iotc Indian Ocean Tuna Commission
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Report of the Seventh Session of the Indian Ocean Tuna Commission

Victoria, Seychelles, 2-6 December 2002

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REPORT
of the
SEVENTH SESSION OF THE
INDIAN OCEAN TUNA COMMISSION

Victoria, Seychelles, 2-6 December 2002

INDIAN OCEAN TUNA COMMISSION

VICTORIA, 2003

MEMBERS OF THE INDIAN OCEAN TUNA COMMISSION

AS OF 2 DECEMBER 2002

AUSTRALIA

CHINA

COMOROS

ERITREA

EUROPEAN COMMUNITY

FRANCE

INDIA

IRAN, ISLAMIC REPUBLIC OF

JAPAN

KOREA, REPUBLIC OF

OMAN, SULTANATE OF

MADAGASCAR

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Executive Summary

The Seventh Session of the Indian Ocean Tuna Commission (IOTC) was held in Victoria, Seychelles, 2-6 December 2002. Ms. N. Rajkumar, the Chairperson, could not attend and the Session was chaired by Mr. John Spencer.

Representatives of 16 Members of the Commission attended the Session. The Commission noted the presence of observers from three States, two Intergovernmental organizations and two non-governmental organizations. The requests from the Republic of the Philippines to renew their status as Cooperating Non-Contracting Party and from Indonesia to become a Cooperating Non-Contracting Party were granted by the Commission.

The Commission welcomed the progress achieved after the first year of operation of the IOTC-OFCF Project, commending the Secretariat for its heavy involvement in Project activities. The Commission welcomed the financial commitments made to the Secretariat for the implementation of the Tagging Programme, welcoming the support provided by IOTC Members and some tuna industry associations.

The Commission approved the Programme of Work and the Budget of the Secretariat, as well as the scale of contributions for 2003.

The Commission recognized the importance of a phased implementation of a Control and Inspection Scheme and adopted seven resolutions relating to:

- *Inspection in port,*
- *A vessel monitoring system pilot programme,*
- *Establishment of a list of vessels presumed to have carried out illegal, unregulated and unreported fishing in the IOTC area and*
- *Establishment of a record of vessels over 24 metres authorised to operate in the IOTC Area,*
- *Conservation of bigeye and yellowfin tuna in the Indian Ocean,(request for scientific advice)*
- *The terms of reference for the IOTC Compliance Committee and*
- *The constitution of a Standing Committee on Administration and Finance.*

Two recommendations adopted concerned implementation of the resolution concerning the IOTC record of vessels and measures to prevent the laundering of catches by IUU large-scale tuna longline fishing vessels.

Three resolutions were deferred for the next Session, concerning:

- *Conservation of bigeye and yellowfin tuna in the Indian Ocean,*
- *Limitation of fishing capacity of Contracting Parties and Cooperating Non-Contracting Parties for their vessels larger than 24 metres fishing, notably, for yellowfin tuna and bigeye tuna and*
- *An action plan to ensure the effectiveness of the conservation programme for bigeye tuna in the IOTC Area of Competence.*

The Commission decided on a new procedure for the selection process of the new Secretary, but deferred to the next Session the changes proposed to the process for the election of the officers of the Commission.

The Commission elected by acclamation Mr. John Spencer (European Community) to be its Chairperson, Mr. Philippe Michaud (Seychelles) and Mr. P.K. Pattanaik (India) to be its vice-Chairpersons.

OPENING OF THE SESSION

1. The Seventh Session of the Indian Ocean Tuna Commission (IOTC) was held in Victoria, Seychelles, 2-6 December 2002. Representatives of 16 Members of the Commission, 3 States eligible to attend Sessions of the Commission, from 2 intergovernmental organizations and 2 non-governmental organization attended the Session. The list of participants is attached as Appendix I.

2. The Chairperson of the Commission, Ms. Neerja Rajkumar (India), informed the Secretariat that she was unable to continue in her functions. In consequence, the Session was chaired by the Vice-Chairperson attending the meeting, Mr. John Spencer (European Community).

3. Following an opening address by the Executive Secretary (Appendix II), Mr. Spencer welcomed the delegates and observers to the Session. His speech is reproduced in Appendix III.

4. The Session was opened by Mr. W. Herminie, Minister for Agriculture and Marine Resources of the Seychelles. His speech is reproduced in Appendix IV.

5. Opening statements provided by Parties in written form are reproduced in Appendix V.

ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION (IOTC-S7-02-01)

6. The Commission adopted the Agenda as presented in Appendix VI to this report. The documents before the Commission are listed in Appendix VII.

CONSIDERATION OF REQUESTS TO ACCEDE AS COOPERATING NON-CONTRACTING PARTIES

7. The request from the Republic of the Philippines to renew its status as Cooperating Non-Contracting Party, and from Indonesia to become a Cooperating Non-Contracting Party, were granted by the Commission.

ADMISSION OF OBSERVERS

8. Pursuant to Article VII of the Agreement establishing the IOTC, the Commission noted the presence of observers from the Maldives and South Africa, entitled to attend as Members of FAO and admitted the Russian Federation (State non-Member of FAO), two intergovernmental organizations, the South-East Asian Fisheries Development Center (SEAFDEC) and the South Pacific Forum Fisheries Agency (FFA) and two non-governmental organizations, the Organization for the Promotion of Responsible Tuna Fisheries (OPRT) and the World Wildlife Fund for Nature (WWF).

9. Japan stressed the importance of following strictly the Rules of Procedure for admission to future meetings of the subsidiary bodies of the Commission.

PROGRESS REPORT OF THE SECRETARIAT (IOTC-S7-02-04)

10. The Secretary presented the report on its activities in document IOTC-S7-02-04, describing the activities carried out during 2002 and relevant administrative issues.

11. The Commission noted the progress achieved, congratulating the Secretariat for the amount and quality of work carried out since the last meeting.

PROGRAMME OF WORK AND BUDGET (IOTC-S7-02-05 AND IOTC-S7-02-04-ADD.1)

12. The Programme of Work and Budget for the year 2003 was presented by the Secretariat, noting that substantial new activities will be initiated in 2003, notably in coordinating and implementing the tagging programmes and the OFCF statistical activities, the constitution and maintenance of new

databases linked to the vessel lists and to predation of longline-caught fish, bycatch and observer programmes.

13. The Financial Statement was presented in Document IOTC-S7-02-04-Add.1. Following confirmation from two Members that payments of Contributions to the IOTC Trust Fund had in fact been made, but had been incorrectly attributed in the FAO accounting process, the Commission noted that the cumulative outstanding payments of contributions have increased to $329 536, 6 % of the cumulative budget over the lifetime of the trust fund. Expenditure and commitments in 2002 were as budgeted, although delayed recruitment to the new staff positions will probably produce savings. Funds in hand are sufficient to cover anticipated expenditure until the contributions assessed for 2003 are received.

14. The issue of late and of unpaid contributions still needs to be addressed in the budgeting process. It is also necessary to ensure that the requests for the payment of contributions reach the responsible authorities and to confirm that contributions paid in are allocated to the correct account. It was agreed that the Secretariat should copy the letters calling for payment of contributions to the liaison officers of the Contracting Party concerned. It was also agreed that the liaison officer should provide the Secretariat with copies of the payment instructions to permit verification that the funds were correctly allocated to the IOTC Trust Fund.

15. The Secretariat informed the Commission that, as instructed by the 6th Session, a letter had been sent to the Director General of FAO to ask for a waiver of the 4.5 % servicing costs. A response was received to the effect that, as these are real costs to cover administrative overhead associated to handling IOTC funds and personnel, the agreement of the FAO Finance Committee is needed to remove this charge. This committee will consider the requests at its next meeting in March 2003.

16. Thailand indicated that a complete revision of total catch for past years has been made and that this would affect the calculation of their contribution. In conformity with the procedure determined by the 3rd Session of the Commission, this year's contribution will remain as calculated based on the official IOTC nominal catch database and adjustments, if required, will be made for next year's assessment of the scale of contributions. It was noted that any change would also affect the contributions of all the members.

17. The Commission noted that the recommendation of the Scientific Committee that the Programme of Work of the Commission for next year requires an increase in the staff of the Secretariat. In particular, Japan, Sri Lanka, Mauritius, and Thailand expressed their support for an additional one P-4 and one P-3 level posts.

18. It was noted that some Members have constraints to increase the budget in 2003. It was therefore agreed to limit the expansion of the staff to one P-4 post, budgeted for six months in 2003 and, exceptionally, to use accumulated funds to cover the additional costs in 2003.

19. The European Community (EC) considered that the responsibilities of the IOTC have expanded, in particular with the introduction of the Bigeye tuna statistical documents in 2001 and the IOTC Record from 2003. The Secretariat needs to be given the means to fulfil its functions efficiently. However, the EC budget is finalised well before the Annual Meeting of IOTC. In consequence, unforeseen increases in the IOTC budget could not be entertained for 2003, particularly as any increase in the budget of Regional Fishery Organisations must be duly justified.

20. The Commission requested the Secretariat to circulate the budget and scale of contributions incorporating the proposed posts well in advance of the 2003 Session, together with a description of the responsibilities and work programme of each of the Secretariat professional posts.

21. The Commission approved the Programme of Work and the Budget and scale of contributions for 2003 as attached in Appendix VIII.

22. The Commission noted that monitoring of expenditure by the Secretariat was extremely difficult as the Secretariat does not have direct access to the FAO Oracle financial system. The Commission

recommended that FAO should explore means of providing this access, which is available to the FAO regional offices and FAO representatives in each country.

23. The Commission reiterated its concern that restrictions placed by the Finance Committee on external auditing may hinder the ability of the Commission to attract extra-budgetary funds for specific projects.

REPORT OF THE 5TH SESSION OF THE SCIENTIFIC COMMITTEE (IOTC-S7-02-06)

24. Mr. Renaud Pianet, Chairperson of the Scientific Committee, presented the report of the Fifth Session of this body (Document IOTC-S7-02-06 E, Appendix IX).

Issues arising from the Progress Report of the IOTC-OFCF Project

25. Japan expressed its commitment to further assist developing coastal states in the collection and processing of data regarding their tuna fisheries.

26. The Commission commended the OFCF for the progress achieved to date, recognizing that the activities were expected to improve the statistical reporting from Indian Ocean coastal States.

Issues arising from the Working Party on Data Collection and Statistics

27. The Commission noted the progress achieved in different areas, stressing the need to address the issues related to non-reporting, delayed reporting and poor data quality.

Issues arising from the discussion on the FAO Expert Consultation on Harmonization of Catch Certification

28. The Commission noted the recommendation from the Scientific Committee, agreeing that it was necessary to obtain more experience in the functioning of the statistical document programme before envisaging any modifications. The Commission agreed to assess progress at its next Session and, if necessary at that time, any changes proposed. In this context, Australia highlighted the need to broaden the coverage of the statistical document programme to ensure the effective coverage of all catches.

Issues arising from the Working Party on Tropical Tunas

29. The Commission thanked the People's Republic of China for the excellent organization of the meeting in Shanghai.

30. The Commission noted the usefulness of the Executive Summaries provided by the Scientific Committee for yellowfin, bigeye and skipjack tuna and recommended that such Summaries be provided in future Commission meetings.

31. The Chairman of the Scientific Committee, questioned on this issue, confirmed that the detrimental effects of increasing fishing pressure on juvenile yellowfin tuna by purse seiners fishing on floating objects applied equally to bigeye tuna.

32. Australia expressed concern regarding the increase in purse seine fishing for juvenile yellowfin tuna and bigeye tuna associated with fish aggregating devices and noted that effective measures should be implemented to tackle this issue, expressing preference for the implementation of a time and area closure for fishing on floating objects. Australia noted that the Scientific Committee had recommended a reduction in catch of bigeye tuna by all gears for several years and that the Committee had identified area and seasonal closure of fishing grounds to fishing on floating objects as the best option for control of catches of small bigeye tuna

33. The EC expressed its view that a moratorium could be an effective means of reducing the catches of juveniles, but only if the zone where it is applied is based on scientific recommendations and that the implementation is respected by all Contracting Parties. In effect, the experience in ICCAT, where this measure has been enforced for several years, has shown that compliance has resulted in a

reduction in the catch of juveniles. However, the beneficial effect has been negated by non-compliance by other Contracting Parties which have notably increased their fishing effort and catch.

In the case of IOTC, several elements should be taken into account:

a) The recommendations of the Scientific Committee on the implementation of a moratorium date from 2000 and do not take into account the latest scientific evaluations or the evolution of the fisheries for tropical tunas, in particular the expansion of the longline fleet;

b) Means of control that can ensure respect of this measure by both Contracting and non-Contracting Parties that practice IUU fishing are not yet available to IOTC;

c) The TAGFAD and FADIO projects which are co-funded by the EC will contribute to a better understanding of the effect of FADs on stocks and should permit the Scientific Committee to formulate recommendations from a more reliable basis.

In this context and taking account of the fact that the Commission has not yet adopted measures limiting fishing effort by all fleets fishing the tunas concerned, the EC judged that it is premature to adopt this type of measure, particularly as the advice of the Scientific Committee needs to be updated.

34. Australia emphasised that compliance issues should not be used as a basis to prevent the adoption of effective conservation measures.

Issues arising from the Working Party on Tagging

35. The Commission welcomed the financial commitments made to the Secretariat for the implementation of the Tagging Programme, welcoming the support provided by IOTC Members and some tuna industry associations.

36. The EC expressed its firm commitment to the Tagging Programme, indicating that around nine million Euros will be allocated to finance Indian Ocean tagging programmes, such as the IOTTP, FADIO and TAGFAD programmes. The EC emphasized to Members the importance of participating in this programme and encouraged those who have not yet done so to contribute to its funding.

37. Mauritius and the EC expressed their concern about the absence of tagging activities planned for the eastern Indian Ocean, stressing that tagging in both the eastern and western basins is necessary to achieve the objectives of the IOTTP. The Commission was informed that tagging experiments will be conducted in the eastern Indian Ocean by SEAFDEC, in cooperation with Japan.

38. Australia stressed that it was likely to take five years or more before data were available from the tagging programme that would be suitable to provide robust estimates of key parameters. Australia noted that, based on statements from the Scientific Committee, the current status of the stocks of bigeye tuna and yellowfin tuna require immediate action; therefore, that it was necessary to take action before robust results were available from the tagging programme.

39. Iran expressed readiness to participate in the small scale tagging programme and encouraged all other countries to do so.

Issues arising from the Working Party on Neritic Tunas

40. The Commission agreed that all Parties interested should coordinate with the Chairman of the Scientific Committee to decide on the date and venue of the next meeting of the Working Party on Neritic Tunas.

Issues arising from the Proposed Schedule of Working Party Meetings

41. The Commission endorsed the schedule of Working Party meetings as proposed by the Scientific Committee. The Working Parties to be convened in 2003 included:

a) The Permanent Working Party on Data Collection and Statistics;

b) The Working Party on Tropical Tunas;

c) The Working Party on Tagging;

d) The Working Party on Neritic Tunas; and

e) The Working Party on Billfish.

Issues arising from the discussion on a Survey of Predation of Longline-Caught Fish

42. Japan welcomed the creation by the IOTC Secretariat of a database on predation intended to centralise all information collected through the different surveys and commended the Secretariat for its involvement with this survey.

43. Japan pointed out that predation rates estimated from the survey in the Indian Ocean are twice those in other oceans. Japan informed the Commission that the preliminary results of a survey on predation by marine mammals conducted in waters around Japan indicated that a substantial amount of fish, some of high commercial value, are predated by marine mammals. It was pointed out that predation affect both tuna and other species, and that concerted action was needed by all parties concerned. The Commission was informed that the Scientific Committee will assess the progress of this Survey in its 2004 Session.

Issues arising from the discussion on Other Business

44. The Commission endorsed the recommendation from the Scientific Committee for the creation of a Working Party on Bycatch, stressing nevertheless that the Scientific Committee should primarily concentrate on the species falling under the IOTC mandate.

45. The EC informed the Commission of several EC programmes currently underway to collect data on catches of non targeted, associated and dependent species by purse seiners operating under EC flags.

Issues arising from the Election of the Chairperson and Vice-Chairperson of the Scientific Committee for the period 2003-2004

46. The Commission commended Mr Renaud Pianet, from France, and Dr. V.S. Somvanshi, from India, for their dedication and the important contribution they have made to its work during the past four years as Chairman and Vice-Chairman, respectively, of the Scientific Committee.

47. The Commission welcomed Dr. Geoffrey Kirkwood, from the UK, and Prof. Xu Liu-Xiong, from the People's Republic of China, as Chairman and Vice-Chairman, respectively, of the Scientific Committee for the period 2003-2004.

Management Issues

48. The Commission recognized the importance of a phased implementation of a Control and Inspection Scheme as agreed upon at the intersessional meeting in Yaizu, 27-29 March, 2001. IOTC, at its Session in 2001, had already adopted measures to establish a programme of control and inspection. This progress should continue in order to complete it, as foreseen by the Yaizu meeting.

49. The EC and Japan presented proposals targeting IUU fishing. These measures are based on a positive list and a negative list which identifies IUU vessels in order to reinforce the means of combating IUU activities. The Negative List establishes transparent and non-discriminatory criteria and procedures, and legitimates enforcement measures against IUU vessels, as well as permitting actions against those Flag States which do not exercise jurisdiction on their vessels in an effective manner. The positive list – now termed IOTC Record – was proposed based on the Commission's resolutions and on past experience in combating IUU fishing activities.

50. The Commission adopted by consensus the following Resolutions (Appendix X):

a) Resolution 02/01 Relating to Establishment of an IOTC Programme of Inspection in Port.

b) Resolution 02/02 Relating to the Establishment of a Vessel Monitoring System Pilot Programme.

c) Resolution 02/03 Relating to the Terms of Reference for the IOTC Compliance Committee.

d) Resolution 02/04 On establishing a List of Vessels Presumed to have Carried Out Illegal, Unregulated and Unreported Fishing in the IOTC Area.

Japan noted that Paragraph 9 of the Resolution stipulates that Contracting Parties should take all necessary measures, under their applicable legislation, to implement the listed actions, including the prohibition of imports of tuna and tuna-like species caught by vessels recorded in the list of IUU vessels operating in the IOTC Area. Japan interprets this provision to apply to those species covered by the statistical document programme, currently the bigeye tuna.

Japan also emphasized that, although the scope of fishing vessels covered by this scheme is initially limited to non-Contracting Parties, in view of the paragraph 11, expansion of the scope to Contracting Parties will be considered as a matter of priority at the next Commission meeting and should be realized in the near future.

Iran and Thailand expressed concern regarding their capacity to comply with this Resolution, especially the need to keep track and communicate timely to the Secretariat all vessel changes that occurred. Japan expressed its willingness to assist Contracting and Cooperating Non-Contracting parties to build and maintain vessel lists.

e) Resolution 02/05 Concerning the Establishment of an IOTC Record of Vessels Over 24 Metres Authorised to Operate in the IOTC Area.

Japan provided the Commission with information on recent IUU large-scale tuna longline vessels activities (Document IOTC-S7-08E). In this context, some countries indicated that the list of IUU vessels provided by Japan was inconsistent, including vessels that cannot be considered IUU. Vanuatu informed the Commission that there are no Vanuatu vessels operating within the IOTC Area.

The Commission agreed in principle that, for the practical implementation of the IOTC record, the OPRT could, through relevant Contracting Parties, transmit information relating to its members to IOTC.

Japan requested that the Secretariat and all Contracting Parties and Cooperating Non-Contracting Parties of the IOTC inform all relevant non-contracting Parties of the IOTC of this Resolution well before its implementation (Appendix XI).

51. The Commission adopted by consensus the following Recommendations (Appendix X):

a) Recommendation 02/06 on the Implementation of Resolution 02/05 concerning the IOTC Record of Vessels.

b) Recommendation 02/07 concerning the Measures to Prevent the Laundering of Catches by IUU Large-Scale Tuna Longline Fishing Vessels.

52. The Commission adopted Resolution 02/08 On the Conservation of Bigeye and Yellowfin Tuna in the Indian Ocean (Appendix X) concerning a request for scientific advice.

53. The Commission decided to defer the consideration of the draft Resolution presented by Australia on the Conservation of Bigeye and Yellowfin Tuna in the Indian Ocean (Appendix XII). In relation to this proposed resolution, Australia drew attention to the work already undertaken by the Scientific Committee at its Third Session, on available management measures to deal with the excessive catch of bigeye associated with floating objects and also that the Committee had regarded the option of implementation of a time-area closure for purse seine fishing operations on floating objects as the most suitable, based on the analyses of the existing data. Australia recalled that Resolution 99/01 committed the Commission to engage to adopt a time area closure and expressed serious concern that no action towards this objective has yet been taken, and called for effective measures to be adopted at IOTC.

54. The EC recalled that its position regarding possible closed areas is stated in paragraph 33.

55. A draft Resolution, presented by Japan and the EC on the limitation of fishing capacity of Contracting Parties and Cooperating Non-Contracting Parties for their vessels larger than 24 metres fishing, notably, for yellowfin tuna and bigeye tuna, is attached in Appendix XII.

56. Several countries indicated that they cannot accept this Resolution, noting that they needed more time to make decisions on this matter. The Commission agreed that Resolutions of this nature should be circulated to Members before the IOTC Session to have an opportunity to study them.

57. Japan, the EC and France expressed their dissatisfaction with the lack of progress on this issue, especially considering that it had been discussed in the last three IOTC Sessions. They further noted that, without such a management measure, there is a risk of increased fishing effort coming from other oceans into the Indian Ocean.

58. Australia expressed dissatisfaction, in particular that the Commission had not yet been able to take decisions on any management measures. Australia expressed its willingness to work intersessionally with other members to ensure that the next IOTC session was able establish effective measures to deal with all issues confronting stocks managed by the IOTC.

59. Japan strongly requested that all IOTC Contracting Parties attending the next IOTC Session come with a mandate to adopt the proposal on effort limitation, irrespective of whether it is an intersessional or a regular meeting.

60. In this context, the EC noted for its part that it has a historical presence in the IOTC Area and has always practiced a responsible policy in reporting data on catches and sampling. The EC emphasized that it has implemented an observer programme; that its vessels are equipped with VMS, and that its vessels and gear have identification marks as required by international standards. The EC has been monitoring its vessels for years and consequently, is conducting regulated and monitored fisheries. In respect of fishing effort, the EC has practiced a responsible policy, following which both capacity and fishing effort have remained stable. The EC however regrets the uncontrolled expansion of fishing capacity by some Members, in particular in the longline sector. This concern, which was shared by the Commission, led to the adoption in 2001 of Resolution 01/04 which aims at a reduction of the fishing capacity of non-contracting Parties, and the EC is awaiting information concerning the implementation of this Resolution. Being one of the major actors in the fisheries for tropical tunas in the IOTC Zone, the EC is ready to take commitments leading to a reduction in fishing capacity. In the context of such a plan, the EC is sympathetic to the needs of development expressed by certain Members and believes that any measures adopted by this Commission should satisfy the legitimate interests of the Members concerned.

61. The discussion on the Action Plan was deferred to the next Session (Appendix XII).

MATTERS ARISING FROM THE SIXTH SESSION (IOTC-S-06-01-R[E])

Contracting and collaborating party reports on implementation status of IOTC resolutions

62. Australia, China, EC, Japan, Mauritius, Philippines and the Republic of Korea presented documents describing the current implementation status of IOTC resolutions and recommendations. These statements are transcribed in Appendix XIII.

Consideration on the establishment and Terms of Reference of a Finance Sub-Committee

63. The Commission adopted unanimously Resolution 02/09 concerning the establishment of the Standing Committee on Administration and Finance (SCAF), presented in Appendix X.

Issues on the selection of a new Secretary

64. The Commission was reminded that the Secretary, Mr. David Ardill, is scheduled to retire on 30th November 2003. The Commission considered that the 8th Session would be considerably disrupted if

the Secretary were to have retired immediately prior to the Session, when the next Secretary will also be elected. Furthermore, the Commission judged that, in order to ensure the continuity in the activities of the Secretariat, it would be desirable that the selected candidate have the opportunity to become familiar with the activities of the post, and that this would best be achieved if there were overlap between the entry in function of the new Secretary and the departure of the present incumbent. The Commission therefore instructed its Chairperson to write a letter to the Director General of FAO to request that the retirement of the current Secretary be delayed to achieve this overlap, or at least until February 2004.

65. The Secretary confirmed that he was prepared to remain in function until then if necessary.

66. The Commission agreed to follow the procedure described below for the selection process of the new Secretary:

a) The vacancy announcement (including required qualifications) to be advertised through international means and the Commission's Web site by the end of February 2003;

b) Applications to be received by the Secretariat with a deadline of 31 May and distributed to Members by 15 June 2003;

c) Five candidates to be classed in order of preference by Members on a point score of five to one by 15 September, this ranking transmitted to the Secretariat, collated there and the ranking of all qualified candidates conveyed to Members as soon as possible;

d) The three candidates with the greatest number of points to be invited to the 8th Session of the Commission for interview by Heads of delegation;

e) The new Secretary to be elected by the Commission;

f) The Director General of FAO to be informed of the decision of the Commission in order to proceed to the appointment of the new Secretary.

67. Appendix XIV contains a description of required and desired qualifications for candidates to the post of Secretary.

68. Members were advised that there will be budget implications associated with bringing candidates to the Session for interview and for the period in which both the leaving Secretary and his replacement will be employed, although it was noted that this can be accommodated within existing resources.

PROPOSED CHANGES TO THE RULES OF PROCEDURE

Proposal from India to change Rule VII 2.: Election of Chairperson and Vice-Chairpersons

69. A letter from India proposing changes to the process for the election of the officers of the Commission, was circulated to Members prior to the Session. As this letter did not contain a specific proposal as required in Rule XVI for modification of the IOTC Rules of Procedure, it was decided that the Legal Adviser should propose specific changes which should be circulated to Members well in advance of the next Session. The Commission noted that, in many cases, the elected Chairperson had been unable to chair the Sessions. It was suggested that one of the options that could be looked at by the Legal Adviser to solve this problem might be to elect the officers at the beginning of the Session, rather than at the end as is the case at present.

ANY OTHER MATTERS

Relationship with other Bodies

FAO

70. The Commission agreed that, at its 2003 Session, it will further discuss issues raised by document IOTC-S7-02-10 for possible decision to improve the effectiveness of IOTC.

CCSBT

71. The CCSBT requested that its communication with Seychelles be circulated to the IOTC. Copies were provided to members. Seychelles indicated that it would circulate its reply to members in the near future.

Other Business

South Africa

72. South Africa indicated that it intends to formalize its involvement with IOTC by joining the Commission in the near future and summarized the recent developments in its tuna fishery.

WWF

73. WWF acknowledged the positive steps taken by the Commission regarding consideration of ecosystem issues such as by-catch, but expressed its disappointment that management measures concerning bigeye and yellowfin tuna had not been implemented at this Session.

SEAFDEC

74. SEAFDEC informed the Commission of its plans for future research, which include a tagging programme in the eastern Indian Ocean, in cooperation with other institutions from the region, an on-going survey of tuna resources and a training programme on tuna tagging for its staff.

FFA

75. The FFA expressed its appreciation for being invited to the Session and indicated that, as there are new management arrangements in the Pacific, their attendance to meetings of the Commission provides an opportunity to become familiar with the procedures of other Regional Fishery Bodies.

Closing statements

76. The EC and SEAFDEC made closing statements which are reproduced in Appendix XV.

DATE AND PLACE OF THE SIXTH SESSION OF THE SCIENTIFIC COMMITTEE AND THE EIGHTH SESSION OF THE COMMISSION

77. The Commission expressed its appreciation to the Government of Seychelles for hosting the 5th Session of Scientific Committee and the 7th Session of the Commission, for the excellent meeting facilities and hospitality extended to the delegations.

78. The Commission agreed that the Eighth Session of the Commission will take place in Seychelles, from 8 to 12 December, 2003, preceded by the Sixth Session of the Scientific Committee from 3 to 6 December, 2003. The Chairman indicated that there would be a Head of Delegation meeting on Sunday 7 December to select the new Executive Secretary.

ELECTION OF THE CHAIRPERSON AND TWO VICE-CHAIRPERSONS

79. The Commission elected by acclamation Mr. John Spencer (European Community) to be its Chairperson. Mr. Philippe Michaud (Seychelles) and Mr. P.K. Pattanaik (India) were elected vice-Chairpersons.

ADOPTION OF THE REPORT

80. The report of the Seventh Session of the Indian Ocean Tuna Commission was adopted on December 6th, 2002.

APPENDIX I
LIST OF PARTICIPANTS

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APPENDIX II
OPENING ADDRESS OF THE SECRETARY OF THE COMMISSION

It is my pleasure to welcome you to the opening ceremony for the Seventh Session of the Indian Ocean Tuna Commission.

I would also like to extend a special welcome to the delegations from Iran and Vanuatu, which are the latest countries to join the Commission. We now have twenty-one Contracting Parties and one Cooperating Non-contracting Party. The Commission will also examine requests from several Parties seeking to accede to the status of Cooperating Non-contracting Party. We also have delegations from a number of non-member States which support our actions and will, I am confident, shortly join the Commission. Finally, several Intergovernmental and Non-governmental Organizations will be attending the Session.

Several of the most important countries and entities fishing for tunas in the Indian Ocean are still not party to IOTC. This situation is detrimental to statistical reporting, stock assessment and implementation of management. It is hoped, however, that the issues which have delayed the integration of these parties in the IOTC process can be overcome in the future.

I would also like to extend a warm welcome to the representatives of the tuna fishing industry who, by their presence in the Scientific Committee last week and now in the Commission, illustrate their high level of interest in the proceedings of this Commission.

Tuna landings from the Indian Ocean have continued to increase rapidly and are now of the order of 1.5 million tonnes per year. The Indian Ocean, despite its relatively small size and the land barrier to the north, is thus producing nearly one third of the tuna and tuna-like species caught worldwide. In addition, with the high proportion of high priced sashimi fish and of valuable species such as the seerfish caught by artisanal fisheries, it is probably safe to state that this catch is more valuable than that of the other oceans.

IOTC has now matured to the point where management of the tuna fisheries in the Indian Ocean is a reality. Stock assessment conducted in the context of the Working Party on Tropical Tunas has shown that at least two of the species falling under its mandate are heavily exploited. While the Commission has not yet moved to the establishment of quotas, effort limitations are in order. In the current Session, a number of measures will be discussed aimed at stabilising or even reducing fishing effort.

In this Session, the Commission will decide on the Terms of Reference of a Control and Inspection committee. This committee is expected to bring transparency to the management process, both as it relates to contracting and collaborating parties, and to the combat of IUU fishing.

Control of illegal, unregulated and unreported fishing is central to the management of effort as, otherwise, parties taking no responsibility for their fisheries would reap all the benefits. The Commission will therefore examine means of identifying these IUU fleets and, through Port State control and trade-related measures, make the operation of IUU vessels uneconomic.

The burden of these activities will fall to a large extent on the Indian Ocean coastal States in whose harbours most landings occur. These countries will have to establish a cadre of port inspectors with the competence and authority to turn away IUU vessels coming to their shores.

It is to be noted that this fight against IUU fisheries is now being coordinated throughout the three major oceans as the regional fishery management bodies in each area are working closely together, exchanging information and adopting similar management measures.

Contracting and collaborating parties will be expected to manage their tuna fishing fleets actively, a process which in certain cases is going to require legislative changes. It will also require improvement of fisheries information systems. The Working Parties organised by the Commission in 2002 again concluded that the statistics available were in most cases inadequate for accurate assessment of stocks. The inadequacies run from late reporting to inadequate sampling and large discrepancies between different data sets. While these questions are critical for stock assessment, they are even more so where management of a fishery is concerned.

While little can be done by the Secretariat for those countries which are not coastal to the Indian Ocean, other than to bring the deficiencies to their attention, we are working hard to improve the statistics of Indian Ocean coastal States. One of the actions undertaken is a joint project by the IOTC Secretariat and the Overseas Fishery Cooperation Foundation of Japan, aimed at improving the data collection and processing capabilities of Indian Ocean coastal developing States. It is expected that this project, which could be extended for as long as five years, will substantially improve the quality and timeliness of statistical data for nearly half the tuna and tuna-like species caught in the Indian Ocean.

I am pleased to inform the Commission implementation of the pilot studies for tuna tagging has started. The preparation of a larger programme through funding by the European Community, is also well advanced. It is hoped that the implementation of this programme will begin in 2003. For a number of technical reasons, it is likely that the European Community programme will be active mainly in the western basin of the Indian Ocean. Failure to tag tunas in the eastern basin would severely limit the benefits of the tagging programme. It is critical, therefore, that the search for funding be continued.

Again, it should be recognized that the importance of tuna tagging extends beyond the sphere of stock assessment. Until we know what is the structure of the different tuna stocks in the Indian Ocean and the possible interactions between fisheries, the choice of management strategies cannot be correctly rationalized.

These are challenging developments for the Secretariat and will substantially lay the groundwork for the management of Indian Ocean tunas. I am sure the Commission will give us the directions and the means to implement these activities.

I will now request Mr. John SPENCER who will chair the meeting, to speak to you.

APPENDIX III
OPENING ADDRESS OF MR JOHN SPENCER, VICE CHAIRPERSON OF THE COMMISSION AND CHAIRPERSON OF THE SEVENTH SESSION

Firstly, it is my pleasure to extend to all of you a warm welcome and wish you a fruitful and pleasant stay in Seychelles. In particular, I welcome our new, the Members Islamic Republic of Iran and Vanuatu.

On behalf of IOTC, I would like to express our appreciation to the Government of Seychelles for hosting this Seventh Session of the Commission. On your behalf, I would wish to convey a special appreciation to you, Mr. Executive Secretary and your staff, which have made great efforts to prepare this meeting through the provision of documentation well in advance.

Distinguished delegates,

The importance of the tuna resources, both in terms of their biomass and economic value is well documented in the literature of this Commission. Equally, our common objectives for their management and sustainable exploitation is an acknowledged responsibility. This meeting constitutes the seventh occasion at which the Commission will have deliberated on appropriate conservation and technical measures for the management of the resources. There is a responsibility on this Commission to take decisive measures now to address legitimate conservation concerns outlined clearly in the Report of the Scientific Committee.

I would highlight four areas where I would hope that this Commission registers substantial progress at this Session.

Firstly, I would refer to the issue of fishing capacity, in particular, in relation to bigeye tuna, but also to yellowfin, where the Scientific Committee has expressed certain concerns. Substantial progress was made at our last session in developing a framework for the introduction of fleet capacity measures in order to conserve and manage the resources in a responsible manner. I would expect that, with further work, it should be possible to agree an effective resolution addressing this key issue.

Secondly, sometimes Delegates attending such meetings consider themselves within a vacuum ; isolated from the work of other tuna Organizations in the world. The reality however is that tuna resources and markets throughout the world are inextricably linked and this factor has to be borne in mind by all tuna Commissions in the development of their policies and conservation measures. One of the main challenges that faces world tuna resources at the present time is that posed by the development of illegal, unregulated and unreported fishing activities – the so called IUU activities. Just as sister Tuna Organizations, such as ICCAT in the Atlantic, has taken measures to combat this phenomenon, so IOTC must also be pro-active in this domain taking account of the determined flexibility demonstrated by IUU actors.

Thirdly, and related to the last point on IUU, the Commission needs to develop further its measures in relation to inspection and control in line with the intersessional meeting in Yaizu in March 2001. It is only through the introduction of additional control measures that we can ensure the effective regulation of fishing activities.

Finally, as a relatively young Commission, there are a number of institutional changes that need to occur in order to have a fully integrated approach to the Commission's work. In this regard, I would highlight the need to define terms of reference for both the Committee on Control and Inspection, and the Committee on Finance.

I wish you all an excellent working week and I look forward to working with you in an effective and even-handed manner. We have a heavy work load and I count on all of you to be constructive and pragmatic in your interventions.

APPENDIX IV
SPEECH OF HON. WILLIAM HERMINIE, MINISTER OF AGRICULTURE AND MARINE RESOURCES TO THE 7TH SESSION OF THE INDIAN OCEAN TUNA COMMISSION

Good morning and welcome to the 7th Session of the Indian Ocean Tuna Commission. I am indeed very happy to note the presence of many key tuna scientists and decision-makers from the region, and from other parts of the world. All of you have come here to consolidate the knowledge acquired over the past year on management measures of the tuna stocks in the Indian Ocean. Tuna fishing is an important commercial activity and is the second largest type of fishing activity in the world. Last year alone, the total catch arising from tuna fishing in the Indian Ocean region amounted to over 1.5 million tonnes - composed mainly of tuna and billfishes – and this translates into an estimated monetary value of over 3 (three) billion US Dollars. Seychelles places a high importance on tuna fishing and today the fishing and related industry has emerged as the leading foreign exchange earner, representing 40 % of gross foreign earnings for last year. The primary reason why we are meeting this week is to ensure that countries surrounding the Indian Ocean as well as other Distant Water Fishing Nations continue to dialogue. We must develop a sustainable cooperation programme whereby the region will continue to derive the maximum benefit from this resource whilst at the same time ensuring the sustainability of the tuna stock levels.

We meet at a time when the world is recognising that almost all fisheries activities are being exploited near or over their allowable limits. This concern is already apparent for various Indian Ocean tuna stocks that are of major interest to us, such as yellowfin and bigeye tuna. This global concern was reinforced during the recent World Summit on Sustainable Development in Johannesburg, where it was agreed, that wherever possible, fishing activities should be maintained at a sustainable level and depleted fish stocks be restored to maximum sustainable levels - not later than the Year 2015. And additionally, countries also agreed to eliminate subsidies which contribute to over-capacity and to illegal, unreported and unregulated fishing (IUU).

It goes without saying that the Commission will be required to be proactive so as to monitor, and as far as possible eliminate, IUU fishing in the Indian Ocean tuna fishing industry. Certainly, that would require both a national and an international effort. At this point please allow me to reiterate two important points I raised the last time I addressed you. Firstly, catch statistics are fundamental for good stock assessment and for informed decisions for management purposes. In this regard, I wish to commend the efforts by IOTC to ensure that the Indian Ocean Nation States as well as Distant Water Fishing Nations are developing the necessary capacity to ensure appropriate data collection schemes. The assistance being provided to the IOTC by the "Overseas Fisheries Cooperation Foundation of Japan" is living testimony of the commitment made by Mr Komatsu, at the 6th session of the IOTC. On behalf of the Japanese government he made a declaration to assist our Indian Ocean countries with the establishment of a statistical system to service the whole region. A cooperation which is aimed at strengthening data collection and data processing in the coastal countries of the Indian Ocean. I must once again take this opportunity to thank the Japanese government for this cooperation. We are at this point reminded of our obligation to ensure that all data collected is exhaustive, accurate, and validated for sound stock assessment studies and be submitted to the IOTC in a timely manner.

The second point I need to reiterate is the fact that, in 2001, the Indian Ocean Tuna Commission Scientific Committee agreed that a well designed, large scale tagging experiment would be the best and most cost effective means of collecting much of the basic information required to improve the stock assessment of the major tropical tuna fisheries. In this context, I can confirm that the tuna tagging project submitted to the European Union by Seychelles in collaboration with Mauritius has received a positive response. The project is expected to cost 4.5 (four and a half) million Euros. This substantial contribution by the EU will go a long way in allowing our scientists to better understand the behaviour of tuna in the Western Indian Ocean. However, in the future, we must also consider obtaining necessary financial contribution to undertake a similar activity in the eastern part of the Indian Ocean. We are proud to note that the Government of Seychelles is deeply committed to the success of this programme and hope that all countries represented here and all those whose fleets fish in the Indian Ocean, but who have not been able to take part in our deliberations, will contribute towards the successful implementation of this important programme for the Indian Ocean.

Finally, I acknowledge that there is much concern as to whether the present levels of fishing can be sustained over the long-term. We all appreciate the complexity of the issues surrounding any management regime, and that with every year that passes, the growth in fishing capacity and efficiency adds to the strain on this resource. This requires greater adjustments through discussions and action oriented plans in order to sustain a rational level. What remains, therefore, is for me to wish all of you, fruitful deliberations and a pleasurable working week in our lovely islands. I now have the added pleasure to declare the 7th Session of the Indian Ocean Tuna Commission open.

APPENDIX V
OPENING STATEMENTS

AUSTRALIA

I welcome the opportunity to make some brief opening comments to the Seventh Session of the Indian Ocean Tuna Commission (IOTC 7).

As members of the IOTC the challenge we face collectively is to develop and maintain a management framework which allows us to achieve both the optimum utilisation and conservation of the stocks we are mandated to deal with. There has been some progress but frankly speaking the hard decisions are yet to be taken, and the time for action is short, particularly for bigeye.

It is pleasing to note that the Commission membership has now grown to 21 members. We welcome Iran, and Vanuatu, one of our Pacific neighbours as the newest members of the IOTC. The membership of the IOTC is diverse, representing the range of interests in the fish stocks of the Indian Ocean – we have distant water fishing nations represented, along with both developed and developing coastal states. We have to work collectively and cooperatively to achieve the aims of this Commission.

Australia recognises that currently there are important fishing nations and entities that are not yet members of this Commission. It is essential that all those fishing in the Indian Ocean are engaged and cooperating with the conservation and management measures of the Commission.

Australia is pleased to acknowledge Indonesia's interest in becoming a cooperating non-member, and we hope they will be able to become a full member of the Commission as soon as possible.

We are very pleased to see South Africa represented here. South Africa is an important coastal state and we hope you are able to join the IOTC soon. We look forward to the opportunity to work closely with you in the IOTC.

When we look at the agenda for this meeting, we have a lot of work to do. We already have unfinished matters from the last meeting – one of which is in relation to bigeye. There is no question that the major challenge is for us to take effective action to reduce the catch of bigeye tuna, now. We have clear scientific evidence that current catches are well above MSY and cannot be sustained. Yellowfin is perhaps not yet as critical but it still requires action to ensure catches do not go above current levels.

We want to see an effective conservation measure for bigeye. A properly crafted resolution to establish a limit on the number of fishing vessels is potentially a first tentative step in the right direction. But we must do much more if we are to bring about the catch reductions needed. In looking at the options for catch reductions, we must always bear in mind what factors have contributed to the current overfished situation, and target our measures to address those factors. At the same time we must ensure that we do not jeopardise the legitimate interests of all IOTC coastal states to be able to sustainably develop their fishing industries into the future.

We see the use of FADs as a key factor that has contributed to the current situation in relation to juvenile bigeye stocks. In 1999 the Commission, in Resolution 99/01 agreed to work towards adopting time and area closures on the use of FADs and we want to see such measures established within an agreed timeframe.

Illegal fishing is a continuing problem and we look forward to a discussion at this meeting on further measures we can take to deal with this issue. We are aware of some proposals that members will be making at this meeting, which we see as a constructive basis for further action.

Ultimately this Commission should be active in establishing conservation and management measures - including managing the total level of catch through national allocations for particular species. In essence, there are three main elements to effective fisheries management:

- a sound scientific framework underpinned by verifiable and comprehensive data;
- a workable management framework capable of responding to scientific assessment; and
- a strong monitoring, surveillance and compliance framework.

At this meeting of the IOTC we have to make progress in putting these components in place. There has been a lot of work to date in developing data and science, and more needs to be done. For instance, we need to establish an effective tagging programme for the whole Indian Ocean, and members must improve the timeliness and comprehensiveness of the data they provide.

We have to put in place an effective VMS system. Ultimately Australia hopes that we can see a centralised VMS in IOTC but realise that we need to move step by step towards that goal. Let's put the foundations in place now.

And we need to agree Terms of Reference for the IOTC Control and Inspection Committee, that the Commission decided to establish at its last session. The Committee is as an essential component of the of an effective control and inspection scheme. It must be able to monitor and report on non-compliance and be able to make recommendations to improve measures. It must apply to both contracting and non-contracting parties. We need to specify carefully its role and functions so it has the mandate to be effective.

Another matter we would wish to highlight is in relation to the bigeye statistical document programme (SDP) adopted last year. The Scientific Committee has made some recommendations to improve the scheme which we are happy to support. In addition we believe there are large improvements needed to the scheme's coverage and operation, and we would wish to see these addressed as quickly as possible. In its current form the scheme only covers frozen bigeye and not fresh chilled, does not include catches from the purse seine sector and does not cover domestic landings (i.e. tuna caught by a vessel and landed in the vessels flag State).

We support the recommendation from the Scientific Committee to establish a Working Party on Bycatch and look forward to the work of this Group in addressing this important issue, as a step towards managing fisheries based on an ecosystem approach.

Finally, I wish to mention that this is likely to be the last IOTC meeting for two members of the Secretariat and I hope we can find time in our meeting to acknowledge the efforts of these two very capable gentlemen.

So we have a very full and important agenda to deal with and we look forward to a productive meeting.

EUROPEAN COMMUNITY

The European Community is pleased to participate in the 7th Session of the Indian Ocean Tuna Commission and wishes to thank the Government of the Republic of Seychelles and the Secretariat of IOTC for hosting and organizing this meeting.

At the 6th Session, considerable progress was achieved in defining an effective management and conservation policy. It is important that this work should continue.

In light of the advice of the Scientific Committee, it is imperative that the Commission, in order to ensure a sustainable exploitation of stocks and the future of fisheries for migratory species in the Indian Ocean, should place as priorities for this year:

- The adoption of measures aiming at a limitation of fishing capacity;
- The adoption of measures to combat IUU fishing;
- Strengthening of control measures as determined by the conclusions at Yaizu;

We are all aware that the increase in fishing effort on tropical tunas in this region has a negative impact on the stocks. Any delay in the adoption of measures would certainly compromise the future of these fisheries.

Furthermore, the fight against IUU activities which undermine the effect of management and conservation measures needs to be made tangible by the adoption of a coherent set of measures based on the FAO Plan of Action, as well as on precedents that exist in other Regional Fishery Organisations.

To that end, the EC considers that it would be desirable to establish both a positive list of vessels that are authorized to fish in the IOTC Area, and also a negative list of vessels that conduct IUU activities.

Finally, the EC also believes that it is necessary to complement existing control measures in order to ensure effective compliance by all Parties with conservation and management measures.

The EC hopes that this meeting, through the cooperation of all Parties, will have a fruitful result.

JAPAN

On behalf of the Japanese Delegation, I would like to thank the Government of Seychelles and the IOTC Secretariat for hosting this meeting in this beautiful country. Japan also welcomes Iran and Vanuatu as new Contracting Parties. Japan is looking forward to working cooperatively with them and all other Parties here for better achievement of the objectives of the Convention.

Mr. Chairman, Japan puts high priority in two specific points during this annual meeting. They are i) the introduction of conservation and management measures on bigeye tuna, and ii) the establishment of positive listing scheme as a new and more effective measure against IUU fishing activities.

First for bigeye tuna management, the Scientific Committee found that the recent catches of bigeye tuna in the Indian Ocean have been consecutively above its MSY level for the recent several years. Concrete conservation and management measures on bigeye tuna are indispensable to maintain the resource sustainability. We should not postpone anymore the introduction of effective measures for the long-term conservation and sustainable use of this stock.

Another important point that we should not forget is the catches by NEI, in other words, catches by IUU fishing. This catch represents about 15% to 20% of the entire bigeye tuna catches. If we succeeded in introducing an effective measure to eliminate IUU fishing, we could reduce the overall catches by about 20% as a result of implementation of IUU measures.

Second, Japan proposes with EC delegation a positive listing scheme of authorized large-scale vessels as a new measure against IUU fishing activities. The Indian Ocean and the Atlantic Ocean are the major fishing grounds of IUU fishing vessels. Almost all the IUU large-scale tuna longline vessels are owned and operated by the residents of Taiwan Province of China. Japan and Taiwan Province of China established a Joint Action Programme to eliminate IUU large-scale tuna longline fishing vessels. Japan budgeted US$30million to scrap Japanese origin IUU large-scale longliners for three years, from 2001 to 2003. 34 vessels have been scrapped to date. Taiwan Province of China re-registered 8 Taiwan Province of China origin IUU vessels to Taiwan Province of China to date. However, many IUU vessel owners escaped from the Joint Programme and sneaked in the registry of Contracting Party of regional fisheries organizations or even a land locked country as new hosts to continue their fishing operations. At present, about 100 large-scale tuna longline IUU vessels are operating all over the world.

During the last four years, in addition to the implementation of the Joint Programme, Japan has been taking sanction measures based on the Commission's resolutions and so-called IUU vessel list. But because of frequent flag hopping and changes of names, coupled with fish laundering and use of forged documents on vessel registry, the current sanction measures lose their effectiveness almost entirely. Document IOTC-S7-02-08 provides detailed explanation on this point.

In early November, ICCAT developed a new measure against IUU fishing activities, namely positive listing of authorized vessels. As a result, IUU fishing vessels will shift their fishing grounds to other oceans including the Indian Ocean. The IOTC must establish urgently a similar effective measure to eliminate IUU fishing vessels. Japan urges all the Contracting Parties to work cooperatively to establish a positive listing scheme and other relevant measures including a measure to prevent fish laundering during this Commission meeting.

Lastly Mr. Chairman, I hope that, under your guidance and strong leadership, we can have a successful and fruitful meeting during this week.

KOREA

On behalf of the Korean delegation I am pleased to participate at the Seventh Session of the Indian Ocean Tuna Commission and thank the Secretariat for its hard work for preparing this meeting.

The followings are the view of the Korean Delegation what we see as important issues in the meeting.

We are all aware that very limited data are available in most cases for accurate stock assessment and making more informed decisions on the management of our common fisheries resources. In this context, there are the need for more research on a more comprehensive coverage of catches in the Indian Ocean. The data

collection programme will improve the quality and timeliness of statistical data for tuna and tuna-like species in the Indian Ocean.

With respect to the IUU issue, the International Commission for the Conservation of Atlantic Tunas (ICCAT) adopted a couple of resolutions, namely, white list and negative or black list last month. IUU fishing vessels in the Indian Ocean also pose a threat to tuna stocks in the Area. In this regard, the Commission should consider to implement a serious number of actions for the conservation and management measures which can be of assistance in identifying and eliminating every possible IUU fishing activity for tuna stocks in the Area.

As we know, there are important players who not only take a huge amount of tuna and tuna-like species in the area but also not full members of the IOTC for some reasons. We should invite them to work with us and to co-operate with the Commission for the sustainable utilization of tuna stocks in the Area.

The Korean Delegation also supports that the integrated monitoring scheme is an essential and fundamental tool to ensure the effective implementation of conservation and management measures and this scheme should be implemented as soon as possible for tuna and tuna-like species in the Area.

The Korean Delegation hope that the Seventh Commission Meeting will be a productive and successful one.

MALDIVES

Maldives thanks the Secretariat for giving this opportunity to observe the 7th Session of IOTC. This meeting has surely enlightened me on the activities of IOTC in relation to tuna Research and Management.

Maldives, as a coastal State in the Indian Ocean, measures taken to manage, the tuna resources of the Indian Ocean will affect the situation in Maldives.

We hopefully expect to participate in the Scientific Research activities, especially in the areas of tagging.

We look forward for further development and commitment in areas of tuna management in the Indian Ocean.

APPENDIX VI
AGENDA OF THE SEVENTH SESSION

1) **Opening of the Session**
2) **Adoption of the agenda and arrangements for the Session (IOTC-S7-02-01) [for decision]**
3) **Consideration of requests to accede as Cooperating Non-contracting Parties [for decision]**
4) **Admission of observers [for decision]**
5) **Progress report of the Secretariat (IOTC-S7-02-04 and IOTC-S7-02-04 Add.1) [for discussion]**
6) **Programme of Work and Budget for 2003/4 (IOTC-S7-02-05) [for discussion and decision]**
7) **Report of the 5th Session of the Scientific Committee (IOTC-S7-02-06) [for discussion and decision]**
8) **Management issues**

   Consideration on the Terms of Reference for a Control and Inspection Committee (6th Session Report, para. 39) (IOTC-S7-02-07)

   Draft Resolution on an Action Plan to ensure the effectiveness of the conservation programme for bigeye tuna in the IOTC Area of competence, (6th Session Report, para. 42)

   Draft Recommendation relating to the establishment of a Vessel Monitoring System (6th Session Report, para. 42).

   Other Resolutions and/or Recommendations on conservation and management (IOTC-S7-02-08)
9) **Matters arising from the Sixth Session (IOTC/S/06/01/R[E]) [for discussion and decision]**

   Contracting and collaborating party reports on implementation status of IOTC resolutions (Inf. document with the collection of resolutions)

   Consideration on the establishment and Terms of Reference of a Finance Sub-Committee (6th Session Report, para. 88)

   Issues on the selection of a new Secretary
10) **Proposed changes to the Rules of Procedure**

    Proposal from India to change Rule VII 2.: Election of Chairperson and Vice-Chairpersons [for discussion and decision];
11) **Any other matters [for discussion and decision]**

    Relationship with other Bodies.

    FAO
    CCSBT

    Other business

    South Africa
    WWF
    SEAFDEC
    FFA
12) **Date and Place of the Sixth Session of the Scientific Committee and the Eighth Session of the Commission [for decision].**
13) **Election of the Chairperson and two vice-Chairpersons**
14) **Adoption of the report**

APPENDIX VII
LIST OF DOCUMENTS

IOTC-02-01	Provisional annotated agenda for the seventh Session
IOTC-02-02	Provisional list of documents
IOTC-02-03	Provisional list of participants
IOTC-02-04	Progress report of the Secretariat
IOTC-02-05	Programme of Work and Budget of the Secretariat
IOTC-02-06	Report of the fifth session of the Scientific Committee
IOTC-02-07	EC Proposal: Draft terms of Reference for an IOTC Control and Inspection Committee
IOTC-02-08	Japanese Report on the Current Situation of IUU LSTLVs
IOTC-02-09	Requests for accession as Cooperating Non-Member Party
IOTC-02-Inf.1	Japan's Position at the 7th Session of the Indian Ocean Tuna Commission (IOTC) by Fisheries Agency of Japan
IOTC-02- Inf.2	Import Data of Japan
IOTC-02- Inf.3	Report of Bigeye SD(2002.7-8)

APPENDIX VIII
BUDGET FOR 2003

	2003
PROFESSIONAL STAFF	
Secretary - D-1	180,120
Deputy Secretary - P-5	164,784
Management officer - P-4	76500
Data Manager - P-3	134,076
Programmer - P-3	128,820
Translator/Editor P-2	115,000
SUB-TOTAL	799,300
ADMIN. SUPPORT	
Administrative Asst. - G-6	24,420
Database Assistant G-6	21,012
Bilingual secretary - G-4	12,120
Publications Assistant G-5	15,780
Driver/Messenger - G-2	15,348
Messenger/Cleaner - G-1	8,988
Overtime	11,000
SUB-TOTAL	108,668
TOTAL STAFF	907,968
Consultants	25,000
Duty travel	75,000
Sampling	8,000
Meetings	40,000
Interpretation	33,000
Equipment	15,000
Operating expenses	40,000
Miscellaneous	22,000
SUB-TOTAL	1,165,968
Deductions (staff housing)	-22599
TOTAL	1,143,369
FAO Servicing Costs	51,452
GRAND TOTAL	1,194,821

SCALE OF CONTRIBUTIONS FOR 2003 (IN US$)

Country	GNP class (WB 2000)	OECD status	Average Catch (t) (1998-2000)	Contribution (US dollars)
Australia	High	Yes	10,615	$81,595
China, People's republic of	Middle	No	127,780	$54,133
Comoros	Low	No	8,743	$13,257
Eritrea	Low	No	Below 400t	$5,229
European Community	High	Yes	218,044	$310,170
France(Terr)	High	Yes	558	$70,514
India	Low		117,895	$37,313
Iran, Islamic republic of	Middle	No	87,136	$45,176
Japan	High	Yes	44,692	$119,147
Korea, Republic of	Middle	Yes	5,374	$31,894
Madagascar	Low	No	12,000	$13,975
Malaysia	Middle	No	13,654	$28,982
Mauritius	Middle	No	3,219	$26,682
Oman	Middle	No	20,813	$30,559
Pakistan	Low	No	36,607	$19,398
Seychelles	Middle	No	26,118	$31,728
Sri Lanka	Middle	No	98,522	$47,685
Sudan	Low	No	Below 400t	$5,229
Thailand	Middle	No	43,535	$35,567
United Kingdom(Terr)	High	Yes	Below 400t	$63,798
Vanuatu	Middle	No	700	$26,127
			TOTAL	**$1,098,158**

APPENDIX IX
REPORT OF THE FIFTH SESSION OF THE SCIENTIFIC COMMITTEE

OPENING OF THE SESSION

1. The Fifth Session of the Scientific Committee of the Indian Ocean Tuna Commission (IOTC) was held at the Victoria Conference Centre in Victoria, Seychelles, from the 26th to the 29th of November 2002. It was attended by 30 delegates from 11 IOTC Members, as well as five observers from member countries of FAO or other UN agencies and intergovernmental organizations. Dr Shui-Kai Chang attended as invited expert. The list of participants is reproduced in Appendix I.

2. Mr. Renaud Pianet of France, Chairman of the Scientific Committee, chaired the Session. Mr. Pianet welcomed the delegates and noted the large amount of work to be done in the short time available.

ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION (IOTC-SC-02-01)

3. The Scientific Committee adopted the Agenda as presented in Appendix II of this report. The documents available are listed in Appendix III.

ADMISSION OF OBSERVERS

4. In conformity with the decision of the Third Session of the Commission on the admission of observers, the delegates WWF[1], ICCAT[2] and FFA[3] (international organization) were admitted. The Chairman then invited the delegates to introduce themselves.

PROGRESS REPORT OF THE SECRETARIAT (IOTC-SC-02-02)

5. The Secretariat presented IOTC-SC-02-02, outlining staff changes, the core activities of acquisition, processing and dissemination of information pertinent to the tuna fisheries of the Indian Ocean, as well as a work-plan for the year 2002.

6. The acquisition of information remained the main focus of the Secretariat's activities throughout the year. Requests for submission of the mandatory data were sent to all Member and non-Member countries and new data were entered in the databases. Additional data validation procedures were developed, which allowed the identification of various problems in specific datasets. Some of these problems were resolved after contacting the data correspondent for the party concerned.

7. The execution of sampling programmes in Thailand and Malaysia continued during 2002. The inception of sampling programmes since March in Sri Lanka and April in Indonesia will help to complete past and current information on non-reporting longliners operating in the Indian Ocean. More details on these programmes are given under point 5.

8. The development of specific procedures for data entry and validation continued during 2002. New procedures were also created for the preparation of reports and datasets for the Working Parties. The preparation and processing of historical information continued, including major reviews concerning the vessel record database and re-estimation of catches of non-reporting fleets. The Secretariat also carried out statistical analyses and data modelling to assist the work of the Working Parties.

[1] World Wildlife Fund

[2] International Commission for the Conservation of Atlantic Tunas

[3] Fisheries Forum Agency

9. The development of the IOTC statistical software, WinTuna, continued during 2002 and is now fully operative. Modules were adapted to be used for the IOTC sampling programs. A training session on WinTuna was held in Seychelles in August, under the framework of the IOTC/OFCF project, and follow-up training was provided for data entry operators in Indonesia, Thailand and Mauritius.

10. The Secretariat was involved in a number of activities related with coordination and technical support for the Indian Ocean Tagging Programme. IOTC staff were involved in logistic support, hiring consultants, for purchase of equipment and coordination of several pilot tagging experiments and preparation of further proposals of funding of tagging projects. The Secretariat contributed to the preparation of reports on the status of IOTC species and on the survey of predation of longline-caught fish. Support was also given to the Working Parties held in 2002 through the preparation of standard reports and datasets, presentation of documents and editing of the reports of the Working Parties.

11. Activities related to the dissemination of information were carried out as in previous years with the publication and diffusion of data products, proceedings and reports of all the Working Party meetings. The IOTC website was redesigned to expand and improve access to its contents. In addition to all the Working Party and Committee reports, the website now includes electronic versions of virtually all the scientific papers presented to the Working Parties and recent Expert Consultations. These papers have also been published as the Proceedings of the IOTC Working Parties in a CD-ROM format.

12. The Secretariat presented its work plan for 2003, noting that, in addition to the core activities, the start of the Indian Ocean Tagging Programme and the likely extension of the IOTC/OFCF project will considerably increase the workload of the Secretariat.

13. The Committee congratulated the Secretariat on the amount and quality of the work performed during the last year, in particular considering the small number of staff working in the Secretariat, and endorsed the plan of work for the year 2003.

14. The Committee noted that several of the IOTC publications are only distributed in electronic format, recognizing that this may affect the dissemination of the information to several developing countries in the region. It was agreed that the distribution of hard copies of the IOTC publications to selected countries would be needed to allow them to access to the new information available.

15. The Committee recommended that the Secretariat assess the number of countries that would be interested in receiving printed versions of the IOTC publications instead of or in addition to the electronic copies available, informing the Commission at its subsequent meeting on the budgetary implications that this would involve.

16. The Committee noted that, as it had anticipated during the meeting last year, the workload on the Secretariat during 2002 has increased due to the planned execution of various field activities. This situation is expected to worsen during 2003 as the field activities will expand even further, more Working Parties meetings are scheduled than in 2002 and additional responsibilities are expected to be added.

17. In this respect, the Committee recognized that monitoring of the Bigeye Tuna Statistical Document programme and the establishment of a Control and Inspection Committee in 2003 will require the development of new databases and reports from the Secretariat. The execution of pilot studies and small-scale tagging projects planned for 2003 will also require direct support from the Secretariat. Furthermore, more preparatory work will be required from the Secretary in support of the species Working Parties in 2003.

18. At the current staffing level, the Scientific Committee believes that the Secretariat will have to reduce its involvement in activities essential to address the mandate of the Commission. Therefore, the Committee strongly recommended that the Secretariat staff be increased by recruiting two additional professional posts in 2003, one at a P-4 and one at a P-3 level. These new posts are considered essential to complete the tasks which have been assigned by the Commission and the Scientific Committee.

19. The Committee further agreed that the involvement of scientists from member countries in the completion of several short-term activities at the Secretariat could be of mutual benefit. In this context the Committee recommended that all Members and Cooperating Parties of the IOTC consider the assignment of scientists to short-term projects to be carried out at the Secretariat. This, it was considered, would have

funding implications as, although the salary of the seconded personnel would be paid by the parent institutions, travel and subsistence funds would presumably have to be provided by the Commission.

PROGRESS REPORT OF THE IOTC-OFCF PROJECT (IOTC-SC-02-08)

20. The Secretariat informed the Committee on the activities carried out under the scope of the IOTC-OFCF Project during its first year of operation. The Project funds become available on April 1st and two OFCF[4] Experts arrived to Seychelles on 18th April.

21. The Secretariat informed the Committee that the implementation of a catch monitoring scheme in Indonesia in cooperation with local (DGCF[5], RIMF[6]) and foreign institutions (CSIRO[7]-ACIAR[8]) had taken most of the time and resources of the Project. The activities started with the creation of a Steering Committee in February and continued throughout the year, involving several trips of IOTC and OFCF staff to the country. The main objective of the Project is the collection of information on the activities of fresh-tuna longliners in Indonesia. Sampling is conducted in the ports of Jakarta, Benoa and Cilacap where this fleet lands its catch and lists of licensed vessels and vessel activity records are collected from the DGCF and port authorities.

22. The Secretariat noted that more than 50,000 fish had been monitored in only two months of operation, with valuable biological information collected at the same time. Vessel lists and activity records have also been collected as planned.

23. Other activities during 2002 included a training course on WinTuna for users and administrators held in Seychelles in August, involving twenty participants from ten countries, the extension of the IOTC sampling in Thailand, the provision of computer equipment, implementation and training on WinTuna in Mauritius and preliminary arrangements with the authorities of the Sultanate of Oman to extend the sampling programme to include length-frequency measurement of yellowfin tuna caught by its fisheries.

24. The Secretariat proposed that the activities during next year should concentrate on the monitoring of the on-going projects, transfer of the sampling programme in Sri Lanka to the IOTC-OFCF project and start of sampling in Oman. Description of the fisheries and the data collection and processing systems of selected countries in the region will be followed by a Regional Workshop on Statistical Systems, scheduled to be held in Seychelles in the last quarter of 2003.

25. The Committee commended the OFCF for the considerable progress achieved during the first year of operation of the Project. The Committee noted that the amount of data collected in the scope of the Project was of utmost importance and considered that its extension will further improve the cooperation between coastal countries and the IOTC and boost the collection of relevant fisheries data.

26. The Secretariat confirmed that the port sampling included sampling of non-target species, including sharks. The Committee recommended that the sampling of by-catch from fresh-tuna longliners be continued in order to assess the amounts of NTAD[9] species caught by this fleet. However, the Committee noted that there are difficulties to conduct the sampling of sharks in the context of the IOTC-OFCF project.

PRESENTATION OF NATIONAL REPORTS

27. The following National Reports were presented to the Scientific Committee and discussed : IOTC-SC-02-Inf1 (EC-France), IOTC-SC-02-Inf2 (UK), IOTC-SC-02-Inf3 (Korea), IOTC-SC-02-Inf5 (EC), IOTC-

[4] Overseas Fishery Cooperation Foundation of Japan

[5] Directorate General of Capture Fisheries

[6] Research Institute of Marine Fisheries

[7] Commonwealth Scientific and Industrial Research Organisation

[8] Australian Centre for International Agricultural Research

[9] non-target, associated and dependent species

SC-02-Inf7 (EC-Spain), IOTC-SC-02-Inf8, (Japan), IOTC-SC-02-Inf9 (China), IOTC-SC-02-Inf10 (Mauritius) and IOTC-SC-02-Inf11 (Thailand).

28. In addition, India and Seychelles provided the Scientific Committee with verbal updates of their National Reports. The invited expert provided a summary of the current situation of the fishery from Taiwan,China. The abstracts of the documents and verbal updates are included in Appendix IV.

29. The Committee noted that the EC programme to monitor the catches of non-targeted, associated and dependent species on European purse seiners and longliners will be useful to estimate the catches of species that are not usually available from logbooks.

30. To a question on the current sampling of purse seiners under flags other than EC operating in the Indian Ocean the EC delegate indicated that part of this fleet was sampled in the same way as the Spanish fleet.

31. The Committee stressed the importance of the data collected by UK observers on purse seine and longline vessels operating within the BIOT[10](Chagos Archipelago) FCMZ[11] for the estimation of catches of non-target, associated and dependent species and discards. It was noted that the high catch rates of non-targeted species on longliners might have implications for the interpretation of the catch rates of target species due to the decrease of the number of hooks available.

32. The Scientific Committee noted with satisfaction that Korea has taken measures to improve the collection of size frequency data. Questions were raised as to the reasons for the marked reduction of the longline fleet in 1991; however a clear answer does not seem to be available at the time.

33. It was remarked that predation of tunas in the Mauritian longline fleet is mainly the result of pilot whales, however, it was indicated that it is sometimes difficult to distinguish between this species and false killer whales. The Secretariat suggested that cetacean identification sheets designed by the Zoological Society of Paris would help fishermen in the identification of this kind of predator and that it could be produced on waterproof material for distribution.

34. It was noted that, in the past, some catch and effort, as well as size frequency data from the Indian fleets have not been made available to the Secretariat because the data were being used by scientists from a number of institutions. It was indicated that corrective actions have been taken on this issue and that India will submit this information to the Secretariat in the near future.

35. The Scientific Committee remarked that Seychelles, in spite of being a small fishing country, was very important in terms of strategic location and the activity of foreign fleets. The efforts and achievements of this country to improve their data collection systems are commended and appreciated.

Guidelines for the National Reports

36. The Scientific Committee discussed a set of guidelines for the preparation of National Reports, attached as Appendix V. The proposed guidelines include four sections covering (i) general fisheries statistics, (ii) progress on the implementation of recommendations of the Scientific Committee, (iii) progress on national research programs currently in place, and (iv) any other relevant information. The Scientific Committee adopted the guidelines proposed by the Secretariat, indicating that national reports should emphasize sections (ii) and (iii), since the national fisheries statistics are already presented and discussed in detail during the WPDCS. In addition, it was agreed that the section (i) should, as much as possible, be limited to the five most recent years and that, if necessary, short descriptions of the results of national research programs could be included in section (iii). The guidelines will be posted in the IOTC website.

[10] British Indian Ocean Territory

[11] Fishery Conservation and Management Zone

REPORT OF THE WORKING PARTIES

Report of the Permanent Working Party on Data Collection and Statistics (WPDCS) (IOTC/SC/02/03)

37. The Third Meeting of the Working Party on Data Collection and Statistics took place in Mahé, Seychelles on November 25th 2002 with the participation of 23 scientists from various countries.

38. The WPDCS reviewed the situation of the data holdings at the Secretariat, noting improvement in several areas, including the retrieval of important historical datasets from several countries, better estimation of the catches of fresh-tuna IUU vessels, progress in the sampling programmes in Thailand, Malaysia and Sri Lanka and the implementation of a sampling programme in Indonesia under the scope of the IOTC-OFCF Project. At the same time, it was noted that there is still no information reported about the fleet of IUU deep-freezing longliners and the former-Soviet purse-seine vessels that continue to operate in the Indian Ocean. The situation of the data holdings for nominal catches and catch-and-effort data has improved considerably in the past year, although the scarcity of size-frequency data from the longline and artisanal fisheries continues to be a major impediment for the application of rigorous stock assessment.

39. The WPDCS noted the following situation by groups of species:

- Tropical Tunas: Problem areas include the poor knowledge of catches and effort of IUU vessels and the lack of size-frequency information for these IUU vessels and the Taiwan,China, longline fishery, the latter since 1989. The WPDCS noted the improvements in the levels of catch reporting, collection of vessel registry information, estimation of IUU catches, estimation of Indonesian longline catches, recovery of historical data and establishment of new sampling programmes by the Secretariat.
- Billfish: Species aggregation, mislabelling, underreporting and non-reporting are widespread problems, indicating that, although data in the Secretariat's database are considered accurate and reliable for minor fishing entities, they are far from complete. The lack of size frequency statistics from Taiwan,China since 1989 is of concern.
- Neritic Tunas: Reporting of catches of neritic tunas has also been incomplete. In recent years catches have not been reported or were reported aggregated for many Indian Ocean coastal countries. Catch and effort and size frequency statistics for these species are conspicuously absent from the IOTC database because they are rarely included in the data submissions. It is thought, however, that many countries may have collected information for these species.
- Temperate tunas: The quality of the reporting of catches and effort for albacore has been declining since the mid-eighties, in proportion with the increase of IUU longliners operating in the Indian Ocean. Nevertheless, the completeness of the catch and catch-and-effort data is still good. In contrast, the size frequency statistics are poorly represented, because of the lack of reporting by Taiwan,China (since 1989) and IUU fleets.

40. The Committee noted the progress achieved in different areas since its last meeting and commended the Secretariat for its effort to achieve these results. Nevertheless, the Committee stressed that, in spite of the progress, the availability and quality of the statistics gathered at the Secretariat was still very low for several species, periods and fleets, this hampering the work of the Working Parties.

41. The Committee stressed that the timeliness of data submissions must be improved and encouraged countries to provide their data before the stated deadlines. This is important to ensure that the Secretariat can process this information in a timely manner for the activities of the Working Parties.

42. The Committee expressed its satisfaction to learn that the catch-and-effort and size-frequency data from Taiwan,China will be made available for collaborative studies to be presented the nest species Working Parties, and will be submitted to the Secretariat afterwards.

43. The Committee also strongly recommended that Japan and Korea make every possible effort to increase the sampling effort to ensure that the size-frequency samples are representative of the size distribution of the catch.

44. The Committee expressed further concern regarding the extensive lack of catch and effort and size frequency statistics for important artisanal fisheries, especially those operating gillnets.

45. The Committee agreed that the Secretariat should make every possible effort to produce previous year catch estimates for the Working Parties.

46. The Committee noted with satisfaction that, in line with its previous recommendations, several national observer programmes are being planned or already implemented. These programmes will allow the estimation of bycatch and discards in the main industrial fisheries.

FAO Expert Consultation on Harmonization of Catch Certification (IOTC-SC-02-09)

47. The Secretary reported on a meeting held from 9 to 11 January 2002 in La Jolla, California. The meeting recognized that there were currently two forms of catch documentation schemes in use by different regional fishery bodies, categorized respectively as "catch" and "trade" documentation schemes. These two schemes are distinguished by the fact that catch documentation should be delivered immediately following authorized fishing activities and covers fish landed or transhipped and traded within a country, whereas trade documents are delivered when the fish is landed or transhipped and only applies to fish traded internationally.

48. Trade documentation schemes such as the IOTC Bigeye statistical documentation scheme do not provide an exhaustive enumeration of the bigeye tuna caught by longline fisheries. The main value of such a scheme resides in the possibility of identifying all the vessels catching bigeye tuna. This is of particular importance in the case of longliners that tranship their catch at sea and may never pass through the port of an Indian Ocean coastal country, thus escaping enumeration in the Vessel Record.

49. At a minimum, therefore, the Scientific Committee recommended that the Commission should envisage a requirement for all the information accompanying each shipment of bigeye tuna from Contracting as well as non-Contracting Parties to be transmitted to the Secretariat, notably the elements identifying the vessel. Inclusion of the vessel trip dates (beginning and end of each trip), fishing area, gear used, and landing or transhipment date on each document would provide valuable additional information on the activity level of each vessel concerned. This information will allow identifying whether the catches originate from the Indian Ocean.

Report of the Working Party on Methods (WPM) (IOTC-SC-02-04)

50. For logistic reasons, the meeting of the ad hoc Working Party on Methods (WPM) was held as a sub-group of the Working Party on Tropical Tunas. It was convened on June 3rd 2002 in Shanghai, China. The chairman of the Working Party presented the report (Document IOTC-SC-02-04).

51. The agenda of the WPM concentrated on four main issues, namely (i) review of existing applications of operating models, (ii) review of stock status indicators, (iii) review of procedures for raising size frequency and catch-and-effort data and (iv) methods for standardizing catch-and-effort data.

52. The WPM reviewed a number of previously used status indicators and identified other additional contenders. It was considered that status indicators must be tested for robustness before recommendations can be made. The use of an operating model together with a protocol for testing was suggested as a possible way to achieve this.

53. The WPM identified several important issues encountered when applying GLMs to standardize CPUE data and drew them to the attention of the WPTT.

54. It was agreed that, in the case of IOTC, the main priority for an operating model should be the evaluation of robustness of stock indicators, CPUE standardization procedures and assessment methods. A small group was assigned to work intersessionally on identifying existing operating models, evaluating their suitability for use in IOTC and identifying areas for further (or new) development of models. Due to limitations of staff and time, the Secretariat was able to achieve little development in this area. However, the Scientific Committee was informed of three new operating model projects being developed by CSIRO, and by CCSBT (used to test the robustness of the stock assessments of SBT), and by the EC (used for management strategy evaluation).

55. The Scientific Committee noted that the IOTTP would require a simulation model to evaluate the most effective number and location of tags. It was suggested that a consultant could be contracted to develop a core set of procedures that could be useful for the tagging programme as well as an operating model.

56. The WPM considered that IOTC should be aware of initiatives in other non-tuna commissions regarding the adoption of an ecosystem approach, and recommended that information and developments be brought to the attention of the Committee.

Report of the Working Party on Tropical Tunas (WPTT) (IOTC-SC-02-05)

57. The Fourth Meeting of the Working Party on Tropical Tunas (WPTT) took place in Shanghai, People's Republic of China, on June 3rd-11th 2002. As instructed by the Scientific Committee, the WPTT gave priority to the assessment of yellowfin tuna. The Chairman of the WPTT introduced the report and executive summaries presenting the situation of the three species under its mandate.

58. The Scientific Committee commended the WPTT for the amount of work done, particularly considering the reduced time available for the meeting. It recognized that holding simultaneously three Working Parties meetings (WPM, WPT and WPTT) in the limited time available posed several logistic problems, which affected the ability of the WPTT to produce a final version of the report at the meeting. It was recommended that this be taken into consideration during the planning of the next Working Party meetings.

59. The Committee adopted the executive summaries for yellowfin, bigeye and skipjack tunas, which are listed in Appendices VI to VIII.

60. The Committee also noted the importance of including in the report a sufficient number of figures to illustrate main features of the fisheries and to display information relevant to the conclusions of the Working Party.

61. For reasons of scientific transparency and documentation of its work, the Committee considered important that it be possible to reproduce all the analyses performed during the meeting. To this effect, the addition of an Addendum to the report of the WPTT, containing detailed descriptions of the analyses carried out during the meeting by the participants, was welcomed by the Committee. The Committee also indicated that it was equally important that copies of the software used, together with the input files used and the output files generated be deposited with the Secretariat. This information would be subject to the same rules of confidentiality applying to special datasets made available to the Working Party.

Management recommendations:

Yellowfin tuna:

62. Considering all the stock indicators and assessments, as well as the recent trends in effort and total catches of yellowfin, the Scientific Committee considered that:

a. Total catches under current fishing patterns are close to, or possibly above MSY. Furthermore, catches by all main gears have been increasing both consistently and substantially in recent years. In these circumstances, any further increase in both effective fishing effort and catch above levels in 2000 should be avoided.

b. The current trend for increasing fishing pressure on juvenile yellowfin by purse seiners fishing on floating objects is likely to be detrimental to the stock if it continues, as fish of these sizes are well below the optimum size for maximum yield per recruit.

Bigeye tuna:

63. The Scientific Committee had already noted with concern the rapid increase of catches of bigeye tuna at its meeting in 1999. Since then, catches have remained high. Taking into account the results of the current assessments, which represent the best effort to date to analyse the available data in a formal context, it is likely that current catches are well above MSY. Therefore, the Committee recommends that a reduction in catches of bigeye tuna from all gears, eventually to the level of MSY, be started as soon as possible.

Skipjack tuna:

64. At this stage, the Scientific Committee has not made any specific management recommendation concerning skipjack tuna, as it appears that this stock is still in good condition.

65. The Scientific Committee was informed of two meetings to be held by ICCAT in the coming years related to the activities of the WPTT. The first is a worldwide meeting on bigeye tuna to be held in 2004 in Spain, and which is a follow up to the one that took place in 1996 in La Jolla. The second is a Working Group on environmental issues related to tuna, also to take place in 2004. The Scientific Committee agreed that both meetings are relevant to the work of IOTC and that interested scientists should make an effort to participate, particularly in the organization of the meetings.

Report of the Working Party on Tagging (WPT) (IOTC-SC-02-06)

66. A meeting of the WPT was held in connection with the 4th Working Party on Tropical Tunas in Shanghai, China, between June 3 and 11, 2002. The chairman of the Working Party presented the report, which summarizes the current situation of the tagging programmes, as document IOTC-SC-02-06.

67. Initial funding, which will amount to about US$300 000 annually, is available to the Secretariat for tagging, and a number of activities were initiated in 2002 with the involvement of tagging experts. These activities included pilot tagging (Mayotte and Seychelles) and the conduct of technical studies on specific problems, for example in relation to the issue of livebait resources which are essential for the effective conduct of future tagging.

68. Japan confirmed that will provide funding at a level of approximately US$80,000 per year, for a period of five years, subject to annual reviews.

69. The WPT expressed satisfaction on the progress achieved with the large scale tagging project, which will be funded by the EC at a level of €4.5 million, the funding request for which is being prepared by consultants to the *Commission de l'océan Indien*. The WPT noted that this exercise will be finalised towards the end of 2002.

70. The WPT also recommended the conduct, starting in 2003, of various pilot and small-scale tagging activities in countries that have been identified, using funds allocated to IOTC; these operations will have limited scientific objectives but are judged to be of substantial interest. These operations will be conducted in parallel with the large-scale tagging project which will be carried out with the use of a livebait pole-and-line vessel with EC funding. The WP also prepared a list of technical recommendations aimed at the effective conduct of tagging, for example related to livebait, publicity for tagging and tag recovery, tagging in sport fisheries, etc.

71. The WPT, while expressing satisfaction for the progress achieved towards implementing tagging of tunas in the Indian Ocean, was concerned that no tagging project has yet been identified in the eastern Indian Ocean. The WPT reiterated the recommendation made in 2000 and 2001 to the effect that it is essential to tag tunas in a coherent manner over the whole of the Indian Ocean if the objectives of the tagging programme are to be achieved.

72. Some concerns were expressed regarding the way tag recovery rates would be estimated. It was indicated that for purse seiners, EC observers could be used for seeding tags. It was agreed that it is necessary to produce a more specific plan of action on tag seeding when the IOTTP[12] is implemented.

73. Recovery rates for longliners could be estimated by comparing the rates from vessels where an observer is on board with those from vessels without observers. However, for this approach to be successful, the observer coverage rate needs to be sufficiently high.

74. Several alternatives were discussed for using live and dead bait. It was agreed that a project should be undertaken in Seychelles to study the possibility of locating and capturing live bait. In the eastern Indian Ocean, Indonesia is known to have a well-developed bait fishery which supports a pole-and-line fleet.

75. The EC reported on a new project, TAGFAD, funded by the EC at a level of €800,000 which will place archival tags on tunas associated with FADs. This project has received support from the fishing industry.

[12] Indian Ocean Tuna Tagging Programme

76. The Scientific Committee welcomed this initiative as well as the one presented in the report of the FADIO project (IOTC-SC-02-Inf4), indicating that results derived from these projects might be useful for the better understanding of the effects of FADs on Indian Ocean tuna stocks.

77. Preliminary simulation studies concerning tagging have been undertaken. They should be quickly finalized to allow optimizing future tagging operations. It was mentioned that funding from the EC has been requested for a three-month consultancy to develop a simulation model that would allow estimation of the number of fish that would be necessary to tag in order to achieve the goals of the programme. The Committee welcomed these initiatives and encouraged further work in this area.

78. The problem of publicizing the programme, in particular at the level of artisanal fisheries, was also discussed. Posters on the objectives and methods of the IOTTP have been printed in English and French and are being translated to Spanish. Posters publicizing the rewards for tag recoveries have been designed and deployed in Mayotte and Seychelles. Scientists from China volunteered to translate these posters to Chinese. India indicated that they have public electronic boards that provide artisanal fishermen with weather and satellite-based fishery forecasts, and volunteered the use of these boards to advertise the tagging programme to their fishermen.

79. The Scientific Committee commended the work of the Working Party on Tagging, indicating that a good deal of work has been done this year. It was noted that the situation of funds and resources to implement the project in the western Indian Ocean seems to be on good track. However, operational concerns may limit the possibilities of using these resources in the eastern Indian Ocean. It was agreed that, to ensure the effectiveness of the tagging project, it is necessary that tagging takes place in both areas. It is recommended that every possible effort be made to obtain the necessary resources.

80. The Scientific Committee also considered that it is necessary to create a small advisory committee for allocating priorities and resources for the pilot tagging projects. It was agreed that this steering committee should include the Chairpersons of the Working Parties on Tagging and Tropical Tunas, the Chairperson of the Scientific Committee and the Secretariat.

81. The Scientific Committee encouraged countries to assume responsibility at the national level for the tagging project through the development of their own tagging initiatives, by participating in the small-scale tagging projects and/or by providing funds for the project. In addition, it is important that countries make every possible effort to publicize the project and to ensure reporting of tag recoveries.

82. The Scientific Committee restated its strong support for the IOTTP. The Committee emphasized that no reliable assessment in the Indian Ocean could be achieve without a comprehensive tagging programme. This is a continuous cause for concern considering the continuous increases in tuna catches and the risk of overexploitation to some of the species.

Report of the Working Party on Neritic Tunas (WPNT)

83. The Secretariat informed the Committee that the Working Party on Neritic Tunas, that was expected to meet in Bandar-Abbas (Iran), had to be cancelled two weeks before the scheduled date, as only four scientists from the seventy contacted had confirmed their participation.

Schedule of Working Party meetings in 2003

84. The Committee recommended that the Working Party on Data Collection and Statistics be held in 2003 just before the sixth Session of the Scientific Committee to facilitate participation of scientists also attending that meeting. The Committee noted that the section of National Reports concerning summary fishery statistics was more appropriately discussed in the context of the WPDCS than in the Scientific Committee. The Committee recommended that the duration of the WPDCS be extended to two days to deal with National Reports and that the SC meet on the four following days.

85. The Committee agreed that the Working Party on Tropical Tunas should meet for six days during the first two weeks of June 2003 in Seychelles, with priority given to skipjack tuna. The Committee agreed that new assessments of bigeye tuna be conducted only if time is sufficient.

86. The Committee agreed that the Working Party on Tagging should meet for two days immediately after the Working Party on Tropical Tunas, also in Seychelles.

87. The Committee agreed that there was no immediate need for the Working Party on Methods to meet in 2003. The Committee further agreed that the current *ad-hoc* work conducted on operating models should continue during 2003 and be revised by the WPM in 2004. The Committee was informed of a tentative meeting to be organized by ICCAT that will be held in 2003 to discuss on the development of integrated models in the context of its BETYP programme.

88. The Secretariat informed the Committee that new data on billfish, especially swordfish, is likely to be available in 2003. The Committee agreed that this justified that the Working Party on Billfish meet in 2003 in Seychelles. The Committee agreed that a five day meeting of the WPB be scheduled for September 2003.

89. The Committee agreed that the Secretariat should continue with the arrangements for the first meeting of Working Party on Neritic Tunas to be held in 2003. The Committee requested the Secretariat to contact the scientists in the region early next year to decide on the date and venue of the meeting.

90. The Committee noted with concern the low participation of scientists from coastal countries to Working Party meetings agreeing that this is in most cases due to lack of funding. The Committee suggested that the Commission should envisage funding the participation of key participants from developing Indian Ocean coastal States that have no alternative financing.

91. The Committee noted the high catches of albacore in recent years. The Committee requested the Secretariat to prepare a document on the status of albacore similar to that of the executive summary on skipjack tuna. The Committee agreed to evaluate the situation of this species at its 2003 meeting and to assess then the need for convening a meeting of the Working Party on Temperate Tunas.

92. The Committee also requested that the Secretariat invite CCSBT[13] to provide a short Executive Summary on the status of the southern bluefin tuna for the next session of the Committee.

93. The Secretariat informed the Committee that the catches of southern bluefin tuna have been updated in 2002 and are now in agreement with those held by CCSBT. The Secretariat informed the Committee on an invitation extended by the CCSBT for the IOTC Secretariat to participate in a meeting that will be held in April 2003. The current methods to estimate the catches of southern bluefin tuna in Indonesia will be reviewed during the meeting.

PROGRESS ON A SURVEY OF PREDATION OF LONGLINE-CAUGHT FISH (IOTC-SC-02-10)

94. The Secretariat presented document IOTC-SC-02-10 summarizing the progress on a survey of predation on longline-caught fish. The collection of information on this subject continued during 2002 and a considerable amount of data has already been gathered by various participants.

95. The Scientific Committee invited the countries involved in the survey of predation of longline-caught fish to report on the progress achieved during 2002.

96. Japan presented document IOTC-SC-02-12, containing a progress report on surveys of predation of Japanese longline-caught fish. In 1998 and 1999, the Scientific Committee recommended that predation of longline catches be further studied. Japan started the predation survey in September 2000, with the participation of about 450 longliners belonging to the Japan Tuna Federation. Since then, a total of 8,810 longline operations reported damage to tuna and tuna-like species from predators in the three oceans. The figures indicate that damage in the Indian Ocean, and particularly in the equatorial waters and off the south-east coast of Africa, are almost twice that in the Pacific and Atlantic Oceans. The average composition of predators involved is 35% toothed whales, 63% sharks and 5% other predators.

97. India presented document IOTC-SC-02-13 on the results of a study on predation of yellowfin tuna in the longline catches from Indian waters. This study involved two longline survey vessels operated by the Fishery Survey of India (FSI). One of the vessels operates in the Arabian Sea, while the other operates in the Andaman and Nicobar waters. Sharks are identified as the main predator. Observations seem to indicate that

[13] Commission for the Conservation of Southern Bluefin Tuna.

certain months (i.e. July in the Arabian Sea and May for the Andaman waters) show higher predation rates. The percentage of annual predation on yellowfin tuna was found to be 10.8% in the Arabian Sea and 5.5% around the Andaman islands.

98. The Seychelles are highly concerned, as predation by marine mammals represents a major economic loss for their semi-industrial longline fishery. Information on predation has been collected since the beginning of the domestic fishery in 1995. Since 1999, foreign longline fleets licensed in Seychelles have been supplied with modified log sheets so as to record the number of fish lost to predation by set. Predation rates reported for 2002 amounted to 12% of the catches, ranging between 10-15% depending on the species.

99. The EC informed that predation information has been collected in La Réunion since 1992, noting that pilot whales were the predators most observed. Funds had been allocated to study this subject and a Project will be starting by the first quarter 2003.

100. Mauritius reported surveys that indicate that marine mammal predation rates reach about 20% during the summer months, and is lower during the winter.

101. The Scientific Committee agreed that these studies are of great importance and encouraged participating countries to continue with this work. The Committee agreed that the amount of countries involved and data collected on predation justify the creation of a centralized database. The Committee recommended that all data available on predation be forwarded to the Secretariat and a database created and maintained to gather this information. Japan offered assistance in this task. The Committee noted that very detailed information was collected agreeing that the Secretariat should not disseminate the data without the previous consent of the reporting country.

102. The Committee also requested that countries involved in these studies report their findings to the appropriate Working Party, and in particular to the WPTT and the WPB.

ANY OTHER BUSINESS

Creation of a Working Party on Bycatch

103. The Committee recognized the importance of considering the impact of fishing on the ecosystems associated with the target tuna species and that this issue would be advanced most effectively through the establishment of a Working Party on Bycatch. The Committee identified several potential issues with a range of bycatch species in both artisanal and industrial tuna fisheries and highlighted the issue of shark bycatch due to the level of catch of these species, the high vulnerability of some shark stocks to mortality from fishing and their top position in oceanic ecosystems.

104. The Committee recommends the following:

a. that each Member develops a National Plan of Action on Sharks as identified by the FAO International Plan of Action on Sharks;

b. that the IOTC develops and presents a Regional Plan of Action on Sharks to the FAO;

c. the establishment of a Working Party on Bycatch; and,

d. that Members are reminded that all retained catch and any discards associated to tuna fisheries should be reported to the Secretariat, as practical as possible.

105. The Working Party on Bycatch, in the first instance, should consider the following issues:

a. Identify major bycatch species in Indian Ocean tuna fisheries;

b. Investigate means to monitor and assess bycatch in general with initial emphasis on sharks;

c. Exchange information on bycatch and identify methods to carry out assessments of bycatch;

d. Liaise with groups investigating bycatch issues for other regional bodies (e.g. CCSBT, IATTC[14], ICCAT, CCSBT) involved with the management of tunas; and

e. Propose measures to reduce unsustainable bycatch, as appropriate.

f. Encourage the conduct of research on ecosystems.

106. It was recommended that a small group be created to facilitate communication on bycatch issues among Members and that, in the first instance, the discussions should focus on issues relevant to shark species. A Chairperson should be identified to facilitate exchange of information through the small group, coordination of future activities and reporting to the Scientific Committee. It is recommended that the group meet briefly during the next meeting of the Working Party on Tropical Tunas and plan future activities, as appropriate.

Research on tunas in relation with the environment and ecosystem

107. The Committee was informed that, at the last meeting of the sub-committee on the Environment of the ICCAT SCRS[15], it was recommended that in 2004 a meeting be organized to define and make available data and indices on environmental characteristics which might be relevant for assessment and management of tuna stocks. This meeting will be open to participation by other tuna regional fisheries bodies concerned with similar issues with the goal of holding a meeting in early 2004.

108. The Committee welcomed this initiative and supported the participation in the proposed activities.

109. CLIOTOP, a new IGBP/GLOBEC project was presented in IOTC-SC-02-Inf5. CLIOTOP is a research project devoted to the application of the comparative approach to elucidate the influence of climate on key ecosystem processes involving tuna and other top predators. CLIOTOP will end its implementation meeting late in 2003.

110. The Scientific Committee expressed its appreciation for the information presented and welcomed the CLIOTOP initiative indicating that the issues treated by this project might be of relevance to the work advanced by the Working Parties.

ELECTION OF THE CHAIRPERSON AND VICE-CHAIRPERSON FOR THE PERIOD 2003-2004

111. The Committee unanimously elected Dr Geoffrey Kirkwood from the UK as the Chairman of the Scientific Committee for the period 2003-2004, to replace Mr Renaud Pianet, from France, who completed his mandate. The Committee expressed its deepest appreciation for the contribution of Mr Pianet, who through his dedication and experience, successfully steered the Scientific Committee through its first four years of existence.

112. The Committee also elected unanimously Prof. Xu Liu Xiong, from the People's Republic of China as the vice-Chairman for the biennium. The Committee also expressed its greatest appreciation to the departing vice-Chairman, Dr. V.S. Somvanshi from India, for his contribution during the past four years.

ADOPTION OF THE REPORT

113. The Report of the Fifth Session of the Scientific Committee was adopted on November 29th 2002.

[14] Inter-American Tropical Tuna Commission

[15] Standing Committee on Research and Statistics

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APPENDIX II. AGENDA OF THE MEETING

1. *Opening of the session*
2. *Adoption of the agenda and arrangements for the session (IOTC-SC-02-01)*
3. *Admission of observers*
4. *Progress report of the Secretariat (IOTC-SC-02-02)*
5. *Progress report of the IOTC-OFCF project (IOTC-SC-02-08)*
6. *Presentation of national reports*
7. *Reports of the Working Parties*
   - *7.1. Report of the permanent Working Party on Data Collection and Statistics (WPDCS) (IOTC-SC-02-03)*
     - *7.1.1. Harmonization of catch certification schemes (IOTC-SC-02-09).*
   - *7.2. Report of the ad hoc Working Party on Methods (WPM)(IOTC-SC-02-04)*
     - *7.2.1. Applications of an operating model for testing new assessment methods (IOTC-SC-02-11)*
   - *7.3. Report of the Working Party on Tropical Tunas (WPTT) (IOTC-SC-02-05)*
     - *7.3.1. Presentation of the executive summaries of the status of the yellowfin and bigeye tuna resources*
   - *7.4. Report of the Working Party on Tagging (WPT) (IOTC-SC-02-06)*
     - *7.4.1. Recent activities in relation with the IOTTP*
   - *7.5. Report of the Working Party on Neritic Tunas (WPNT) (IOTC-SC-02-07)*
   - *7.6. Schedule of Working Party meetings in 2003*
8. *Progress on a survey of predation of longline-caught fish (IOTC-SC-02-10)*
9. *Any other business*
10. *Election of the chairperson and vice-chairperson*
11. *Adoption of the report*

APPENDIX III. LIST OF DOCUMENTS

IOTC-SC-02-01	Adoption of the Agenda and arrangements for the Session.
IOTC-SC-02-02	Progress Report of the Secretariat.
IOTC-SC-02-03	Report of the Permanent Working Party on Data Collection and Statistics (WPDCS).
IOTC-SC-02-04	Report of the ad hoc Working Party on Methods (WPM).
IOTC-SC-02-05	Report of the Working Party on Tropical Tunas (WPTT).
IOTC-SC-02-06	Report of the Working Party on Tagging (WPT).
IOTC-SC-02-07	Report of the Working Party on Neritic Tunas (WPNT).
IOTC-SC-02-08	Progress Report of the IOTC-OFCF project.
IOTC-SC-02-09	Harmonization of catch certification schemes.
IOTC-SC-02-10	Progress on a survey of predation of longline-caught fish.
IOTC-SC-02-11	Applications of an operating model for testing new assessment methods.
IOTC-SC-02-12	Progress report on surveys of predation of longline-caught fish (Japan). *National Research Institute of Far Seas Fisheries, Japan*
IOTC-SC-02-13	Observations on predation of Yellowfin tuna in the longline catches from Indian waters. *Somvanshi, V.S. and S. Varghese*
IOTC-SC-02-inf1	EC France - Rapport national 2002.
IOTC-SC-02-inf2	A summary of the 2001 / 2002 Fishing Season in the British Indian Ocean Territory (Chagos Archipelago) Fisheries Conservation and Management Zone. *Pearce, J., N. Ansell, N. Mynard, and G. Kirkwood,*
IOTC-SC-02-inf3	Korean Tuna Longline Fishery in the Indian Ocean. *An Doo-Hae, Dae-Yeon Moon and Jeong-Rack Koh*
IOTC-SC-02-inf4	FADIO: a project on the study of tuna behaviour around FADs from tagging and acoustics. *Dagorn, L.*
IOTC-SC-02-inf5	Overview of the planned activities on the European purse seine fleets in the Indian Ocean in 2003 in relation with IOTC recommendations: Onboard observer and tagging. *Pianet, R., P. Pallares, A. Fonteneau and H. Arrizabalaga,*
IOTC-SC-02-inf6	CLIOTOP (CLimate Impacts on Oceanic TOp Predators), a new GLOBEC regional programme for open ocean ecosystem processus comparative analysis. *Maury, O.*
IOTC-SC-02-inf7	EC-Spain – National report 2002.
IOTC-SC-02-inf8	Statistics and status of Japanese tuna fisheries in the Indian Ocean. *Okamoto,H. and N. Miyabe*
IOTC-SC-02-inf9	China national tuna fishery report in IOTC waters (draft). *Xu Liu Xiong & Dai Xiao Jie*
IOTC-SC-02-inf10	Status of Tuna Fisheries in Mauritius. *Norungee, D.*
IOTC-SC-02-inf11	Small tuna fisheries and resources in the Andaman sea. *Pokapunt, W.*

APPENDIX IV. NATIONAL REPORT ABSTRACTS

Abstract of Document IOTC-SC-02-Inf1 (France on behalf of its Overseas Territories)

During the last 5 years, tuna catches have varied between 400 and 600 t a year. This amounts to about 10% of the total catches from the artisanal fishery.

In 2001, total catches of tuna reached 650 t and are 95% due to the artisanal fishery (handline). The emergence of a small-scale longline fishery can be noted, with the arrival of two longline vessels of less than 10 metres overall length. The total catches for those vessels for 2001 were of 45 t, of which tunas and tuna-like species account for 44% (20 t).

A pilot tagging programme, aiming at assessing the potentialities for tagging, was implemented in Mayotte. In the light of the successful results, a small-scale tagging programme should be implemented during the first half of 2003.

Abstract of Document IOTC-SC-02- Inf1 (EC-France)

Two fleets operate in the Indian Ocean, purse seiners based on Seychelles and Antsiranana (Madagascar) and longliners based on La Réunion. The landings of these fleets are monitored to produce catch-and-effort statistics and length-frequency samples.

Virtually all the 12 recommendations concerning EC-France were acted upon or will be in 2003. Two organizations, IRD and IFREMER are involved in research activities on high seas pelagic resources and their ecosystems. IRD is conducting a programme since 2001 (THETIS) dealing with the biological interactions between the tunas and their prey aimed at evaluating the impact of fisheries on their ecosystems. This programme also studies the tactical and strategic aspects of purse seiner operations in order to better estimate effective fishing effort. Two new Franco-Spanish programmes involving the use of electronic tags (TAGFAD and FADIO) will be initiated in 2003 with European funding and financial support from French and Spanish fishing companies. Finally, growth curves for bigeye and yellowfin tunas are being updated. IFREMER is conducting research activities on data collected in the swordfish programme (growth and reproduction) and started a programme (DORADE) in 2001 on the FAD attraction phenomenon, based on the dolphinfish as a biological model.

Abstract of Document IOTC-SC-02-Inf7 (EC-Spain)

Two fleets are operating in the Indian Ocean: the purse seine fleet targeting tropical tuna (yellowfin, skipjack and bigeye) and the longline fleet targeting swordfish. In 2001 a total of 17 purse seiners and 10 longliners (2 during the whole year and 8 partially) were operating. Most of the purse seiners are between 800 and 2,000 t of carrying capacity. Average size of longliners is 30 m. Spanish catches in 2001 were: 47.571 t (yellowfin), 68,346 t (skipjack), 7,930 t (bigeye), 399 t (albacore) and 1,871 t (swordfish), resulting a total of 126,260 t Purse seine catch in 2001 decreased a 12% as a consequence of the important decrease (25%) of catch on FADS. Tropical tuna sampling in 2001 has considerably increased (820 samples against 296 in 2000 and 136,719 against 61,957 in 2000 fish measured) because the full implementation of the new sampling method and the improvement of the sampling structure. Together with that more than 8,000 swordfish have been measured (23% of the total landings) and sex at age for temporal-spatial strata has been obtained by biological sampling.

Regarding research, two Spanish Research Institutes (IEO and AZTI) are involved in the tropical tuna researches and the IEO is also involved in the swordfish research. Since the beginning of the 90's a Spanish expert on fisheries has been permanently based in Mahé. Scientists involved in these fisheries have actively participated in the works of the WPTT, WPB and the SC. This year 10 documents have been presented. Research programs are or will be conducted in order to implement the Scientific Committee recommendations, in particular: plan for collecting information on supplies and fishing on FADs, jointed (IRD-IEO-AZTI) observer programme to estimate discards and by catch, jointed (IRD-IEO-AZTI) tagging programme on tropical tuna fishing on FADs and opportunistic tagging of swordfish and by catch of longline catch.

Abstract of Document IOTC-SC-02-Inf4 (FADIO)

Document IOTC-SC-02-Inf4, describing FADIO, a project on the study of tuna behaviour around FADs from tagging and acoustic, was presented to and discussed by the Scientific Committee. The main objectives of this project are to develop prototypes of autonomous instrumented buoys, and new electronic tags for

observing the behavior and abundance of tuna and other pelagic species. In addition the project involves tagging and acoustic surveys of tuna and bycatch species around FADs.

Abstract of Document IOTC-SC-02-Inf5 (EC Observer programmes)

Document IOTC-SC-02-Inf5 presents an overview of the planned activities on the European purse seine fleets in the Indian Ocean in 2003 in relation with IOTC recommendations regarding onboard observers and tagging. European Commission regulations establish the minimum and extended Community programs for the collection of data in the fisheries sector, which include estimations of discards for the main European fisheries. In order to apply this regulation, the European Community has developed a new system of project funding, with the first programme started in 2002 and finishing in 2006. These national programs include sampling on biological data, research cruises, tagging projects as well as observer's programs to estimate discards and bycatch. In the case of the tuna fisheries, they are also planned to conform to recommendations and regulations of concerned regional organizations; IOTC, ICCAT and IATTC for the Indian, Atlantic and eastern Pacific Oceans respectively. In this context, France and Spain have developed two national programs; one for the estimation of bycatch and discards (for which funding has already been secured) and another for the archival tagging of FAD-associated tunas in 2003 (funding still pending).

Abstract of Document IOTC-SC-02-Inf2 (United Kingdom)

The UK presented its National Report (IOTC-SC-02-Inf.2) summarizing tuna fishing in the British Indian Ocean Territory (Chagos Archipelago) Fisheries Conservation and Management Zone) in the 2001/2002 fishing season (April 2001 – March 2002). During this season, 36 longline vessels (mainly from Japan and Taiwan, China) caught a total of 1,034 t, primarily of yellowfin and bigeye tuna, and 50 purse seine vessels (Spanish and French) caught nearly 5,800 t of yellowfin, skipjack and bigeye tuna). An observer programme was again conducted during 2001/2002, with observations on one Japanese longliner and 7 Spanish purse seiners. Longline catches have been monitored through a system of complete hook surveys, in which two observers monitored every hook hauled for a chosen set. For the surveyed sets, by arrangement with the skipper all fish were landed. This allows a complete unbiased species composition of the catch to be determined, as well as hook occupancy rates. Species compositions determined in this way for 2000/2001 and 2001/2002 combined were presented in IOTC-SC-02-Inf.2 and found to differ substantially from the corresponding species composition calculated just for retained species.

Abstract of document IOTC-SC-02-Inf3 (Korea)

The commercial Korean tuna longline fishery has operated in the Indian Ocean since the mid 1960s. Korean tuna longline fishery mainly targeted yellowfin, bigeye and albacore tunas. Southern bluefin tuna was listed among the main target species of Korean longliners in recent years. The traditional fishing ground of the Korean tuna longline fishery were mainly found in the central tropical Indian Ocean, but Korean longliners were mainly operated in the western Indian Ocean as from 2000.

The number of Korean tuna longline fishing vessel in the Indian Ocean showed a decreasing trend from a peak of 185 longliners in 1975 but from 1995 onward, about 50 to 60 longliners have operated. The size of Korean tuna longliners ranges from 298 to 525 gross tonnage class. Catches of the Korean tuna longline fishery have shown a decreasing trend from a peak at 71,000 t in 1978 and in 2001, 23 out of 54 registered longliners caught 4,000 t,, showing a decrease by about 42% from the 2000 figure. The CPUE of the Korean longline fishery has also shown a decreasing trend from a peak at 2.48 fish/100 hooks in 1977 and has remained at less than 1.00 fish/100 hooks in recent years.

The Korean government initiated a fisheries observer programme in 2002 to monitor its distant water fisheries, including those for tunas, and to meet the requirements of regional fisheries bodies. Two systems have been maintained for the collection of Korean tuna fisheries data. The first system has been operated by the Korean Deep-Sea Fisheries Association to collect total catch by species and the second data collection system which has been the National Fisheries Research and Development Institute (NFRDI) is to sample catch and effort data based on the logbooks.

Abstract of Document IOTC-SC-02-Inf8 (Japan)

In 1999 Japan achieved a 20% reduction in the number of distant water longline vessels. The total fishing effort by Japanese longliners in the Indian Ocean, which was 135 million hooks in 1997 and 1998, was reduced to 100 and 110 million hooks in 1999 and 2001, following the decrease of vessels, while the percentages of effort in each Ocean to the total has not shown remarkable change. The longline catch for each species in 2001 (2000) was 5,201 t (3,783) for southern bluefin tuna, 3,009 t (2478) for albacore,

12,823 t (12,956) for bigeye and 13,594 t (15,563) for yellowfin. In 2001, the yellowfin catch was a little larger than that of bigeye as was the recent trend. Regarding Japanese purse seine fishery, though more than 10 vessels operated in 1991-1993, this number decreased to only 2 vessels in 2000 and 2001. The total fishing effort (operation days + searching days) of purse seine increased from 349 days in 1989 to 2,393 days in 1992, and decreased drastically to 321 days in 2000 and 262 days in 2001. Nearly 100% of the operations were made on FAD associated schools recently. The total purse seine catch in weight for each species in 2001 (2000) was 1,830 t (2,332), 603 t (952) and 592 t (747) for skipjack, yellowfin and bigeye respectively.

It was indicated that, although Japan has implemented an observer programme for longline vessels fishing southern bluefin tuna, the coverage of this programme is low but is expected to increase in the future. A similar programme covering tropical tunas is still not in place, although there are plans to implement one with similar coverage.

Japan is engaged in a global data revision for the longline fleet to ensure that the information in the Secretariat database was based on the IOTC areas, rather than the FAO statistical areas as in the past.

Most of the Japanese purse-seine vessels which have stopped operating in the Indian Ocean moved to the Pacific Ocean, while some stopped fishing operations completely.

Abstract of Document IOTC-SC-02-Inf9 (People's Republic of China)

A total of 93 Chinese tuna longliners were operating between 45°-95°E and 10°N to 10°S, in the Indian Ocean, 2001, with the total nominal catch of 5,721 t, 786 t or 12% less than the previous year. Bigeye and yellowfin are the two main target species, accounting for 52.3 % and 31% of the total tuna catch respectively. The total fishing effort was 19,994 thousand hooks in 2001, about 7% less than the previous year. The CPUE varied from 248 to 402kg/1,000 hooks, with a mean value 286 kg/1,000 hooks. Catch statistics including FORM 1, FORM 3 and vessel information have been routinely reported to the IOTC Secretariat. WinTuna was made in Chinese version with the help of the IOTC Secretariat. Tuna Statistical Documents have accompanied the bigeye exported since July 2002. New fishing licenses will be issued to fishing vessels after December 1, 2002. A scheme for Vessel Monitoring System (VMS) is being made. A scientific observer programme will be carried out, with the first observer dispatching on December 2002.

The lower threshold size for vessels that will be monitored by VMS is 40 metres. The reason for the missing albacore catches before 1999 is that, before that year, owners were not required to report these catch of this species.

Abstract of Document IOTC-SC-02-Inf10 (Mauritius)

The tuna fishery is an important fishery in Mauritius as it forms the basis if a local canning factory. Tuna transhipment has been a valuable tuna fishery related activity for more than three decades. In the year 2001, 16,327 t of tuna and tuna-like species were transhipped. Since 1985, an artisanal fishery has also been developed around fish aggregating devices. Catches amount to about 300 t annually and consisting mainly of tuna and dolphin fish. The sport fishery also lands about 400 t of tuna and billfishes. Since recently, a swordfish fishery is being developed. In 2001, six local vessels operated in this fishery and unloaded 88 t of pelagic species. Licenses are issued to European vessels and Asian longliners to operate in the Mauritian EEZ. During 2001, the catch by Asian longliners amounted to 7,523 t, consisting mainly of Albacore tuna. Since recently, the software WinTuna 2000, has been installed at Albion Fisheries Research Centre for data entry and processing. Mauritius has implemented several recommendations of the Scientific Committee. These include port sampling of longline catch, collection of data on predation by marine mammals, support for tagging programme, collection of data on swordfish fishery and submission of statistics to IOTC.

Abstract of Document IOTC-SC-02-Inf11 (Thailand)

The main tuna species caught in the Andaman Sea of Thailand are neritic tunas, including frigate tuna, kawakawa, longtail, bullet and skipjack tuna. The contribution in terms of catch of small tunas has increased from 2,880 t in 1983 to the peak of 42,611 tones in 1995. Most of them are caught with regular purse seine, tuna purse seine and gillnets. In 2001, 300 multipurpose purse seine vessels, including regular and tuna purse seine, and 34 gillnet vessels were reported. All of them operated along the coast within 3-45 km from shore and at the depth of 30-200m. The size of caught fish ranged from 10-60 cm in fork length. The peak of fishing season is during the northeast monsoon. Since April 2000, the IOTC has supported the Department of Fisheries in implementing a sampling programme on tuna longline vessels unloading in Phuket. Sampling is conducted monthly by staff of AFDEC at Phuket fishing port. The results in 2001 indicate a total effort of

856 trips, total landing of 4,285 t, with an average catch per trip of 5.01 t. The species composition of the landings consisted of yellowfin tuna 43%, bigeye tuna 32%, billfish 12%, swordfish 11% and others 2%.

Abstract of verbal update from India

India's production of tuna and tuna-like fishes in 2001 was about 135 thousand tonnes mainly neritic tunas caught in small-scale fishery sector. The principal species were kawakawa, skipjack, frigate tuna and yellowfin tuna. The rest of the catches were dominated by the three species of seerfish (*Scomberomorus commerson*, *S. guttatus* and *S. lineolatus*). The main gear used were gillnets, pole and line, hook and lines, and longlines. India is commissioning a census, which will include information and data on fishing craft and gear, besides strengthening data collection and fish catch statistics. Industrial fishing was not significant; only one longliner was operative during the year. The oceanic sector including the catches landed by the two survey and research vessels, landed about 700 t of tuna. The oceanic fishing activity is being revived with 19 longliners permitted on Indian ownership basis. To encourage diversification of existing vessels, two shrimp trawlers are being converted to monofilament longliners. The research findings through exploratory surveys by longlining have shown decreasing trends in abundance indices of YFT and SKJ. The mean size of yellowfin tuna caught in the Arabian Sea sector was observed to be smaller than that caught in the Bay of Bengal and Andaman and Nicobar waters. Conversely, skipjack tuna in the Arabian Sea were observed to have larger mean size than those from the Bay of Bengal and Andaman and Nicobar waters. The survey on predation of YFT caught in longlining has revealed that in the Arabian Sea the predation was 10.8%, whereas in the Bay of Bengal and in Andaman and Nicobar waters 5.5%. India is preparing to participate in the tuna tagging programme of IOTC with small scale tagging project. Small boats for pole and line fishing and hand lining and survey vessel for longlining will be used as platforms for the tagging project during 2003-04.

Additionally it was explained that most of India's longline fleet was engaged in shallow longline operations (mainly targeting yellowfin), but that this situation might change in the future.

Abstract of verbal update from invited expert regarding Taiwan province of China

In the Taiwan,China deep sea longline fishery in the Indian Ocean, 335 vessels were operating in 2001, following the slightly decreasing trend in number since 1998. Total catches, except for 1993, average at about 100,000 t/year for the last ten years. Estimated catches of the four major species in 2001 are: albacore 26,000 t (increased from previous year), bigeye 37,000 t (same level of 1999), yellowfin 19,000 t (slight increase) and swordfish 12,000 t (the lowest point since it became a seasonal target in early 1990). Four types of data from this fleet were collected, and emphasis was made on the difference on estimations of nominal catches and catch/effort data.

The bigeye statistical documents programme has been implemented since 2002 to secure accurate information on bigeye trading. Experimental VMS and observer programs continued in 2002.

Abstract of verbal update from Seychelles

The Seychelles has a developed tuna fishery in the EEZ practiced by distant water fishing nations. The vessels have been fishing under licence agreement with the Seychelles since early 1980's.

Around 150 longliners from Japan, Taiwan and South Korea are actually active. The number of purse seiners active have slightly decreased since the last two years and actually around 46 vessels are active.

During the WPDCS in 2001, the Seychelles presented a document (WPDCS-01-02) describing the vessels licensed in Seychelles by the flag country and reporting rates of logbooks from industrial vessels.

Reference is also made to a document presented during the WPTT (WPTT-02-08), describing the quality of data reported from the distant water fishing fleets, especially the longliners and purse seiners carrying flags other than the EU.

Since 1995 the Seychelles has developed a semi-industrial longline fishery targeting swordfish, actually 11 vessels are active and around 400 t of fish are landed. The coverage rate of log books for the local fishery is around 90% and 20% of the trip are sampled for the frequency size data. During the working party of billfish in 2001 a document was presented illustrating the trends in abundance indices of swordfish caught in Seychelles compared to the Reunion fishery (catch rates and trends in size frequency).

By catch data from this fishery are collected on log books and submitted to IOTC.

The Seychelles participates in the following on going projects :

- Purse seine fishery sampling activity in collaboration with IRD
- THETIS programme (IRD) on the behaviour of tunas
- The collection of biological and other data from swordfish caught on the longline research vessel
- Tagging pilot project
- Software actually used to compile tuna data : AVDTH from IRD, WinTuna (IPTP version). The development of WinTuna 2000 will permit better processing of the tuna data and reporting obligations to IOTC.
- Publications of SFA : semestrial tuna bulletins.

APPENDIX V. GUIDELINES FOR THE PREPARATION OF NATIONAL REPORTS

At its Fourth Session, the Scientific Committee agreed to request from its Members and Cooperating Non-Member Parties, that National Reports be prepared and presented regularly at its Sessions.

The National Reports will be listed as Information Documents presented to the Scientific Committee and each delegation will be asked to briefly introduce its Report during the Session. The Report should include information for the most recent complete year and the four previous years, if possible. Recent developments in each fishery for tropical tunas (skipjack, yellowfin, bigeye) should be highlighted, and where important, fisheries for small tunas and billfish as well as any available information concerning by-catch from tuna fisheries.

In general, the National Report should include information on:

- General Fishery Statistics
    a. Catch by species, for each gear type
    b. Fleet structure
    c. Available information on the catches of non-target, associated and dependent (NTAD) species
    d. Description of recent changes in the national data collection and processing systems

This section is intended to provide a summary of the main features of the tuna fisheries for the reporting party. As such, it does not replace the need for submission of data according to the IOTC Mandatory Data Requirements listed in IOTC Resolution 01/05.

- Report on the implementation of recommendations of the Scientific Committee

The Scientific Committee has produced a number of recommendations concerning collection of information and research on the relevant resources. A summary of the general recommendations will be listed in the IOTC website.

- National Research Programs currently in place

The reporting party is invited to describe current scientific research taking place in institutions under its responsibility. The emphasis should be placed on describing the activities rather than the results of the scientific research, which would be more appropriately reported in the species Working Parties.

- Any other relevant information

APPENDIX VI. EXECUTIVE SUMMARY OF THE STATUS OF THE YELLOWFIN TUNA RESOURCE

BIOLOGY

Yellowfin tuna is a cosmopolitan species distributed mainly in the tropical and subtropical oceanic waters of the three oceans, where it forms large schools. The sizes exploited in the Indian Ocean range from 30 cm to 170 cm fork length. Smaller fish (juveniles) form mixed schools with skipjack and juvenile bigeye tuna and are mainly limited to surface tropical waters, while larger fish are found in surface and sub-surface waters. Intermediate age yellowfin are seldom taken in the industrial fishery, but are abundant in some artisanal fisheries, mainly in the Arabian sea.

Stock structure is unclear, and a single stock is usually assumed for stock assessment purposes. Longline catch data indicates that yellowfin are distributed continuously throughout the entire tropical Indian Ocean, but some more detailed analysis of fisheries data suggests that stock structure may be more complex. A study of stock structure using DNA was inconclusive.

Spawning occurs from December to March in the equatorial area (0-10°S), but the main spawning grounds seem to be between 50 and 70°E. Yellowfin size at first maturity has been estimated at 110 cm, and recruitment occurs in July. Newly recruited fish are primarily caught by the purse seine fishery on floating objects. Males are predominant in the catches of larger fish, but apparently at a larger size (150 cm) than in other oceans.

Several new growth studies were presented to the WPTT. The Working Party identified two hypotheses regarding growth curves: a “slow-growth” hypothesis, assuming a two-stanza growth curve, and a “fast-growth” hypothesis, assuming a constant growth rate . The two-stanza growth curve is in good agreement with growth curves estimated from size frequencies and tagging studies in the Atlantic and western Pacific Oceans.

There are no direct estimates of natural mortality (M) for yellowfin in the Indian Ocean. In stock assessments, estimates from other oceans have been used, mainly based on results from the western Pacific tagging programme. These indicated a higher M on juvenile fish than for older fish.

There is little information on yellowfin movement patterns in the Indian Ocean, and what information there is comes from analysis of fishery data, which can produce biased results because of their uneven coverage. However, there is good evidence that medium sized yellowfin concentrate for feeding in the Arabian sea. Feeding behaviour is largely opportunistic, generally aimed at large concentrations of crustacea in the tropical areas or small mesopelagic fishes in the Arabian sea.

FISHERY

Catches by area, gear, country and year from 1950 to 2000 are shown in Table 1 and illustrated in Figure 1. Contrary to the situation in other oceans, the artisanal fishery component in the Indian Ocean is substantial, taking approximately 20-25% of the total catch.

The geographical distribution of yellowfin tuna catches in the Indian Ocean in recent years by the main gear types (purse-seine, longline and artisanal) is shown in Figure 2. Most yellowfin tuna are caught in Indian Ocean north of 10°S and in the Mozambique Channel (north of 25°S).

Purse seine currently takes the most catch, with a catch of 147,000 t in 2000 coming mostly from the western Indian Ocean. Although some Japanese purse seiners have fished in the Indian Ocean since 1977, the purse seine fishery developed rapidly with the arrival of European vessels between 1982 to 1984. Purse seine catches of yellowfin with fork lengths between 30 and 180 cm increased rapidly to some 130,000 t in 1993, after which they have fluctuated around that level. The purse seine catch in 2000 was 147,000 t. The purse seine fishery is characterized by the use of two different fishing modes: the fishery on floating objects (FADs), which catches mainly small yellowfin in association with skipjack and juvenile bigeye, and a fishery on free swimming school, which catches larger yellowfin on mixed or pure sets. Between 1995 and 2000, the FAD component of the purse seine fishery represented 50-66% of the sets undertaken (65-80% of the positive sets) and took 46-63% of the yellowfin catch by weight (63-76% of the total catch).

The longline fishery started in the beginning of the 1950’s and expanded rapidly over the whole Indian Ocean. It catches mainly large fish, from 80 to 160 cm fork length. The longline fishery targets several tuna species in different parts of the Indian Ocean, with yellowfin and bigeye being the main target species in

tropical waters. The longline fishery can be subdivided into an industrial (deep-freezing longliners operating on the high seas from Japan, Korea and Taiwan,China) and an artisanal component (ice longliners operating more in coastal waters). The longline catch of yellowfin reached a maximum in 1993, after which it declined to a level of 88,000 t in 2000.

Artisanal catches, taken by baitboat, gillnet, troll, handline and other gears, have increased steadily since the 1980s. In 2000, the total artisanal yellowfin catch was 69,000 t, while the catch by the dominant artisanal gear, gillnets, was 48,000 t.

Annual mean weights of yellowfin caught by different gears and by the whole fishery are shown in Figure 3. After an initial decline, mean weights in the whole fishery remained quite stable from the 1970s to the early 1990s. After 1993, mean weights in the catches in the industrial fisheries have declined. Although total catch in biomass has been stable for several years, catches in numbers have continue to increase, as there has been more fishing effort directed towards smaller fish, as illustrated in Figure 10.

AVAILABILITY OF INFORMATION FOR ASSESSMENT PURPOSES

The reliability of the estimates of the total catch has continued to improve over the past few years, on one hand as a result of the catch sampling programme being fully operational now, and on the other hand because several national sets of data have recently become available (Oman, Sri Lanka, Iran).

A number of papers dealing with fisheries data, biology, CPUE trends and assessments were discussed by the WPTT, and additional data analyses were performed during the meeting. In particular, estimates of annual catches at size for yellowfin were calculated using the best available information. Estimated catches at age calculated using the catch-at-size data and the two hypotheses regarding growth curves (fast vs slow growth) are shown in Figure 5. Two sets of natural mortality at age schedules were agreed, both assuming a higher M on juvenile fish.

Standardized CPUE analysis using both Japanese and Taiwanese data were presented and discussed. New analyses were also carried out on these data sets during the meeting, estimating standardised CPUEs for both the whole Indian Ocean and the tropical area (10N – 15S), where the bulk of the catch is taken. All resulting standardized CPUE series is similar. These showed an initial steep decline, over a period when catches were relatively low and stable, followed by stable standardized CPUEs since the late 1970s, a period during which catches have increased strongly following the development of the purse seine fishery. This is illustrated in Figure 4 for the tropical area. The observed pattern of standardised CPUE does not correspond well with the expected response of CPUE to changes in catch and biomass. There are several possible explanations for this, such as changes in catchability or behaviour, or the population existing in two fractions with differential availability to purse seine and longline gears. However, there is no scientific information to judge which, if any, of these explanations is correct.

STOCK ASSESSMENT

A full assessment was conducted for yellowfin tuna this year. Several papers presenting assessment results were discussed by the WPTT, and additional assessments were carried out during the meeting using agreed data sets.

No new stock assessment methods were presented to the WPTT, and assessments were carried out using methods used at previous meetings, including the modified Grainger and Garcia index, the PROCEAN method, ASPM, a multi fleet statistical catch at age model, sequential population analysis (VPA) and a multi-gear yield-per-recruit analysis. Many new analyses based on agreed sets of data and hypothesis were performed and discussed during the meeting.

Although there were differences in the details of results from the different assessments, the overall picture is consistent. This can be seen in Figures 6 to 9, which illustrate some of the results from the assessments, expressed in relative units to make them directly comparable. There has been a large and steady increase in fishing mortality since the early 1980s, while there is indication that there has been a substantial decline in biomass since the mid-1980s. Estimates of catchability both for purse-seine and longline fleets show a strong increasing trend since the mid-1980s, especially for the purse-seine fleet, as illustrated in Figures 8 and 9. It should be noted that these figures are intended to illustrate general trends, and should not be viewed as depicting precise estimates of changes in efficiency.

It is not currently possible to obtain a reliable estimate of the fishing mortality at MSY (Fmsy), and some assessment runs were unable to produce plausible estimates of MSY. However, in those cases where plausible estimates or indicators of MSY could be obtained, they consistently indicated that current catches are in the vicinity of, or possibly above, MSY. Even if current catches are below MSY, a continuation of the recent rapid increase in catches and effort would mean that the fishery could very soon reach or exceed MSY.

It is also clear from the basic data that, during the early period of the fishery (from the 1950s to the start of the 1980s), the catches were relatively low and stable around 40,000 t. Since the 1980s there has been a rapid increase in the longline and purse seine effort and the total catch reached over 300,000 t in 1992. Since the mid-1990s there has also been an increase in purse seine fishing on floating objects which has led to a rapid increase in the catch of juvenile yellowfin. The rapid expansion, particularly on juvenile fish, is cause for concern, since it displays all the symptoms of a potentially risky situation. The increases in catches in general has not been as a result of geographic expansion to previously unfished areas, but rather as a result of increased fishing pressure on existing fishing grounds.

MANAGEMENT RECOMMENDATIONS

Considering all the stock indicators and assessments, as well as the recent trends in effort and total catches of yellowfin, the Scientific Committee considered that:

1. Total catches under current fishing patterns are close to, or possibly above MSY. Furthermore, catches by all main gears have been increasing both consistently and substantially in recent years. In these circumstances, any further increase in both effective fishing effort and catch above levels in 2000 should be avoided.
2. The current trend for increasing fishing pressure on juvenile yellowfin by purse seiners fishing on floating objects is likely to be detrimental to the stock if it continues, as fish of these sizes are well below the optimum size for maximum yield per recruit.

YELLOWFIN TUNA SUMMARY

Maximum Sustainable Yield (MSY)	280,000 - 350,000 t
Current (2000) Catch	304,000 t
Current (2000) Replacement Yield	
Relative Biomass B_{2000}/ Bmsy	
Relative Fishing Mortality F_{2000}/Fmsy	
Management Measures in Effect	None

Table 1. *Yellowfin catches by area, gear and countries from 1950 to 2000.*

Gear	Fleet	Av96/00	%	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Fleet
PS	EC	84	26.6																											EC
	NEI-PS	34	10.7																											NEI-PS
	OTHER	12	3.9														0.0	0.0	0.0									0.0	0.0	OTHER
	TOTAL	**130**	**41.2**														*0*	*0*	*0*									*0*	*0*	**TOTAL**
LL	Indonesia	36	11.3																								0.1	0.3	0.7	Indonesia
	Taiwan,China	21	6.6					0.2	0.7	1.1	1.3	1.8	2.4	2.2	2.9	3.5	3.4	2.9	2.2	4.4	3.4	22.6	21.1	14.9	11.8	11.8	5.7	4.4	4.6	Taiwan,China
	NEI-ICE	19	6.0																											NEI-ICE
	Japan	15	4.7			8.9	13.2	24.9	46.5	64.4	36.0	25.7	24.4	40.3	34.6	51.7	25.9	24.8	27.6	44.1	31.6	50.5	25.2	10.3	13.4	7.9	3.9	4.9	6.4	Japan
	NEI-DFRZ	10	3.2																											NEI-DFRZ
	OTHER	8	2.4																	0.1	0.2	4.6	8.0	4.1	6.5	9.6	9.9	11.6	11.7	OTHER
	TOTAL	**108**	**34.1**			*9*	*13*	*25*	*47*	*65*	*37*	*28*	*27*	*43*	*37*	*55*	*29*	*28*	*30*	*49*	*35*	*78*	*54*	*29*	*32*	*29*	*20*	*21*	*23*	**TOTAL**
GILL	Iran	21	6.5																											Iran
	Sri Lanka	19	6.1																											Sri Lanka
	OTHER	15	4.9	0.4	0.4	0.4	0.5	0.6	0.6	0.5	1.4	0.7	0.7	0.8	0.8	1.2	1.8	2.4	2.6	3.5	3.4	3.4	3.1	2.8	2.3	2.8	2.2	3.0	3.3	OTHER
	TOTAL	**55**	**17.5**	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*2*	*2*	*3*	*4*	*3*	*3*	*3*	*3*	*2*	*3*	*2*	*3*	*3*	**TOTAL**
BB	Maldives	12	3.8	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	1.0	1.5	1.5	1.5	1.5	1.0	1.5	1.7	1.7	1.8	2.3	1.4	2.5	6.9	5.0	4.6	Maldives
	OTHER	0	0.1																								0.6	1.2	0.2	OTHER
	TOTAL	**12**	**3.9**	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*1*	*2*	*2*	*2*	*2*	*1*	*2*	*2*	*2*	*2*	*2*	*1*	*3*	*7*	*6*	*5*	**TOTAL**
LINE		7	2.2	0.1	0.1	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.6	0.6	0.7	0.6	
UNCL		4	1.2	0.1	0.3	0.4	0.4	0.4	0.4	1.6	3.5	2.4	2.6	3.3	3.7	5.3	8.4	6.0	6.7	6.5	9.2	9.7	7.6	6.6	5.5	7.7	6.3	7.1	7.0	
	TOTAL	**317**		*2*	*2*	*11*	*16*	*28*	*50*	*70*	*44*	*33*	*32*	*48*	*44*	*63*	*41*	*38*	*40*	*60*	*50*	*93*	*67*	*41*	*41*	*43*	*36*	*38*	*39*	**TOTAL**
Gear	Fleet	Av96/00	%	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Fleet

Gear	Fleet	Av96/00	%	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	Fleet
PS	EU	84	26.6						0.2	1.0	10.5	48.2	57.6	63.3	73.1	104.8	79.4	89.0	82.2	83.1	87.3	78.9	104.8	95.0	92.2	60.9	82.7	89.8	EU
	NEI-PS	34	10.7								0.7	8.4	9.4	6.3	5.2	7.9	4.5	12.7	11.9	13.2	23.6	25.5	36.3	29.4	32.4	28.4	38.2	41.5	NEI-PS
	OTHER NEI	12	3.9	0.1	0.1	0.3	0.2	0.2	0.1	0.3	1.6	1.9	2.0	3.9	5.7	6.0	5.9	7.0	11.7	16.6	17.3	10.4	11.2	6.9	9.0	14.6	15.3	15.7	OTHER
	TOTAL	**130**	**41.2**	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*13*	*58*	*69*	*74*	*84*	*119*	*90*	*109*	*106*	*113*	*128*	*115*	*152*	*131*	*134*	*104*	*136*	*147*	**TOTAL**
LL	Indonesia	36	11.3	1.0	1.3	1.3	1.4	2.1	2.6	2.7	0.8	0.8	0.8	0.7	1.3	2.3	3.8	4.6	5.5	9.3	10.8	14.8	16.7	31.8	38.2	35.7	41.7	31.1	Indonesia
	Taiwan,China	21	6.6	3.4	8.1	4.2	3.7	3.8	4.1	4.7	5.6	5.8	7.3	16.2	22.3	22.7	22.4	31.6	30.7	56.0	88.0	34.0	23.1	27.9	18.4	23.4	17.7	17.4	Taiwan,China
	NEI-ICE	19	6.0														11.9	16.6	14.4	16.7	19.5	27.6	25.7	24.3	24.2	21.6	14.5	10.6	NEI-ICE
	Japan	15	4.7	2.8	2.1	4.6	3.3	3.2	4.9	7.3	7.8	7.9	9.5	10.7	8.3	9.3	4.6	6.3	4.4	5.7	5.7	9.7	8.0	12.8	15.6	16.5	15.1	14.3	Japan
	NEI-DFRZ	10	3.2										0.1	1.1	1.2	4.0	3.6	6.7	7.4	13.4	22.3	9.0	8.0	13.8	6.6	11.5	8.7	9.7	NEI-DFRZ
	OTHER	8	2.4	13.8	32.1	25.2	18.2	13.0	12.0	19.7	16.7	10.7	12.5	16.2	13.2	16.8	19.6	20.4	18.9	40.2	52.0	28.9	16.3	11.1	9.7	5.4	5.5	5.8	OTHER
	TOTAL	**108**	**34.1**	*21*	*44*	*35*	*27*	*22*	*24*	*34*	*31*	*25*	*30*	*45*	*46*	*55*	*66*	*86*	*81*	*141*	*198*	*124*	*98*	*122*	*113*	*114*	*103*	*89*	**TOTAL**
GILL	Iran	21	6.5														1.0	2.3	3.2	12.1	13.3	19.5	22.5	28.5	19.1	18.0	24.3	13.5	Iran
	Sri Lanka	19	6.1							6.7	7.2	5.2	6.1	6.9	6.7	8.1	9.3	7.2	11.0	10.0	10.4	11.1	7.8	12.7	15.5	19.3	27.1	21.7	Sri Lanka
	OTHER	15	4.9	3.1	2.7	1.6	2.8	1.3	2.0	2.5	0.9	1.0	3.8	5.1	8.3	19.3	24.7	17.5	14.1	17.6	14.3	21.7	23.8	14.8	14.0	17.4	17.5	13.2	OTHER
	TOTAL	**55**	**17.5**	*3*	*3*	*2*	*3*	*1*	*2*	*9*	*8*	*6*	*10*	*12*	*15*	*27*	*35*	*27*	*28*	*40*	*38*	*52*	*54*	*56*	*49*	*55*	*69*	*48*	**TOTAL**
BB	Maldives	12	3.8	5.2	4.9	3.8	4.4	4.4	5.6	4.5	7.7	8.2	6.9	6.2	7.4	5.9	5.5	4.9	7.0	8.0	9.3	12.4	11.8	11.5	12.2	13.0	13.0	10.1	Maldives
	OTHER	0	0.1						0.4	0.5	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0						0.0			0.6	0.7	OTHER
	TOTAL	**12**	**3.9**	*5*	*5*	*4*	*4*	*4*	*6*	*5*	*8*	*8*	*7*	*6*	*7*	*6*	*6*	*5*	*7*	*8*	*9*	*12*	*12*	*12*	*12*	*13*	*14*	*11*	**TOTAL**
LINE		7	2.2	0.8	0.7	0.8	1.0	1.0	0.9	0.9	1.0	0.9	0.7	0.4	0.5	0.6	3.9	4.0	4.0	5.5	5.6	6.4	6.4	6.4	6.4	6.8	6.9	8.4	
UNCL		4	1.2	7.4	6.9	7.0	8.6	9.2	8.9	1.7	1.2	1.0	4.3	3.9	2.4	3.2	0.7	0.8	0.9	0.9	1.0	1.0	1.0	8.2	5.0	2.2	1.4	1.7	
	TOTAL	**317**		*37*	*59*	*49*	*44*	*38*	*42*	*53*	*62*	*100*	*121*	*141*	*156*	*211*	*201*	*232*	*227*	*308*	*380*	*311*	*323*	*335*	*318*	*295*	*330*	*305*	**TOTAL**
Gear	Fleet	Av96/00	%	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	Fleet

KEY:

PS	Purse seine	**GILL**	Gill net	**Av96/00**	Average catches for the period 1996-2000
LL	Longline	**LINE**	Hand lines and/or troll lines	**%**	Proportion of the total catch (average 1996-2000) that the average catches (1996-2000) represent
BB	Baitboat	**UNCL**	Other or unknown		

NEI-DFRZ Catches of non-reporting freezing or deep-freezing longline vessels, operating under various flags (Belize, Equatorial Guinea, Honduras, Panama, Vanuatu, etc.) as estimated by the IOTC Secretariat

NEI-ICE Catches of non-reporting fresh-tuna longliners, operating under various flags (Honduras, Taiwan,China, etc.), as estimated by the IOTC Secretariat

NEI-PS Catches of non-reporting purse-seine vessels operating under various flags (Belize, Cayman Islands, Cote d'Ivoire, Liberia, Malta, Netherlands Antilles and Panama)

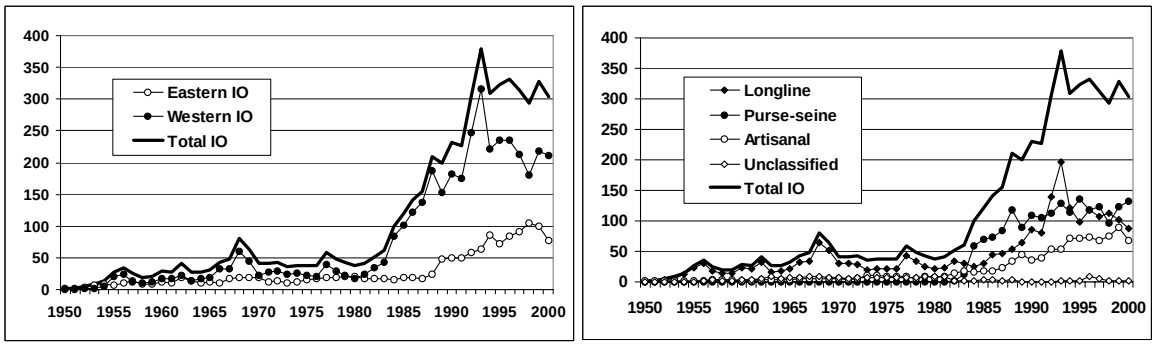


Figure 1. *Yearly catches (thousand of metric tonnes) of yellowfin by area (Eastern and Western Indian Ocean, left) and by gear (longline, purse-seine, artisanal and unclassified, right) from 1950 to 2000.*

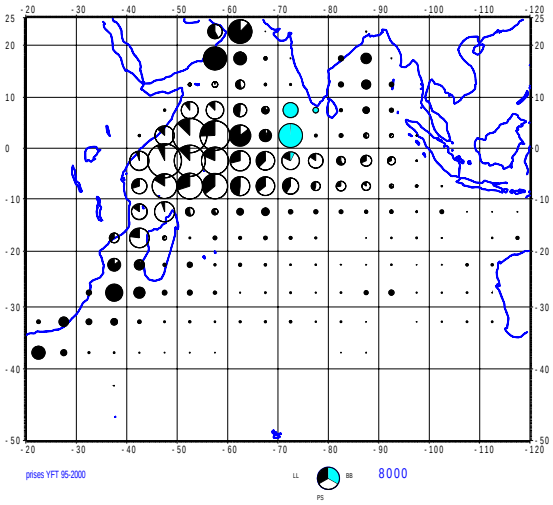


Figure 2. *Average (1995-2000) geographical distribution of yellowfin catches according to the gear (longline, purse-seine and baitboat).*

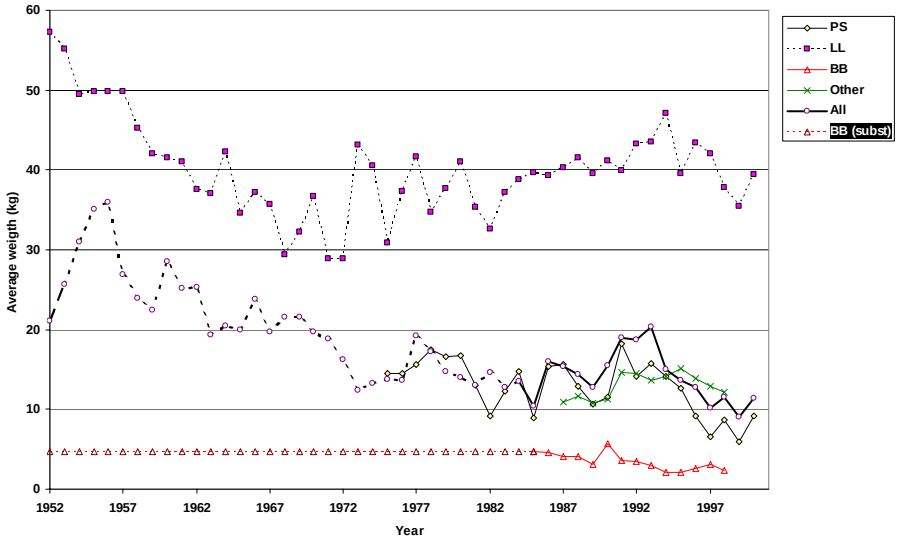


Figure 3. *Yellowfin average weight in the catch by gear (from size-frequency data) and for the whole fishery (estimated from the total catch at size).*

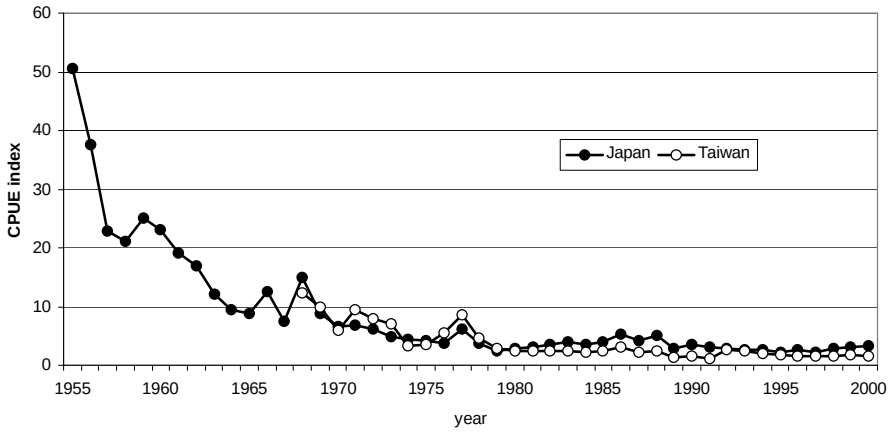


Figure 4. *Yearly abundance indices based on the Japanese and Taiwan, China longline yellowfin CPUE's in the tropical area (10°N-15°S).*

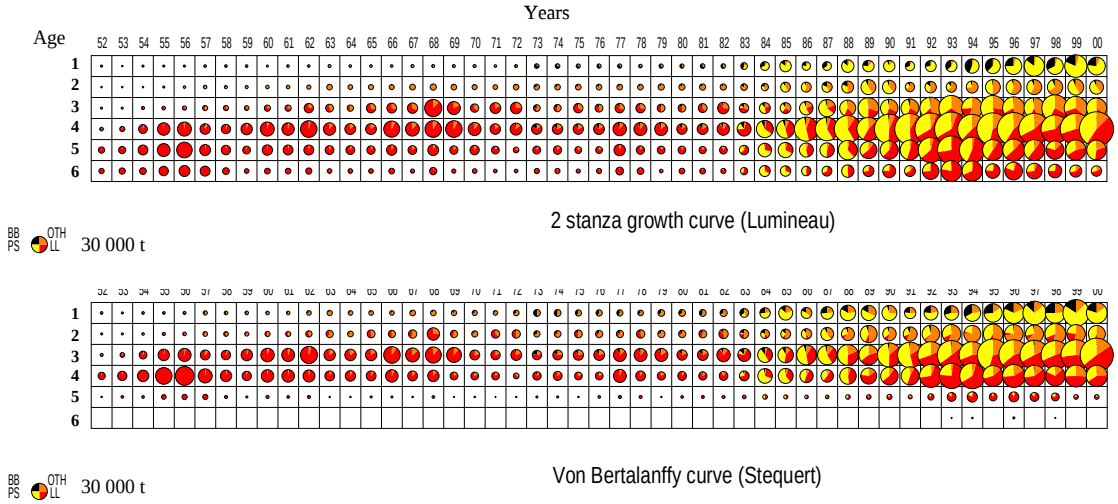


Figure 5. *Catch at age by gear (in weight) according to the two growth hypothesis used by the WPTT: "slow", assuming a two stanzas growth curve (above) and "fast", assuming a constant growth rate (below).*

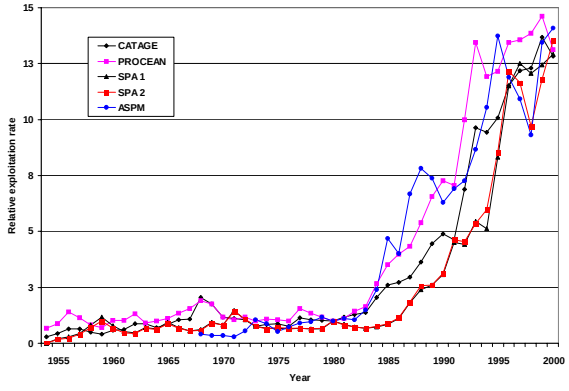


Figure 6. *Relative exploitation rates estimated from the five assessments ran by the WPTT (all have been set at 1 in 1980 selected as the reference year).*

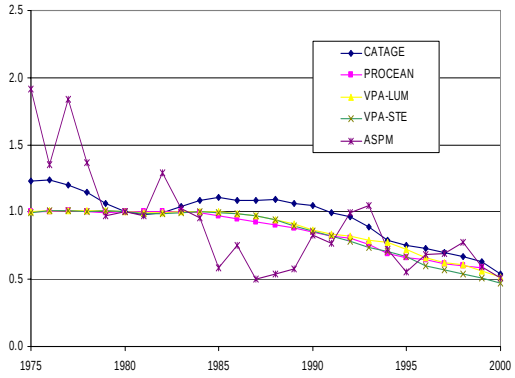


Figure 7. *Trend of the relative biomass estimated from the five assessments ran by the WPTT.*

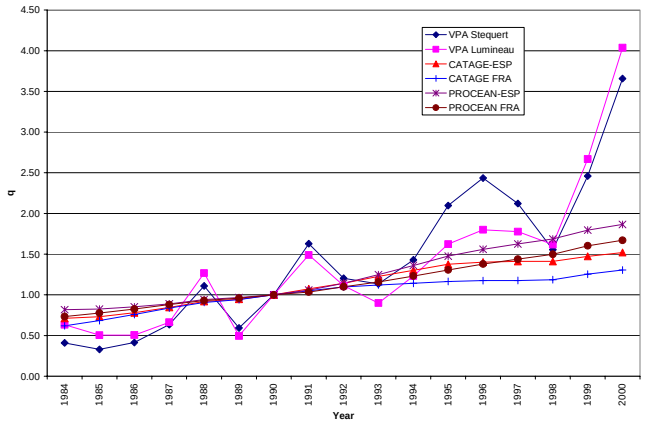


Figure 8. *Average yearly relative catchability coefficients for purse seine fleets estimated from the assessments ran during the meeting; all have been set at one in 1990 selected as the reference year.*

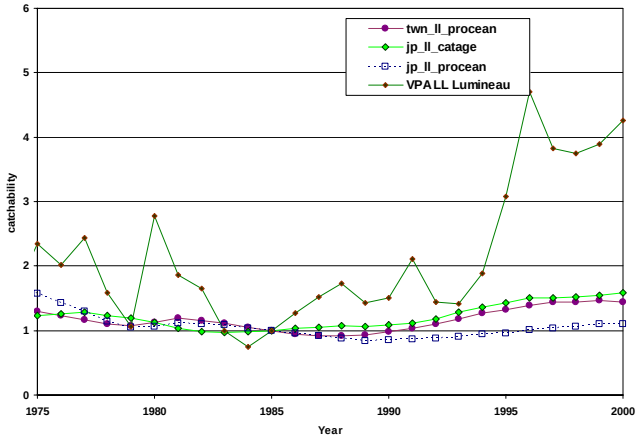


Figure 9. *Average yearly relative catchability coefficients for longline fleets estimated from the assessments ran during the meeting; all have been set at 1 in 1985, selected as the reference year.*

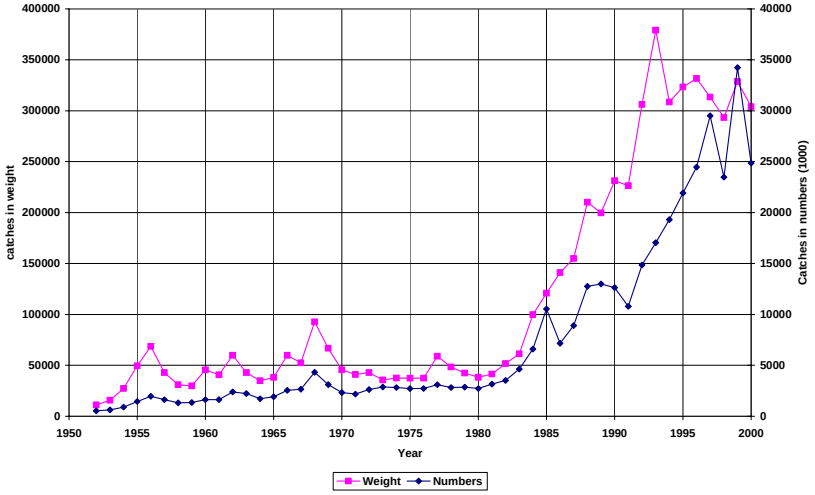


Figure 10. *Total catch of yellowfin tuna in weight and numbers.*

APPENDIX VII. EXECUTIVE SUMMARY OF THE STATUS OF THE BIGEYE TUNA RESOURCE

BIOLOGY

Bigeye tuna is a tropical tuna species occurring in surface waters down to about 300 m depth or more. Juveniles of this species frequently school at the surface underneath floating objects in single-species groups or in aggregations with yellowfin and skipjack tunas. Association with floating objects appears less common as they grow older.

Currently a single stock is assumed for the Indian Ocean, based on circumstantial evidence. The range of the stock (as indicated by the distribution of catches) includes tropical areas, where reproductively active individuals are found, and temperate waters, usually considered to be feeding grounds.

Of the three tropical tuna species, bigeye tuna lives the longest (more than ten years) and that makes it the species most vulnerable, in relative terms, to over-exploitation. Bigeye tuna start reproducing when they are approximately three years old, at a length of about 100cm.

FISHERY

Bigeye tuna is predominantly caught by industrial fisheries and appears only occasionally in the catches of artisanal fisheries (*Table 1*). Bigeye tunas have been caught by industrial longline fleets since the early 1950's, but before 1970 they only represented an incidental catch. After 1970, the introduction of fishing practices that improved the access to the bigeye resource and the emergence of a sashimi market made bigeye tuna a target species for the main industrial longline fleets. More recently (since the early 1990s) bigeye tunas have been caught by purse seine vessels fishing on tunas aggregated on floating objects. Most of the bigeye catches reported under purse seiners are juveniles. Large bigeye tuna are primarily caught by longlines, and in particular deep longliners *(Figure 3)*.

In contrast with yellowfin and skipjack tunas, for which the major catches take place in the western Indian Ocean, bigeye tuna is also exploited in the eastern Indian Ocean *(Figure 2)*. Catches of bigeye have been consistently increasing over the years in the eastern and western parts of the Indian Ocean. The increase in catches in the eastern Indian Ocean is mostly due to increased activity of small longliners fishing for fresh tuna. This fleet started operating around 1985. In the western Indian Ocean, the catches of bigeye are mostly the result of the activity of large longliners and purse seiners.

An important part of the longline catch is taken by longliners from non-reporting flags (see Table 1). The Commission has initiated sampling programmes in various ports in the Indian Ocean to better estimate catches from this component.

AVAILABILITY OF INFORMATION FOR ASSESSMENT PURPOSES

The reliability of the total catches has continued to improve over the past years. The fact that most of the catch of bigeye tuna comes from industrial fisheries has facilitated the estimation of total catches. Catch and effort data, potentially useful to construct indices of abundance, is also considered to be of good overall quality. Size-frequency information is considered to be relatively good for most of the purse-seine fisheries, but insufficient for the longline fisheries. This is due primarily to a lack of reporting from the Korean fleets in the 1970's, lack of reporting from Taiwanese fleets since 1989 and insufficient sample sizes in recent years in the Japanese fishery.

Information on biological parameters is scarce and improvements are needed in particular concerning growth and natural mortality. Current proposals for an Indian Ocean tagging programme are oriented towards improving knowledge of these biological characteristics.

In the case of the purse-seine fishery, it was not possible to derive indices of abundance from catch-and-effort information, because the interpretation of nominal fishing effort was complicated by the use of FADs and increases in fishing efficiency that were difficult to quantify. In the case of the longline fisheries, indices of abundance were derived, although there still remain uncertainties whether they fully take into account targeting practices on different species *(Figure 4)*.

STOCK ASSESSMENT

In 2001, the WPTT conducted a stock assessment on the basis of the best available information at the time using age-structured production models (ASPM). Maximum sustainable yield (MSY) was estimated to be about 89,000 t, from the results considered to be the most reliable. In 2002, the estimate of MSY was updated to 102,000 t, with a confidence interval of 73,000 – 129,000 t.

The assessments suggest that the population is currently above the MSY level but has been declining since the late 1980s (*Figure 5*). The overall fishing mortality is estimated to be currently below that expected at the MSY level, but recent catches have considerably exceeded the estimated MSY and, therefore, they do not appear sustainable. This apparent paradox can be explained by noting that, according to the results of the assessment, the current biomass is more than twice the biomass at MSY. In this case, even a fishing mortality rate less than that at MSY can produce a catch which is greater than MSY, at least temporarily. However, it should also be noted that considerable uncertainty remains around the estimates of current fishing mortality and the estimated fishing mortality at MSY.

The present situation is linked to the rapid increase in both fishing mortality and catches over the last ten years. If current catches are maintained, the population will fall soon to levels below those of MSY.

The recruitment parameters estimated by the model suggest a very weak dependency of the recruitments on the spawning biomass level. There is an increasing trend in the estimated recruitments in recent years, although it was noted that this might actually be due to a trend in catchability not accounted for in the model formulation.

In 2001, the WPTT conducted forward projections for the period 2000-2010 on the basis of the results of the ASPM assessment conducted at that meeting, assuming two different scenarios:

- A constant fishing mortality (F) scenario, in which the fishing mortality is assumed to remain constant at the levels estimated for 1999.
- An increasing fishing mortality scenario, in which fishing mortality is assumed to continue to increase at a rate of 6 % per year during the projected period.

These projections are presented in Figure 6.

Projections under the constant F scenario indicate that the population would be reduced to a level slightly above MSY, with catches being reduced over time and reaching an equilibrium slightly below the MSY of about 100,000 t. This is a direct consequence of the assumed fishing mortality for the projected period.

Projections assuming an increasing F at an annual rate of 6 % (the average rate of increase in overall fishing mortality in the late 1990s as estimated in the assessment) suggest that a decline in the total catch over the projected period would be slightly less than that under the constant F scenario. However, the decline in longline catches is more pronounced in this scenario, while catches in the purse-seine fishery actually increase during the period. This latter projection depends strongly on the assumption that recruitment is almost independent of spawning stock. Of particular concern is the predicted reduction by the year 2010 of the spawning stock biomass to about 20 % of its virgin level, a value that is often considered as a limit reference point.

Given that the current assessment suggests that recruitment is almost independent of spawning stock biomass, the results of the projections reflect mostly yield-per-recruit effects, which could also be evaluated using a multi-gear yield-per-recruit analysis such as the one depicted in Figure 7. This calculation was done on the basis of the results and assumptions on input values from the 2001 assessment.

A number of uncertainties in the assessments conducted have been identified. These uncertainties include:

- The lack of a growth curve for the Indian Ocean that adequately represents growth for fish of all sizes caught by longline and purse-seine fisheries.
- Insufficient size information for the catches of longline fisheries, especially in recent years.
- Uncertainty about the natural mortality at various life stages.
- Uncertainty about the increase in efficiency of the different fisheries involved, especially in the purse-seine fishery. Future consideration of an increase in efficiency could result in a more

pessimistic appraisal of the stock status. For example, it is possible that the fishing mortality that would result in the MSY has already been exceeded.

- There are still unresolved questions in the current index of abundance.

Although there is scope for improvement in the current assessment, it is unlikely that these uncertainties will be substantially reduced for the next assessment cycle.

MANAGEMENT RECOMMENDATIONS

The results of further assessments of the bigeye tuna stock using age-structured production models presented in 2002 to the WPTT confirmed and reinforced the assessment agreed at the 2001 meeting. The WPTT therefore reiterated the technical advice on bigeye tuna given last year.

The Scientific Committee had already noted with concern the rapid increase of catches of bigeye tuna at its meeting in 1999. Since then, catches have remained high. Taking into account the results of the current assessments, which represent the best effort to date to analyse the available data in a formal context, it is likely that current catches are well above MSY. Therefore, the Committee recommends that a reduction in catches of bigeye tuna from all gears, eventually to the level of MSY, be started as soon as possible.

BIGEYE TUNA SUMMARY

mum Sustainable Yield :	102,000 t (73,000 – 129,000 t)
Current (2000) Catch:	131,000 t
Current (2000) Replacement Yield	
Relative Biomass (B_{2000}/B_{msy})	2.15
Relative Fishing Mortality (F_{2000}/F_{MSY})	0.66
Management Measures in Effect	Resolution 98/04: Concerning Registration And Exchange Of Information On Vessels, Including Flag Of Convenience Vessels, Fishing For Tropical Tunas In The IOTC Area Of Competence Resolution 99/01: On the Management of Fishing Capacity and on the Reduction of the Catch of Juvenile Bigeye Tuna by Vessels, Including Flag of Convenience Vessels, Fishing for Tropical Tunas in the IOTC Area of Competence Resolution 99/02: Calling for Actions Against Fishing Activities by Large Scale Flag of Convenience Longline Vessels Resolution No 99/03: on the Elaboration of a Control and Inspection Scheme for IOTC Resolution No 01/06: Recommendation concerning the IOTC bigeye tuna statistical document programme

***Table 1**. Catches of bigeye tuna by gear and main fleets for the period 1950-2000.*

Gear	Fleet	Av96/00	%	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Fleet
LL	Taiwan,China	35	25.1					0.1	0.2	0.6	0.9	1.5	1.5	1.3	1.9	1.2	1.7	1.8	1.4	2.2	2.3	7.2	8.0	10.0	5.5	5.5	4.0	6.0	5.3	Taiwan,China
	Indonesia	26	18.5																								0.0	0.2	0.4	Indonesia
	NEI-DFRZ	17	12.1																											NEI-DFRZ
	Japan	16	11.2			1.5	3.6	7.9	10.1	13.4	12.4	11.3	8.9	15.6	13.6	18.7	12.4	16.8	18.2	22.6	22.3	24.6	15.0	12.7	11.2	8.3	5.2	6.9	5.5	Japan
	Korea	5	3.9																0.1	0.1	0.4	6.3	6.6	2.6	4.1	4.3	6.6	13.4	24.7	Korea
	NEI-ICE	5	3.7																											NEI-ICE
	OTHER	5	3.5																											OTHER
	TOTAL	**110**	**77.9**			*2*	*4*	*8*	*10*	*14*	*13*	*13*	*10*	*17*	*16*	*20*	*14*	*19*	*20*	*25*	*25*	*38*	*30*	*25*	*21*	*18*	*16*	*27*	*36*	**TOTAL**
PS	EC	20	14.4																											EC
	NEI-PS	6	4.0																											NEI-PS
	OTHER	4	3.1																											OTHER
	TOTAL	**30**	**21.5**																											**TOTAL**
BB		1	0.4																					0.1	0.1	0.1	0.1	0.1	0.1	
GILL		0	0.2																											
LINE		0	0.0																											
UNCL																														
	TOTAL	**141**				*2*	*4*	*8*	*10*	*14*	*13*	*13*	*10*	*17*	*16*	*20*	*14*	*19*	*20*	*25*	*25*	*38*	*30*	*25*	*21*	*18*	*16*	*27*	*36*	**TOTAL**
Gear	Fleet	Av96/00	%	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Fleet

Gear	Fleet	Av96/00	%	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	Fleet
LL	Taiwan,China	35	25.1	4.2	6.2	4.9	7.4	8.9	6.8	11.3	11.3	10.9	12.2	16.8	17.6	19.4	19.9	20.7	29.0	24.0	39.5	27.7	32.6	29.8	34.1	39.7	37.1	36.4	Taiwan,China
	Indonesia	26	18.5	0.3	0.3	0.4	0.4	0.5	0.5	0.8	1.9	2.4	2.4	0.7	2.4	3.2	4.5	4.5	4.5	7.6	7.9	10.8	12.2	23.2	27.9	26.1	30.5	22.7	Indonesia
	NEI-DFRZ	17	12.1										0.1	1.1	0.9	3.4	3.2	4.4	7.0	5.7	10.0	7.4	11.3	14.9	12.1	19.5	18.2	20.3	NEI-DFRZ
	Japan	16	11.2	2.1	3.1	10.9	4.2	5.9	7.8	11.4	18.3	14.0	17.2	15.8	15.5	12.3	7.7	8.2	7.8	5.6	8.3	17.5	17.2	16.5	18.8	17.1	14.1	12.5	Japan
	Korea	5	3.9	21.0	24.6	32.9	21.2	18.7	18.9	18.9	16.7	11.5	12.4	11.4	13.9	16.5	11.7	10.3	2.1	4.5	7.1	8.2	6.2	10.8	10.2	3.2	1.3	1.8	Korea
	NEI-ICE	5	3.7														1.9	2.6	2.3	2.6	3.4	5.3	5.5	5.7	6.0	6.0	4.8	3.6	NEI-ICE
	OTHER	5	3.5					0.2	0.2	0.2	0.3	0.1	0.1	0.3	0.1	2.0	7.6	9.2	9.5	11.8	11.6	14.1	8.7	3.6	5.0	4.7	5.5	5.7	OTHER
	TOTAL	**110**	**77.9**	*28*	*34*	*49*	*33*	*34*	*34*	*43*	*49*	*39*	*44*	*46*	*50*	*57*	*56*	*60*	*62*	*62*	*88*	*91*	*94*	*104*	*114*	*116*	*111*	*103*	**TOTAL**
PS	EC	20	14.4						0.0	0.0	0.2	3.1	5.7	8.9	11.9	13.0	9.5	9.5	11.4	7.5	10.4	11.3	19.5	18.3	23.7	17.6	24.6	17.4	EC
	NEI-PS	6	4.0								0.0	0.5	0.6	1.0	0.8	0.8	0.5	1.0	1.5	0.9	1.9	2.5	3.4	3.4	6.2	5.2	7.5	6.0	NEI-PS
	OTHER	4	3.1			0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.9	0.7	0.7	1.2	2.0	2.2	2.6	2.9	3.5	5.1	5.5	2.8	4.1	4.6	6.3	4.1	OTHER
	TOTAL	**30**	**21.5**			*0*	*0*	*0*	*0*	*0*	*1*	*4*	*7*	*11*	*13*	*15*	*12*	*13*	*16*	*11*	*16*	*19*	*28*	*25*	*34*	*27*	*38*	*27*	**TOTAL**
BB		1	0.4	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.5	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	
GILL		0	0.2										0.0	0.3	0.1	2.0	0.6	0.3	0.1	0.0	0.0	0.1	1.2	0.3	0.4	0.5	0.1	0.0	
LINE		0	0.0											0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	
UNCL											0.0	0.0																	
	TOTAL	**141**		*28*	*34*	*49*	*33*	*34*	*34*	*43*	*49*	*43*	*52*	*57*	*64*	*74*	*69*	*73*	*78*	*74*	*104*	*111*	*124*	*130*	*149*	*145*	*151*	*131*	**TOTAL**
Gear	Fleet	Av96/00	%	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	Fleet

KEY:

PS	Purse seine	**GILL**	Gill net	**Av96/00**	Average catches for the period 1996-2000
LL	Longline	**LINE**	Hand lines and/or troll lines	**%**	Proportion of the total catch (average 1996-2000) that the average catches (1996-2000) represent
BB	Baitboat	**UNCL**	Other or unknown		

NEI-DFRZ	Catches of non-reporting freezing or deep-freezing longline vessels, operating under various flags (Belize, Equatorial Guinea, Honduras, Panama, Vanuatu, etc.) as estimated by the IOTC Secretariat
NEI-ICE	Catches of non-reporting fresh-tuna longliners, operating under various flags (Honduras, Taiwan,China, etc.), as estimated by the IOTC Secretariat
NEI-PS	Catches of non-reporting purse-seine vessels operating under various flags (Belize, Cayman Islands, Cote d'Ivoire, Liberia, Malta, Netherlands Antilles and Panama)

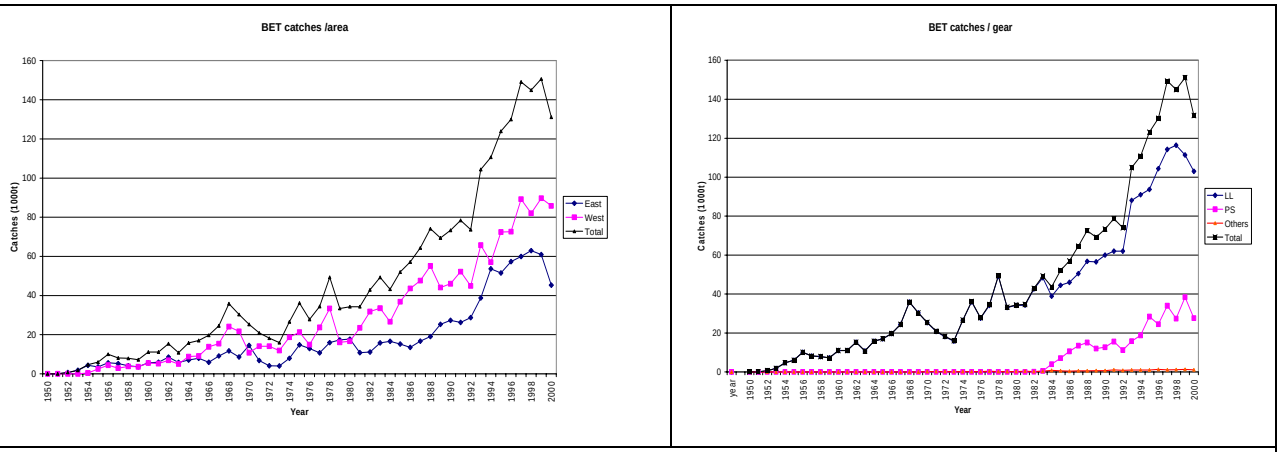


Figure 1 *– Yearly catches (thousand of metric tonnes) of bigeye tuna by area (Eastern and Western Indian Ocean, left) and by gear from 1950 to 2000 (right).*

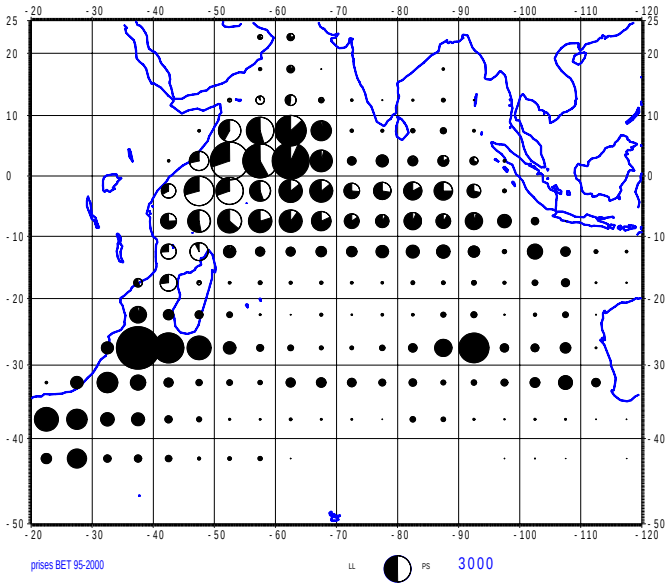


Figure 2 *– Average (1995-2000) geographical distribution of bigeye tuna catches according to gear (longline in black, purse-seine in white).*

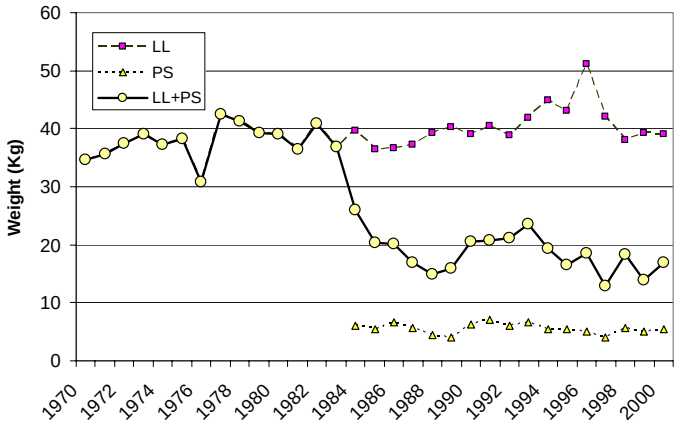


***Figure 3**. Average weight in the catch by gear for the period 1970-2000.*

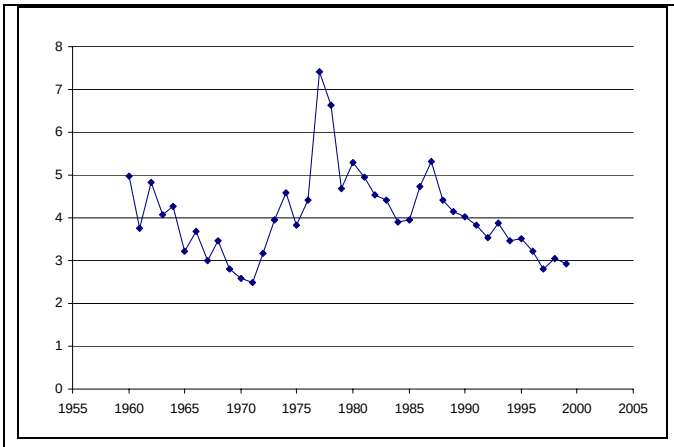


***Figure 4.** Yearly abundance index based on Japanese longline bigeye CPUE.*

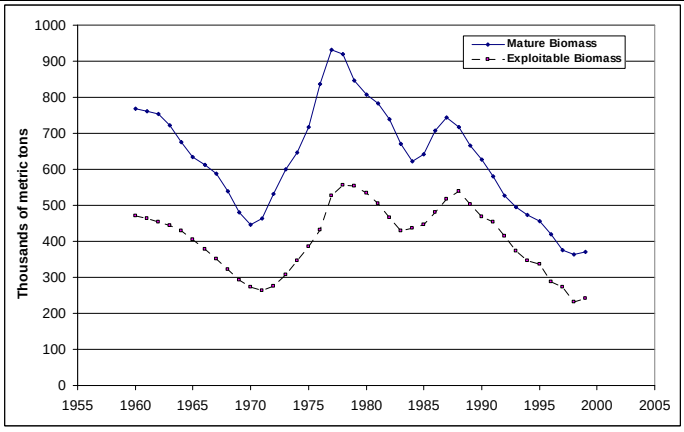


***Figure 5**. Trends of the mature and exploitable biomass of bigeye tuna, as estimated by the WPTT in 2001*

APPENDIX VIII. EXECUTIVE SUMMARY OF THE STATUS OF THE SKIPJACK TUNA RESOURCE

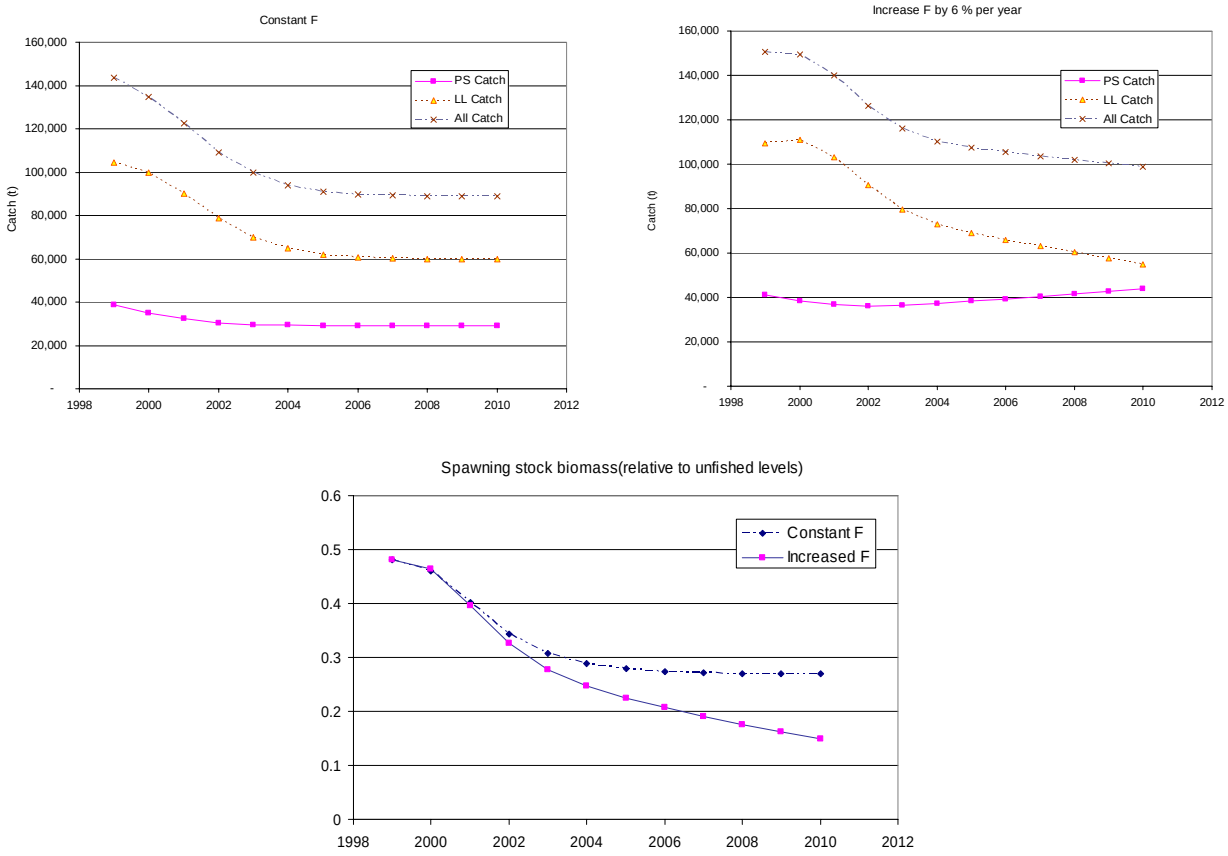
BIOLOGY

The skipjack tuna resource exhibits characteristics that result in a higher productivity when compared to other tuna species. This species has a short lifespan, and they are exploited during a short period (probably less than 3 years). Furthermore, the species shows high fecundity, spawning at an early age (all skipjack tuna caught are already potential spawners) and a great flexibility in its spawning behaviour by being able to reproduce in all waters with surface temperature greater than 24°C. Because of these characteristics, skipjack tuna resources are considered to be resilient stocks which are not easily overfished.

FISHERIES

Tuna fisheries have been increasingly catching skipjack in the Indian Ocean since the early eighties. Skipjack has been the most important tuna species in the Indian Ocean catches of tunas since 1999 with total catches reaching about 400,000 t yearly (*Figure 1 and Table 1*). These catches have also shown low inter-annual variability as compared with similar fisheries in other oceans. This species is taken in similar proportions not only by industrial purse seiners operating since the early eighties, mainly in the Western Indian Ocean, but also by artisanal pole and line fisheries which are mainly active in Maldives (*Figure 2*)

***Figure 6**. Results of the projections under different scenarios, as calculated by the WPTT in 2001.*



and also in India (not shown on the map). The increase of skipjack catches by purse seine fisheries is related to the development of a fishery in association with Fish Aggregating Devices (FAD). Currently, 80% of the

skipjack tuna caught by purse-seine is taken under FADs. Catch rates by the purse seiners show an increasing trend (*Figure 3*) possibly due to an increase in fishing power and to an increase in the number of FADs (and the technology associated with them) in the fishery. The average size of skipjack caught in the Indian Ocean (2.7 kg in the purse-seine catches and 3.0 kg in the Maldivian baitboat catches) is greater that the average size of skipjack caught in other oceans, such as the Atlantic (*Figure 4*). However, there are indications that there has been a slight decrease in sizes caught in recent years in the purse-seine fisheries.

STOCK STATUS

The stock of skipjack tuna in the Indian Ocean has never been thoroughly studied by scientists despite of its importance for the fisheries in the region. Even if this species has always been considered as being resistant to overfishing, it is evident that the present rate of increase in catches (an average increase of 17,000 t per year since the early eighties) cannot be maintained in the long tem, as all stocks have a limit to their productivity and can suffer, at least locally, from overfishing. For instance, such local overfishing has been observed in the Atlantic where, in recent years, skipjack catches have been decreasing despite of an extensive use of FADs, with a low, and decreasing, average weight (Figure 4). Such trends have not yet been observed in the Indian Ocean but preventive measures should be taken.

Independently of its present level of exploitation, there are two concerns about skipjack fisheries in the Indian Ocean:

- First, the legitimate concern by artisanal fisheries regarding the potential interaction between the industrial and the artisanal fisheries which are fishing in nearby areas (Figure 2). This interaction may, for instance, affect the quantity of the large skipjack tuna taken by Maldivian pole-and-line vessels (*Figure 5*) and it should be further assessed by scientists.
- Second, there has been concern that the current extensive use of FADs by purse-seine may produce a "biological trap" with negative consequences for the biology of the Indian Ocean skipjack stocks (for instance, altering their natural growth, natural movement pattern and natural mortality).

MANAGEMENT RECOMMENDATIONS

At this stage, the Scientific Committee has not made any specific management recommendation concerning this stock, as it appears that this stock is still in good condition.

Despite of its present apparent good health, the Indian Ocean skipjack tuna stock should be carefully analysed by scientists. This analysis should be carried out to: a) better estimate its potential productivity and MSY; b) to estimate the risk of interaction between fisheries, and c) the potential risks introduced by the extensive use of FADs. These analyses would require comprehensive processing of the large data bases collected in Maldives and on purse seiners, for instance, analysing catch and CPUE at size by the two fisheries (the necessary data are already available in the IOTC). However, the implementation of a specifically designed component of the planned large scale tagging programme will probably remain the only way to comprehensively evaluate the potential risks of interactions between these skipjack fisheries. The development of field research on FAD-associated skipjack would also be necessary to test the FAD-biological trap hypothesis.

SKIPJACK TUNA SUMMARY

Maximum Sustainable Yield :	
Current (2000) Catch:	393,000 t
Current (2000) Replacement Yield	
Relative Biomass (B_{2000}/B_{MSY})	
Relative Fishing Mortality (F_{2000}/F_{MSY})	
Management Measures in Effect	None

***Table 1**. Catches by gear and main fleets for 1950-2000.*

Gear	Fleet	Av96/00	%	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Fleet
PS	EC	105	30.9																											EC
	NEI-PS	46	13.6																											NEI-PS
	OTHER	20	5.8														0.0	0.2	0.0									0.1	0.2	OTHER
	TOTAL	**170**	**50.3**														*0*	*0*	*0*									*0*	*0*	**TOTAL**
BB	Maldives	77	22.6	8.0	0.8	8.0	9.0	9.0	9.0	9.0	10.0	10.0	10.0	9.0	8.0	8.0	8.0	8.0	14.1	16.9	18.9	17.5	19.6	27.6	28.0	17.5	19.5	22.5	14.9	Maldives
	OTHER	5	1.3	0.2	1.3	1.4	1.5	1.6	1.6	1.7	1.6	1.7	1.6	1.6	2.1	2.1	2.2	2.3	2.6	2.8	2.7	2.9	3.1		0.0	0.0	5.0	10.5	1.8	OTHER
	TOTAL	**81**	**24.0**	*8*	*2*	*9*	*11*	*11*	*11*	*11*	*12*	*12*	*12*	*11*	*10*	*10*	*10*	*10*	*17*	*20*	*22*	*20*	*23*	*28*	*28*	*17*	*25*	*33*	*17*	**TOTAL**
GILL	Sri Lanka	38	11.2																											Sri Lanka
	OTHER	19	5.5	0.5	0.5	0.5	0.7	0.8	0.8	0.7	1.9	0.9	0.9	1.1	1.0	1.6	2.4	3.3	3.6	4.8	4.7	4.7	4.2	3.9	3.1	3.7	2.9	4.0	4.5	OTHER
	TOTAL	**57**	**16.7**	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*2*	*1*	*1*	*1*	*1*	*2*	*2*	*3*	*4*	*5*	*5*	*5*	*4*	*4*	*3*	*4*	*3*	*4*	*4*	**TOTAL**
LINE		3	0.9	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.6	0.4	0.5	0.5	0.3	
LL		0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	
UNCL	Indonesia	25	7.3																					2.3	2.4	3.7	4.1	4.4	3.7	Indonesia
	OTHER	3	0.8	4.3	4.1	7.9	5.1	6.6	7.0	10.0	10.0	9.7	10.0	10.0	15.0	9.4	15.5	11.0	10.0	11.6	16.4	20.7	14.6	12.9	10.7	14.5	11.7	13.8	17.1	OTHER
	TOTAL	**27**	**8.1**	*4*	*4*	*8*	*5*	*7*	*7*	*10*	*10*	*10*	*10*	*10*	*15*	*9*	*16*	*11*	*10*	*12*	*16*	*21*	*15*	*15*	*13*	*18*	*16*	*18*	*21*	**TOTAL**
	TOTAL	**338**		*13*	*7*	*18*	*16*	*18*	*19*	*22*	*24*	*22*	*23*	*22*	*26*	*21*	*28*	*25*	*30*	*36*	*43*	*46*	*42*	*47*	*45*	*40*	*44*	*56*	*43*	**TOTAL**
Gear	Fleet	Av96/00	%	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	Fleet

Gear	Fleet	Av96/00	%	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	Fleet
PS	EC	105	30.9						0.2	1.0	9.4	33.7	48.5	55.2	63.5	75.8	107.0	76.9	81.2	91.7	99.5	120.0	118.2	106.3	94.2	89.0	117.0	117.1	EC
	NEI-PS	46	13.6								0.4	8.2	8.4	6.4	4.8	7.0	7.9	11.7	10.8	20.8	25.4	32.7	43.8	34.3	36.3	44.5	52.9	61.9	NEI-PS
	OTHER	20	5.8	0.3	0.5	1.3	1.0	1.8	2.2	3.8	2.8	3.9	4.5	5.9	11.6	11.0	12.7	20.5	31.6	39.9	39.5	27.9	21.3	11.6	18.0	21.8	27.8	18.3	OTHER
	TOTAL	**170**	**50.3**	*0*	*0*	*1*	*1*	*2*	*2*	*5*	*13*	*46*	*61*	*67*	*80*	*94*	*128*	*109*	*124*	*152*	*164*	*181*	*183*	*152*	*148*	*155*	*198*	*197*	**TOTAL**
BB	Maldives	77	22.6	18.6	13.7	13.2	17.3	22.2	19.6	15.3	19.3	32.3	42.2	45.1	42.6	58.2	57.8	60.7	58.3	57.6	58.0	68.7	69.9	66.2	68.1	77.8	92.3	78.8	Maldives
	OTHER	5	1.3	0.1	0.6	0.8	0.4	0.0	0.2	2.1	2.1	1.5	1.8	0.5	0.5	0.5	1.8	0.1	0.2	0.3	0.1	0.1	0.5	0.2	0.9	2.2	10.7	8.7	OTHER
	TOTAL	**81**	**24.0**	*19*	*14*	*14*	*18*	*22*	*20*	*17*	*21*	*34*	*44*	*46*	*43*	*59*	*60*	*61*	*59*	*58*	*58*	*69*	*70*	*66*	*69*	*80*	*103*	*88*	**TOTAL**
GILL	Sri Lanka	38	11.2							10.6	11.2	8.7	10.1	16.7	16.3	19.6	22.6	25.0	27.9	23.8	24.1	21.5	18.2	22.7	27.8	34.6	51.9	51.9	Sri Lanka
	OTHER	19	5.5	4.2	3.7	2.2	3.8	1.7	2.7	3.9	1.9	2.0	2.4	1.8	4.0	6.1	8.6	10.1	11.4	13.2	14.3	19.4	12.1	11.3	15.8	14.8	23.8	28.2	OTHER
	TOTAL	**57**	**16.7**	*4*	*4*	*2*	*4*	*2*	*3*	*14*	*13*	*11*	*12*	*19*	*20*	*26*	*31*	*35*	*39*	*37*	*38*	*41*	*30*	*34*	*44*	*49*	*76*	*80*	**TOTAL**
LINE		3	0.9	0.5	0.4	0.4	0.4	0.5	0.5	0.9	0.9	1.8	0.6	0.6	0.5	0.5	4.3	4.6	5.0	2.9	3.0	2.8	2.8	2.6	3.2	3.3	2.7	3.3	
LL		0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.6	0.1	0.2	0.1	0.1	0.1	0.1	0.1	
UNCL	Indonesia	25	7.3	5.3	3.7	3.8	8.2	8.6	7.6	12.1	12.0	9.5	10.0	10.1	10.8	12.2	17.4	12.0	11.5	12.8	14.7	17.0	15.2	21.2	27.4	23.9	25.1	25.1	Indonesia
	OTHER	3	0.8	13.9	12.8	12.4	9.7	14.0	17.0	3.9	4.5	5.4	5.1	6.0	7.6	6.9	6.4	5.8	4.7	4.9	5.0	9.5	6.6	6.9	6.2	0.5	0.1	0.1	OTHER
	TOTAL	**27**	**8.1**	*19*	*16*	*16*	*18*	*23*	*25*	*16*	*17*	*15*	*15*	*16*	*18*	*19*	*24*	*18*	*16*	*18*	*20*	*27*	*22*	*28*	*34*	*24*	*25*	*25*	**TOTAL**
	TOTAL	**338**		*43*	*35*	*34*	*41*	*49*	*50*	*54*	*64*	*107*	*133*	*148*	*162*	*198*	*247*	*228*	*243*	*268*	*284*	*320*	*309*	*284*	*298*	*313*	*404*	*393*	**TOTAL**
Gear	Fleet	Av96/00	%	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	Fleet

KEY:

PS	Purse seine	**GILL**	Gill net	**Av96/00**	Average catches for the period 1996-2000
LL	Longline	**LINE**	Hand lines and/or troll lines	**%**	Proportion of the total catch (average 1996-2000) that the average catches (1996-2000) represent
BB	Baitboat	**UNCL**	Other or unknown		

NEI-DFRZ Catches of non-reporting freezing or deep-freezing longline vessels, operating under various flags (Belize, Equatorial Guinea, Honduras, Panama, Vanuatu, etc.) as estimated by the IOTC Secretariat
NEI-ICE Catches of non-reporting fresh-tuna longliners, operating under various flags (Honduras, Taiwan,China, etc.), as estimated by the IOTC Secretariat
NEI-PS Catches of non-reporting purse-seine vessels operating under various flags (Belize, Cayman Islands, Cote d'Ivoire, Liberia, Malta, Netherlands Antilles and Panama)

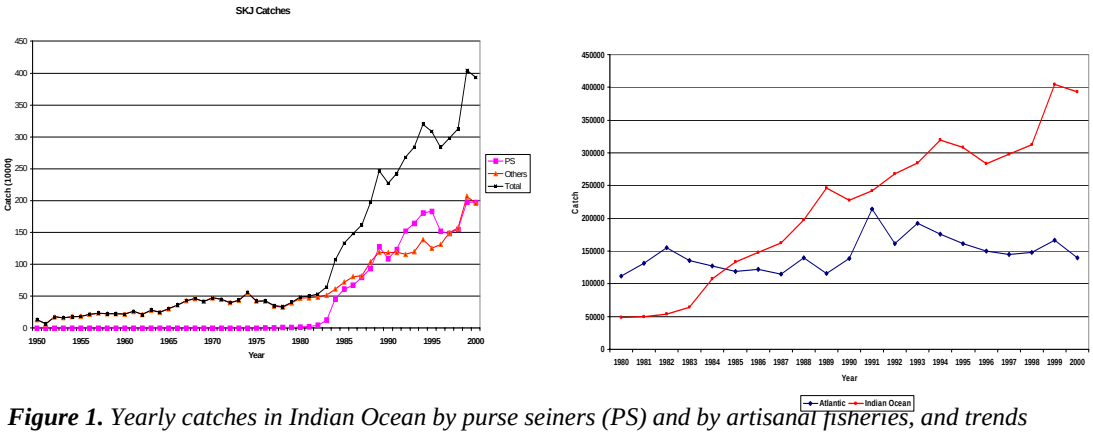


Figure 1. *Yearly catches in Indian Ocean by purse seiners (PS) and by artisanal fisheries, and trends of the total catches of skipjack in the Indian and the Atlantic Ocean*

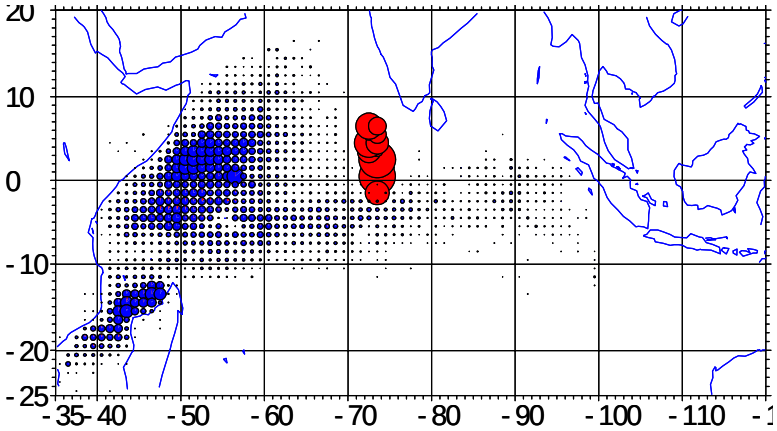


Figure 2. *Average catches of skipjack by the purse seine and Maldivian pole and line fisheries.*

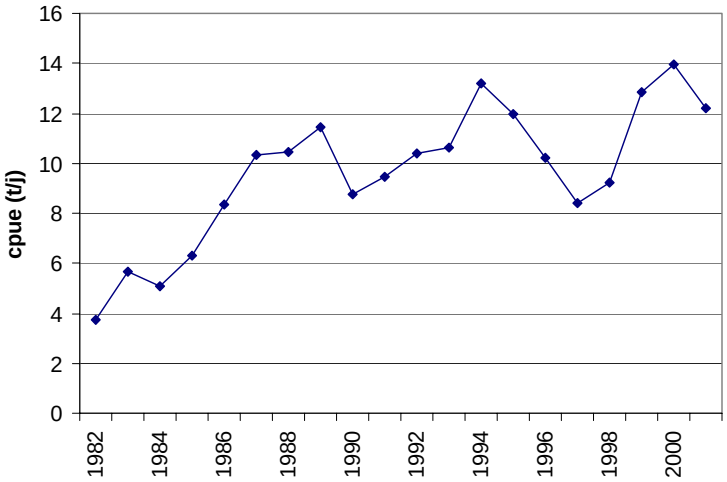


Figure 3. *Nominal catch-per-fishing-day in the purse-seine fishery.*

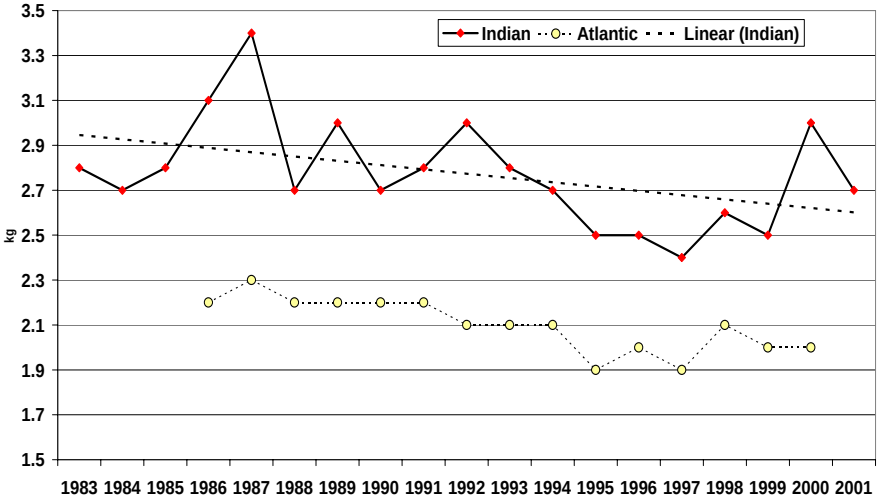


Figure 4. *Average weight of skipjack taken by the purse seine fisheries in the Indian Ocean and in the Atlantic*

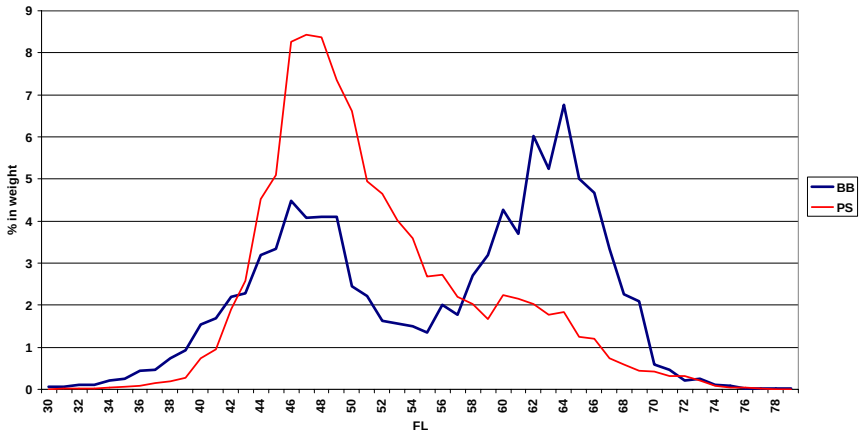


Figure 5. *Typical average size distribution of skipjack taken by purse seine and by Maldivian pole and line vessels (average period 1985-98, in %, in weight)*

APPENDIX X
RESOLUTIONS AND RECOMMENDATIONS ADOPTED BY THE COMMISSION

RESOLUTION 02/01
RELATING TO THE ESTABLISHMENT OF AN IOTC PROGRAMME OF INSPECTION IN PORT

The Indian Ocean Tuna Commission (IOTC),

Taking note of the results of the Intersessional Meeting on an Integrated Control and Inspection Scheme, held in Yaizu, Japan, from 27 to 29 March 2001.

Noting that there is a general consensus of the Contracting Parties on the fact that the inspection in port is a central element of a control and inspection programme, and that it can be, in particular, an effective tool to fight against IUU fishing.

Taking into account that Contracting Parties have agreed that the implementation of an integrated control and inspection scheme should follow a phased approach.

Adopts, in accordance with the provisions of Article IX.1, of the Agreement establishing the IOTC, the following:

1. All measures provided for under this recommendation shall be taken in accordance with international law.
2. Measures taken by a Port State in accordance with this Agreement shall take full account of the right and the duty of a Port State to take measures, in accordance with international law, to promote the effectiveness of subregional, regional and global conservation and management measures.
3. Each Contracting Party may, *inter alia*, inspect documents, fishing gear and catch on board fishing vessels, when such vessels are voluntarily in its ports or at its offshore terminals. Inspections shall be carried out so that the vessel suffers the minimum interference and inconvenience and that degradation of the quality of the fish is avoided.
4. Each Contracting Party shall, in accordance with the Resolution 01/03 establishing a Scheme to promote compliance by Non-Contracting Party vessels with resolutions established by the IOTC, adopt regulations in accordance with international law to prohibit landings and transhipments by non-Contracting Party vessels where it has been established that the catch of the species covered by the Agreement establishing the IOTC has been taken in a manner which undermines the effectiveness of conservation and management measures adopted by the Commission.
5. In the event that a Port State considers that there has been evidence of a violation by a Contracting Party or a Non-Contracting Party vessel of a conservation and management measure adopted by the Commission, the Port State shall draw this to the attention of the Flag State concerned and, as appropriate, the Commission. The Port State shall provide the Flag State and the Commission with full documentation of the matter, including any record of inspection. In such cases, the Flag State shall transmit to the Commission details of actions it has taken in respect of the matter.
6. Nothing in this recommendation affects the exercise by States of their sovereignty over ports in their territory in accordance with international law.
7. While recognizing that inspection in port should be carried out in a non-discriminatory basis, in a first phase, priority should be given to inspection of vessels from Non-Contracting Parties.

RESOLUTION 02/02.
RELATING TO THE ESTABLISHMENT OF A VESSEL MONITORING SYSTEM PILOT PROGRAMME

The Indian Ocean Tuna Commission (IOTC),

Recognizing the developments in satellite-based vessel monitoring system (VMS), and the possible utility within IOTC

Taking note of the results of the Intersessional Meeting on an Integrated Control and inspection scheme, held in Yaizu, Japan, from 27 to 29 March, 2001

Taking note that it was agreed that Vessel Monitoring Systems are a valuable element to assure the monitoring of tuna fisheries activities; that nevertheless, it is necessary to incorporate these systems progressively to allow all Contracting Parties to implement this systems at national level;

Resolves in accordance with the provisions of Article IX.1 of the Agreement creating the IOTC, that:

1. Each Contracting Party and Cooperating Non Contracting Party with vessels greater than 24 metres in overall length (or greater than 20 metres between perpendiculars) and fishing for IOTC species on the high seas outside the fisheries jurisdiction of any coastal state shall adopt a pilot programme for a satellite-based vessel monitoring system (VMS) for ten percent of such vessels. Those Contracting Parties and Cooperating Non-Contracting Parties with less than ten vessels shall ensure the participation of at least one vessel. The pilot programme will be a flag-state based programme.
2. Each Contracting Party and Cooperating Non Contracting Party shall implement a two-year pilot programme effective 1 July, 2003. Contracting Parties and Cooperating Non Contracting Parties are encouraged to implement the pilot programme earlier, if possible. Exceptionally, Contracting Parties and Cooperating Non Contracting Parties may defer the introduction of the system to 1st January 2004.
3. Information collected shall include:
    - the vessel identification,
    - the most recent geographical position of the vessel (longitude, latitude) with a position error which shall be less than 500 metres, at a confidence level of 99%, and
    - the date and time of the fixing of the said position of the vessel.
4. Each Contracting Party and Cooperating non-Contracting Party shall take the necessary measures to ensure that their land-based national Fisheries Monitoring Center (FMC) receives through the VMS the messages requested in paragraph 3
5. Each Contracting Party and Cooperating non-Contracting Party shall ensure that the masters of fishing vessels flying its flag ensure that the satellite tracking device are at all times fully operational and that the information in paragraph 3 is transmitted, preferably once every 6 hours.
6. Each Contracting Party and Cooperating non-Contracting Party shall ensure that a fishing vessel with a defective satellite tracking device shall communicate, at least daily, reports containing the information requested in paragraph 3 to the FMC by other means of communication (radio, telefax or telex).
7. Each Contracting Party and Cooperating non-Contracting Party shall report annually to the Commission on the progress and implementation of its pilot VMS programme or VMS programme.
8. The Commission shall evaluate the pilot programme at its meeting in 2005, with a view to establishing a comprehensive VMS programme

RESOLUTION 02/03
TERMS OF REFERENCE FOR THE IOTC COMPLIANCE COMMITTEE

The Indian Ocean Tuna Commission (IOTC):

Establishes, in accordance with Article XII(5) of the Agreement creating the IOTC, a Compliance Committee.

The functions of the IOTC Compliance Committee shall be to:

a) Review compliance with conservation and management measures adopted by the Commission and make such recommendations to the Commission as may be necessary to ensure their effectiveness;

b) Review the implementation of measures for monitoring, control, surveillance and enforcement adopted by the Commission and make such recommendations to the Commission as may be necessary to ensure their effectiveness;

c) Define, develop and make recommendations to the Commission concerning the phased development and implementation of the IOTC Control and Inspection Scheme;

d) Monitor, review and analyze information pertaining to the activities of Non-Contracting Parties and their vessels which undermine the objectives of the Agreement including, in particular, IUU fishing, and recommend actions to be taken by the Commission to discourage such activities;

e) Consider the effectiveness and practical aspects of the implementation of the IOTC Statistical Document Programme;

f) Perform such other tasks as directed by the Commission;

The Compliance Committee will meet during the annual Commission Session.

RESOLUTION 02/04
ON ESTABLISHING A LIST OF VESSELS PRESUMED TO HAVE CARRIED OUT ILLEGAL, UNREGULATED AND UNREPORTED FISHING IN THE IOTC AREA

The Indian Ocean Tuna Commission (IOTC),

Recalling that the FAO Council adopted on 23 June 2001 an International Plan of Action to prevent, to deter and eliminate illegal, unregulated and unreported fishing (IPOA). This plan stipulates that the identification of the vessels carrying out IUU activities should follow agreed procedures and be applied in an equitable, transparent and non discriminatory way,

Recalling that the IOTC adopted *Resolution 01/07* concerning its support of the IPOA – IUU Plan,

Recalling that IOTC has already adopted measures against IUU fishing activities and, in particular, against large-scale tuna longline vessels,

Concerned by the fact that IUU fishing activities in the IOTC area continue, and these activities diminish the effectiveness of IOTC conservation and management measures,

Further Concerned that there is evidence of a large number of vessel owners engaged in such fishing activities which have re-flagged their vessels to avoid compliance with IOTC management and conservation measures,

Determined to address the challenge of an increase in IUU fishing activities by way of counter-measures to be applied in respect to the vessels, without prejudice to further measures adopted in respect of flag States under the relevant IOTC instruments,

Conscious of the need to address, as a matter of priority, the issue of large-scale fishing vessels conducting IUU fishing activities,

Noting that the situation must be addressed in the light of all relevant international fisheries instruments and in accordance with the relevant rights and obligations established in the World Trade Organisation (WTO) Agreement,

Adopts in accordance with paragraph 1 of article IX of the Agreement, that;

1. For the purposes of this resolution, the fishing vessels flying the flag of a non-Contracting Party are presumed to have carried out illegal, unregulated and unreported fishing activities in the IOTC Area, *inter alia*, when a Contracting Party or co-operating non-Contracting Party presents evidence that such vessels:

    a) Harvest tunas and tuna-like species in the IOTC Area and are not registered on the IOTC list of vessels authorised to fish for tuna and tuna-like species in the IOTC area, or

    b) Harvest tuna and tuna-like species in the IOTC Area, whose flag state is without quotas, catch limit or effort allocation under IOTC conservation and management measures where appropriate, or

    c) Do not record or report their catches made in the IOTC Area, or make false reports, or

    d) Take or land undersized fish in contravention of IOTC conservation measures, or

    e) Fish during closed fishing periods or in closed areas in contravention of IOTC conservation measures, or

    f) Use prohibited fishing gear in contravention of IOTC conservation measures, or

g) Tranship with vessels included in the IUU list, or

h) Harvest tuna or tuna-like species in the waters under the national jurisdiction of the coastal States in the IOTC Area without authorisation and/or infringes its laws and regulations, without prejudice to the sovereign rights of coastal States to take measures against such vessels, or

i) Are without nationality and harvest tunas or tuna-like species in the IOTC Area, and/or

j) Engage in fishing activities contrary to any other IOTC conservation and management measures.

2. Contracting Parties and Co-operating non-Contracting Parties transmit every year to the Secretary before 15th July, the list of vessels flying the flag of a non-Contracting Party presumed to be carrying out IUU fishing activities in the IOTC Area during the current and previous year, accompanied by the supporting evidence concerning the presumption of IUU fishing activity.

3. This list shall be based on the information collected by Contracting Parties and non-Contracting co-operating Parties, entities and fishing entities, *inter alia*, under:

   – *Resolution 98/04 Concerning Registration and Exchange of Information on Vessels Including Flag of Convenience Vessels, Fishing for Tropical Tunas in the IOTC Area of Competence;*

   – *Resolution 99/02 Calling for Action Against Fishing Activities by Large-Scale Flag of Convenience Longline Vessels;*

   – *Resolution 01/02 Relating to Control of Fishing Activities;*

   – *Resolution 01/03 Establishing a Scheme to Promote Compliance by Non-Contracting Party Vessels with Resolutions Adopted by IOTC;*

   – *Resolution 01/06 Concerning the IOTC Bigeye Tuna Statistical Document Programme;*

   – *Resolution 02/01 Relating to the Establishment of an IOTC Programme of Inspection in Port;*

   – *Resolution 02/05 Concerning the Establishment of an IOTC Record of Vessels over 24 Metres Authorised to Operate in the IOTC Area;*

4. On the basis of the information received pursuant to paragraph 2, the Secretary shall draw up a draft IUU list and shall transmit it together with all the evidence provided to Contracting Parties and Co-operating non-Contracting Parties, Entities and Fishing Entities, as well as to non-Contracting Parties whose vessels are included on these lists before 15 August of each year. Contracting Parties, Co-operating non-Contracting Parties and non-Contracting Parties will transmit their comments, as appropriate, including evidence showing that the listed vessels have neither fished in contravention to IOTC conservation and management measures nor had the possibility of fishing tuna and tuna-like species in the IOTC Area, before 30 September to IOTC.

5. Upon receipt of the draft IUU list, Contracting Parties and Co-operating non-Contracting Parties shall closely monitor these vessels included in the draft IUU list in order to determine their activities and possible changes of name, flag and/or registered owner.

6. On the basis of the information received pursuant to paragraph 3, the Secretary shall draw up a provisional list which he will transmit 2 weeks in advance to the Commission Meeting to the Contracting Parties and Co-operating non-Contracting Parties and to the non-Contracting Parties concerned together with all the evidence provided.
7. Contracting Parties and Co-operating non-Contracting Parties may at any time submit to the Secretary any additional information, which might be relevant for the establishment of the IUU list. The Secretariat shall circulate the information, at latest before the annual meeting, to the Contracting Parties and Co-operating non-Contracting Parties and to the non-Contracting Parties concerned, together with all the evidence provided.
8. The Compliance Committee shall examine, each year, the provisional list, as well as the information referred to in paragraphs 3 and 5.
9. The Compliance Committee shall remove a vessel from the provisional list if the flag State demonstrates that:
    a) The vessel did not take part in any IUU fishing activities described in paragraph 1, or
    b) It has taken effective action in response to the IUU fishing activities in question, including, *inter alia*, prosecution and imposition of sanctions of adequate severity.
10. Following the examination referred to in paragraph 6, the Compliance Committee shall submit to the Commission for approval, the provisional list of the vessels identified as carrying out IUU fishing activities in the IOTC area.
11. On adoption of the list, the Commission shall request non-Contracting Parties, whose vessels appear on the IUU list, to take all the necessary measures to eliminate these IUU fishing activities, including if necessary, the withdrawal of the registration or of the fishing licences of these vessels, and to inform the Commission of the measures taken in this respect.
12. Contracting Parties and Co-operating non-Contracting Parties shall take all necessary measures, under their applicable legislation:
    a) So that the fishing vessels, the mother-ships and the cargo vessels flying their flag do not participate in any transhipment with vessels registered on the IUU list;
    b) So that IUU vessels that enter ports voluntarily are not authorized to land or tranship therein;
    c) To prohibit the chartering of a vessel included on the IUU list;
    d) To refuse to grant their flag to vessels included in the IUU list, except if the vessel has changed owner and the new owner has provided sufficient evidence demonstrating the previous owner or operator has no further legal, beneficial or financial interest in, or control of, the vessel, or having taken into account all relevant facts, the flag State determines that granting the vessel its flag will not result in IUU fishing;
    e) To prohibit the imports, or landing and/or transhipment, of tuna and tuna-like species from vessels included in the IUU list;
    f) To encourage the importers, transporters and other sectors concerned, to refrain from transaction and transhipment of tuna and tuna-like species caught by vessels included in the IUU lists;

g) To collect and exchange with other Contracting Parties or Co-operating non-Contracting Parties any appropriate information with the aim of searching, controlling and preventing false import/export certificates regarding tunas and tuna-like species from vessels included in the IUU list.

13. The Secretary will take any necessary measure to ensure publicity of the IUU vessels list adopted by IOTC pursuant to paragraph 8, in a manner consistent with any applicable confidentiality requirements, and through electronic means, by placing it on the IOTC website. Furthermore, the Secretary will transmit the IUU vessels list to other regional fisheries organisations for the purposes of enhanced co-operation between IOTC and these organisations in order to prevent, deter and eliminate illegal, unreported and unregulated fishing.

14. This recommendation shall apply initially to large-scale fishing vessels flying the flag of non-Contracting Parties. The Commission shall, at its annual meeting in 2003, review and, as appropriate, revise this recommendation with a view to its extension to other types of IUU fishing activities of non-Contracting Party vessels and, to Contracting Party, Co-operating non-Contracting Party vessels.

15. Without prejudice to the rights of flag states and coastal states to take proper action consistent with international law, the Contracting Parties and Co-operating non-Contracting Parties should not take any unilateral trade measures or other sanctions against vessels provisionally included in the draft IUU list, pursuant to paragraph 3, or which have been already removed from the list, pursuant to paragraph 6, on the grounds that such vessels are involved in IUU fishing activities.

RESOLUTION 02/05
CONCERNING THE ESTABLISHMENT OF AN IOTC RECORD OF VESSELS OVER 24 METRES AUTHORISED TO OPERATE IN THE IOTC AREA

The Indian Ocean Tuna Commission (IOTC),

Recalling that IOTC has been taking various measures to prevent, deter and eliminate the IUU fisheries conducted by large-scale tuna fishing vessels,

Further recalling that IOTC adopted the Recommendation Concerning the IOTC Bigeye Tuna Statistical Document Programme (Resolution 01/06) at its 2001 meeting,

Further recalling that IOTC adopted the Resolution 01/02 Relating to Control of Fishing Activities at its 2001 meeting,

Noting that large-scale fishing vessels are highly mobile and easily change fishing grounds from one ocean to another, and have high potential of operating in the IOTC area without timely registration with the Commission,

Recalling that the FAO Council adopted on 23 June 2001 an International Plan of Action aiming to prevent, to deter and to eliminate illegal, unregulated and unreported fishing (IPOA), that this plan stipulates that the regional fisheries management organization should take action to strengthen and develop innovative ways, in conformity with international law, to prevent, deter and eliminate IUU fishing and in particular to establish records of vessels authorized and records of vessels engaged in IUU fishing,

Recognizing the need to take further measures to effectively eliminate the IUU large scale tuna fishing vessels;

Adopts, in accordance with paragraph 1 of Article IX of the IOTC Agreement, that:

1. The Commission shall establish and maintain an IOTC Record of fishing vessels larger than 24 metres in length overall (hereinafter referred to as “large scale fishing vessels” or “LSFVs”) authorised to fish for tuna and tuna-like species in the IOTC Area. For the purpose of this recommendation, LSFVs not entered into the Record are deemed not to be authorised to fish for, retain on board, tranship or land tuna and tuna-like species.

2. Each Contracting Party, and Non-Contracting Party co-operating with IOTC (hereinafter referred to as "CPCs") shall submit electronically, where possible, to the IOTC Secretary by 1 July 2003, the list of its LSFVs that are authorised to operate in the IOTC Area. This list shall include the following information:

- Name of vessel(s), register number(s);
- Previous name(s) (if any);
- Previous flag(s) (if any);
- Previous details of deletion from other registries (if any);
- International radio call sign(s) (if any);
- Type of vessel(s), length and gross registered tonnage (GRT);
- Name and address of owner(s) and operator(s);
- Gear(s) used;
- Time period(s) authorised for fishing and/or transhipping;

CPCs shall indicate, when initially submitting their list of vessels according to this paragraph, which vessels are newly added or meant to replace vessels currently on their list submitted to IOTC pursuant to the *Resolution 01/02 Relating to Control of Fishing Activities*.

The initial IOTC record shall consist of all the lists submitted under this paragraph.

3. Each CPC shall promptly notify, after the establishment of the initial IOTC Record, the IOTC Secretary of any addition to, any deletion from and/or any modification of the IOTC Record at any time such changes occur.

4. The IOTC Secretary shall maintain the IOTC Record, and take any measure to ensure publicity of the Record and through electronic means, including placing it on the IOTC website, in a manner consistent with confidentiality requirements noted by CPCs.

5. The flag CPCs of the vessels on the record shall:

a) authorise their LSFVs to operate in the IOTC Area only if they are able to fulfil in respect of these vessels the requirements and responsibilities under the IOTC Agreement and its conservation and management measures;

b) take necessary measures to ensure that their LSFVs comply with all the relevant IOTC conservation and management measures;

c) take necessary measures to ensure that their LSFVs on the IOTC Record keep on board valid certificates of vessel registration and valid authorisation to fish and/or tranship;

d) ensure that their LSFVs on the IOTC Record have no history of IUU fishing activities or that, if those vessels have such history, the new owners have provided sufficient evidence demonstrating that the previous owners and operators have no legal, beneficial or financial interest in, or control over those vessels, or that having taken into account all relevant facts, their LSFVs are not engaged in or associated with IUU fishing;

e) ensure, to the extent possible under domestic law, that the owners and operators of their LSFVs on the IOTC Record are not engaged in or associated with tuna fishing activities conducted by LSFVs not entered into the IOTC Record in the IOTC Area;

f) take necessary measures to ensure, to the extent possible under domestic law, that the owners of the LSFVs on the IOTC Record are citizens or legal entities within the flag CPCs so that any control or punitive actions can be effectively taken against them.

6. CPCs shall review their own internal actions and measures taken pursuant to paragraph 5, including punitive and sanction actions and in a manner consistent with domestic law as regards disclosure, report the results of the review to the Commission at its 2003 meeting and annually thereafter. In consideration of the results of such review, the Commission shall, if appropriate, request the flag CPCs of LSFVS on the IOTC record to take further action to enhance compliance by those vessels to IOTC conservation and management measures.

7. a) CPCs shall take measures, under their applicable legislation, to prohibit the fishing for, the retaining on board, the transhipment and landing of tuna and tuna-like species by the LSFVs which are not entered into the IOTC Record.

b) To ensure the effectiveness of the IOTC conservation and management measures pertaining to species covered by Statistical Document Programs:

i) Flag CPCs shall validate statistical documents only for the LSFVs on the IOTC Record,

ii) CPCs shall require that the species covered by Statistical Document Programs caught by LSFVs in the IOTC Area, when imported into the territory of a Contracting Party be accompanied by statistical documents validated for the vessels on the IOTC Record and,

iii) CPCs importing species covered by Statistical Document Programs and the flag States of vessels shall co-operate to ensure that statistical documents are not forged or do not contain misinformation.

8. Each CPC shall notify the IOTC Secretary of any factual information showing that there are reasonable grounds for suspecting LSFVs not on the IOTC record to be engaged in fishing for and/or transhipment of tuna and tuna-like species in the IOTC Area.

9. a) If a vessel mentioned in paragraph 8 is flying the flag of a CPC, the Secretary shall request that Party to take measures necessary to prevent the vessel from fishing for tuna and tuna-like species in the IOTC Area.

b) If the flag of a vessel mentioned in paragraph 8 cannot be determined or is of a non-Contracting Party without cooperating status, the Secretary shall compile such information for future consideration by the Commission.

10. The Commission and the CPCs concerned shall communicate with each other, and make the best effort with FAO and other relevant regional fishery management bodies to develop and implement appropriate measures, where feasible, including the establishment of records of a similar nature in a timely manner so as to avoid adverse effects upon tuna resources in other oceans. Such adverse effects might consist of excessive fishing pressure resulting from a shift of the IUU LSFVs from the Indian Ocean to other oceans.

11. Paragraph 1 of the Resolution 01/02 Relating to Control of Fishing Activities adopted at the 2001 Commission meeting is no more effective when this resolution is entered into force, while paragraph 2,3,4 and 5 of the said Resolution shall stand as they are.

RECOMMENDATION 02/06.
ON THE IMPLEMENTATION OF THE RESOLUTION 02/05 CONCERNING THE IOTC RECORD OF VESSELS

The Indian Ocean Tuna Commission (IOTC),

Recognizing that the Commission adopted *Resolution 02/05 Concerning the Establishment of an IOTC Record of Vessels over 24 metres Authorized to Operate in the IOTC Area* at its 2002 meeting,

Being concerned that there remain a hundred large-scale tuna longline vessels (LSTLVs) that are believed to continue IUU fishing in the IOTC Area and other areas,

Further recognizing a need to take measures to prevent those IUU fishing vessels from being entered in the IOTC Record before the said Resolution has entered into force,

Reaffirming the right of Contracting Parties and Non-Contracting Parties co-operating with IOTC to determine which fishing vessels over 24 metres will be included on their list of vessels, including new vessels or one to replace old vessels,

Recommends, in accordance with Article IX of the IOTC Agreement, that:

With respect to the LSTLVs, the Secretary should:

Compare the list which was submitted to him in accordance with paragraph 1 of the *Resolution 01/02 Relating to Control of Fishing Activities* (hereinafter referred to as "the LIST") and the initial IOTC Record to be established by the *Resolution 02/05 Concerning the Establishment of an IOTC Record of Vessels over 24 metres Authorized to operate in the IOTC Area* adopted at the 2002 Commission meeting,

Identify the LSTLVs newly appeared on the initial IOTC Record (both net increase from the List and replacements of those previously on the List), and

Present a report on the results to the 2003 Commission meeting.

The Commission should scrutinize the information in paragraph 1 above to examine possible involvement of the remaining IUU LSTLVs on the IOTC Record

RECOMMENDATION 02/07.
CONCERNING MEASURES TO PREVENT THE LAUNDERING OF CATCHES BY IUU LARGE-SCALE TUNA LONGLINE FISHING VESSELS

The Indian Ocean Tuna Commission (IOTC),

Taking Into Account the need to implement the "FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) fishing", which was adopted at the 24th session of the FAO Committee on Fisheries in 2001,

Taking Into Account that the Bigeye Tuna Statistical Document Programme is currently being implemented,

Expressing Grave Concern that a significant amount of catches by the IUU fishing vessels are believed to be transferred under the names of duly licensed fishing vessels,

Recommends, in accordance with Article IX of the IOTC Agreement, that:

1. Contracting Parties, and non-Contracting Parties co-operating (hereinafter referred to as the "CPCs") should ensure that their duly licensed large-scale tuna longline fishing vessels have a prior authorization of at sea or in port transhipment and obtain the validated Statistical Document, whenever possible, prior to the transhipment of their tuna and tuna-like species subject to the Statistical Document Programme. They should also ensure that transhipments are consistent with the reported catch amount of each vessel in validating the Statistical Document and require the reporting of transhipment.
2. CPCs that import tuna and tuna-like species caught by large-scale tuna longline fishing vessels and subject to the Statistical Document Programme should require transporters (which include container vessels, mother vessels, and the like) that intend to land such species in their ports, to ensure that Statistical Documents are issued, whenever possible before the transhipment. Importing CPCs should obligate the transporters to submit necessary documents, including a copy of the validated Statistical Document and other documents, as required under domestic regulation, such as the receipt of transhipment, to the importing CPCs' authorities immediately after the transhipment.

RESOLUTION 02/08
ON THE CONSERVATION OF BIGEYE AND YELLOWFIN TUNA IN THE INDIAN OCEAN

The Indian Ocean Tuna Commission (IOTC),

Recognising the need for action to ensure the achievement of IOTC objectives to conserve and manage bigeye tuna in the IOTC Area of Competence;

Recalling that the 5th Session of the Scientific Committee reiterated the recommendation that a reduction in catches of bigeye tuna from all gears should be implemented as soon as possible;

Concerned that about 70% by number of the total bigeye catch is taken by the purse-seine fleet, and consist mainly by juvenile fish, and that 80% of the catch in weight is taken by the longline fleet.

Recalling the conclusion of the 5th Session of the IOTC Scientific Committee that catches of yellowfin tuna are close to or possibly above MSY, that catches by all main gears have been increasing in recent years and that the increase in the fishing pressure on juvenile yellowfin by purse seiners fishing on floating objects is likely to be detrimental to the stock if it continues;

Recalling that the FAO International Plan of Action for the Management of Fishing Capacity (IPOA) provides in its Objectives and Principles that "States and regional fisheries organisations confronted with an overcapacity problem, where capacity is undermining achievement of long-term sustainability outcomes, would endeavour initially to limit at present and progressively reduce the fishing capacity applied to affected fisheries";

Resolves to seek technical advice from the Scientific Committee for the next session of the Commission on:

- Potential management measures designed to reduce the fishing mortality on juvenile bigeye and yellowfin tuna. The measures to be investigated should include, but not be restricted to, time and/or area closures on purse seine fishing on floating objects, and other forms of effort reduction or alternative fishing strategies.
- Other potential management measures aimed at maintaining or reducing the effective fishing effort and catches of yellowfin and bigeye tunas by all gears.
- The likely effect of these measures on the future productivity of the stocks of bigeye and yellowfin tunas and their consequences on catches of skipjack tuna.

On the basis of the updated scientific advice, the Commission will seek to adopt appropriate measures to address the recommendations of the Scientific Committee at the 2003 Session of the Commission.

RESOLUTION 02/09.
ESTABLISHMENT OF THE STANDING COMMITTEE ON ADMINISTRATION AND FINANCE (SCAF)

The Standing Committee on Administration and Finance (SCAF) is established by the Commission as follows:

1. The Indian Ocean Tuna Commission hereby establishes in accordance with Article XII 5. of the Agreement a standing Committee on Administration and Finance (SCAF).
2. The Standing Committee shall advise the Commission on such matters of an administrative and financial character as are remitted to it by the Commission and shall annually:
    a. examine the operation of the budget for the current year; and
    b. examine the draft budget for the ensuing year.
3. The Standing Committee may draw to the attention of the Commission any matter of an administrative or financial character.
4. The Standing Committee may appoint from amongst its members a smaller, informal group to give preliminary consideration, in consultation with the Executive Secretary, to matters before it.
5. The Standing Committee shall prepare a report of each meeting of the Committee for transmission to the Commission.

APPENDIX XI
STATEMENT OF JAPAN ON RESOLUTION 02/05 CONCERNING THE ESTABLISHMENT OF AN IOTC RECORD OF VESSELS OVER 24 METRES AUTHORISED TO OPERATE IN THE IOTC AREA

In the adoption of Resolution 02/05 *Concerning the Establishment of an IOTC Record of Vessels over 24 metres Authorised to Operate in the IOTC Area*, Japan would like to make the following statement for the record.

Japan would like to ask that the Commission, Secretariat and all the Contracting Parties to contact the relevant countries and inform them of this resolution well before its implementation and continue to encourage them to become a Contracting Party or to obtain cooperating status of the Commission.

Japan would like to underscore that such notification to non-members is very important and indispensable to obtain their understanding on this matter and to ensure the consistency and accountability in light of international rules, such as WTO.

APPENDIX XII
DRAFT RESOLUTIONS DEFERRED TO THE EIGHTH SESSION

DRAFT RESOLUTION (FROM AUSTRALIA)
ON THE CONSERVATION OF BIGEYE AND YELLOWFIN TUNA IN THE INDIAN OCEAN

The Indian Ocean Tuna Commission (IOTC):

Recognising the need for action to ensure the achievement of IOTC objectives to conserve and manage bigeye tuna in the IOTC Area of Competence;

Recalling that the 5th Session of the Scientific Committee reiterated the recommendation that a reduction in catches of bigeye tuna from all gears should be implemented as soon as possible;

Concerned that about 70% by number of the total bigeye catch is taken by the purse-seine fleet, and consists mainly of juvenile fish, and that 80% of the catch in weight is taken by the longline fleet, and consists mainly of adult fish;

Recalling the conclusion of the 5th Session of the IOTC Scientific Committee that catches of yellowfin tuna are close to or possibly above MSY; and that the current trend for increasing fishing pressure on juvenile yellowfin by purse seiners fishing on floating objects is likely to be detrimental to the stock if it continues, as fish of these sizes are well below the optimum size for maximum yield per recruit;

Recalling that the FAO International Plan of Action for the Management of Fishing Capacity (IPOA) provides in its Objectives and Principles that "States and regional fisheries organisations confronted with an overcapacity problem, where capacity is undermining achievement of long-term sustainability outcomes, would endeavour initially to limit at present and progressively reduce the fishing capacity applied to affected fisheries";

Considering the advice of the IOTC Scientific Committee regarding options for a moratorium on purse seine fishing on floating objects to reduce fishing mortality of bigeye in the Indian Ocean that a sub-region of the northwest Indian Ocean was found very clearly to be the most suitable for time-area closures;

Recognising that the Commission in Resolution 99/01 has engaged to adopt a season and area closure on the use of floating objects in the IOTC Area of Competence;

Resolves that there be seasonal area closures and restrictions on the use of Fish Aggregating Devices (FADs) in the IOTC Area of Competence as detailed:

Fishing by surface fleets flying the flag of Contracting Parties and Cooperating Non-Contracting Parties over floating objects, shall be prohibited during the period and the area specified in paragraphs 2 and 3 below;

The area referred to in paragraph 1 is the following:

- Southern limit: [0° North (the equator)]
- Northern limit: [10° North]
- Western limit: [the African Coast]
- Eastern limit: [60° East]

The period covered by the prohibition of paragraph 1 will be from 0000 hours on [1 September] of one year to 2400 hours on [30 November] of the same year;

The prohibition referred to in paragraph 1 includes:

- Prohibition to launch all floating objects;
- Prohibition to fish over floating objects;
- Prohibition to fish over natural objects;
- Prohibition to fish with auxiliary vessels including FAD tender, tranship and resupply vessels;
- Prohibition to set at sea artificial floating objects with or without buoys;
- Prohibition to attach buoys to floating objects found at sea;
- Prohibition to remove floating objects and to wait so that fish associated to the objects will move to associate to the boat;
- Prohibition to tug floating objects outside the zone.

Each party shall:

On or before [1 March 2004], inform all interested Parties in its national tuna industry of the closure, and send a copy of this notice to the Executive Secretariat;

Contracting Parties and Cooperating Non-contracting Parties, shall ensure that all surface fleets concerned by this measure have an observer on board, during the entire duration of the period, who shall observe compliance with the prohibition referred to in paragraphs 1-4. The biological data collected on the fleet as a whole by these observers shall be provided to the Scientific Committee for the purpose of carrying out analyses identified in paragraph 10 below;

Take the relevant measures and inform the Executive Secretary of these on or before [1 March 2004].

Longline, pole-and-line and sport fishing vessels are not subject to the measures above.

Contracting Parties and Cooperating Non-Contracting Parties shall establish internal procedures to penalise surface fleets flying its flag that do not comply with the closure. They shall present an annual report on their implementation to the Commission.

Contracting Parties and Cooperating Non-Contracting Parties shall in accordance with relevant IOTC resolutions prohibit landings and commercial transactions in tuna or tuna products originating from fishing activities prohibited by this resolution. The Secretariat may provide relevant information to the Parties to assist them in this regard.

That all Parties and other interested States work diligently to achieve the implementation of such a programme for the conservation of the tuna resources for 2004.

The Commission asks the Scientific Committee to analyse, for the first time in 2005, the impacts of this measure on the stocks of tuna and tuna like species in the Indian Ocean and to recommend any changes that may be deemed necessary to improve its effectiveness, in order to evaluate the possible modifications to apply to the closure.

DRAFT RESOLUTION, PRESENTED BY JAPAN AND THE EC ON THE LIMITATION OF FISHING CAPACITY OF CONTRACTING PARTIES AND COOPERATING NON-CONTRACTING PARTIES FOR THEIR VESSELS LARGER THAN 24 METRES FISHING, NOTABLY, FOR YELLOWFIN TUNA AND BIGEYE TUNA

The Indian Ocean Tuna Commission (IOTC);

Recalling the adoption of FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas,

Recognizing that Paragraph 1 of "Resolution 99/1 *On the Management of Fishing Capacity and on the Reduction of the Catch of Juvenile Bigeye Tuna by Vessels, Including Flag of Convenience Vessels, Fishing for Tropical Tunas in the IOTC Area of Competence*" adopted at the 4th Session of the Commission stipulates that the 2000 IOTC Session would consider the limitation of the capacity of the fleet of large-scale tuna vessels (greater than 24 metres LOA) to the appropriate level,

Recognizing that the 4th Session of the Scientific Committee recommended that a reduction in catches of bigeye tuna from all gears should be implemented as soon as possible, and it also recommend that the stock status of yellowfin tuna is being exploited close to, or possibly above MSY.

Recognizing that FAO International Plan of Action for the Management of Fishing Capacity (IPOA) provides in its Objective and Principles that "States and regional fisheries organizations confronted with an overcapacity problem, where capacity is undermining achievement of long-term sustainability outcomes, should endeavour initially to limit at present level and progressively reduce the fishing capacity applied to affected fisheries",

Adopts, in accordance with Article IX.1 of the Agreement establishing the IOTC, that:

1. Each Contracting Party and Cooperating non-Contracting Party (hereinafter referred to as the "CPCs"), shall in 2003 and subsequent years, unless the Commission decides otherwise, limit the number of their fishing vessels larger than 24 metres length overall (LOA) (hereinafter referred to as the "LSFVs"), to the number of its fishing vessels authorized[16] to fish by the Flag State for tuna species and, in particular, yellowfin tuna and bigeye tuna in the area of the competence of the IOTC in one of the following years : 1998,1999, 2000, 2001 or 2002.
2. The provision of paragraph 1 will not apply to CPCs whose annual reported catch in the reference years, as provided to the Scientific Committee, of longline fishery was less than 1 500 tonnes for bigeye tuna and less than 3,000 tonnes for yellowfin tuna, or of purse seine fishery was less than 4 500 t for bigeye tuna and yellowfin tuna combined.
3. By 1 July 2003, each Contracting Party and Cooperating non-Contracting Party, shall report to the Secretariat of the IOTC the information foreseen in paragraph 1 above.
4. The Commission shall review at its 2003 IOTC Session measures taken by each Contracting Party and Cooperating non-Contracting Party to implement the provisions described in paragraphs 1 above.
5. Regardless of the full application of this resolution, Contracting Parties will have due regard to the interests of all countries concerned, in conformity with the rights and obligations of those countries under international law and, in particular, to the rights and obligations of developing countries of the Indian Ocean rim with respect to their entry into the high seas fisheries in the IOTC area of competence.

[16] Including authorisations currently foreseen under administrative process.

DRAFT RESOLUTION
AN ACTION PLAN TO ENSURE THE EFFECTIVENESS OF THE CONSERVATION PROGRAMME FOR BIGEYE TUNA IN THE IOTC AREA OF COMPETENCE

The Indian Ocean Tuna Commission (IOTC).

Recognizing the need for action to ensure the achievement of IOTC objectives to conserve and manage bigeye tuna in the IOTC Area of Competence (hereinafter referred to as "the Area"),

Recognizing the obligation of Contracting Parties and the commitment of Cooperating Non-Contracting Parties to comply with the IOTC conservation and management measures,

Recognizing that a considerable number of vessels fishing for bigeye tuna in the Area flying the flag of nations and fishing entities which are not members of IOTC, or do not cooperate with IOTC,

Expressing concern over the status of exploitation of bigeye tuna in the Area,

Being aware of the strenuous efforts by Contracting Parties to ensure enforcement of IOTC conservation and management measures and to encourage non-member nations and fishing entities to abide themselves by these measures,

Finding that the IOTC ability to manage bigeye tuna in the Area on a sustainable basis is undermined or deteriorated by harvest contrary to IOTC recommendations and the need to take further strenuous measures to ensure the effectiveness of the IOTC bigeye tuna conservation measures,

Resolves, in accordance with the provisions of Article IX of the Agreement establishing the IOTC, that:

1. The Commission shall review annually, the information obtained through the IOTC Bigeye Statistical Document Programme, national catch statistics, trade and other relevant information obtained in ports and at the fishing grounds, and identify those Contracting Parties and non-Contracting Parties or fishing entities whose vessels have been fishing bigeye tuna in a manner which diminishes the effectiveness of the IOTC conservation and management measures, based upon the above information.
2. The Commission shall request those Contracting and non-Contracting Parties or fishing entities identified in paragraph 1 above to take all necessary measures so as not to diminish the effectiveness of the IOTC conservation and management measures, including the revocation of vessel registration or fishing licenses of the vessels concerned, as well as to become Contracting Parties if applicable.
3. The Commission or other appropriate subsidiary bodies shall review annually the actions taken by those Contracting Parties and non-Contracting Parties or fishing entities referred to in paragraphs 1 and 2 above, and identify those Contracting Parties and non-Contracting Parties or fishing entities that have not taken appropriate actions as requested.
4. To ensure the effectiveness of conservation measures recommended by IOTC for bigeye tuna in the Area, the Commission will recommend, if appropriate, in accordance with the Agreement establishing the IOTC, that Contracting Parties and Cooperating non-Contracting Parties take measures with respect to importation of bigeye tuna products, harvested in the Area in any form, from the Parties or fishing entities identified in paragraph 3. Such measures shall be multilateral, consistent with international law and obligations of Contracting Parties, and shall be implemented in a fair, transparent and non-discriminatory manner.

APPENDIX XIII
STATEMENTS OF CONTRACTING PARTIES ON THE IMPLEMENTATION OF IOTC MANAGEMENT MEASURES

AUSTRALIA

Resolution 01/01: Concerning the national observer programmes for tuna fishing in the Indian Ocean

Australia is committed to sustainable fisheries management. As part of its commitment, Australia is developing a statutory management plan for its national tuna and billfish fishery in the Indian Ocean (the Southern and Western Tuna and Billfish Fishery). A key measure in the Plan is to develop and implement a data programme to collect, verify, analyse and manage fishery data. An element of the data programme will be a national observer programme. The Australian fishing industry has funded a pilot observer project that will operate throughout 2003. The primary output of the project will be to define the elements a routine observer programme for the Southern and Western Tuna and Billfish Fishery, which will include the elements listed in IOTC Resolution 01/01. A routine observer programme will commence in 2004.

Resolution 01/02: relating to control of fishing activities

Australia implemented formal management arrangements under the *Fisheries Management Act 1991* for the Southern and Western Tuna and Billfish Fishery in 1994. In December 2001 Australia extended the jurisdiction of these management arrangements to cover the high seas areas within the competency of the Indian Ocean Tuna Commission in accordance with its responsibilities under the United Nations Fish Stocks Agreement.

The fishery-specific fishing permits granted in 1994 effectively reduced the number of licences that were in effect under the previous fisheries legislation from several thousand to 278. A further change in arrangements in 1997 again reduced the number of fishing permits for this fishery to 124. This is the current number of fishing permits in the Southern and Western Tuna and Billfish Fishery.

Fishing activities are controlled in the Southern and Western Tuna and Billfish Fishery through conditions placed on the fishing permits and through Fisheries Regulations. For example, a condition is placed on all fishing permits in the fishery requiring an approved Integrated Computer Vessel Monitoring System to be operated on the boat at all times. Other conditions relate to the species that may be taken, shark finning, bycatch, fishing gear and transhipping.

It is a requirement that the fishing permit be carried on board the vessel. The fishing permit contains information relevant to IOTC Resolution 01/02. Vessel survey certificates are also carried on-board vessels, which contain information relevant to IOTC Resolution 01/02. This information is verified annually by the government. Vessel and gear marking is required in accordance with FAO standards. Logbooks are mandatory and are subject to 100% compliance by the government.

An updated list of all fishing vessels greater than 24m in length, nominated to fish in the Southern and Western Tuna and Billfish Fishery has been provided to the Secretariat.

Resolution 01/03: Establishing a scheme to promote compliance by non-Contracting Party vessels with resolutions established by IOTC

Australia has established a centralised border protection regime, which is coordinated by the Coastwatch agency. Coastwatch is based in the Customs and Justice Ministry. The Australian government provides Coastwatch with a budget that provides for a level of aerial surveillance equivalent to around 21,000 flying hours per year. In addition to this the Royal Australian Navy and the Australian Customs Service provides 1800 sea days and 2000 sea days respectively for surface response by patrol vessels.

These resources are used primarily inside Australia's EEZ and the resources are multi-tasked, meaning that these resources are used to protect Australia's borders in relation to threats to national customs, quarantine, immigration, environmental and fisheries laws. A large proportion of the resources are used to protect Australia's northern boundary between Australia and Indonesia and Australia and PNG.

Whilst some aerial patrolling occurs outside Australia's maritime jurisdiction onto areas of high seas, it is generally only conducted within 50 nautical miles of the EEZ and as a rule only targets potential threats to Australia's borders. Australia has not positively identified any fishing vessels from non contracting parties.

Australia requires prior Authorisations for entry to all Australian ports and all such activity is subject to inspection in accordance with IOTC Resolution 01/03.

Resolution 01/04: On limitation of fishing effort of non-Members of IOTC whose vessels fish bigeye tuna

Requirements of IOTC Resolution 01/04 do not apply to Australia as a Member of the IOTC.

Resolution 01/05: Mandatory statistical requirements for IOTC Members

Australia has provided, within the required timeframe, statistics on nominal catch, catch and effort, size frequency, discards, fishing craft and vessel records.

Resolution 01/06: Recommendation by IOTC concerning the IOTC bigeye tuna statistical document programme

Australia welcomes efforts to monitor the catches of tuna and other species of management concern and will participate in a well-constructed statistical document scheme that will effectively monitor catches from all fishing vessels. Australia will support moves to improve the existing IOTC statistical document scheme.

Australia has assessed its responsibilities for implementation of IOTC Resolution 01/06. Currently Australia only catches a minor quantity of bigeye tuna and any exports are fresh tuna, which is outside the scope of the current programme.

Resolution 01/07: Concerning the support of the IPOA-IUU Plan

Australia's National Plan of Action

Australia was a driving force behind the development and implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). Australia is committed to taking action to eliminate IUU fishing and will support all practical measures adopted by the IOTC towards this objective.

Internationally, as a signatory to the IPOA-IUU Australia is expected to develop and implement a National Plan of Action (NPOA-IUU) by no later than 23 June 2004. In this respect, Australia presently implements many of the measures contained in the IPOA-IUU through its domestic legislative framework, including through provisions in the *Fisheries Management Act 1991*. Australia is also considering a national assessment on IUU fishing with a focus on foreign vessel incursions. This assessment will form the basis for developing Australia's National Plan of Action on IUU fishing.

CHINA

A total of 93 Chinese tuna longliners were operating between 45-95 E and 10 N to 10 S in the Indian Ocean, 2001, with the total nominal catch of 5,721 t, 786 t or 12% less than the previous year. Bigeye and yellowfin are the two main target species, accounting for 52.3% and 31% of the total tuna catch respectively. The total fishing effort was 19,994 thousand hooks in 2001, about 7% less

than the previous year. The CPUE varied from 248 to 402 kg/1,000 hooks, with a mean value of 286 kg/ 1,000 hooks. Catch statistics including FORM 1, FORM 3 and vessel information have been routinely reported to the IOTC Secretariat. Win Tuna was made in Chinese version with the help of the IOTC Secretariat. Tuna statistical Documents have accompanied the bigeye exported since July 2002. New fishing licenses will be issued to fishing vessels after December 1, 2002. A scheme for Vessel Monitoring System (VMS) is being made. A scientific observer programme will be carried out with the first observer dispatching on December 2002.

THE EUROPEAN COMMUNITY

Information on fisheries

The various EC fleet fish for all the major species under IOTC mandate. The total catch of tuna and tuna-like species by those fleet amounted to about 200,000 tonnes in 2001.

Research

All the EC member states have national research institutes or regional laboratories, in cases supervised by the country's major universities. Regarding tropical tuna fisheries, the Member States also work in close collaboration with the research institutes of countries in which the relevant fleet land part or all of their catches.

Scientists from the EC and its Member States have been regularly participating to the scientific meetings organized by IOTC.

Statistics

The EC already has a constraining legal framework for its Member States, applicable to all the fleet fishing highly migratory species in their various areas of activity. This framework enforces the resolutions taken by IOTC.

In this context, EC transmitted to IOTC all the catch and effort data, as well as the lists of vessels authorized to fish and of vessels having effectively fished in 2001 in the IOTC area.

Furthermore, aiming ate giving a more precise and more coherent framework to fisheries statistics collection, EC adopted in 2000 a number of common provisions regarding the collection and management of data necessary to the conduct of the fisheries common policy (Council regulation (CE) n° 1543/00.) This regulation will allow, as of 2003, to enhance the biological data that will be submitted to IOTC.

Additionally, Member States are adopting national regulations that enforce and complement in certain cases the EC framework, taking into account the specificity of national fisheries.

Progress on the implementation of IOTC resolutions

After the annual meeting of each RFB from which it is a member of, the EC transposes in its own regulation the conservation measures that have been adopted, in order to make them constraining for its Member states and its nationals within the deadlines set for coming into force.

All the technical conservation measures in force for the highly migratory species have been compiled in the Council regulation (CE) n° 973/01 arranging for technical conservation measures for some highly migratory stocks (J.O. L137/1 of 19.05.2001.)

The control measures have also been transposed in the Community law by the Council regulation (CE) n° 1936/01establishing some control measures applicable to fishing activities on certain highly migratory fish stocks (J.O. L 236/1 of 03.10.2001.)

Those two regulations are subject to a modification procedure at the Council in view of their adaptation to the new management and conservation measures adopted by the RFBs, and particularly IOTC.

The transposition of the Resolution aiming at implementing a Bigeye statistical document scheme is under way under the framework of a Council regulation proposal implementing the Statistical recording programs in the EC. While waiting for the implementation of this regulation, the Member States have implemented those programs.

Additional conservation and management measures

The European Community and its Member States are implementing a structural adaptation program aiming at limiting the fishing capacity and effort of the fleet, depending on the status of the target resource.

In addition to the mandatory provisions, the relevant Member States adopt for certain species measures more constraining than those imposed at Community level or by the RFBs ; those provisions, adapted to their national situation, always aim towards rational management as well as a more accurate fisheries monitoring, all the way to the level of catch trade.

The monitoring of vessels through satellite has become mandatory since 1 January 2000 for all the vessels longer than 24 meters (see description of the EC scheme in appendix.) In this context, Member States, in accordance with Community regulations, have created Fisheries Monitoring Centres to manage the VMS targeted at monitoring Community fishing vessels longer than 24 meters. This system is operational for EC tuna fishing vessels operating in the Indian Ocean.

The satellite based VMS established by the European Union

The European Union has introduced a satellite based Vessel Monitoring System (VMS) in two phases.

In the first phase, which started on the 30 June 1998, vessels exceeding 20 meters between perpendiculars or 24 metres overall length in the following categories were required to be equipped:

- vessels operating in the high seas, except in the Mediterranean Sea,
- vessels catching fish for reduction to meal and oil.

In the second phase, which commenced on the 1 January 2000, all vessels exceeding 20 meters between perpendiculars or 24 metres overall length wherever they operate are subject to VMS.

There is, however, an exception for vessels operating exclusively within 12 nautical miles of the baselines of the flag Member State, and for vessels which operate at sea for less than 24 hours.

The satellite tracking devices fitted on board the fishing vessels shall enable the vessel to communicate its geographical position to the flag state and to the coastal Member State simultaneously. In practice position reports are retransmitted in nearly real time from the flag state to the coastal state.

The data obtained from VMS shall be treated in a confidential manner.

Tampering with VMS has been defined as a serious infringement[17].

An obligation is placed on Member States to establish and operate Fisheries Monitoring Centres which will be equipped with the appropriate staff and resources to enable Member States to monitor the vessels flying their flag as well as the vessels concerned flying the flag of other Member States

[17] Council Regulation (EC) No 1447/1999 of 24 June 1999 establishing a list of types of behaviour which seriously infringe the rules of the common fisheries policy.

and third countries operating in the waters under the sovereignty or jurisdiction of the said Member State.

Member States shall take the necessary measures to ensure that the position reports received from fishing vessels to which a VMS applies are recorded in computer-readable form for a period of three years. The European Commission shall have access to these computer files on the basis of a specific request.

Each FMC receives a substantial amount of position reports. Although not an explicit requirement, it is commonly considered a good practice to analyse incoming reports automatically in order to detect "events" which may be of interest for MCS activities. Such "events" include :

- a vessel failing to report on schedule,
- a vessel reporting a position which is inconsistent or not credible compared to previously received reports,
- a vessel entering or leaving a specific area,
- a vessel travelling at, above or below a given speed,
- a vessel landing abroad.

Sophisticated VMS software may be capable of detecting complex events which might be a combination of those referred to above. For example, a vessel of a particular type, travelling below a given speed in a defined geographical area. Furthermore with VMS the time of arrival in port, the time of arrival on a specific fishing ground, can be predicted.

The detailed rules for the implementation of VMS are contained in Commission Regulation (EC) N° 1489/97 laying down detailed rules for the application of Council Regulation (EEC) N° 2847/93 as regards satellite-based vessel monitoring systems.

The main provisions concern:

- the requirements for the satellite tracking devices,
- the frequency of position reporting,
- the format for transmission to the coastal Member State,
- the procedures in case of technical failure,
- access to computer files by the European Commission, and

a number of administrative arrangements between Member States and the Commission.

Several satellite systems exist that can meet the requirements of the EU Regulations. Neither the Council nor the Commission have imposed a particular system. Therefore any solution that meets the requirements is acceptable, and different vessels may be equipped with different systems.

VMS has not replaced conventional enforcement tools such as patrol vessels and aircraft, it nevertheless improves the efficiency and effectiveness of their deployment.

Besides monitoring fisheries in Community waters, the European Union is also responsible for a significant number of its vessels operating in different parts of the oceans.

Outside Community waters, fishing must take place with due regard to the management measures adopted by the competent international and regional bodies, and by the coastal states. Furthermore, where applicable, masters of community fishing vessels must comply with the national laws and regulations governing the waters of the coastal state, as well as with the specific provisions contained in the Fisheries Agreements.

The European Union is anxious to ensure that its vessels respect the various rules applicable in waters of third countries and on the high seas.

Since the satellite tracking devices installed on board EU fishing vessels must be operational at all times, wherever the vessels operate, the control of the fleet operating outside Community waters is being increased significantly by the introduction of VMS. Indeed, the flag Member State knows at all times where its vessels are operating. Therefore the European Union is endeavouring to use VMS in bilateral fisheries agreements with third countries and in the framework of regional fisheries organisations such as the North East Atlantic Fisheries Commission, more commonly referred to as NEAFC. NEAFC was established in 1953. At present, there are 6 Contracting Parties, among which the European Union. NEAFC took the responsibility to regulate a number of species, such as Oceanic Redfish, Blue Whiting, Atlanto-Scandic Herring and Mackerel. These regulatory measures are complementary to those within the national fishing zones.

In 1998, the Contracting Parties agreed upon a Joint Control and Enforcement Scheme to be applied in the Regulatory Area18. This Scheme entered into force on 1 July 1999.

VMS is one of the key elements of the Scheme. Under the Scheme, Contracting Parties shall track their vessels by VMS. Entry / exit reports and position reports are forwarded to the NEAFC Secretariat in computer-readable format (the so-called North Atlantic format). These reports are retransmitted in real time in the same computer-readable format to Contracting Parties with an active inspection presence in the Regulatory Area, in compliance with specific provisions on secure and confidential treatment.

In view of the importance of VMS as a means of control, the European Union will review ways of improving the application of the system. In particular, the European Commission has brought forward proposals for the extension of the scope of VMS to vessels measuring less than 20 metres between perpendiculars or 24 metres overall in length.

From a technical point, satellite systems continue to evolve[19] and there may be further developments in the near future regarding the expansion of other applications such as an interface with an electronic logbook or the linking of VMS with vessel sensors placed in trawl winches which will allow the enforcement authorities to monitor the vessel more thoroughly. The European Commission is also exploring the potential of remote sensing techniques for fisheries monitoring. A study concerning the NAFO area has clearly shown that space borne synthetic aperture radar (SAR) images could complement VMS[20]. A project is conducted to investigate means to make these images available for operational MCS in nearly real time at an affordable price. It is worth while pointing out here that the European Union is already using remote sensing for the control of area-based subsidies to farmers.

Further trials will be conducted as necessary in order to gain experience with other advanced technologies with a view of promoting their introduction by Member States.

JAPAN

1. Japan has already submitted the basic data to the Scientific Committee based on *Resolution 98-01 Mandatory Statistical Requirements for IOTC Members* and *Resolution 98-04 concerning Registration and Exchange of Information on Vessels, including Flag of Convenience Vessels, Fishing for Tropical Tunas in the IOTC Area of Competence*.

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18 The scheme of control and enforcement in respect of fishing vessels fishing in areas beyond the limits of national fisheries jurisdiction in the convention area ("The Scheme").

19 The future of satellite systems in European fisheries protection and management, Study in support of the Common Fisheries Policy, Final Report, August 1998 - Navigs s.a.r.l..

20 SAR - imagery for fishing vessel detection, Final Report, October 2000 - Joint Research Centre (JRC) of the European Commission.

2. Regarding the measures to eliminate IUU fishing, Japan continued non-purchase guidance against the products from the vessels on the ICCAT IUU list. This action is based on *Resolution 99-02 Calling for Actions against Fishing Activities by Large Scale Flag of Convenience Longline Vessels*.
3. Japan also reported the results of Japanese survey on predation of longline-caught fish to the Scientific Committee in connection with *Resolution 00-02 on a Survey of Predation of Longline Caught Fish*.
4. Lastly, pursuant to *Resolution 01-06 concerning the IOTC Bigeye Tuna Statistical Document Programme*, Japan implemented the Statistical Document Programme on the frozen bigeye tunas from July 1, 2002. The summary of information obtained by the Programme in July and August, 2002 is submitted to the Commission.

REPUBLIC OF KOREA

With regard to Resolution 01/01, Korean government has been taking active interest in building up observer programme and initiated the programme in 2002 to monitor its distant water fisheries including those for tuna and tuna-like species to meet regional fisheries bodies. At the initial stage, the size of observer programme will be fairly small but will be gradually developed to a bigger scale to cover all required areas of fisheries.

With regard to Resolution 01/02, Korea didn't submit the fishing vessel list to the Secretariat because the list is same as the previous year, 2001.

With regard to Resolution 01/05, Korea submitted nominal catch data, catch and effort data, and size data to the Secretariat. National Fisheries Research and Development Institute (NFRDI) of Korea has continuously collected catch and effort data for the Indian tuna and tuna-like species from Korean tuna longliners. This institute has reported the data to the Secretariat.

With regard to Resolution 01/06, since July 1, 2002, Korean Government has adopted and fulfilled the Bigeye Tuna Statistical Document Programme for the frozen bigeye products.

MAURITIUS

Mauritius is very much concerned about the conservation and management of fishery resources. As regards to the implementation of the IOTC resolutions, I am pleased to state:

Resolution 01/02 relating to control of fishing activities

Mauritius has taken several measures to control activities of vessels flying its flags. One of them is that only fishing vessel owned by Mauritian citizens or incorporated in Mauritius (50% of the shares of the company should be owned by Mauritius) are issued Mauritian license. Appropriate conditions are attached to the issue of license. Specific provision is made regarding fishing in high seas and water not falling under the jurisdiction of Mauritius. Vessels characteristics of these vessels are communicated to IOTC annually. These vessels have to provide to the local authorities all data pertaining to catch and effort on their arrival to Port Louis.

Resolution 01/05: Mandatory Statistical requirements for IOTC members

Although we had certain problems with our software to process data (of which IOTC was informed) we have submitted data of the year 2001 which include:

1. Catch and effort data of the surface longline fishery
2. Size frequency of the license longliners transhipping at Port Louis
3. Size frequency data of catch of the local surface longline fishery
4. Vessels characteristics of local and licensed vessels.

Resolution 00/02 on survey of longline caught list

Regarding predation of longline caught fish, survey forms have been distributed to local vessels and are collected after every trip along with the logbooks. All these data will be submitted to IOTC shortly. According to returns, predation amounts to 20% especially during the summer month and are mostly caused by pilot whales

Resolution 01/06 – Concerning IOTC bigeye statistical document programme.

Mauritius import frozen tuna (including bigeye) which are processed by the local canning factory. These tuna are fished by E.U Purse seiners. As per provision under this recommendation, tuna caught by purse seiners and meant for canning purpose, are not required to be accompanied by statistical document or re-certificate. However, name and signatures of authorized persons have been transmitted to IOTC and in case Mauritius import or re-export tuna we shall abide by all the provisions under this recommendation.

Resolution 98/04 – Registration and exchange of information on vessels

Vessels characteristics of local as well as licensed vessels to operate in the EEZ of Mauritius are transmitted to IOTC annually.

PHILIPPINES

The Philippines, as a Cooperating Non Contracting Party, to IOTC has been regularly providing almost all mandatory statistical data requirements of the Commission i.e. catch and effort data as well as the listing of all Philippines flag tuna longline vessels operating in the area of competence of IOTC.

The Philippines since the promulgation of its new fisheries code requires that Philippines flag fishing vessels that fish outside Philippines waters must secure an International Fishing Permit before they can operate in the High Seas; failure on their part to get the permit will mean cancellation of their commercial fish boat licenses and Gear license.

In July this year, the Philippines is already implementing the Bigeye tuna statistical system and the Commission was provided with the authorized signatories to such documents.

In so far as the implementation of the National Observer Programme, the Philippines while recognizing the importance of the programme will not be able to implement it in the very near future due to financial constraints as well as the lack of qualify personnel to undertake this activity.

APPENDIX XIV
QUALIFICATIONS AND TERMS OF REFERENCE FOR THE POST OF SECRETARY OF THE COMMISSION

Qualifications and benefits

(a) The incumbent should have university level qualifications, preferably at post-graduate level, in fisheries biology, fisheries science, fisheries economics or related field. He/she should have at least ten years experience in fisheries management, policy formulation, preferably including bilateral and international relations. He/she should have the ability to exercise a high degree of professional initiative. The incumbent should also be conversant with the preparation of budgets, documents and the organization of international meetings. He/she should have working knowledge, level C, of either English or French. Preference will be given to candidates who have working knowledge in both languages.

(b) Other essential requirements include competence in the selection of staff; demonstrated ability to supervise professional matters in subject field; and familiarity with the use of word processing, spread sheets and database management systems.

(c) Desirable requirements include: a high degree of adaptability and ability to cooperate effectively with people of different nationalities and of various social and cultural backgrounds and education levels.

(d) The Secretary will be graded at the D-1 level based on the United Nations salary scheme for professional and high categories. He/she will in addition, be entitled to a variable element for post adjustment, pension, insurance, etc. The Secretary is appointed under the same terms and conditions as staff members of FAO.

Terms of reference

Pursuant to Article VIII.2 of the Agreement, the Secretary shall be responsible for implementing the policies and activities of the Commission and shall report thereon to the Commission. He/she shall also act as Secretary to the subsidiary bodies established by the Commission, as required.

The incumbent will have overall responsibility for planning, coordination and administration of the Commission in accordance with the Agreement and the decisions of the Commission.

He/she shall, for administrative purposes, be responsible to the Director-General of FAO.

He/she will in particular:

a) receive and transmit the Commission's official communications;

b) maintain high level contacts with appropriate government officials, fishery institutions and international organizations concerned with tuna fisheries to facilitate consultation and cooperation between them on information collection and analysis;

c) maintain an active and effective network of national focal points for routine communication of progress and results of the activities of the Commission;

d) prepare and implement work programmes, prepare budgets and ensure timely reporting to the Commission;

e) authorize disbursement of funds in accordance with the Commission's budget;

f) account for the funds of the Commission;

g) stimulate interest among Members of the Commission and potential donors in the activities of the Commission and in possible financing or in implementing of pilot projects and complementary activities;

h) promote, facilitate and monitor the development of databases for resource assessment and biological and socio-economic research to provide a sound basis for conservation management;

i) coordinate the Members' programmes of research when required;

j) organize sessions of the Commission and its subsidiary bodies and other related *ad hoc* meetings;

k) prepare background papers and a report on the Commission's activities and the programme of work for submission to the Commission at the regular sessions, and arrange the subsequent publication of the report and the proceedings of the Commission as well as its subsidiary bodies and related *ad hoc* meetings;

l) perform other related duties as required.

APPENDIX XV
Closing Statements

The EUROPEAN COMMUNITY

The EC considers that this Seventh Session has been one of the most positive Meetings of this Commission. The major priorities identified at the beginning of this Meeting have, with one exception, all been addressed in an effective manner. Whilst we remain disappointed that consensus could not be reached in relation to a resolution on the limitation of capacity for the bigeye and yellowfin fisheries, we are confident that there is a greater understanding among Members of the issues involved and that agreement will be reached next year.

This Meeting has adopted important measures to counteract IUU activities and these measures must be vigorously implemented by all Members. In this regard it is important that there be close coordination between Tuna Regional Organizations. Furthermore, we have added to the number of control and inspection measures in order to introduce in a phased way a control and inspection scheme.

SEAFDEC

On behalf of SEAFDEC, I have to refer to and draw the IOTC's attention to some points related to our SEAFDEC competence.

SEAFDEC is quite a unique international organization which has its own research and training vessels for member countries. Our vessels for the purpose of research and training annually operate in the high seas of Indian Ocean.

In relation to resolutions adopted such as "Resolution concerning the establishment on an IOTC record of vessels over 24 metres authorized to operate in the IOTC area" and "Resolution relating to the establishment of a VMS pilot programme", I would like to draw an attention of IOTC to uniqueness of the SEAFDEC.

At this stage, the vessels of SEAFDEC are registered in and fly their flag of Thailand where the SEAFDEC Secretariat and Training Department are stationed in accordance with international rules related registration of vessels.

As a matter of principle for international organization, assets of SEAFDEC such as vessels are common properties for member countries. SEAFDEC, therefore, has to keep its independency as an international organization and its responsibility to manage and control over activities of the vessels.

Accordingly, when IOTC consider comprehensive management scheme in which IOTC request responsibility of flag state, I strongly hope IOTC duly pay attention to independency of international organization like SEAFDEC.

In short, IOTC should consider the room for international organization to behave as an independent organization, not be subject to specific country.