

Commission for the Conservation of
Southern Bluefin Tuna



みなまぐろ保存委員会

Report of the Fifth Meeting of the Ecologically Related Species Working Group

**2-5 February 2004
Wellington, New Zealand**

Report of the Fifth Meeting of the Ecologically Related Species Working Group
2-5 February 2004
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Agenda Item 1. Opening of the meeting

1.1. Election of the Chair

1. The Deputy Executive Secretary opened the Working Group, and Ms Gillian Wratt (Ministry for the Environment, New Zealand) was elected as Chair.
2. The Chair welcomed participants, in particular the Fishing Entity of Taiwan and the Republic of Korea which participated as members for the first time and Indonesia which attended as an observer for the first time.

1.2. Adoption of agenda

3. The agenda was adopted and is provided at **Attachment 1**.
4. The list of meeting participants is provided at **Attachment 2**.
5. The list of documents presented to the Working Group is provided at **Attachment 3**.
6. Rapporteurs from each Member were appointed to assist the Secretariat in drafting the report of the Working Group.

Agenda Item 2. Reports

2.1. Member reports (activities undertaken since last meeting in November 2001)

7. Australia, Japan, and New Zealand presented national annual reports on ecologically related species (ERS) issues according to the format agreed at ERSWG4. The Fishing Entity of Taiwan and Korea also presented their national reports on SBT fisheries and ERS for the first time. National reports were presented to the Working Group as papers CCSBT-ERS/0402/National Reports 01-05.
8. The Fishing Entity of Taiwan raised a question about the definition of terms regarding bycatch and incidental catch. Current usage of these terms differed slightly among countries.

2.2. Non-members reports

9. Indonesia made a verbal presentation. The main targets of the Indonesian longline fishery are yellowfin and bigeye tunas, and SBT is caught as bycatch. A data collection system for tuna in the Indian Ocean is currently underway with the assistance of IOTC (Indian Ocean Tuna Commission), OFCF (Overseas Fisheries Corporation Foundation) and CSIRO (Commonwealth Scientific and Industrial

Research Organisation). Indonesia is preparing for the development of a National Plan of Action (NPOA) for sharks.

Agenda Item 3. Review of relevant International Instruments

10. Australia presented its paper on the development of a National Plan of Action for the Conservation and Management of Sharks (CCSBT-ERS/0402/04) and reported on progress in developing its NPOA for reducing the Incidental Catch of Seabirds in Longline Fisheries (CCSBT-ERS/0402/05).
11. New Zealand presented its paper on the NPOA for seabirds (CCSBT-ERS/0402/10). There was some discussion of the legal aspects of applying such regulation/measures on the high seas. New Zealand was going to investigate this further. The Fishing Entity of Taiwan requested that a copy of the final NPOA be provided to all members.
12. Japan noted that it has already developed NPOA on seabird and shark and has submitted to FAO in 2001 (CCSBT-ERS/0402/Info03, CCSBT-ERS/0402/Info04).
13. Korea and the Fishing Entity of Taiwan reported that they are developing NPOA's for seabirds and sharks.
14. After discussion ERSWG concluded that National Plans of Action are a useful framework to define problems of incidental capture of seabirds and sharks, identify and implement workable and effective solutions, and allow for communication of the members' intent and activities.

Agenda Item 4. Reports of meetings of other organisations relevant to the ERS Working Group

15. The CCAMLR (Commission for the Conservation of Antarctic Marine Living Resources) observer (Janice Molloy, Department of Conservation, New Zealand) presented paper CCSBT-ERS/0402/Info26 at the meeting. She provided an outline of the process used by CCAMLR to assess and address the impact of fishing on non-fish catch.
16. CCAMLR has established a working group called IMAF-WG (Incidental Mortality Associated with Fishing) which meets annually in Hobart, at the same time as the Fish Stock Assessment Working Group (FSA-WG). Prior to the IMAF Working Group meeting, the Secretariat collates data on seabird and marine mammal interactions collected by observers during the fishing season. The Secretariat also provides IMAF-WG with data on the level of compliance with CCAMLR Conservation Measures aimed at reducing seabird mortality. All longline vessels fishing legally in CCAMLR carry a CCAMLR observer and in CCAMLR's exploratory fisheries vessels are also required to carry a national observer, so the data provided to IMAF-WG is very comprehensive.

17. IMAF-WG reviews observer information, as well as information on new or improved mitigation measures, the status of seabird populations, and initiatives undertaken by Regional Fisheries Management Organisations. Based on this review, IMAF-WG provides advice and makes recommendations to the CCAMLR Scientific Committee. At the most recent meeting in October 2003, IMAF-WG reviewed recent information on the design and effectiveness of tori lines, and made recommendations to the Scientific Committee that have resulted in changes to the relevant Conservation Measure (CCSBT-ERS/0402/Info16).
18. This process has been effective and CCAMLR has made significant progress in addressing the incidental mortality of seabirds in toothfish fisheries by authorised vessels. In 1997 when CCAMLR began addressing the seabird problem an estimated 6,589 seabirds were caught. The incidental mortality of seabirds has progressively declined until in 2003, only 15 seabirds were caught. In tandem with this, compliance with the Conservation Measures put in place by CCAMLR has reached a high level. For instance in 2003 92% of all sets were made with a tori line, and 98% of sets were made during night time.

Agenda Item 5. Provide information and advice on issues relating to species associated with southern bluefin tuna (SBT) (ecologically related species), with specific reference to:

(a) species (both fish and non-fish) which may be affected by SBT fisheries operations;

19. Japan presented its program to tag and release pelagic shark species in the SBT fishery (CCSBT-ERS/0402/9). Japan noted the very low level of tag recoveries and possible causes. Members agreed that every effort should be made to ensure any tag recoveries were reported, and where necessary to collaborate with similar tagging programs, and other fisheries where these tags may be recovered.
20. Australia presented a paper on the impact of Pelagic Fishing on the Flesh-footed Shearwater *Puffinus carneipes* in Eastern Australia (CCSBT-ERS/0402/06). This paper concludes that the eastern Australian population of *P. carneipes* will decline substantially unless its catch rates are significantly reduced, and that there is an urgent need to develop a suite of mitigation measures that will halt or greatly reduce the current levels of incidental catch. Existing measures such as use of under water setting chute, or combining the use of twin tori-lines and line weighting as used in this experiment were not successful in reducing its catch rates to acceptable levels. Other measures such as increased line weighting, or the application of temporal and spatial closures may be necessary to reduce the shearwater bycatch to a level that is sustainable.
21. Japan presented a paper on the use of blue dyed bait and tori-lines to reduce the incidental capture of seabirds in the Japanese SBT fishery (CCSBT-ERS/0402/8). The paper concluded that blue dyed bait was effective in reducing the incidental catch of seabirds (from 3-4 birds per 1000 hooks to 0-0.5 per 1000 hooks). The combination of blue dyed bait and tori-line streamers was even more effective in

reducing seabird catch. It was found that there was no significant difference between blue dyed and undyed baits in the catch rates of albacore and bigeye tuna. The results for SBT catch rates were inconsistent. Members discussed the practicality of using dyed baits, particularly if this approach was more costly. If there was deterioration in bait quality after baits were thawed, dyed and refrozen it should be possible and cost effective to dye baits as part of the initial preparation and packaging process. It was also suggested that bait type and life status may also influence seabird catch rates. Members agreed that the Japanese research was encouraging and could be further investigated. The Japanese industry representative noted that if the strategy was found to be highly effective they would support its use in the relevant Japanese tuna longline fisheries.

22. Australia reported that black coloured snoods were currently being trialed in Antarctic demersal longline fisheries. These may be effective in reducing seabird interactions, were relatively inexpensive and could be easily introduced into fishing practices if necessary. Australian fishers were also considering trialing of black clips to reduce the risk of attracting seabirds to fishing gear.
23. New Zealand presented its paper on the incidental capture of seabirds, marine mammals, and marine reptiles in tuna longline fisheries in New Zealand waters (CCSBT-ERS/0402/11). New Zealand advised that the low level of observer coverage achieved for its domestic tuna fleet was due to logistical difficulties with the size of vessels and the large number of ports these vessels fished. New Zealand is attempting to increase the level of observer coverage for this sector of their fishery.
24. New Zealand presented an update on the role and work of the group *Southern Seabird Solutions* (CCSBT-ERS/0402/12), noting the importance of collaborative work involving all relevant stakeholders in developing and implementing effective strategies to reduce the impacts of SBT fishing on southern hemisphere seabird populations.
25. Australia presented its paper on observer data illustrating the catch composition and life status of fishes taken in the Eastern Tuna and Billfish Fishery (CCSBT-ERS/0402/07).
26. This concluded the presentation of papers under this item. The meeting discussed the nature of information and advice on ERS issues in relation to SBT fisheries to be presented to the Commission according to the ERS Terms of Reference (TOR).

(b) predator and prey species which may affect the condition of the SBT stock.

27. Japan presented paper CCSBT-ERS/0402/13 on the distribution of teleosts in the SBT fishery. Observer data identified seven dominant non-target teleost species caught in the SBT fishery, and seasonal differences in their distribution. It was suggested that fish distributions were determined by their ecological characteristics, as well as prey distributions and oceanographic conditions.
28. Japan presented paper CCSBT-ERS/0402/14 on the trophic relationships of seabirds and fishes in the SBT fishery, investigated using stable isotopes. Carbon and

nitrogen isotope analyses were conducted on samples collected by scientific observers. These analyses showed a range in the trophic levels occupied by both seabird and fish species. Japan indicated that collection and analysis of more samples may provide greater clarity on relationships of species and trophic levels and other factors.

29. Japan noted that the ERSWG terms of reference 2(a) and (b), reflected in agenda items 5(a) and (b), should be accorded equal importance by the ERSWG. Japan noted that at this ERSWG meeting, Japan was the sole presenter under item 5(b). Japan encouraged other members to present material under this item at future meetings. New Zealand and Australia commented that their current and recent management and research priorities are focussed on reducing impacts of SBT fisheries on ERS, including monitoring and mitigation of the effects of fishing on these species. Australia also noted that there is work in progress in Australia that would hopefully be brought forward to the ERSWG for this item in the future.

(c) general discussion under agenda Item 5

30. Japan, New Zealand and Australia expressed the view that the Commission should encourage new members to report at future ERSWG meetings on their work relevant to terms of reference 2(a) and (b). Korea and the Fishing Entity of Taiwan indicated that they had come to this ERSWG to learn the nature and processes of the meeting. These members advised that information could be presented relevant to these terms of reference as appropriate in the future.
31. New Zealand, Australia and Japan expressed their encouragement for all CCSBT members and cooperating non-members to fully participate in the Commission's work. Australia suggested that the first and easiest step to achieve this for Korea and the Fishing Entity of Taiwan may be to bring forward information on bycatch that has not as yet been provided in their National Reports. The Fishing Entity of Taiwan advised that its observer program was only at pilot trial stages and the data collected is limited and needs to be treated cautiously. It will take time to compile and analyse the collected data for reporting.
32. New Zealand, Australia and Japan offered to assist other members and cooperating non-members to build their capacity to undertake and report on ERS matters including the development of data recording protocols and identification of bycatch species.
33. Key outcomes of discussion relating to Agenda items 5(a) and 5(b) were that:
 - The results of research so far on the use of blue dyed bait as a mitigation measure to reduce incidental capture of seabirds are encouraging. Ways to overcome application difficulties and to minimise costs need to be investigated.
 - Some multiple mitigation measures/strategies tested showed more effectiveness at reducing incidental capture of seabirds than a single measure.
 - The type and number of mitigation measures needs to take account of the geographical differences in distribution of seabirds and the related risk of capture.

- More effort is required to report information relevant to Term of Reference number 2.

Agenda Item 6. Education and public relations activities

34. New Zealand presented paper CCSBT-ERS/0402/15 on the activity of the seabird/fisheries advisory officer during the 2001/02 fishing season. New Zealand noted that the advisory officer program was effective in elevating fishers awareness of the range of measures available to reduce the incidental mortality of seabirds. Japan was interested in how the officer with a lack of legal power could enforce measures taken by government. New Zealand indicated from its experiences that the lack of legal power given to the advisory officer increased skippers' confidence in the officer and therefore was the best way to raise fishers' awareness.
35. The Fishing Entity of Taiwan introduced its programs on guidance, extension and educational activities about ecologically related species (CCSBT-ERS/0402/info28). Members thanked the Fishing Entity of Taiwan for its presentation at its first ERSWG meeting. Members discussed several issues raised in the paper including the effectiveness of these materials for distant-water fishing vessels, placing observers onboard to educate fishers, and ways to secure funds for preparing materials.
36. The Japanese industry representative introduced the education activities undertaken by its tuna industry to reduce incidental mortality of ecologically-related species, such as seabirds, sharks and sea turtles. Japan also introduced the efforts of the Organisation for the Promotion of Responsible Tuna Fisheries (OPRT) that hosted in 2003 the World Tuna Longline Fishery Conference attended by major tuna fishery organisations and fishery management authorities. The Conference participants adopted a joint declaration in which they called for efforts to successfully manage incidental catches of sea turtles and seabirds, and bycatch of sharks.
37. As agreed at the ERSWG4 meeting, the Secretariat, in cooperation with member countries, intersessionally developed educational pamphlets to be used to increase public awareness of the need and methods to reduce incidental catches of seabirds and sharks in longline fisheries. These pamphlets were translated into each language and are presently in press and will soon be distributed to each member country.
38. Australia noted that the taxonomy for albatrosses has been revised, and 24 albatross taxa are now recognised. Australia suggested that the pamphlet be updated to reflect this change once existing stocks of the pamphlet are distributed and prior to printing a second batch.

Agenda Item 7. Update of "Research Priorities for Mitigation Measures" (ERSWG 4 Attachment 5)

39. The ERSWG recognised that there were two different aspects in the priorities, i.e., i) indication of importance of mitigation research identified by the ERSWG as a whole,

ii) prioritisation of research activities to be implemented by each country. These two priorities may differ because each country has different types of fisheries to which a certain type of mitigation measure may not be as effective, and because duplication of research in the same conditions may not be necessary.

40. Updated priorities for research into mitigation measures by Australia, Japan and New Zealand are provided at **Attachment 4**. The Fishing Entity of Taiwan and Korea will add their research priorities to **Attachment 4** before the submission of reports to the next Commission meeting.

41. Considering:

- That the results of research to date on the use of blue dyed bait as a mitigation measure to reduce incidental capture of seabirds are encouraging despite current problems with application and costs.
- That multiple mitigation measures/strategies tested are more effective at reducing incidental capture of seabirds than a single measure.
- The type and number of mitigation measures needed to take account of the geographical differences in distribution of seabirds and the related risk level as well as the differences in fishing operations.

The ERSWG identified two priorities of mitigation research as:

- Further research on the use of blue dyed bait as a mitigation measure to reduce incidental capture of seabirds should be encouraged including ways to overcome application difficulties and to minimise costs.
- Further research on multiple mitigation measures/strategies to reduce incidental capture of seabirds should be encouraged.

Agenda Item 8. Update of “ERSWG Operational Framework” (ERSWG 4 Attachment 6)

42. The Working Group discussed the data requirements for ERS matters. The members drew a number of conclusions from the discussions.

- Members recognised that there are potential benefits in future collaborative work in some areas. It was noted that collaborative research projects will need to be considered on a case-by-case basis and data confidentiality issues will need to be addressed.
- The ERSWG expressed the importance of Korea and the Fishing Entity of Taiwan collecting and submitting ERS information in accordance with the guidelines set out in CCSBT scientific observer program standards (Attachment F, SC 8 report), the ERSWG research priorities (**Attachment 4**) and the ERS national report framework (Attachment 10, ERSWG 4 report).
- Given that Australia, New Zealand and Japan have been addressing ERS issues for a number of years, ERSWG 5 agreed there is value in providing Korea, the Fishing Entity of Taiwan and Indonesia with information on domestic data collection systems, including observer program data collection forms and any

- other forms used to collect ERS information. Australia and New Zealand saw additional value in developing a list of the ERS related data which members of the working group possess. Japan noted that effort should be concentrated particularly to new members to collect information in accordance with the observer standards and additional burden should be avoided.
43. The ERSWG discussed data requirements necessary to address the terms of reference, but was unable to reach agreement. A number of issues remain unresolved:
- The quality of data and level of resolution. Australia and New Zealand requested the ERSWG strive to assess the highest resolution data possible. Japan believed the current national report format is sufficient to address the terms of reference.
 - Japan, Korea and the Fishing Entity of Taiwan expressed concern that the collection and management of increased ERS data above the current data standards would create a significant burden on fishing activities and already limited manpower, financial resources, and research capacity, possibly jeopardising the major task of managing SBT.
 - New Zealand and Australia considered the CCSBT scientific observer program standards data collection rankings need to be reconsidered by the Scientific Committee taking into account the importance of ERS issues such as the incidental catch of seabirds. Japan, Korea and the Fishing Entity of Taiwan stressed that the standards were adopted last year through substantial discussion for many years, and considers these criteria are adequate and do not need to be changed.
 - Australia and New Zealand suggested that the Commission could be requested to provide advice to the ERSWG on policy issues surrounding ERS data collection, reporting and confidentiality. Japan considered that the current scheme under the existing Terms of Reference works well and could not find a need to request the Commission for such advice.
44. The ERSWG considered the progress member countries have made in relation to the research objectives presented in Attachment 6 of the report of the 4th meeting of the ERSWG '*ERS operational framework*'.
- In relation to the assessment of ERS interactions with SBT fisheries, the ERSWG is yet to achieve the objective of providing the Commission with an estimate of the level of incidental seabird take in SBT fisheries.
 - Members have made progress in investigating a number of factors that influence the incidental take of seabirds in SBT fisheries.
 - The ERSWG has developed and assessed a significant number of mitigation measures in accordance with the operational framework. There have also been a number of positive steps taken to further research and implement additional mitigation measures.
 - The objective of increasing education and public relations has been substantially progressed in the inter-sessional period. In particular, the ERSWG developed and printed pamphlets on seabird and shark bycatch, and countries provided presentations on their domestic ERS education activities.

45. The ERSWG adopted an updated Operational Framework (**Attachment 5**) to facilitate coordinated work in preparation for the 6th meeting of the ERSWG.

Agenda Item 9. Proposals for future research activities

46. The ERSWG did not discuss any proposals for future research activities under this agenda item.

Agenda Item 10. Future work program

10.1. Draft Agenda for the next ERSWG meeting

47. The proposed draft agenda for the next ERSWG meeting is at **Attachment 6** for consideration by the Commission.

10.2. Inter-sessional work

48. In preparation for the 6th meeting of the ERSWG a number of items must be progressed during the inter-sessional period. Korea and the Fishing Entity of Taiwan agreed to provide a table of research priorities for mitigation research for inclusion in **Attachment 4**. The meeting also agreed that Australia, New Zealand and Japan would provide Korea, the Fishing Entity of Taiwan and Indonesia with information on their ERS data collection systems. New Zealand agreed to circulate its NPOA for seabirds to members and cooperating non-members once finalised.

Agenda Item 11. Other business

49. There was no other business.

Agenda Item 12. Conclusion

12.1. Adoption of meeting report

50. The meeting adopted the report.

12.2. Recommendation of timing of next meeting

51. The ERSWG agreed that the next meeting be held in late 2005 and that ERSWG meetings be held every two years.
52. The ERSWG suggested that the Commission consider holding ERSWG meetings in association with other meetings of the Commission.

12.3. Close of meeting

53. The meeting closed at 4:26pm on Thursday 5 February 2002.

List of Attachments

Attachment

- 1 Agenda
- 2 List of Participants
- 3 List of Documents
- 4 Research Priorities for Mitigation Measures
- 5 ERSWG Operational Framework
- 6 Draft Agenda for the Sixth Meeting of the Ecologically Related Species Working Group

Agenda

CCSBT - Fifth Meeting of the Ecologically Related Species Working Group

1. Opening
 - (i) Election of the Chair
 - (ii) Adoption of the Agenda
2. Reports
 - (i) Member reports (activities undertaken since last meeting in November 2001)
 - (ii) Non-members reports
3. Review of Relevant International Instruments
4. Reports of meetings of other organisations relevant to the ERS Working Group
5. Provide information and advice on issues relating to species associated with southern bluefin tuna (SBT) (ecologically related species), with specific reference to:
 - (a) species (both fish and non-fish) which may be affected by SBT fisheries operations:
 - (b) predator and prey species which may affect the condition of the SBT stock
6. Education and public relations activities
7. Update of 'Research Priorities for Mitigation Measures' (ERSWG 4 Attachment 5)
8. Update of 'ERSWG Operational Framework (ERSWG 4 Attachment 6)
9. Proposals for future research activities
10. Future work program
 - (i) Draft Agenda for the next ERSWG meeting
 - (ii) Inter-sessional work
11. Other business
12. Conclusion
 - (i) Adoption of meeting report
 - (ii) Recommendation of timing of next meeting
 - (iii) Close of meeting

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List of Documents
CCSBT - Fifth Meeting of the Ecologically Related Species Working Group

The main agenda items for papers are indicated in parentheses at the end of each paper's title

(CCSBT-ERS/0402/)

01. Draft Agenda
02. List of Participants
03. Draft List of Documents
04. (Australia) Progress on Developing Australia's National Plan of Action for the Conservation and Management of Sharks. (3)
05. (Australia) Progress on Developing Australia's National Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries. (3)
06. (Australia) The Impact of Pelagic Fishing on Flesh-footed Shearwater *Puffinus carneipes* in Eastern Australia. G. Barry Baker and Brent Wise. (5(a))
07. (Australia) Summary of Observer Data on Composition and Life-status of Fishes Caught in the Eastern Tuna and Billfish Fishery. (5(a))
08. (Japan) Effect of Blue-Dyed Bait and Tori-Pole Streamer on Reduction of Incidental Takes of Seabirds in the Japanese Southern Bluefin Tuna Longline Fisheries. Hiroshi Minami and Masashi Kiyota. (5(a))
09. (Japan) Tag and release of the pelagic shark species in the SBT fishery. Hiroaki Matsunaga and Hideki Nakano. (5(a))
10. (New Zealand) National Plan of Action to Reduce the Incidental Catch of Seabirds in New Zealand Fisheries. Dawn Randall and Jim Nicolson. (3, 5(a))
11. (New Zealand) Incidental capture of seabirds, marine mammals, and marine reptiles in tuna longline fisheries in New Zealand waters, 2000-01 to 2001-02. (5(a))
12. (New Zealand) Southern Seabird Solutions – an Update. Janice Molloy. (5(a), 6)
13. (Japan) Distribution of teleosts dominated in the SBT fishery. Takahiro Nobetsu and Hideki Nakano. (5(b))
14. (Japan) Trophic relationship of seabirds and fish in southern bluefin tuna longline fisheries using stable carbon and nitrogen isotopes. Hiroshi Minami , Masashi Kiyota and Tomoya Onodera. (5(b))
15. (New Zealand) New Zealand Northern Tuna Fleet: Report of Advisory Officer - Seabird/Fisheries Interactions 2001/02. Department of Conservation Science Internal Series 99. Department of Conservation, Wellington, New Zealand. 2003. Kellian, D. (6)

(CCSBT-ERS/0402/National Reports)

01. (Australia) Member's Annual Report to ERSWG 5. (2)
02. (Japan) Annual Report of Japan. (2)
03. (New Zealand) New Zealand Country Report: Ecologically Related Species in the Southern Bluefin Tuna and Related Tuna Longline Fisheries in the New Zealand 200 n. mile EEZ, 2000–01 to 2001-02. (2)
04. (Korea) Annual Report of Korea. (2)
05. (Taiwan) Annual Report of Taiwan to ERSWG5. (2)

(CCSBT-ERS/0402/Info)

01. (Japan) Review of the Japanese RTMP observer program in the high sea waters in 2001-2002 fishing years. Masashi Kiyota and Hiroshi Minami. (2)
02. (Japan) Estimation of incidental take of seabirds in the Japanese southern bluefin tuna longline fishery in 2001-2002. Masashi Kiyota and Yukio Takeuchi. (2)
03. (Japan) Report on the Assessment of Implementation of Japan's National Plan of Action for the Conservation and Management of Sharks of FAO. JFA. (3 or 4)
04. (Japan) Assessment report on the implementation of Japan's National Plan of Action for reducing incidental catch of seabirds in longline fisheries. JFA. (3 or 4)
05. (Australia) Spatio-temporal Trends of Longline Fishing effort in the Southern Ocean and Implications for Seabird Bycatch. Geoffrey N. Tuck, Tom Polacheck, Cathy M. Bulman. (5(a))
06. (Japan) Underwater Setting Device for preventing Incidental Catches of Seabirds in Tuna Longline Fishing. Hisaharu Sakai, Hu Fuxiang and Takafumi Arimoto. (5(a))
07. (Japan) Incidental take of seabirds in longline fisheries: Nature of the issue and measures for mitigation. Masashi Kiyota. (5(a))
08. (Japan) Attempts to reduce incidental take of seabirds in tuna longline fishery: Effectiveness of blue-dyed baits. Hiroshi Minami and Masashi Kiyota. (5(a))
09. (Japan) Can blue baits save seabirds? A new attempt to reduce incidental take of seabirds in tuna longline fishery. Hiroshi Minami and Masashi Kiyota. (5(a))
10. (Japan) Efforts to alter longline into environmentally friendly fishing method: wisdom contest between fishery and seabirds. Masashi Kiyota. (5(a))
11. (Japan) Standardized CPUE for the main pelagic shark species dominated in the SBT fishery. Hiroaki Matsunaga and Hideki Nakano. (5(a))
12. (Japan) Age and growth of blue shark (*Prionace glauca*) in the Indian Ocean. Hideki Nakano and Satoshi Fuchigami. (5(a))
13. (New Zealand) Longline sink rates of an autoline vessel, and notes on seabird interactions. Science for Conservation 183, Department of Conservation. 2001. Wellington, New Zealand. Smith, N.W.McL. (5(a))

14. (New Zealand) Sink rate of baited hooks on New Zealand pelagic tuna vessels. Department of Conservation Science Internal Series 123, Department of Conservation, Wellington, New Zealand. 2003. Keith, C. (5(a))
15. (New Zealand) Fish bycatch in New Zealand tuna longline fisheries, 2000–01 and 2001–02. (5(a))
16. (New Zealand) Changes to the CCAMLR Conservation Measure Relating to Minimisation of Incidental Mortality of Seabirds in the Course of Longline Fishing or Longline Fishing Research in the Convention Area. Janice Molloy. (5(a))
17. (New Zealand) Tori line designs for New Zealand domestic pelagic longliners. Conservation Advisory Science Notes 248, Department of Conservation, Wellington, New Zealand. 1999. Keith, C. (5(a))
18. (New Zealand) Developmental stages of the underwater bait setting chute for the pelagic longline fishery. Conservation Advisory Science Notes 246, Department of Conservation, Wellington, New Zealand. Molloy, J., K. Walshe and P. Barnes. (5(a))
19. (Japan) Report of the predation survey by the Japanese commercial tuna longline fisheries (September, 2000 - September, 2002). Tom Nishida and Yukiko Shiba. (5(b))
20. (Japan) Update on result of feeding ecology analysis of southern bluefin tuna based on stomach samples collected from offshore longline vessels. Tomoyuki Itoh and Kenichiro Omote. (5(b))
21. (Japan) Guidance, Extension and Educational Activities about Ecologically Related Species. Hiroshi Minami, Masahiko Kiyota and Hideki Nakano. (6)
22. (New Zealand) Seabird/fisheries interactions – Final report of advisory officer. Conservation Science Advisory Notes 295, Department of Conservation, Wellington, New Zealand. 2000. Keith, C. (6)
23. (New Zealand) Video – Fishing the Seabird Smart Way – the New Zealand Experience. Janice Molloy. (6)
24. (New Zealand) The Tuna Fishers Folder. Department of Conservation, Wellington, New Zealand. 2001. Department of Conservation. (6)
25. (Australia) Proposal to Study Seabird-fishery Interactions in global Longline Fisheries. (7)
26. (New Zealand) Extract of the report of the twenty second meeting of the CCAMLR Scientific Committee (2003) – Incidental Mortality Associated with Fishing. (4)
27. (Indonesia) Present Status of Shark Fisheries in Indonesia. Parlin Tambunan, Johannes Widodo and I Gede Sedana Merta. (5)
28. (Taiwan) Guidance, Extensions and Educational Activities about Ecologically Related Species. Yu-Min Yeh, Tien-Hsiang Tsai, Tzu-Yaw Tsay, James Sha and I-Hsun Ni. (6)

(CCSBT-ERS/0402/Rep)

01. Report of the Third Meeting of Ecologically Related Species Working Group (June 1998)
02. Report of the Fourth Meeting of Ecologically Related Species Working Group (November 2001)

Research Priorities for Mitigation Measures

In recent years a number of mitigation measures have been developed and are now used by fishers. For some of these measures, further improvements in their effectiveness in minimising incidental capture of seabirds could be made through experimentation. Also the effect on target and non-target fish may need to be assessed for some mitigation measures.

In addition to existing measures, members of the Extended Commission are engaged in research into new measures. There are also a number of possible measures which are not being actively developed, but which exist as concepts.

The ERSWG has prepared a summary of existing and potential mitigation research in table form, for endorsement by the Extended Commission. This table highlights the research currently underway by the members, and helps identify possible areas of collaboration. It is recognised that each member is likely to have different research priorities because of differences between fleets. For this reason, the priorities for each member are shown separately.

The table should be treated as a guide only, and will need to remain flexible. New ideas or results of research are likely to alter country priorities over time. The table could be updated on an annual basis.

Research which is being undertaken by members outside the Extended Commission and which may be of interest to members is included in the table.

ERSWG RESEARCH PRIORITIES FOR MITIGATION MEASURES

Mitigation Measure	Research Need(s)	Method	Country undertaking Research	Member Priorities (high, medium, low)					Opportunities for Collaboration	Past ERSWG Papers
				JP	NZ	AU	KR	TW		
Presently Used										
Night setting	<ul style="list-style-type: none"> effect on SBT-CPUE effect on non-target fish effect of light levels on seabird capture (e.g. moon, cloud) ways to minimise hazards to crew effect of night setting on crew efficiency 	<ul style="list-style-type: none"> analyse existing databases, at sea experiments, analyse existing databases 	Australia Japan -	high	low ¹	high ²	med	low	<ul style="list-style-type: none"> input from fishers designing experiment sharing analyses technical advice 	95/13, 95/29, 95/35, 95/37, 9706/3, 9706/11, 9706/25, 9806/10, 9806/17, 9806/25, 0111/34, 0111/69
Bait-casting machine	<ul style="list-style-type: none"> effectiveness in combination with tori line effectiveness of different models 	<ul style="list-style-type: none"> at sea experiments at sea experiments 	- -	med	low	low	low	low	<ul style="list-style-type: none"> input from fishers designing experiment technical advice sharing analyses 	95/14 9806/17 9806/25
Line weighting (mainline and snoods)	<ul style="list-style-type: none"> optimum weighting and position of weights for different gear Effect on SBT CPUE ways to minimise hazards to crew 	<ul style="list-style-type: none"> at sea experiments gear modifications or changes to haul operation 	Australia Japan - USA (Hawaii)	med	med	high	low	low	<ul style="list-style-type: none"> input from fishers designing experiment technical advice sharing analyses 	95/33 95/39 9806/12 0111/23 0111/24 0111/53 0111/62 0402/Info14

¹ Night setting is routinely undertaken in New Zealand tuna fisheries so research is not a priority, but New Zealand is willing to collaborate with other CCSBT members and non-members.

² In Australia night setting is mandatory in tuna fisheries operating south of latitude 30°S. Research is necessary to evaluate the need to employ night setting in areas north of 30°S.

Mitigation Measure	Research Need(s)	Method	Country undertaking Research	Member Priorities (high, medium, low)					Opportunities for Collaboration	Past ERSWG Papers
				JP	NZ	AU	KR	TW		
Colouring baits	<ul style="list-style-type: none"> identification of a short-lasting dye effectiveness in reducing seabird captures effect on SBT CPUE 	<ul style="list-style-type: none"> trials with existing dyes at sea experiment at sea experiment 	USA (Hawaii) Japan NZ	high high high	high high high	low low low	low low low	med med med	<ul style="list-style-type: none"> input from fishers designing experiment technical advice sharing analyses 	0111/61 0402/08 0402/Info08 0402/Info09
Tori lines	<ul style="list-style-type: none"> most effective design for different fleets 	<ul style="list-style-type: none"> at sea experiments 	Japan Australia New Zealand USA (Hawaii)	high	high	high	med	med	<ul style="list-style-type: none"> input from fishers designing experiment technical advice sharing analyses 	95/13 95/29 9706/15 9706/32 9706/6 9806/9 9806/17 9806/25 0111/34 0111/60 0402/08 0402/Info16 0402/Info17
Sound deterrents	<ul style="list-style-type: none"> effectiveness in reducing seabird captures 	<ul style="list-style-type: none"> at sea experiments 	Japan Australia NZ fisher trials	low	low	low	low	low	<ul style="list-style-type: none"> input from fishers designing experiment technical advice sharing analyses 	
Side setting	<ul style="list-style-type: none"> feasibility of altering vessel set up effectiveness in reducing seabird captures 	<ul style="list-style-type: none"> advice from vessel designers & fishers at sea experiments 	USA (Hawaii)	low low	low low	low low	low low	low	<ul style="list-style-type: none"> input from fishers sharing analyses technical advice 	
Offal and bait retention	<ul style="list-style-type: none"> ways to store used baits on board Timing and form of release of used baits & offal to minimise attraction of seabirds 	<ul style="list-style-type: none"> advice from fishers advice from fishers 	NZ NZ	low low	high high	low low	low low	low	<ul style="list-style-type: none"> sharing advice input from fishers technical advice on offal management technologies 	

Mitigation Measure	Research Need(s)	Method	Country undertaking Research	Member Priorities (high, medium, low)					Opportunities for Collaboration	Past ERSWG Papers
				JP	NZ	AU	KR	TW		
Combination of mitigation measures (CMM)	<ul style="list-style-type: none"> effectiveness in reducing seabird captures using CMM effect on SBT CPUE of CMM underwater setting and line weighting twin tori line and line weighting 	<ul style="list-style-type: none"> at sea experiments at sea experiments at sea experiments at sea experiments 	Japan	high	high	high	low	med	<ul style="list-style-type: none"> designing experiments technical advice sharing analyses input from fishers 	
			Australia	high	high	low	low	med		
			Japan	low		high	low	low		
			Australia	med		high	low	low		
Under Development										
Underwater setting	<ul style="list-style-type: none"> development of technology best position to place baits effectiveness in reducing seabird captures 	<ul style="list-style-type: none"> advice from hydro-engineers at sea experiments at sea experiments 	NZ Australia USA (Hawaii)	med	high	high	low	low	<ul style="list-style-type: none"> joint funding between New Zealand and Australia input from fishers designing experiment technical advice sharing analyses 	95/6 9706/13 9706/17 9706/18 9806/32 0111/13 0111/25 0111/54 0402/Info06 0402/Info18
			Japan Australia NZ	med	high	high	low	low		
			NZ Australia	med	high	high	low	low		
Water cannon	<ul style="list-style-type: none"> effectiveness in reducing seabird captures 	<ul style="list-style-type: none"> at sea experiment 	Japan	low	low	low	low	low	<ul style="list-style-type: none"> input from fishers designing experiment sharing analyses technical advice 	0111/63
Potential										
Advanced artificial baits/lures	<ul style="list-style-type: none"> development of lure which is attractive to SBT but not to seabirds effect on SBT CPUE effectiveness in reducing seabird captures 	<ul style="list-style-type: none"> development of technology trials with farmed tuna at sea experiment at sea experiment 	- - -	low low low	low low low	low low low	low low low	low low low	<ul style="list-style-type: none"> input from fishers designing experiment sharing analyses technical advice 	

Mitigation Measure	Research Need(s)	Method	Country undertaking Research	Member Priorities (high, medium, low)					Opportunities for Collaboration	Past ERSWG Papers
				JP	NZ	AU	KR	TW		
Hook modifications	<ul style="list-style-type: none"> effect of existing hook designs on capture of seabirds effect of existing hook design on SBT CPUE development of new hook that maximises SBT CPUE and minimises seabird capture 	<ul style="list-style-type: none"> at sea experiments 	-	low	low	low	low	low	<ul style="list-style-type: none"> input from fishers designing experiment sharing analyses technical advice 	
		<ul style="list-style-type: none"> at sea experiments 	-	low	low	low	low	low		
		<ul style="list-style-type: none"> development of hook at sea experiments 	-	low	low	low	low	low		
Bait type	<ul style="list-style-type: none"> assessment of live versus dead bait type 	<ul style="list-style-type: none"> at sea experiments analyse existing data sets 	Australia	low	low	High	low	low	<ul style="list-style-type: none"> input from fishers 	0402/06
Research on by-catch by purse seine fishery	<ul style="list-style-type: none"> observation on bycatch of non-SBT species 	At sea observation	Countries which have purse seine fishery	—	—	med			<ul style="list-style-type: none"> sharing analyses 	
Area closures (temporal and spatial)	<ul style="list-style-type: none"> effectiveness in reducing seabird bycatch 	<ul style="list-style-type: none"> analyse existing data sets collect and analyse data on re-directed effort 	Australia	low	med	high	low	low	<ul style="list-style-type: none"> input from fishers sharing analyses 	0402/06

ERSWG OPERATIONAL FRAMEWORK

The Commission requires the ERSWG to provide information and advice based on research which:

- determines the nature and extent of ERS interactions in SBT fisheries
- determines the effects of SBT and other fisheries on ERS
- assesses current or potential measures to reduce ERS captures
- assesses predator and prey species which may affect the condition of the SBT stock

The ERSWG also has a role in the development of advice on best practice for educational activities. The ERSWG will provide advice and recommendations on these issues and on research priorities to the Commission through the Scientific Committee.

The following table details an operational framework for consideration and endorsement by the Commission. This framework is intended to be an evolving one. Work areas included in the table are considered to be of high priority for the ERSWG, and will form the basis for key discussions and output from ERSWG meetings. This does not preclude discussion of other items.

The framework will be reviewed at ERSWG meetings, where items and information can be added, deleted or modified, taking account of the degree of progress of the projects.

Commission Requirements (Broad Areas of Work)	Relevant Terms of Reference	Research Questions/ Objective	Input	ERSWG Process	Outputs	Time Frame	Status
CURRENT WORK PRIORITIES FOR THE ERSWG							
A) Assessment of ERS interactions with SBT fisheries	2(a) 3(a) (iii)	1) Provision of estimates of bycatch and/or incidental take of seabirds and other species taken in SBT fisheries.	Relevant sections from members' annual reports to the ERSWG, scientific papers and/or data as appropriate.	Each member provides necessary papers and/or data in electronic format to the Secretariat for distribution three weeks in advance of the ERSWG. An agenda item at the ERSWG is dedicated to review of the papers presented and/or analyses of data and the development of a section for inclusion in the report to the Commission.	Report from ERSWG to Commission which synthesises information provided by members, provides advice on, and identifies, areas of further research and cooperation, including potential mitigation measures.	ERSWG 6	Annual and ongoing
	5, 6	2) What factors influence seabird captures in SBT fisheries?	Relevant sections from members' annual reports to the ERSWG, scientific papers and/or data as appropriate.	Each member provides necessary papers and/or data in electronic format to the Secretariat for distribution three weeks in advance of the ERSWG. An agenda item at the ERSWG is dedicated to review of the papers presented and/or analyses of data and the development of a section for inclusion in the report to the Commission.	Advice on key factors which influence seabird bycatch, those factors warranting further investigation and, potential mitigation measures.	ERSWG 6	—

Commission Requirements (Broad Areas of Work)	Relevant Terms of Reference	Research Questions/ Objective	Input	ERSWG Process	Outputs	Time Frame	Status
B) Development and Assessment of Effectiveness of Mitigation Measures	3(a) (iv), 5	<ol style="list-style-type: none"> 1) How can the design and deployment of tori lines be optimised to minimise seabird captures? 2) Development of blue-dyed bait. 3) Research on effect on SBT-CPUE of night setting. 	Relevant sections from members' annual reports to the ERSWG, scientific papers and/or data as appropriate and information from fishers.	<p>Each member provides necessary papers and/or data in electronic format to the Secretariat for distribution three weeks in advance of the ERSWG.</p> <p>An agenda item at the ERSWG is dedicated to review of the papers presented and/or analyses of data and the development of a section for inclusion in the report to the Commission.</p>	<p>Advice on amendments or improvements to the guidelines for tori pole design and deployment (ERSWG3 Attachment 6).</p> <p>Advice on additional measures including multiple mitigation measures.</p>	ERSWG 6	—
C) ERS Interactions with SBT	2(b), 3(b)	<ol style="list-style-type: none"> 1) Identification of 'other' ERS. 2) Identification of SBT food and ecological relationships. 					
D) Education and Public Relations	5, 6	<ol style="list-style-type: none"> 1) Promote awareness of ERS issues to fishers. 2) Promote awareness of appropriate use of tori lines. 	<p>Relevant sections from members' annual reports to the ERSWG, and scientific papers etc.</p> <p>Update of information on Albatross taxonomy.</p>	<p>Exchange of members' views and information to occur intersessionally.</p> <p>Re-draft ERS seabird pamphlet to reflect updated taxonomy prior to next re-print of the pamphlet.</p>	<p>Re-drafted ERS seabird pamphlet.</p> <p>Advice on appropriate education and public relations needs.</p>	Prior to next re-print of pamphlet.	

Commission Requirements (Broad Areas of Work)	Relevant Terms of Reference	Research Questions/ Objective	Input	ERSWG Process	Outputs	Time Frame	Status
FUTURE WORK AREAS OF HIGH PRIORITY FOR ERSWG							
E) Proposals for Future Research or Activities¹	4		Research plan(s). Results of the review of scientific papers.	Review of research plans.	Recommendations to the Commission. Research questions / proposals.		Annual

¹ Once a research proposal under E) is agreed by the ERSWG and CCSBT, the relevant research question or objective from the proposal would move up into current work priorities section of the table.

Draft Agenda

CCSBT - Sixth Meeting of the Ecologically Related Species Working Group

1. Opening
 - 1.1. Election of the Chair
 - 1.2. Adoption of the Agenda
2. Reports
 - 2.1. Member reports (activities undertaken since last meeting in February 2004)
 - 2.2. Non-members reports
3. Review of Relevant International Instruments
4. Reports of meetings of other organisations relevant to the ERS Working Group
5. Provide information and advice on issues relating to species associated with southern bluefin tuna (SBT) (ecologically related species), with specific reference to:
 - (a) species (both fish and non-fish) which may be affected by SBT fisheries operations
 - (b) predator and prey species which may affect the condition of the SBT stock
6. Education and public relations activities
7. Research Priorities for Mitigation Measures (ERSWG 5 Attachment 4)
 - 7.1. Update of the mitigation measures research table
 - 7.2. Consideration of ERSWG mitigation research priorities
8. ERSWG Operational Framework (ERSWG 5 Attachment 5)
 - 8.1. Update of the operational framework
 - 8.2. Consideration of progress in meeting the operational framework
9. Proposals for future research activities
 - 9.1. Proposals for future research
 - 9.2. Consideration of ERSWG research priorities
10. Future work program
 - 10.1. Draft Agenda for the next ERSWG meeting
 - 10.2. Inter-sessional work
11. Other business
12. Conclusion
 - 12.1. Adoption of meeting report
 - 12.2. Recommendation of timing of next meeting
 - 12.3. Close of meeting