Original: English

REPORT OF THE INTERNATIONAL WORKSHOP ON TUNA RFMO MANAGEMENT OF ISSUES RELATING TO BYCATCH

(Brisbane, Australia, June 23-25, 2010)

I. Opening of the meeting

1. The International Workshop on Tuna RFMO Management of Issues Relating to Bycatch was hosted by the United States and the Pacific Islands Forum Fisheries Agency (FFA).

2. On behalf of the Workshop Steering Committee, Dr. Rebecca Lent (United States) welcomed the participants. The meeting included participants from 31 Member and cooperating non-Members of the five tuna Regional Fisheries Management Organizations (RFMO) (IATTC: Inter-American Tropical Tuna Commission; WCPFC: Western and Central Pacific Fisheries Commission; ICCAT: International Commission for the Conservation of Atlantic Tunas; IOTC: Indian Ocean Tuna Commission; and CCSBT: Commission for the Conservation of Southern Bluefin Tuna), as well as representatives of the Secretariats of the five tuna RFMOs, 8 inter-governmental organizations, and 15 non-governmental organizations.

3. Dr. Lent reminded participants of the terms of reference for the Workshop, which were agreed at the Second Joint Meeting of Tuna RFMOs in San Sebastian, Spain (29 June – 3 July 2009), namely to:

    a. Review the available information on incidental catch of non-target species and juveniles of target species;

    b. Provide advice to tuna RFMOs (T-RFMOs) on best practices, methods, and techniques to assess and reduce the incidental mortality of non-target species, such as seabirds, turtles, sharks, marine mammals, and juvenile target species;

    c. Develop and coordinate relevant research programs and observer programs; and

    d. Make recommendations on mechanisms to streamline the work of the T-RFMO Working Groups in this field in order to avoid duplication.

4. The meeting was chaired by Dr. Meryl Williams, and in her welcoming remarks she identified four important areas: 1) that information on bycatch needs to be improved in most fisheries; 2) how to improve assessment of the risks posed by tuna fisheries to bycatch species; 3) solutions to reducing bycatch rest with RFMOs working more concertedly with stakeholders including industry, IGOs and NGOs; and 4) fisheries managers in states and RFMOs need good ways to measure the effectiveness of bycatch mitigation measures.

5. The following participants from States were nominated to form the Drafting Group chaired by Dr Williams: Ms Katrina Phillips and Ms Trish Stone (Australia), Mr. Rafael Trujillo (Ecuador), Mr. Antonio Fernández (European Union) and Mr. Alan Gray (European Commission), Messrs Takumi Fukuda, Takashi Koya and Kortaro Yokawa (Japan), Ms Stephanie Hill (New Zealand), Dr Julia Hsiang Wen Huang and Mr. Chai Chi Fu (Chinese Taipei), and Ms Nicole Le Boeuf and Ms Sarah McTee (United States of

America), plus Ms Elizabethann English (Workshop Secretariat). Nominated rapporteurs were: Ms Heidi Hermsmeyer, Mr. Matthew Daniel, Ms Maggi Raab and Mr. Jeremy Smith.

II. Keynote speaker

6. Dr. Pamela Mace delivered the keynote address which focused on the primary bycatch issues in tuna RFMOs. She presented an overview of the state of the world's fisheries and marine ecosystems, examples of fisheries management success stories and other cases which were moving towards success, causes for concern such as the excess fishing capacity of world fleets and unique and common aspects of each bycatch taxon. She stressed that several species of seabirds and sea turtles were seriously endangered and action on reducing bycatch should not wait. Dr. Mace highlighted the depleted stock status of the six oceanic shark species that were recently unsuccessfully proposed for listing under Convention on International Trade in Endangered Species (CITES) and described the listing processes. The key messages of the keynote address were that many bycatch species populations are in serious decline, depleted, endangered, or critically-endangered; the ecosystem and precautionary approaches to management are urgently required; more data should be collected on interactions between tuna fisheries and bycatch species; overcapacity and subsidies in tuna fisheries should be reduced; and cooperation and harmonization of mitigation measures should be coordinated across the T-RFMOs. Dr. Mace emphasized that lack of data or lack of international consensus should not be used as an excuse for inaction, particularly for depleted species. Sufficient is known about stock status and mitigation measures to accelerate their implementation now.

III. Panel 1: Bycatch in Global Tuna Fisheries

7. Panel 1 was moderated by Dr. Eric Gilman (Hawaii Pacific University) and focused on the following five issues: 1) gear technology, 2) time/area restrictions, 3) monitoring, 4) performance standards, and 5) compliance. The opening presentations of panelists will be made available on the website.

8. Dr. Haritz Arrizabalaga (ICCAT) presented as overview of known bycatch within tuna RFMOs, based on the five background Workshop papers, one for each taxon (sea turtles, seabirds, marine mammals, sharks, and finfish). He noted that many bycatch species are caught in all ocean basins but all bycatch species in all tuna RFMOs needed to be considered. Some critically endangered bycatch species such as turtles were also caught in non-tuna fisheries and affected by land-based threats. Thus assessments needed to be much broader than those based on tuna fisheries impacts. Dr. Arrizabalaga also noted that in some cases the information available has been improving, but in general there is a lack of substantial data on the interaction rates of bycatch species which makes it difficult to identify that a bycatch problem exists, estimate the population impacts, and provide management advice.

9. Dr. Steve Kennelly (Australia) presented an overview of methods for measuring (and solving) bycatch, with a particular focus on the role of observers. He described the methods used to identify and estimate bycatch, including the use of onboard observers, electronic monitoring, coast guard inspections, interviews with fishers, and self sampling fleets. Observers are an important part of the fundamental scientific, evidence-based approach to bycatch reduction. Dr. Kennelly described and analyzed two success stories

where observers were used to identify bycatch problems and develop and test methods to address the issues. In addition to observers, he noted that a common thread in the success stories was the importance of involving fishers in identifying and solving bycatch problems.

10. Dr. Barry Baker (Convention on Migratory Species) described methods to address bycatch within tuna fisheries. He identified three methods for solving bycatch problems: 1) adopting management measures, 2) requiring physical changes to gear to minimize interactions, and 3) requiring the use of safe release techniques. Dr. Baker focused on bycatch mitigation measures used for sea turtles, seabirds, marine mammals, and sharks in longline and purse seine fisheries. Mitigation is a particular challenge for marine mammals and some of the suggested measures, such as some acoustic devices, are even harmful to the mammals. All are costly. He noted that it is better to avoid the interaction with bycatch species rather than to seek to mitigate the effects of the interaction after it has occurred. He urged RFMOs to adopt a much more stringent experimental approach to finding bycatch reduction solutions, including documenting the effects on target species as well as on bycatch

11. Dr. Martín Hall (IATTC) stressed the centrality of the observer program over 25 years of addressing bycatch in the IATTC. He illustrated this with two examples of successful development and implementation of bycatch measures, namely the IATTC tuna-dolphin program and the regional turtle program in the eastern Pacific Ocean. Both examples showed that bycatch could be reduced without destroying the fisheries. Dr. Hall emphasized that in order to develop and implement bycatch mitigation measures, problems and their priority must first be determined, then the factors that lead to bycatch understood, solutions identified through collaboration with fishers, communities and scientific analysis of data and experiments, solutions tested, and regulations promulgated. Some of the key lessons from these examples that led to the successes of the programs were strong leadership at all levels and from all sectors involved, adequate training, finding common ground, working from the bottom-up by working directly with fishermen, and building capacity in the regions.

12. Dr Gilman moderated the discussion between the participants and the panelists. Several RFMO participants stressed the need to include performance measures in developing and implementing bycatch mitigation. The panelists discussed methods for assessing whether current mitigation measures are meeting management objectives, including the level and use of observer coverage needed. Given the expense of observer programs, funding is a challenge and the panelists discussed funding options such as the “user pays” principle, developing a collective fund among the T-RFMOs to pool resources and facilitate collaboration, and using sampling designs to assess the appropriate observer coverage rates for different circumstances. The panelists noted that ecological risk assessments could help guide RFMOs to determine priority bycatch issues, even in relatively data poor situations, and thus direct scarce resources at the most critical issues.

13. Dr Baker’s presentation generated discussion on how to avoid bycatch altogether through the use of mechanisms such as time/area closures, rather than focusing on mitigating bycatch. The panelists noted that some T-RFMOs have adopted time/area closures to reduce the catch of juvenile tunas and agreed that where bycatch to target

catch ratios are very high, spatial management to reduce the effort in these areas could be considered. However, the panelists also noted that in many cases these areas are within EEZs and thus under direct State control. Other advances are sorting grid panels, acoustics to alert turtles and mammals to the presence of fishing gear, and lights to reduce finfish bycatch in the purse-seine fisheries.

14. Participants raised questions on how to measure the effectiveness of different gear technologies for reducing bycatch. Panelists pointed out that actual longline catches of large fish hauled in one by one can be monitored remotely using on board cameras, positioning and winch activity recording equipment. The data produced is analyzed with image recognition software. The panelists also noted that good experimental design techniques are needed to determine the efficacy of bycatch reduction technologies.

15. Many of the measures discussed were driven by bottom-up efforts to seek solutions. The need for top-down commitment and attention to bycatch problems was also stressed. Stakeholders should be encouraged to cooperate and the panelists noted that positive media attention and market demand, e.g., for dolphin-safe tuna, has the potential to motivate stakeholders to take steps toward sustainable fisheries.

IV. Panel 2: Addressing Bycatch in the Tuna RFMOs: Current measures, gaps, and challenges

16. Panel 2 was moderated by Mr. Andrés Domingo (Uruguay). One representative from each of the five tuna RFMO Secretariats or associated bodies summarized what each tuna RFMO has done to address bycatch, and what the gaps and challenges remain. Presentations were given by Dr. Gerry Scott (ICCAT), Dr. Peter Ward (WCPFC), Dr. Francis Marsac (IOTC), Dr. Guillermo Compeán (IATTC), and Mr. Robert Kennedy (CCSBT).

17. The presentations illustrated the range of different circumstances that led to the formation of each RFMO and how its management needs had developed over time or as a result of influences in the period in which it was created. The mandates of different Commissions varied with respect to the coverage of bycatch reduction measures, but nevertheless all had responded to increasing attention to bycatch issues in global agreements of the United Nations and to public opinion. IATTC was the earliest Commission, created in 1949 at a time when the prevailing pole and line fishery did not suffer a bycatch problem. As purse seining developed and dolphin mortality and later other bycatch problems associated with FAD fishing had arisen, the IATTC had sequentially tackled the problems as they arose, using industry incentives as well as scientific and technical approaches. ICCAT has well documented records of bycatch diversity but little on bycatch volume. In terms of mitigation, it has recently undertaken an extensive risk assessment on seabird bycatch with the Agreement on the Conservation of Albatrosses and Petrels (ACAP) and BirdLife International. ICCAT's successful efforts in managing bycatch of small tunas appear to be suffering a reversal from an influx of Indian Ocean tuna vessels returning to the more secure Atlantic. WCPFC has conducted an extensive risk assessment on over 200 species of bycatch with the collaboration of ACAP and BirdLife International. Studies have shown that although 20% observer coverage is generally adequate to ensure very accurate estimates of the catch of target species, a greater coverage is needed to get similar accuracy of bycatch, which is rarer. IOTC was relatively slow to get started on bycatch reduction measures but has greatly increased activity since 2005 and is starting its observer program in July

2010. CCSBT, which does not have a convention area, has recommended that its Members and Cooperating Non-Members implement the bycatch mitigation measures of two of the three RFMO areas within which its fishery occurs – WCPFC and IOTC. CCSBT is a single species management agency but its objectives include appropriate management of southern bluefin tuna (SBT), which can be taken to include minimizing the impact of SBT fishing on 'ecologically related species'. Seabird bycatch is of particular priority in the Southern Ocean.

18. All of the panelists emphasized the importance of having access to good quality data for the assessment of the status of bycatch species and to characterize the volume of bycatch removed from the ecosystem. Both data access and quality are problematic issues for bycatch across the T-RFMOs. Some of the T-RFMOs have explored methods for dealing with high levels of uncertainty and data poor context by conducting ecological risk assessments and adopting precautionary measures. One of the key differences in how the T-RFMOs have been addressing bycatch seems to be related to the scope of the respective Conventions related to management of bycatch species. The bycatch conservation and mitigation measures that have been adopted by the T-RFMOs vary widely in terms of scope, whether they are voluntary or binding, and how they have improved over time based on new information and competing priorities. RFMO panelists also noted that cooperation is increasing among T-RFMOs and IGOs and NGOs in conducting stock assessments of bycatch species and implementing bycatch reduction programs. Observer coverage rates vary widely depending on gear type and T-RFMO, e.g., IATTC has 100% coverage of purse seiners, representing coverage of 80% of the catch. However, all of the panelists noted the challenges of funding observer programs, training observers, and resolving concerns over jurisdiction and confidentiality of data.

19. The primary gaps and challenges identified by the panelists included setting priorities among bycatch problems, balancing practicalities and obligations, implementing mitigation measures once resolutions were passed, and monitoring and compliance with bycatch measures and associated reporting requirements. Further capacity building and training are needed as well as performance measures to monitor performance and adjust measures to ensure that they are meeting the objectives of the T-RFMOs. All of the panelists noted that the collection, provision, and sharing of consistent and comprehensive data was lacking across RFMOs, thus inhibiting the ability of the T-RFMOs to conduct fishery-wide assessments of bycatch species. A wide range of challenges are faced in implementing observer programs, even including piracy and the need for vessels to use scarce accommodation for security personnel rather than observers.

20. In the moderated panel discussion, some participants commented on the lack of reporting of bycatch data to the T-RFMOs and underscored the importance of harmonizing and standardizing the formats of data collected in order to improve the quantity and quality of data. The panelists noted that it would be advantageous to establish a harmonized and consistent approach to data collection across gear types so the data could be compared across the T-RFMOs. The panelists also noted that guidelines in developing an effective mitigation measure could be useful, including identifying what monitoring would be necessary for such measures.

21. Some State participants pointed out the need to distinguish between target and bycatch species for taxa such as sharks where some species can be both, and the need to include discussions of other impacts on bycatch species, such as land based effects.

V. Comments from States and other meeting participants

22. Several participants underscored the need for more comprehensive data collection and reporting. In further developing bycatch data collection systems, harmonized arrangements would be beneficial.

23. Capacity building and compliance measures were mentioned as important components of building a data collection system, especially but not only among developing States. Fishers and observers need training in identifying species of bycatch. The concept of establishing a joint horizontal T-RFMO scientific or technical working group was raised. This working group could address bycatch issues, provide training and capacity building, share research information, and encourage collaboration across the T-RFMOs. Collaboration between T-RFMOs and IGOs and NGOs was also mentioned as a means to facilitate cooperation on research and information sharing.

24. Several participants, particularly from IGOs and NGOs, called for the immediate adoption of science based best practice mitigation, and also discussed the need for a precautionary, ecosystem-based approach to the management of bycatch species. It was noted that sustainability should be the main objective, regardless of whether a species is considered bycatch or targeted, and conservation and management measures are needed despite the lack of data for bycatch species. The potential efficiency of harmonized bycatch conservation measures across the T-RFMOs and shared best practices for mitigation measures was raised by expert participants. States noted, however, that differences between oceanographic conditions, fleets, bycatch species, regional needs and RFMO mandates were important factors to be accounted for in any harmonization efforts.

25. On the question of how best to achieve uptake and compliance with mitigation measures, RFMOs would need to engage at all levels including bottom-up from fishers, their households and communities and industries, develop incentives based approaches to gain industry buy-in and maintain momentum through continuous improvement programs. Notwithstanding significant data gaps, the imperative was clear that action should be taken now on many bycatch problems. NGOs were particularly willing to engage with RFMOs in helping solve the bycatch problem, as these issues were often at the heart of their conservation agendas.

26. Bycatch was noted to likely be an increasing problem as growing human populations, especially in developing maritime States, are reliant on the marine environment.

27. The Chair provided closing remarks summarizing the proceedings of the first day of the Workshop. In addition, Dr. Williams noted several areas which should be further considered when addressing bycatch issues, including incorporating oceanographic knowledge which affects the distribution and abundance of both target and bycatch species, tagging data that could provide information on space/time management options for bycatch mitigation measures, and encouraging more participation from bycatch species behavioural experts and ecologists. Some solutions could also be sought in bycatch mitigation efforts in other non-tuna fisheries, such as other longline fisheries.

She also noted the importance of economics in affecting what species are retained and utilized.

VI. Improving assessment of bycatch within and among T-RFMOs

28. Dr. Francis Marsac (IOTC), moderator of the discussion, posed the question of whether it was useful to differentiate between incidental catch and bycatch. Participants agreed it is very difficult to define bycatch. It was pointed out that the Steering Committee arrived at the conclusion that while it is important to understand what bycatch is, the focus of the workshop is to review how to reduce bycatch for selected taxa (seabirds, sea turtles, marine mammals, certain species of sharks, and non-target and small target finfish) according to the terms of reference

29. Members recognized the important role that observers play in improving assessments of bycatch. Members further noted the recommendations relating to minimum observer requirements that were agreed at the Kobe II MCS workshop, and wish to build on this accomplishment.

30. Members emphasized the importance of scientifically based observer programs in relation to collection of bycatch data and noted that this was not always consistent with compliance-based observer programs. Some participants noted that the requirements for observer coverage depends largely on the objectives of the program; if the aim is to quantify interactions with bycatch species, then higher levels of coverage may be required in comparison to a focus on monitoring target fisheries.

31. The meeting recognized a minimum of 5% observer coverage, as an initial level, as recommended by participants of the Kobe II MCS workshop. Some participants saw a need for increased coverage to levels appropriate to the objective of the program, e.g. 20%. Some participants considered 5% a suitable coverage level. Some participants noted that this level of coverage (5%) could be sufficient to identify specific fisheries or areas that might require additional coverage or monitoring. Some scientists noted that the required coverage level should be based on fishing effort rather than the number of trips. Issues relating to appropriate design, cost, vessel size and length of fishing trips were all recognized as challenges to be addressed by observer programs.

32. The meeting identified the need for a technical working group of experts from each RFMO as well as other invited experts as a forum for information exchange and identifying areas for increased coordination. It was recognized that the confidentiality and security of data would need to be addressed by the technical working group.

33. Several participants highlighted issues such as the need to harmonize standards and training for observers, identify minimum standards for data, protocols to share information, and the need for sanctions when Members do not meet obligations to share data.

34. As well as the importance of observer data, for those species without sufficient data to conduct full stock assessment, it was noted that stock status could be evaluated using qualitative methods, including the use of expert judgment. This type of analysis could be done by individual RFMO or across RFMOs.

35. Japan provided a discussion paper outlining some of the challenges in including sharks in a Catch Documentation Scheme as recommended at the Kobe II MCS workshop. Japan

noted that sharks have special identification issues including separate marketing of body and fins. These issues should require a specific shark CDS form.

VII. Improving ways to mitigate/reduce bycatch within and among T-RFMOs

36. The moderator, Dr. Laurent Dagorn (Seychelles), opened the session by asking how to prioritize the development and implementation of bycatch measures across taxa. Ecological risk assessment was identified by some participants as a means for rapidly prioritizing species of concern. Concerns were raised regarding small target finfish and that these should be given equal priority to other bycatch species. Several participants noted that, given the conservation status of several of the bycatch species, bycatch measures should be adopted based upon the precautionary principle.

37. A participant also noted that reducing overall fishing capacity can contribute to reducing bycatch and the impacts of removals of bycatch species on ecosystems and that measures aimed at reducing fishing mortality of target species could have positive effects on bycatch species as well.

38. The moderator posed the question of whether it was possible to prioritize the development and implementation of bycatch measures and whether there were desired elements or criteria for what makes up an effective bycatch mitigation measure. The moderator suggested that a good mitigation measure would have the following elements: binding, clear and direct, measureable, science-based, ecosystem-based, ecologically efficient (reduces the mortality of bycatch), practical and safe, economically efficient, holisitic, collaboratively developed with industry and stakeholders, and fully implemented.

39. During the moderated discussion, comments were made in response to the moderator's suggested list of desired elements and with regard to additional considerations in the development of bycatch mitigation measures. Several participants agreed that best practice mitigation measures should be scientifically based and that this would enhance industry buy-in. It was suggested that industry and market incentives be considered in the development of bycatch mitigation measures. Paucity of data for bycatch species was noted as an issue, and that measures effective for some species may negatively impact others and should be avoided. Participants noted that safety issues for fishers are also important (e.g. weighted branch lines). ACAP indicated that the results of recent research have demonstrated the importance of using weighted branch lines to sink baited hooks beyond the reach of seabirds to reducing seabird bycatch in longline fisheries and that research is underway to ensure their safety for fishermen.

40. In addition to a discussion regarding the development a list of desired elements of a bycatch mitigation measure, some participants suggested the development of a standardized list of basic elements for conservation and management measures for bycatch across the RFMOs and their existing measures should be strengthened to address any gaps. In response, several participants offered suggestions for such a standardized list.

41. Participants made suggestions were as follows: making conservation measures binding, making them apply to a specific area, ensuring that conservation measures are subject to periodic review and improvement where necessary, referencing existing best practices such as Food and Agriculture Organization of the United Nations' (FAO)

International Plans of Action (IPOAs), including clearly stated management objectives, including mitigations measures with clear technical specifications, requiring reporting and research on interactions, including requirements for estimation of bycatch, elements for education and training of fishers, monitoring and compliance requirements, cooperation and collaboration with other RFMOs and IGOs, NGOs and providing support for developing nations.

42. With respect to the technical aspects of mitigation measures, participants also discussed the possibility of standardizing mitigation measures across T-RFMOs. Several participants noted that that such a standardized list of common elements for conservation measures on bycatch should be seen as framework with technical elements of measures being adapted to regional areas. Specifically, some participants suggested that harmonization rather than standardization should be the objective and that that regional differences may be an important consideration given various oceanic, fishery and ecosystem scales. In response to this, some participants suggested that there were more commonalities among factors of bycatch than differences and that regional difference should not prevent RFMOs from working together to share information and to harmonize mitigation measures, as appropriate.

43. The moderator presented several categories of mitigations methods that can be used to reduce bycatch including the use of spatial/temporal approaches, technical modifications, and market incentives. The moderator also prompted discussion among the participants by inquiring whether RFMOs should impose required methods of reducing bycatch, or whether RFMOs should require a conservation and management objective, leaving the specific mitigation measures and their implementation to the participants.

44. Within this discussion, participants repeated the theme that it is preferred to first avoid bycatch, followed by attempts to minimize interactions, and then finally to mitigate the impacts of bycatch by increasing survival through safe handling and live release.

VIII. Addressing the Special Challenges of Developing Nations and SIDS in assessing and mitigating bycatch

45. Ambassador Loyola Sullivan (Ambassador for Fisheries Conservation, Canada) introduced the working lunch session on addressing the special challenges of developing nations and Small Island Developing States (SIDS) in assessing and mitigating bycatch, noting that developed states need to provide assistance where possible to help developing states meet their obligations. The meeting noted its appreciation to Canada for hosting the working lunch.

46. Mr. Fabio Hazin, moderator of the discussion, identified four main areas that are special challenges for developing States: assessment, mitigation, enforcement and participation. Previous discussions already highlighted the importance of observer coverage, but in the context of developing nations and SIDS, the high cost of observer coverage means there is a need for other means of obtaining data, including in port, e.g. through port-based monitoring and through fisher interviews. Capacity building should enable developing countries to participate to RFMOs across the range of bycatch management issues, rather than just focusing on these countries collecting and supplying bycatch data from their fisheries.

47. Participants observed that capacity building should be viewed as on-going process. The moderator and various participants emphasized the importance of involving fishermen and communities in capacity building projects to achieve buy in. Discussions highlighted that developing countries need training opportunities and technology transfer, but that it can be difficult to retain the newly trained experts in developing countries when they can find jobs internationally. Building institutions is therefore also an important component, including through training in human resources, and accessing funding e.g. through grant applications, as well as other institutional knowledge

48. During discussions, various capacity building efforts that are already underway were highlighted. Several participants noted that coordination of efforts is important to ensure best allocation of resources. Developing nations also need to be actively involved in the design of such programs.

IX. Improving cooperation and coordination across RFMOs

49. Ms Sylvie LaPointe (Canada) in introducing this discussion, noted that there was room for improving the co-operation and co-ordination between the T-RFMOs through the use of "smarter" means of sharing information and expertise. This could be achieved through direct contact between the T-RFMOs Secretariats or through contacts between the Parties to the respective T-RFMOs.

50. There was a discussion on how this cooperation and coordination could be best achieved and there was wide agreement that a joint technical Working Group of the T-RFMOs would greatly assist reaching this objective. Following discussion in the Workshop the Terms of Reference for this joint technical Working Group were developed and agreed (Appendix 3).

51. In the course of the discussion, various views were expressed as regards the role of the joint technical Working Group, its composition, or, if the joint working Group would be of a permanent nature or not. It was generally agreed that the objective of the joint Working Group would be to advise on the support, harmonization and streamlining of bycatch related activities among the T-RFMOs.

52. A group of non-governmental organizations called on the T-RMOs to appoint a dedicated staff member to deal with bycatch issues in each T-RFMO Secretariat. It was pointed out that such positions were in place in some T-RFMOs. There was a general view that designated staff members in each T-RFMO secretariat would exchange information on existing conservation and management measures, ongoing research and future actions.

53. As a first step in improving the exchange of information between the T-RFMOs, it was agreed that the respective T-RFMOs would exchange information on their current bycatch measures. The possibility of exchanging information with non-T-RFMOs was also discussed.

54. With the view to further capacity building, facilitating cooperation and collaboration, avoiding duplication, subsequent cost savings, it was suggested that a centralized source of information regarding ongoing bycatch research should be developed. The WCPFC Secretariat noted that it had established a global web based resource for information on bycatch species.

55. Participants discussed the issue of prioritizing where money is spent in each RFMO. It was noted that coordination among the RFMOs could result in cost savings and that the proposed working group might be both efficient and cost-effective. The savings might outweigh the cost of running the joint group.

X. Adoption of report and closing

56. The report and workshop recommendations (Appendix 4) were adopted and the meeting was closed.

Appendix 1

Kobe 2 Bycatch Workshop
Agenda

- Opening Ceremonies
- Keynote Speaker
- Panel 1: Bycatch in Global Tuna Fisheries
- Panel 2: Addressing Bycatch in the Tuna RFMOs: Current measures, gaps and challenges
- Comments from States and other meeting participants
- Moderator-led Discussion 1: Improving assessment of bycatch within and among T-RFMOs,
- Moderator-led Discussion 2: Improving ways to mitigate/reduce bycatch within and among T-RFMOs
- Addressing the Special Challenges of Developing Nations and SIDS in assessing and mitigating bycatch
- Moderator-led Discussion 3: Improving cooperation and coordination across RFMOs,
- Chair-led Discussion: Potential Recommendations to RFMOs
- Review of Draft Report
- Closing Ceremonies

Appendix 2

Opportunities for Capacity-Building related to Bycatch

Presented by Canada and the United States

The following projects are examples of opportunities related to bycatch issues that may be available to assist developing nations

	Project	Partner Nations	Description
1.	Basic Fisheries Training	United States	The United States has developed a curriculum for training programs to teach the basics of fisheries management, and held a workshop in São Tome and Principe in June 2010. More workshops will be held, funding permitting.
2.	Capacity Building Workshops	Canada	Canada will host a capacity building workshop in Africa in 2011 or 2012.
3.	Ecosystem Approach to Fisheries Management (EAFM)	United States	The application of EAFM focuses on fishery management decisions that take into account all interactions within an ecosystem, including human impacts. U.S. capacity-building activities in this area include carrying out stock assessments, developing fisheries management plans, gathering stakeholder inputs, applying best management practices, and developing good governance systems at scales from local to international. Capacity-building modules are also being developed on the impact of climate change on fisheries .
4.	Enforcement Workshops	United States	The United States has convened a number of workshops on the development of an overall framework for enforcement in an effort to mitigate Illegal, Unreported and Unregulated (IUU) fishing. Particular focus has been given to monitoring, control and surveillance (MCS) assessments and training in implementation of port state measures, enforcement techniques, and development of supporting legal framework. Additional efforts have targeted specific training at both the management and operational level in order to develop an integrated management program nationally and regionally.
5.	International Cooperation in Designing Marine Protected Areas	United States	The United States is engaged in a variety of efforts internationally, including helping developing nations to establish MPAs in their waters. In addition, the United States hosted the 1st International Marine Mammal Protection Area Conference in 2009.

	(MPA)		
6.	International Scientific Symposium on Circle Hooks	United States	The United States is organizing an international scientific symposium on circle hooks to examine their performance in relation to target and bycatch species in commercial and recreational fisheries. The symposium will be held in Miami, May 4-6, 2011.
7.	Management Training	Canada	Canada will support the on-site training of the Turks and Caicos' Director of Fisheries Operations (DFO) at DFO headquarters and various regional offices.
8.	Marine Mammal Stranding Workshops	United States	The United States has supported three marine mammal stranding workshops in the Caribbean and another in India since 2003, and may host additional workshops as funding becomes available.
9.	Sea Turtle Bycatch Assessment and Reduction	United States	The United States has undertaken several projects to provide technical and financial assistance to reduce sea turtle bycatch in certain fisheries. Uruguay has received funding in the past and the United States is currently undertaking a project in Chile's gillnet fisheries.
10.	Observer Program Support and Training Workshops	United States	The United States provides support for emerging observer programs in several regions, including West Africa and the Pacific Islands. For example, the United States has co-hosted observer training workshops in several West African countries since 2008. Preliminary planning is underway for workshops in Sierra Leone, Liberia, and Gabon, to take place in 2010 or 2011. Observer training activities are also underway in the Coral Triangle[i], where 6 countries will work towards establishing a regional observer program.
11.	RFMO Participation	Canada	Canada coordinates with the Caribbean Large Marine Ecosystem (CLME) project to encourage improved national and regional-level governance participation in ICCAT.
12.	Scientific Support	Canada	Canada participated in the Caribbean Regional Fisheries Mechanism's (CRFM) annual scientific meeting.
13.	Scientific Support	Canada	Canada assists the work of the Caribbean Regional Fisheries Mechanism (CRFM) by providing input into regional stock assessments.
14.	Scientific Support	Canada	Canada supports the work of the Age and Growth Unit at the Institute of Marine Affairs (IMA), Trinidad. Canada helped establish the laboratory in the early 1990s, and further Canadian input would help the lab work more efficiently. The current focus of the laboratory is on pelagic species. Canada plans to: participate in work planning;

			inspect and review the protocols at the IMA lab in order to become familiar with the work; and arrange a 3-6 month work term in a Canadian lab for one scientist from the IMA.
15.	Shark Bycatch Assessment and Reduction	United States	The United States has undertaken several joint projects with developing nations to investigate the potential use of gear such as circle hooks to avoid the capture of sharks by longline gear.
16.	Shark Training Workshops	United States	The United States sponsors workshops in the Eastern Tropical Pacific to develop standardized shark data collection protocols and identification guides.
17.	Stock Assessments of Bycatch Species	United States	The United States has provided logistical and technical support for stock assessments of several bycatch species, including several endangered or critically endangered species, in developing countries. The United States will continue to provide such support as needed, appropriate, and feasible.

[i] The Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security is a 5-year initiative among Indonesia, Philippines, Malaysia, Timor Leste, Papua New Guinea and Solomon Islands, with NOAA providing technical assistance to the governments and WWF, Conservation International and TNC working in the communities.

Appendix 3

Bycatch Joint Technical Working Group: Terms of Reference

The Bycatch Joint Technical Working Group (WG) should be small in nature so as to work more efficiently (e.g. 2-3 representatives from each Tuna RFMO). The WG will support, streamline, and seek to harmonize the bycatch related activities of Ecosystems/Bycatch working groups. The WG will have the ability, where necessary, to consult and work with other experts including those from fishing industry, IGOs and NGOs. The findings/recommendations of the WG will be considered by each RFMO, including, as appropriate, their technical bodies, in accordance with the procedures of each RFMO. The RFMOs may provide feedback to the WG as necessary. To the extent possible, the WG will meet electronically.

Terms of Reference:

1) Identify, compare and review the data fields and collection protocols of logbook and observer bycatch data being employed by each Tuna RFMO. Provide guidance for improving data collection efforts (e.g., information to be collected) and, to the extent possible, the harmonization of data collection protocols among Tuna RFMOs.

2) Identify species of concern that, based on their susceptibility to fisheries and their conservation status, require immediate action across Tuna RFMOs. Review all available information on these species and identify their data needs.

3) Review and identify appropriate qualitative and quantitative species population status determination methods for bycatch species.

4) Review data analyses to identify all fishery and non-fishery (e.g. oceanographic and physical) factors contributing to bycatch, taking into account the confidentiality rules of each RFMO.

5) Review existing bycatch mitigation measures including those adopted by each Tuna RFMO and consider new mitigation research findings to assess the potential utility of such measures in areas covered by other Tuna RFMOs taking into consideration differences among such areas.

6) Review and compile information on bycatch research that has been already conducted or is currently underway to delineate future research priorities and areas for future collaboration.

7) The duration of the WG will depend on the needs and requests of the Tuna RFMOs.

Appendix 4

RECOMMENDATIONS FROM THE KOBE II WORKSHOP ON BYCATCH

Participants in the Kobe II Bycatch Workshop support bringing the following recommendations forward to the respective RFMOs as regards bycatch across five taxa (seabirds, sea turtles, finfish, marine mammals, and sharks):

I. Improving assessment of bycatch within T-RFMOs

1. RFMOs should assess the impact of fisheries for–tuna, tuna like and other species covered by the conventions on bycatch by taxon using the best available data.
2. RFMOs should consider adopting standards for bycatch data collection which, at a minimum, allows the data to contribute to the assessment of bycatch species population status and evaluation of the effectiveness of bycatch measures. The data should allow the RFMOs to assess the level of interaction of the fisheries with bycatch species.
3. Encourage the participation of appropriate scientists in relevant T-RFMO working groups to conduct and evaluate bycatch assessments and proposed mitigation strategies; and
4. Implement/enhance observer and port sampling programs with sufficient coverage to quantify/estimate bycatch and require timely reporting to inform mitigation needs and support conservation and management objectives, addressing practical and financial constraints

II. Improving ways to mitigate/reduce bycatch within T-RFMO

5. RFMO measures should reflect adopted international agreements, tools and guidelines to reduce bycatch, including the relevant provisions of the FAO Code of Conduct, the IPOAs for Seabirds and Sharks, the FAO guidelines on sea turtles, the best practice guidelines for IPOAS for seabirds, and the precautionary approach and ecosystem approaches.

6. For populations of concern including those evaluated as depleted, RFMOs should develop and adopt immediate, effective management measures, for example, prohibition as appropriate on retention of such species where alternative effective sustainability measures are not in place.

7. Evaluate the effectiveness of current bycatch mitigation measures, and their impact on target species catch and management, and identify priorities for action and gaps in implementation, including enforcement of current measures and capacity building needs in developing states

8. Seek binding measures or strengthen existing mitigation measures, including the development of mandatory reporting requirements for bycatch of all five taxa across all gear types and fishing methods where bycatch is a concern; and

9. Identify research priorities, including potential pilot projects to further develop and evaluate the effectiveness of current or proposed bycatch mitigation measures, working with fishers, fishing industry, IGOs and NGOs, universities and others as appropriate, and facilitate a full compendium of information regarding mitigation techniques or tools currently in use, e.g. building on the WCPFC Bycatch Mitigation Information System.

10. Due to the conservation status of certain populations and in accordance with priorities in the RFMO areas, expedite action on reducing bycatch of threatened and endangered species.

11. Adopt the following principles as the basis for developing best practice on bycatch avoidance and mitigation measures and on bycatch conservation and management measure.

    - binding,
    - clear and direct,
    - measureable,
    - science-based,
    - ecosystem-based,
    - ecologically efficient (reduces the mortality of bycatch),
    - practical and safe,
    - economically efficient,
    - holisitic,
    - collaboratively developed with industry and stakeholders, and
    - fully implemented.

III. Improving cooperation and coordination across RFMOs

12. As a matter of priority, establish a joint T-RFMO technical working group to promote greater cooperation and coordination among RFMOs with the attached Terms of Reference. The RFMOs are encouraged to expedite the formation of the joint working group.

13. Actively develop collaborations between relevant fishing industry, IGOs and NGOs, universities and others as appropriate, and RFMOs to assess the impact of bycatch on the five taxa, study the effectiveness of bycatch mitigation measures, and further the understanding of population dynamics of species of conservation concern; and

14. Develop the long-term capacity of T-RFMOs to coordinate and cooperate for data collection, assessment of bycatch, outreach, education, and observer training, including establishing a process to share information on current bycatch initiatives and potential

capacity building activities

15. RFMOs are encouraged to report progress to Kobe III on the formation and on progress against the recommendations in part I and II of this workshop report.

IV. CAPACITY BUILDING FOR DEVELOPING COUNTRIES

16. Acknowledging the additional or new requirements of bycatch mitigation and the need to build further capacity for implementation, in carrying out the recommendations in I, II, and III above, consider capacity building programs for developing countries to assist in their implementation. Establish a list of existing capacity building programs related to bycatch issues (see attached Appendix 2 for example) to avoid duplication where possible and facilitate coordination of new capacity building programs.