



Smart Fishing Initiative
Indian Ocean Tuna Commission

Indian Ocean Tuna Management Workshops on implementation of the precautionary approach and rights-based management

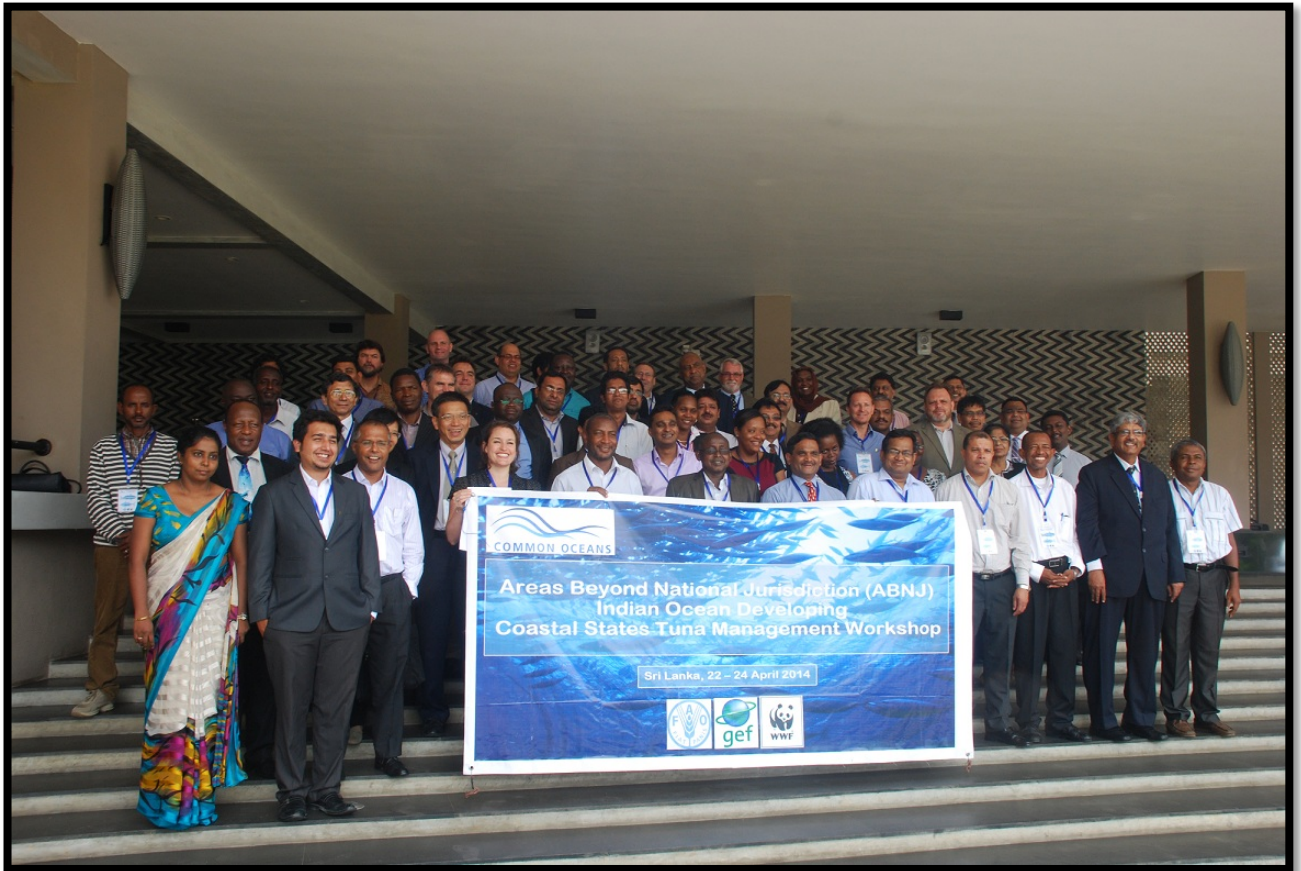
ABNJ-Tuna-2014-TR-1-MSE-WS

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Cinnamon Bey Hotel, Beruwala, Colombo, Sri Lanka

Facilitator: **Graham Pilling**





Meeting Summary

Official representatives from 18 countries participated in the first two workshops under the framework of the project “Sustainable Management of Tuna Fisheries and Biodiversity Conservation in the Areas Beyond National Jurisdiction (ABNJ)”, also known as the ABNJ Tuna Project. These workshops focused on the implementation of the precautionary approach and on rights-based management approaches. The ABNJ Tuna Project is a global project executed by UN Food and Agriculture Organization (FAO), in collaboration with a number of partners, and is part of the Common Oceans Program that includes another three global projects. WWF is the lead partner for the implementation of these workshops with generous coordination and advice from the FAO.

This workshop was designed to increase capacity of Indian Ocean developing coastal states to engage in: development of Harvest Strategies as a tool to improve the sustainability of tuna fisheries; including the evaluation of their performance against management objectives through a Management Strategy Evaluation (MSE) process; and understanding the sensitivity and robustness

of different strategies to uncertainties. Through this workshop the aim was to improve the capacity of developing coastal states to engage in continuing dialogue around the implementation of sustainable tuna management through the Indian Ocean Tuna Commission (IOTC).

During the three-day meeting hosted by Sri Lanka and facilitated by WWF, participants discussed elements of fisheries management and expressed their priority concerns for tuna management in the Indian Ocean, emphasizing the need to ensure effective management of the shared tuna stocks.

Experts took participants through a curriculum covering the precautionary approach, harvest strategies, MSE and rights-based management (RBM) for tuna fisheries. The material covered these concepts in principle and in the context of regional, Indian Ocean tuna fisheries, using a combination of plenary presentations and small group discussion to engage with participants.

At the conclusion of the workshop, participants left with positive expectations for their future engagement in Indian Ocean fisheries management. While recognizing that the range of new concepts and material presented would mean it would take a number of iterations to become more fully conversant with these, participants were starting to tease out the role the different components played in the development and evaluation of potential management strategies. Looking forward, priority was given to building momentum for regular dialogue between the Commission, Scientific Committee and MSE process; highlighting the importance of developing coastal states coming together to explore the benefits of sustainable management that will benefit the marine ecosystem as well as the fishers who derive their living from the 'common oceans'.

The list of participants who attended the workshop is included in Appendix I. While this report will not discuss the presentations given at the workshop in detail, it is intended to encapsulate some of the major points and themes, as well as provide a summary of the discussion that followed.

Day 1: Precautionary Approach, Harvest Strategies And Management Strategy Evaluation

Introduction and opening address

Mr. Nimal Hettiarachchi, Director General of Fisheries, Sri Lanka welcomed participants to the workshop, and expressed his belief that the workshop represents an opportunity for sharing information and experience, discussing and identifying opportunities. He noted the enormous expertise within the region can promote improving international fisheries in the area. Concluding, he explained that with 1,000,000t tuna landed in the Indian Ocean, urgent measures for tuna management are needed for both the economies of developing coastal states and the livelihoods of their people.

Mr. Daniel Suddaby, Senior Tuna Manager, WWF Smart Fishing Initiative provided a brief introduction to the GEF-funded 'Common Oceans Program', and the ABNJ Tuna Project. He explained that as part of this project, focus has been placed on achieving agreement on harvest strategies within RFMOs through capacity building workshops such as this, that aim to "level the playing field" to enable sustainably managed tuna, and through supporting the dialogue between scientists and managers at the Commission level.

Overview of international fisheries management and origins of Precautionary Approach, Harvest Strategies and Management Strategy Evaluation globally and in the context of the IOTC

Dr. Campbell Davies, leader of pelagic fisheries research at CSIRO, Australia, provided a broad overview of the main themes of the workshop, noting the objective of the workshop were improving the understanding of participants, namely, senior fisheries policy and management staff, with the concepts of the precautionary approach, harvest strategies, reference points and Management Strategy Evaluation (MSE). He noted that historically, the collective track record of effectively managing fisheries and their impact on in the wider marine ecosystem has generally been poor; but that this has spurred the development of policies, management and assessment approaches that better reflect the complex, dynamic and uncertain nature of fisheries systems and in a range of countries these had been demonstrated to be effective in rebuilding fisheries/preventing overfishing.

Questions included the extent to which the MSE approach could be extended to non-target species, multiple-use management and environmental variability. Dr. Davies explained that it can be used to evaluate strategies that address wider marine impacts of fishing, not only target, but also bycatch and non-target species through using a range of broader ecological and ecosystem models. He acknowledged, however, that while the methods and data available for species-specific stock assessments have been widely tried and tested, the uncertainty inherent in more complex ecological and multiple-use systems in coastal zone contexts means the consultation and policy considerations in developing truly multiple-use strategies are much more complicated. In terms of accommodating environmental variability, Dr. Davies referred to work done at in the testing of the Commission for the Conservation of Southern Bluefin Tuna (CCBST) Management Procedure where 'process error' was incorporated into the models to examine whether performance of procedure was sensitive to systematic variation in the migration of juvenile southern bluefin tuna into the Great Australian Bight in a way that might be driven by environmental variation in the strength of flow of the major coastal current systems. He highlighted that the focus of such comparisons was not to "predict" the environmental effect, but to determine whether the performance of the monitoring and decision making procedure (MP) was sensitive to such a source of process uncertainty, if it existed. In this case, the MP was found to be robust to this source of uncertainty, that is, the evaluations indicated that the MP could achieve its objectives even if this process error was "real" and the MP was not "aware of it".

Dr. Davies noted that in the context of the precautionary approach, harvest control rules, reference points and MSE, there is often a considerable lag between scientific developments and

general consensus on approaches and their adoption into policy, management and international law and there were a wide range of examples where these approaches have been successfully applied in other fisheries. He underscored the value of distinguishing between the roles of stock assessment, which is used to estimate indicators of the condition of the stock and provide advice on “where you are, relative to where you want to be”, and MSE and harvest control rules, which are used to evaluate and select monitoring and decision making procedures (including reference points) to “get you where you want to go and avoid major pitfalls along the road”. He stated that different RFMOs are at different stages of organizational maturity in terms of development of monitoring, assessment, monitoring control and surveillance (MCS), development and implementation of conservation measures and status of stocks. He explained that in this context, IOTC members have the opportunity to take advantage of being in a ‘good’ place and develop and evaluate strategies that have a high probability of this keeping them “where they want to be” and avoid opportunity costs and economic loss associated with overfishing and overfished stocks.

Participants underscored the importance of increased interaction and discussion between the Commission and the Scientific Committee in order for both parties to better understand the science and policy dimensions of harvest strategies and MSE in order to make members more comfortable with the task ahead of developing conservation measures and accepting and adopting recommendations. Dr. Davies appreciated this was likely to be the case and noted the difficulty associated with making clear responses to questions from the Scientific Committee on management objectives, reference points and levels of risk in the absence of a better understanding of the range of likely short and medium term consequences. It was his expectation that this would take a number of iterations and that the first of these was likely to come through the Scientific Committee providing the Commission with preliminary examples of a default harvest strategy which would be designed to facilitate discussion and feedback and direction from the Commission to the Scientific Committee on the next steps. He highlighted that the iterative nature of identifying and evaluating the performance of different strategies was likely to be particularly important in the context of managing existing and future capacity and potential transition arrangements for coastal states to meet their aspirations.

Small Group Discussion

Day 1 concluded with breakout group discussion on their objectives and possible indicators that they would use as indication of the performance of fisheries management. The participants identified the following key objectives for management:

- biological sustainability;
- economic and social benefits; and
- ecosystem strengthening.

To measure whether these objectives are met, they proposed indicators that included stock assessment, measuring fish size, higher value/ quality of fish, catch per unit effort (CPUE), social ‘happiness’ of fishery, equitable distribution of benefits to communities, and reduced bycatch.

Participants stressed the need for capacity building to level the playing field of understanding among managers, scientists, fishers and other stakeholders. They explained this requires scientists and managers to communicate in understandable language about the likely impacts of different catch levels and the development of management approaches that are likely to be successful in light of these uncertainties. They also underscored the need to focus attention on illegal, unreported and unregulated (IUU) fishing.

Day 2: Precautionary Approach, Harvest Strategies and Management Strategy Evaluation in the IOTC

IOTC Management Framework Overview

Dr. Rishi Sharma, IOTC Stock Assessment Scientist, presented on the IOTC management framework and the scientific process behind it. He described the reference points that have been identified under IOTC Resolution 13/10 and the MSE process the IOTC is currently engaged with.

Discussions focused primarily on understanding who should be setting the objectives associated with the MSE. A number of participants noted the perceived problem of ‘science versus management’ and urged the Secretariat of the Commission to assist countries to build capacity that would enable them to understand the information provided to them. One participant underscored the need for improved communication from the scientists in the Scientific Committee to guide the Commission on setting management objectives. Dr. Sharma told participants that many of the objectives need to come not only from the scientists but from the policy makers also and therefore, it is not about either management or science but the two working together. Responding to this, Dr. Campbell Davies explained one of the strengths of the MSE process comes from the combination of the consultative interactive component and the technical component. He underscored that a key element of the former is building close dialogue between scientists and Commissioners.

Discussion shifted to the MSE process the presenters explained to the group that when producing implementable management strategies there is no point treating the process as an ‘academic exercise’ if the changes/reductions/increases are not achievable. Dr. Davies stressed it is not just about constraining catches but putting in place a tested decision-making framework that responds to decreases or increases in catches as necessary. He said it is about an adaptive, “monitor > assess > make a decision” cycle.

Small Group Discussion

During small group discussions, participants were given information regarding catch by gear, Kobe plots from stock assessments and suggested reference points. With this information, they were

asked to provide management guidance with an associated rationale for their conclusions. On reporting back to plenary, the following issues were highlighted by the group:

- It is difficult to separate feasible management strategies from allocation and development plans;
- Consideration of “transitional arrangements” to meet aspirations will become important;
- There are a diversity of perceptions and responses to the risk of overfishing and a diversity of “implementation strategies” might be required to meet objectives; and
- This is the ‘start’ of the conversation and therefore, the potential for developing a body/group/workshop, such as the one being planned for May 31st, to ensure regular dialogue between scientists and managers needs to be investigated.

The resources of the ABNJ Tuna Project hold potential to support these science-management dialogues in the future.

Day 3: Rights-Based Management in the Context of Tuna Fisheries

Introduction to Rights Based Management

Dr. Campbell Davies presented an introduction to rights based management (RBM). Dr. Davies underscored how traditional open access fisheries management has largely resulted in over-exploited stocks, reduced average yields and poor economic returns and introduced the concept of RBM as an alternative. He explained it follows a system of “Cap > Allocate the Cap > Trade”, concluding that the design of allocation and effective market mechanisms for trading access rights is the key to successful RBM. He also highlighted the importance of the design of implementation and transition arrangements from open access to limited entry fishery have been the key to successful experiences in RBM.

Rights Based Management in Tuna RFMOs

Dr. Gerald Scott, ISSF Scientific Advisory Committee, presented on RBM in tuna RFMOs. He described the importance of capacity transfer in RBM, and the developing view that this entails more than just the physical transfer of vessels, or fishing capacity. In this context, capacity transfer aims to meet the following objectives:

- Fulfilling the right to benefit from tropical tuna fisheries;
- Increasing economic growth and local employment;
- Building human capacity;
- Meeting obligations (associated with rights);
- Exercising sovereign rights; and
- Ensuring food security.

Dr. Scott underscored that when making choices regarding capacity transfer tools, distribution risks and revenues needed to be considered. He concluded by introducing the principle of “graduality”, whereby capacity transfer occurs through a phased and collaborative approach, involving all stakeholders.

Rights Based Management in the Indian Ocean Tuna Commission

Dr. Gerald Scott provided a detailed overview of recent meetings and discussions on RBM in the IOTC. He explained that in the IOTC, present control measures are mainly directed at fleet capacity limitations, adding that in taking into account the aspirations of developing coastal states, these limits are “soft” limits. Noting a very large share of the total tuna catch is from artisanal and semi-industrial vessels, Dr. Scott explained that while management systems need to be designed to fulfill socio-economic and political objectives, a necessary first step is the development of a limit on total fishing effort and an allocation scheme that is acceptable to members. He concluded that an effective RBM system needs to be implemented in combination with a good MCS system to offer a genuine alternative to just focusing on input and output controls.

In the ensuing discussion attention was drawn to the aspirations of developing countries with one participant expressing skepticism about RBM in the Indian Ocean, saying that while RBM looks very good in theory, as developing countries are seeking to increase their fleet to obtain a more equal share of allocation, RBM comes with a lot of socio-political implications. Dr. Davies responded that in the Indian Ocean context, RBM is a process that will not happen quickly and will only work if all parties agree it is better for them in the long run. Dr. Gerald Scott added that if there are concerns about artisanal opportunities, a certain amount of allocation can be set aside for this purpose.

One participant asked whether RBM would have a negative impact on consumers in terms of cost of fish because a handful of people would have control over a whole fishery. Another participant added that as it is all down to an allocation issue, that is where conflict starts because allocation means exclusivity and we need to think what the best criteria is to put everyone in the same boat. Dr. Davies noted that while there are no magic solutions to the allocation issue, the process requires developing conversations, trust and confidence within the RFMO. He cautioned that these conversations should not expect to find an ideal ‘cure all’ solution but instead engage in an on-going process that will come across roadblocks and the need for all members to compromise to some extent from their preferred positions.

During discussions on capacity transfer, the presenters explained they are trying to change the perception of what capacity is. While according to technical definition, it is referred to as the amount of fish caught when effort is fully utilized; they are putting forward the idea that the social and economic benefits that accrue from a fishery are much broader than the direct activities associated with boats on the water. For example in some states, the decision has been taken to develop processing facilities, developing capacity for transportation of fish between processing

plants and the market or provision of MCS or fleet management services. These activities can potentially generate social and economic benefits commensurate with “catching fish” and provide a different range of social and economic development pathways. It was suggested this broader consideration of “access and benefit sharing” provides a wider range of options for capacity transfer, development and investment for consideration than a focus simply on catching capacity and allocation.

Small Group Discussion

During the small group discussion, participants were asked to answer the following questions in relation to the case study of 2012 scientific advice on yellowfin tuna:

- What forms of control should be used to achieve the management objective and what are the pros and cons of this/these control(s)?
- How well would they achieve the management objective?
- How can aspirations be achieved while simultaneously realizing the sustainability goals for tuna fisheries in the IOTC area?

When reporting back, one of the groups drew attention to difference between artisanal and commercial fisheries and the importance of finding ways to balance these differences when defining capacity and effort controls. It was noted that there was greater potential to manage industrial fisheries in the short-term, and most groups had focused their discussion on this sector, while acknowledging that better monitoring and practically implementable management measures for the artisanal fleets would require more time to develop and implement. They pointed to alternative approaches to meeting coastal states’ aspirations like investments in landing and processing facilities. Another group pointed to effort and efficiency creep and underscored the importance of input controls, i.e. a cap on total effort, and the potential for a vessel day scheme-type approach. This group explained that control measures should come as a package, not just one individual measure, as this would be essential to effective implementation. The third group emphasized that reducing fishing capacity needs to be fair and equitable. They also stressed the need for input controls and having good MCS in place. They were concerned that there are not a lot of alternative approaches for meeting the aspirations of coastal states, and hence the burden of management measures may fall unfairly to them, but noted that relocating skills from the fishery into other areas of the local economy that provide national benefit may be an option (e.g. farming and social security benefits for a portion of the year).

Conclusion

After three days of presentations and energetic discussion, participants left the workshop with positive expectations for their future engagement in Indian Ocean fisheries management. It was

recognized that there was a range of new concepts and material presented and that it would take a number of iterations for participants to become more fully conversant with these. Notwithstanding this, there was an impressively high degree of willingness to engage and through the discussions participants were starting to tease out the role the different components played in the development and evaluation of potential management strategies. It was generally considered a priority to maintain the momentum and provide an appropriate forum for regular dialogue between the Commission, scientific committee and MSE process. In this regard, it was noted that the special session on MSE at the upcoming IOTC meeting would provide an excellent opportunity to revisit the concepts and further discussions.

The ABNJ Tuna Project, WWF, and all those who contributed to this workshop, hope that this initial workshop is the first step of many future conversations on the development and implementation of management measures for the sustainable use of tuna resources in the Indian Ocean.

For more information

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Appendix I List of participants

	Name	Country/Organization
1	Mohammed Sirajul Islam	Bangladesh
2	Adhir Chandra Das	Bangladesh
3	Oirdi Zahir Aboubacar	Comoros
4	Mahamoud Ali Cheikh	Comoros
5	Ahado Ragueh Aidahis	Djibouti
6	Mohamed Cheham Mohamed	Djibouti
7	Bishnupada Sethi	India
8	Mokhtar Akhondi	Iran
9	Syed Pervaiz	Iran
10	Elizabeth Mueni	Kenya
11	Peter Nyongesa	Kenya
12	Mohammed Nazari	Malaysia
13	Mohammed Noor	Malaysia
14	Mohammed Shainee	Maldives
15	Sinan Hussain	Maldives
16	Shiham Adam	Maldives
17	Sunil Panray Beeharry	Mauritius
18	Marie Joseph Ramsamy	Mauritius
19	Maria Pinto	Mozambique
20	Simeão Lopes	Mozambique
21	Peter Flewwelling	Mozambique
22	Angelica Antonio	Mozambique
23	Haji Noor	Pakistan
24	Waseem Khan	Pakistan
25	Seny Camara	Republic of Guinea
26	Youssouf Camara	Republic of Guinea
27	Mellissa Joseph	Seychelles
28	Roy Clarisse	Seychelles
29	Kuruppuge Suraj Chandrakumara	Sri Lanka
30	Rekha Maldeniya	Sri Lanka
31	Nimal Hettiarachchi	Sri Lanka
32	Chamari Dissanayake	Sri Lanka
33	Dileepa De Croos	Sri Lanka
34	Channa Weeratunga	Sri Lanka
35	Roshan Fernando	Sri Lanka
36	Ganesan Dhanabalasingam	Sri Lanka
37	Abdurahman Wehelie	Somalia

38	Kamal Tag Elsir ElSheikh	Sudan
39	Nadia Karoum	Sudan
40	Hosea Gonza	Tanzania/SWIOFC
41	Juma Kassim	Tanzania
42	Zahor Kassim	Tanzania
43	Pattira Lirdwitayaprasit	Thailand
44	Smith Thummachua	Thailand
45	Campbell Davies	CSIRO
46	Rishi Sharma	IOTC
47	Rondolph Payet	IOTC
48	Gerald Scott	ISSF
49	Martin Purves	MSC
50	Graham Pilling	SPC
51	Alice Miller	WWF
52	Daniel Suddaby	WWF
53	Moazzam Khan	WWF
54	Rab Nawaz	WWF
55	Salvador Fernandes	WWF
56	Umair Shahid	WWF
57	Vinod Malayilethu	WWF
58	Wetjens Dimmlich	WWF

