REPORT ON APEC WORKSHOP
"Economic Security and Sustainable Tuna Fisheries in the Coral Triangle"

Jakarta, Indonesia
21-23 October 2008

APEC Fisheries Working Group

November 2008

List of Abbreviations

APEC	Asia Pacific Economic Council
ASEAN	Association of South East Asian Nations
BIMP-EAGA	Brunei Indonesia, Malaysia, Philippines East Asian Growth Area
CF	Carbon Footprint
CT	Coral Triangle
CTI	Coral Triangle Initiative consisting of Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor Leste
EEZ	Exclusive Economic Zone
FAD	Fish Aggregation Device
FFA	Forum Fisheries Agency, a subregional group of Pacific Island States, New Zealand and Australia.
IMO	International Maritime Organization
IOTC	Indian Ocean Tuna Commission
IUU	Illegal, Undocumented and Unregulated Fishing
MMAF	Ministry of Marine Affairs and Fisheries, Indonesia
MPA	Marine Protected Area
NFA	National Fisheries Authority, PNG
PNA	Parties to the Nauru Agreement consisting of 8 Pacific Island countries
PNG	Papua New Guinea
RFMO	Regional Fisheries Management Organization
RPOA	Regional Plan of Action
SPC	Secretariat to the Pacific Commission
WCPFC	Western and Central Pacific Ocean Fisheries Council
WWF	World Wide Fund for Nature or World Wildlife Fund, the conservation organization
UN	United Nations
UNCLOS	United Nations Law of the Sea

Summary Record of Workshop on "Economic Security and Sustainable Tuna Fisheries in the Coral Triangle"

INTRODUCTION

1. The workshop on "Economic Security and Sustainable Tuna Fisheries in the Coral Triangle" was held in Jakarta Indonesia from 21-23 October 2008. The first day of the Meeting was chaired by Dr. Subhat Nurhakim, Research Centre for Capture Fisheries, Agency for Marine and Fisheries Research of the Ministry of Marine Affairs and Fisheries of Indonesia.

2. The attendees comprised delegates from 9 of the 21 (Asia Pacific Economic Council) APEC Member Economies, as well as representatives of other agencies from the Ministry of Foreign Affairs of Indonesia, among others.

3. This project's objectives is to hold an international workshop to be held in the Coral Triangle in order to find new ways of sustainable economic management and trade in tunas of the region and to provide opportunities for enhancing regional economic security and trade. The output as presented on this report is a series of recommendations on how to sustainably manage the tuna in the CT region using trade and markets to complement and strengthen existing resource management measures. In addition, the workshop identified innovative financing options harnessing trade and markets to support management costs, including discussions on presenting innovative ways of channelling back a portion of the benefits derived from tuna harvest and consumption to support tuna management costs throughout all stages of the species' life cycle. The sustainable management of tunas throughout their entire life cycle will improve survival rates and generate a larger total volume of tunas.

   The project's implementation design is graphically illustrated in Figure 1, drawing from the objectives and addressing issues and actions specified under the APEC Bali Plan of Action, the ECOTECH and the Manila Declaration.

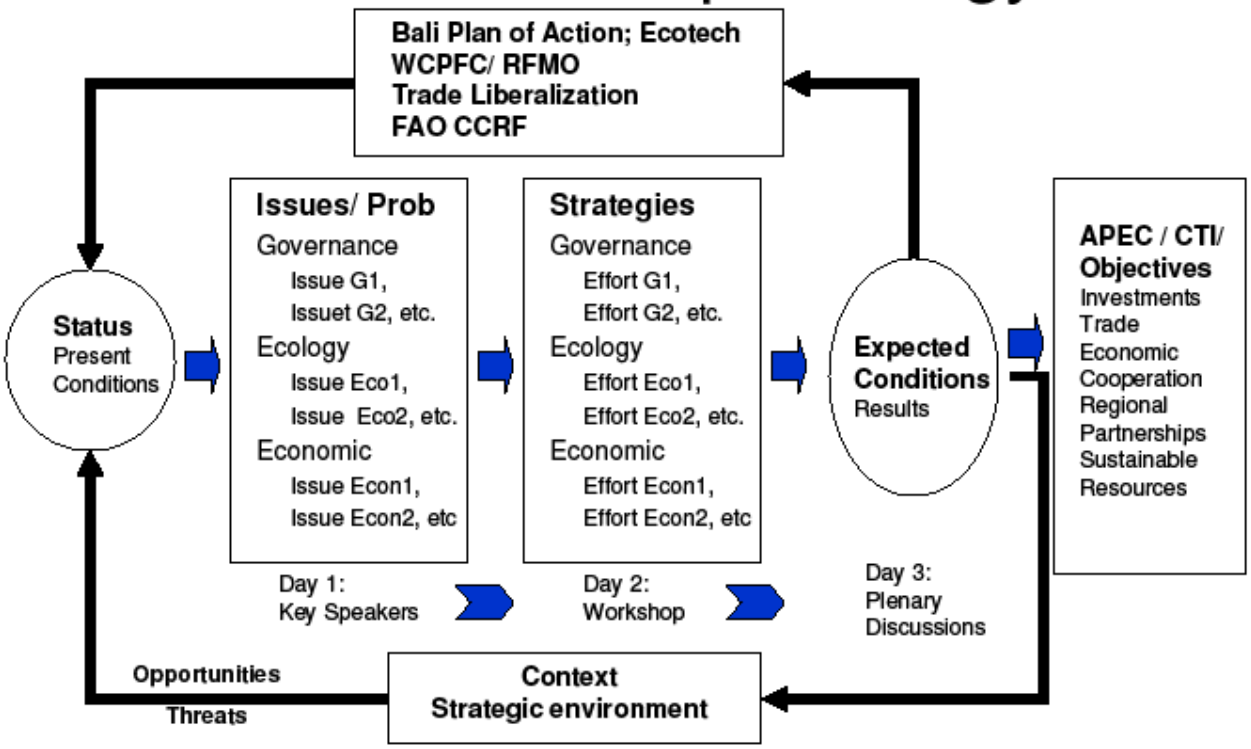
4. The workshop brought together 56 local, regional and international experts from industry, retail, scientific, economic and policy- making communities from 9 APEC economies over a three day period to think together creatively about an optimal model for management and trade. Included among the participants are women in as speakers, facilitators and participants.

   Women participation in all aspects of project implementation are considered from the secretariat (6/8 members), facilitators/rapporteurs (4/8), speakers (2/8). During the workshop, 11 or 19.6% of participants are women.

OPENING REMARKS

5. The Director of Fishing Industry Development, MMAF of Indonesia as the Project Overseer of the APEC-FWG Workshop, Mr. Anang Noegroho, on behalf of the Indonesian Economy, APEC and WWF, warmly welcomed delegates and participants to the workshop.

Tuna Workshop Strategy



6. The keynote speech was made by Dr. Ali Soepardan (Director General of Capture Fisheries, MMAF of Indonesia). Dr. Soepardan noted the importance of sustainable fisheries management for the economies of the Coral Triangle (CT) countries, and for income and food security across APEC countries and the world more broadly. He acknowledged the progress made on collaboration among the region's countries, as well as with key industry and civil society partners on tuna management. He encouraged all the actors to work together to identify solutions to the great challenges of ensuring a system of responsible fishing at this workshop.

7. The Master of Ceremonies, Mr. Andi Soesmono (Directorate of Fishing Industry Development, MMAF of Indonesia), outlined the agenda for the workshop.

PRESENTATIONS AND PLENARY DISCUSSION

Session 1: Governance Papers

8. Dr. Subhat Nurhakim (Research Center for Capture Fisheries, MMAF) acted as Chair of the first Session on Day 1.

9. Before starting the presentations, the Chair invited Dr. Lida Pet-Soede (WWF) to give a brief introduction to the history and context of the Coral Triangle Initiative (CTI). Dr. Lida Pet-Soede explained the progress of increasing regional collaboration over the last 10 years through the Sulu Sulawesi and Bismarck Solomon Seas Marine Ecoregion Tri-National agreements. Recognising the need to further upscale the level at which marine resource management challenges were addressed, at the APEC Leaders meeting in Sydney in September 2007, President Susilo Bambang Yudhoyono of Indonesia invited the other member states to join him in endorsing a new initiative for the Coral Triangle on Coral Reefs, Fisheries and Food Securities. This was followed in October-November 2007 by similar endorsements and calls for action by the Pacific Island Forum, ASEAN and the Brunei-Indonesia-Malaysia-Philippines East Asian Growth Area (BIMP-EAGA) meetings. This culminated in December 2007 with the governments of Indonesia, Malaysia, Papua New Guinea, the Philippines, the Solomon Islands, and Timor Leste agreeing to an ambitious new partnership - the "**Coral Triangle Initiative on Coral Reefs, Fisheries and Food Securities" (CTI)**. CTI governments have since begun to craft a Plan of Action to be adopted at the World Ocean Conference (WOC) in Manado, Indonesia in May 2009.

10. The Chair invited Professor Martin Tsamenyi (Director, Australian National Centre for Ocean Resources & Security, University of Wollongong) to present on "*The International Legal Framework for Tuna Management: from Common Property to Rights based Tuna Management - Issues for the Coral Triangle Countries*."

11. Professor Tsamenyi spoke of the history of ocean management, moving from a perception of infinite supply in the 15th-19th centuries to a series of treaties and conventions in the late 20th century which try to address the urgent need

for responsible management. Since the early 1970s, most resources of the sea, previously coming under the high seas freedom of fishing and common property, have been subjected to coastal State property rights. This development was codified in the United Nations Convention on the Law of the Sea (UNCLOS) in 1982 in the form of the exclusive economic zone (EEZ). UNCLOS gives substantial discretionary powers to coastal States in terms of the utilisation of the living resources in their EEZs and imposes obligations on them to conserve and manage the resources in their EEZs. At the same time, the traditional freedom of fishing on the high seas has been substantially curtailed and is now subject to international treaty obligations and the duty to cooperate. Recognising the highly migratory nature of tuna and tuna-like species, international law requires coastal States and States fishing on the high seas to cooperate to manage such stocks through competent regional fisheries management organizations (RFMOs). The RFMO with competence for the tuna resources in the area of the CT region is the Western and Central Pacific Fisheries Commission (WCPFC). Three of the countries in the CT region - Solomon Islands, Papua New Guinea and the Philippines - are members of the WCPFC, while Indonesia is a WCPFC cooperating non-member. The sustainable management and utilisation of the property rights to the tuna resources in the CT region would need to be in the overall context of the conservation and management measures adopted by the WCPFC. To achieve this, it is important that all CT region countries become full members or cooperating non-members of the WCPFC. One of the key challenges these countries will face is capacity to implement the conservation and management measures adopted by the WCPFC.

12. In the ensuing discussion, Dr. Tsamenyi suggested that the best option for strengthening WCPFC is to strengthen the capacity of its individual members, both developing and developed countries and to encourage non-members to join. Key to achieving this is an increase in both human and financial resources allocated for management. One possible source of such bridge capital funding could be voluntary contributions from institutions such as the World Bank. It was noted that over-capacity is a real challenge, as are flags of convenience. Plenary was informed that a study is under way on which countries are fishing the most and least responsible.

13. The Chair then invited Mr. Sylvester Pokajam (Director, National Fisheries Authority, Papua New Guinea) to present on "*Tuna Management Policies and Conservation Measures in Papua New Guinea*".

14. Mr. Pokajam spoke about tuna management policies and conservation measures in Papua New Guinea. He explained the growing national tuna industry, but recognised that the industry cannot grow without fish, i.e. sustainability measures and effective enforcement of these measures are essential. Key to success of PNG system is decision making structure, with power vested at the Board level. Effective enforcement of essential conservation & management measures were the key to the success of the country in management of its tuna resources. Some of the key measures effectively enforced include:

- A tuna management plan at the National level that effectively limits capacity through the Vessel Day Scheme and highly regulates the use of FAD (Fish Aggregation Device);
- A tuna management plan that supports sub-regional cooperation through the FFA (Forum Fisheries Agency) and PNA (Parties to the Nauru Agreement) as exemplified for their VDS system and the call for the closure of the high seas;
- A tuna management plan that fully supports conservation and management measure under the WCPFC (Western and Central Pacific Ocean Fishing Council).

15. During the discussion which followed the presentation, Mr. Pokajam told plenary that funding for monitoring, control and surveillance in PNG comes from access agreements. The diversity and independence of NFA Board representation was remarked upon. Discussion then moved to the value to PNG of working closely together on tuna conservation, as single country action is insufficient on its own. PNG was congratulated on its advanced management regime, the plan for which was developed in 1999, 17 years after UNCLOS was signed.

16. The Chair then invited Dr. Purwito Martosubroto (Chair, Tuna Commission of Indonesia) to present on **"*Trade, IUU Fishing and Fisheries Management: The Case for Indonesia*"**.

17. Dr. Martosubroto's presentation characterized the tuna fisheries of Indonesia, the current status and challenges in terms of governance and aspects of trade and fishing. Through the Decree of Minister of Marine Affairs and Fisheries No. 17/2006, foreign flag vessels were phased out gradually from the Indonesian EEZ. He indicated current declining trend of tuna catch in the Indonesian EEZ of the Indian Ocean that led fishers to undergo fishing in the high seas and even in the EEZ of other countries, namely the Maldives and Sri Lanka.

18. In the discussion following the presentation, Dr Martosubroto noted that they have fisheries capture statistics by nine fisheries management areas across Indonesia. The question of accuracy of the data is raised, although it is accepted that statistics are better for tuna than in other fisheries. Efforts to further improve statistics are underway. One expected impact of the global financial crisis on fisheries in Indonesia is a possible delay in payments from importing countries. The good news is that trends of declining rates of rejection by the EU of Indonesian tuna exports suggest improvements in quality. Private-public partnerships are key to continue progress on management at all stages in the tuna trade, and it will remain important to encourage relevant non-participating parties to collaborate. Improvements in patrols and enforcement are expected through increased cooperation between Indonesia's MMAF, marine police and the navy. There is the expectation that the CTI to contribute to a solution. It was noted in this context that the new IUU fishing rules coming into play in Japan, the EU and the US will mirror food safety rules, making it more difficult to export tuna to these markets without evidence of non-support for IUU.

19. The Chair then invited Professor Ricardo Babaran (Associate Professor, Institute of Marine Fisheries and Ocean Sciences, University of the Philippines) to make the final presentation of Session 1 on the **"*Role of the Coral Triangle Countries in the Life History and Management of Tunas in the Region*."**

20. Professor Babaran explained that the geographical distribution of tunas are dictated by the physiological requirements (such as temperature, DO, etc) and that these same environmental factors influence the timing and geographical occurrence of spawning adults, spawning areas and larvae. He highlighted the importance of the Coral Triangle region because it hosts various life stages of the dominant tuna species as the conditions found in this region favor the occurrence of these species.

21. As recommendations, he proposed the adoption of a more effective and unified management framework for managing the transboundary and highly migratory tuna species and stocks in the CT region; the need to identify spawning grounds of tunas and undertake measures to protect them, utilize lessons learned from the use of FADs and advocated a precautionary approach to management in absence of information and advocated the need for a more science-based policy decisions.

22. Prof. Babaran opened the discussion that followed by explaining that FADs make fish behave in a different manner ("*maladaptively*") by making them aggregate and/or stay longer than they would otherwise, under natural conditions. Fish associated with drifting FADs have been observed to be thinner than free-swimming schools. Using non-tuna species as basis, there are indications that this is also true in the case of anchored FADs (*payao*) because the proportion of *payao*-associated fish with empty stomachs is higher than free-swimming individuals. However, this result will have to be verified further. Science needs to catch up with FADs. In PNG yellowfin and skipjack tuna catch has increased by 50% in 2008, contrary to the scientific data presented. Prof Babaran's noted in response that models are only as good as the data entered, and data in both Indonesia and the Philippines is incomplete, leading to possibly false advisories on levels of fish. Strategies for better FAD management are essential, as is determining whose responsibility it is to conduct these evaluations. One suggestion was to retrieve FADs during the closed season to reduce such heavy influence on fish. It was noted that the WCPFC generates much data on behaviour and distribution of tuna resources and can thus play a major role in management. In case the WCPFC is too large and complex to effectively manage tuna, the CTI may be able to provide a complementary solution-oriented focus.

Session 2 - Ecology and Economic Papers

23. Mr. Andi Soesmono acted as Chair for the second session of Day 1.

24. The Chair invited Dr. Jose Ingles (WWF), on behalf of Kate Barclay, Hannah Parris, Jimely Flores, Quentin Hanich, to present on **"*Tuna Trade Flows from the Coral Triangle*"**.

25. Dr. Ingles presented a study the scope of which covers Philippines, Indonesia, Papua New Guinea, Solomon Islands and Fiji. The four themes covered are: i) physical flows of tuna (can, *katsuobushi*), ii) management regimes and gaps, iii) implementation of information collection, and iv) future trends. The sector, as exemplified by a single trading company, is characterized by dense, globally networked supply chains with many companies but some useful coordination points. CT and fishing state measures have thus far had limited effectiveness, due in part to unreliable information sources. Multilateral agencies are showing slow progress on conservation measures. The most reliable information and effective management is for food safety, not coincidentally an area where government aims are aligned with commercial interests. Major retailers are particularly sensitive to sustainability. The key draft recommendation is to work with existing policy frameworks, existing industry practices and WWF to a) develop a joint WWF/industry commitment to purchase product from only those vessels that can demonstrate compliance with all relevant RFMOs, and b) build national and regional management and reporting procedures to leverage off food safety traceability systems, for improving data collection and future work on catch documentation schemes. The study is scheduled for completion in November 2008.

26. In the discussion, Dr. Ingles delved into the question of rapidly improving technology to help with traceability. He fielded a question regarding practicality of recommendation a) above by emphasising the need to work effectively with the private sector, and deferring further clarification of the recommendation until the publication of the final report.

27. The Chair invited Ms. Annabelle Trinidad (Senior Manager, CTI Policy & Development, Conservation International, Philippines) to present **on "*The Real Costs of Tuna Production and Impacts on Industry Behaviour*"**.

28. Using an expanded, or green, accounting framework, market valuation, and micro-economic analysis, Ms. Trinidad spoke on i) estimating the real cost of producing tuna; ii) using a surrogate pricing to estimate ecosystem goods and services provided for tuna to grow to market-appropriate size; iii) providing benchmark information on the costs of management; and iv) determining the impact of underestimating costs provided by the natural ecosystem on the behaviour of the tuna fishing sector. The green accounting framework broadens the coverage of the asset base and production frontiers by including environmental assets. By valuing only the operating costs of tuna fishing (fuel, labour, supplies and depreciation on capital equipment), an underestimation occurs. Ms. Trinidad proposes instead that tuna is an ecosystem good and that the costs of producing tuna are in fact both the operating costs of a tuna fishing boat and the goods (food) and services (habitat) provided by nature which enables the fish to reach market-appropriate size. The resulting industry cost curve shifts upward, resulting in an overestimation of economic rents and a miscalculation of the level of effort coinciding with levels of Maximum Sustainable Yield (MSY) and Maximum Economic Yield (MEY). This implies that the levels of fishing effort corresponding to either MSY or MEY subscribed to by the industry based on a conventional accounting framework is actually greater than what is

required. Currently the private sector, i.e. the owners of labor and capital, is responsible for the cost of catch which is measured by standard accounting procedures, while society in general, represented by governments, is responsible for the costs of tuna nourishment and protection. The study results suggest a cost of protection of US$ 4 million and cost of nourishment of US$ 1.2 million per year. In other words, the costs of harvesting tuna are far higher than currently acknowledged, leading to trends of overfishing. Ms. Trinidad concluded by suggesting i) the use of economic targets in tandem with biological targets, ii) the computation of costs and benefits from a societal point of view, and iii) the use of simple economic / financial analysis such as break-even analysis.

29. The discussion opened with a questions as to whether 'nourishment costs' are helpful or valid to include, since a difference of opinion exists as to whether or not food fish for tuna have a value unto themselves. Plenary was told that the one of the reasons that fishers are still catching tuna in a situation where basic annual operational losses are ~US$ 5 billion is that subsidies provide some of the false economic rationale to continue fishing. Even so, the fishing communities are suffering greatly from losses which would be expected in time to lead to diminished effort as income and livelihoods were shifted to other sectors.

30. The Chair then invited Professor Alvin Culaba and Dr. Raymond Tan (Center for Engineering and Sustainable Development and Research, De La Salle University, Philippines) to present on **"*Estimating the Carbon Footprint of Tuna Fisheries*"**.

31. Dr. Tan's presentation outlined how carbon footprint (CF) refers to the cumulative emissions of carbon dioxide generated over the life cycle of a product, commodity or service. In recent years it has become a widely used sustainability metric due to the evident causal links between greenhouse gas emissions and climate change. An input-output model developed from Philippine data is used to determine a top-down estimate of the CF of tuna. The model is based on an environmental extension of the basic Leontief framework, which allows for consistent consideration of life cycle aspects in the computation of supply chain footprints. From the model it is estimated that the CF is 0.25 – 0.30 kg of carbon dioxide per kg of tuna at the wholesale gate. Of this total CF figure, 51% is generated directly by fishery operations, 5% from transportation, another 21% from indirect emissions through electricity consumption, and the remaining 23% through various indirect supply chain linkages within the life cycle. Current work is focused on refining these estimates and sensitivity analysis to pinpoint the most promising areas for interventions to reduce CF.

32. In the ensuing discussion, Dr. Tan explained that they can develop a model to guide optimal invest for companies wishing to set and meet standards on reduced CF. More work is needed to understand real relative impacts of tuna footprint versus other key protein sources (e.g. pork, beef, poultry etc). It may help, for example, to develop an underlying 'carbon coefficient' per source country (i.e. a rating system). Accuracy would, however, depend on equivalent information from all countries which is not currently available. Dr. Tan pointed out that decision makers need to weigh off the benefits of using

the current imperfect model now, versus a more refined model which might be ready in five years time. One advantage of the methodology presented is that it is more consumer oriented, versus the Kyoto Protocol which is producer oriented. To produce data capable of guiding strategic corporate decision making, the analysis would need to be further developed with a hybrid model that includes more detail by activity, mode of transport, etc. Dr. Tan suggested that such refinements could be done within a matter of weeks if full input data was made available.

33. For the final presentation, the Chair invited Professor Rashid Sumaila (Fisheries Economics Research Unit Centre, University of British Columbia, Canada) to speak on **"*Fixing the Broken Triangle: Insights from Game Theory*"**.

34. Professor Sumaila briefly explained game theory and how it can be used to understand why the CT can be described as a 'broken' triangle. A back of the envelope calculation suggests huge economic losses that all stakeholders with fishing interests in the CT potentially face if the current system is not revised. Professor Sumaila looked at (i) the fact that many countries, both domestic and distant water fishing, are actively fishing in the CT; and (ii) some of these countries catch, either through direct targeting or as by-catch, large quantities of juvenile bigeye and bluefin tuna, while other countries catch mainly mature parts of these populations of tuna. The theory of games can be used to map out a more optimal equilibrium for all parties, and thus establish a basis for negotiating toward mutually beneficial collaborative action. Professor Sumaila closed by introducing the University of British Columbia's Sea Around Us project which will propose an incentive structure to encourage cooperation that would reduce juvenile by-catch, avoid fishing in nursery areas, encourage the use of fewer more sustainable FADs, and cut overcapacity in the fisheries equitably. Implementing such a system of incentives should help the development of sharing rules for the gains from cooperative, sustainable management of the tuna fisheries of the CT.

35. In the discussion that followed, Professor Sumaila explained that modelling becomes more complex with increasing variables (e.g. more players, coalitions, different gear types etc.). It was noted that it is important to recognise that the CT is not just about 'coral' but is a political agreement centred on marine related issues linking the six countries, in this case tuna and the related trade and revenue. A suggestion was made to model time into the model's equation, to reflect the likelihood that one party gains more than the other at certain stages as both (or all) parties move on the paths toward an optimal equilibrium.

WORKING GROUPS

36. The Master of Ceremonies invited Ms. Sian Owen (Workshop Facilitator) to summarise the outcomes of Day 1 - Presentations and set the Objectives and Expectations for Day 2 – Working Groups.

37. Ms. Owen presented a set of conclusions and recommendations from the first day's discussion. She then described how the workshop would divide into four working groups to brainstorm around the following topics:

- Improve the current understanding of management of tuna fisheries in the CT and examine potential application of economic models and principles for sustainable management;
- Identify sources of long term economic sustainability (including sources of sustainable financing where relevant) for the responsible management of tuna fisheries in the CT, through trade and markets.

38. The working groups were organised as follows, with designated facilitators and rapporteurs:

1. Facilitator – Dr. Lida Pet-Soede (WWF); Rapporteur – Dr. Jose Ingles (WWF)
2. Facilitator – Dr. Dorothy Zbicz (Consultant); Rapporteur – Ms. Megan Bailey (UBC)
3. Facilitator – Mr. Mark Stevens (WWF); Rapporteur – Ms. Moestika Panca Dewiani (Indonesia Ministry of Foreign Affairs)
4. Facilitator – Dr. Rashid Sumaila (UBC); Rapporteur – Mr. Paolo Mangahas (WWF)

39. The working groups returned to plenary to present the results of their discussions. Each group was given 10 minutes to present, followed by a plenary discussion of 30 minutes, chaired by Dr. Ingles. Detailed notes from the working groups are available in Annex 4 of this report. A Task Force was formed to work that evening to collate the key conclusions and recommendations from the working groups to present to plenary on Day 3.

DISCUSSION OF THE RESULTS & WORKSHOP RECOMMENDATIONS

40. Mr. Andi Soesmono acted as Chair for the final session of the workshop.

41. The Chair invited Ms. Owen to present the results of the Task Force's deliberations. Wednesday evening and facilitate a plenary discussion to bring the workshop to a set of conclusions and recommendations. Ms. Owen summarised the progress of the workshop thus far, and explained what would be done with the final results. Firstly, an informal update would be sent by the CTI Secretariat to inform the CTI Senior Officials Meeting (SOM2) in meeting in Manila October 23-24th (Annex 5). This would be followed with a formal report to the APEC Fisheries Working Group in November 2008 and a set of Recommendations to the CTI Secretariat for consideration at the SOM3 meeting expected in early 2009. It is also likely that a progress update will be made to the WOC in Manado in May 2009.

42. Ms. Owen then gave instructions on the exercise which would take place during that session to identify top priorities to take forward from the workshop. Nine "*stations*" were set up around the room, comprising the sum total of 60 from 9 categories. These are the recommendations that had emerged from the Working Groups the previous day. Details on the full list of recommendations are available in Annex 3 to this report. Each participant was allocated five "votes" to note their own opinions on which actions were

most important for follow up. The "votes" would be tallied at tea break and reported back afterward in plenary. Plenary discussion would then confirm the workshop's conclusions on top priorities to take forward as highlights in APEC report and recommendations to CTI Secretariat. Ms. Owen noted that all ideas emerging from the workshop would go forward in the reports, regardless of whether identified as top priorities in this exercise.

43. The exercise was conducted and yielded that following top priorities:

Science & Information Management

a) Identify tuna **spawning and nursery sites and migratory routes**. (Establish **fish stock status** for every fishing ground to help develop best practices.)
b) Develop an accurate and complete standardized **regional tuna database**. (Establish program to improve quality of data. Country collaboration can start from research and data collection. Establish training programs to develop capacity to collect consistent, high quality data across the region. Build relationships with private sector to facilitate better sharing of datasets.)

Policy & Economics

c) Develop **CT Regional Plan of Action** for the management of tuna fishing capacity based on FAO guidelines.
d) Form a CT alliance of states to **enhance negotiating positions** on pricing and access agreements.
e) Use **existing marine & fishing associations** to better regulate fisheries and trade (e.g. quality assurance).
f) Launch a **platform for collaboration** on tuna management, bringing together key policy makers and decision makers across relevant industry sectors and other stakeholder groups.
g) Manage CT fisheries according to both **biological and socio-economic targets**. As part of this strategy, establish **incentive structures** to increase sustainability, efficiency and profitability.
h) Identify potential donors and **strategies for fund raising**. One key component of a sustainable finance strategy should be a **CTI Tuna Trust Fund**.

Communications

i) **Improve buyer countries' understanding** of current policies in producer countries so as to make realistic demands.
j) Invest in **targeted communications strategies** across CTI tuna activities to ensure effective information flows and shared understanding and buy-in for continued collaboration.

Technical

k) Develop cost effective technology to **avoid bycatch of juvenile tunas.**
l) Develop **regional management plan for FADs**.

44. The facilitated discussion that followed the presentation of these results covered the following ideas and issues.

- Quite surprisingly, the need to address the essential biological information about the spawning sites, times of spawning, larval distribution came on top signifying the desire for more science to drive management policies;
- Need for more cohesive collaboration between and among CT countries also showed that current cooperation leaves more to be desired. Hence, a regional platform for collaboration ranked high among the priorities. Here the idea of pursuing series of Roundtable Discussions could support the need for a forum where stakeholders meet and talk about issues.
- New, creative and innovative ideas emerged from the workshop. Among these are A) the creation of a "CT Alliance of States" that would strengthen bargaining positions with respect to pricing as well as access agreements. Nobody from the participant was against the idea; b) the use of socio-economic targets to compliment existing biological targets to manage tunas. These two ideas hold promise for further development.
- It appears that short to medium term needs for management of tunas garnered more votes than the medium to longer-term needs such as those dealing with ideas on sustainable financing that would support conservation. This is understandable as the latter are harder to develop and takes more time to implement.
- Some of the more promising suggestions include a CTI trust fund, the redirection of taxes and subsidies to priority areas that need support.
- Huge sums are needed to implement many of the suggestions above but there are ideas presented that with limited support could prove catalytic and provide the stimulus to reform tuna management.
- The session ended with the desire to circulate the totality of ideas presented in the hope that these ideas be further developed by anybody.

45. Closing Remarks were made by Mr. Saut Hutagalung (Director of Foreign Trade, MMAF), who complimented the participants on the productivity of the three days and the quality of the outcomes. He expressed gratitude to the workshop organisers for a job well done, and then officially brought the meeting to a close.

MEDIA OUTCOMES

46. A press conference was held last October 21 which was attended by local and foreign journalists resulting in significant international media coverage for the workshop. By October 23, some 21 outlets ran stories on the event that include Independent online, South Africa, ABS-CBN Philippines, Economic Times India, Times of India, France 24, China Post, Forbes, NY, MSN Money, NY, PR Inside.com Austria, ABC television, Australia, ABC Radio Australia,

International Herald Tribune, France. The news is expected to appear on Wall Street Journal and The Jakarta Post.

Annexes:

1. Agenda
2. Participants list
3. Full Working Group discussion notes
4. Full Working Group Recommendations
5. Recommendations sent to CTI-SOM meeting in Manila

Annex 1: Agenda

"Economic Security and Sustainable Tuna Fisheries in the Coral Triangle"

Workshop Agenda

(Venue: SUMBA B Room, 3rd Floor, Borobudur Hotel, Jakarta)

Monday, 20 October 2008: Arrival of Participants

Tuesday, 21 October 2008 - DAY 1

Opening Ceremonies

Master of Ceremonies: Mr. Andi Soesmono

8:00-9:00	**Registration and Coffee**
9:00–9:05	**Opening Remarks - Mr. Anang Noegroho, Project Overseer and Director, Fishing Industry Development, Ministry of Marine Affairs and Fisheries, Indonesia**
9:05–9:30	**Keynote Speech - Dr. Ali Soepardan, Director General of Capture Fisheries, Ministry of Marine Affairs and Fisheries, Indonesia**
9:30–9:45	**Photo Session - GROUP PHOTO**
9:45–10:30	**Press Conference - Mr. Anang Noegroho and invited guests**
9:45-	**Tea Break**

Session 1: Governance Papers

(Session Chair: Dr. Subhat Nurhakim)

10:30 – 11:00	**Prof. Martin Tsamenyi, Director, Australian National Centre for Ocean Resources & Security, University of Wollongong, Australia** ***"The International Legal Framework for Tuna Management: from Common Property to Rights based Tuna Management - Issues for the Coral Triangle Countries."***
11:00 – 11:30	**Mr. Sylvester Pokajam, Director, National Fisheries Authority, Port Moresby, Papua New Guinea** ***"Tuna Management Policies & Conservation Measures in Papua New Guinea."***
11:30 – 12:00	**Dr. Purwito Martosubroto, Chair, Tuna Commission, Indonesia**

"Trade, IUU Fishing and Fisheries Management: The Case for Tuna Fisheries in Indonesia."

12:00 – 12:30 **Prof. Ricardo Babaran, Associate Professor, Institute of Marine Fisheries and Ocean Sciences, University of the Philippines**
"Role of the Coral Triangle Countries in the Life History and Management of Tunas in the Region."

12:30 - 14:00 **LUNCH BREAK (beside the meeting room)**

Session 2: Ecology and Economic Papers

(Session Chair: Mr. Andi Soesmono)

14:00–14:30 **Dr. Kate Barclay, et al. Senior lecturer, University of Technology, Sydney**
"Tuna Trade flows from the Coral Triangle: Philippines, Indonesia, Papua New Guinea, Solomon Islands and Fiji."

14:30 – 15:00 **Ms. Annabelle Trinidad, Senior Manager, Policy & Development, for the CTI, Conservation International-Philippines**
"The real costs of tuna production and impacts on industry behaviour."

15:00 - 1530 **Tea Break**

15:30 – 16:00 **Dr. Alvin Culaba and Dr. Raymond Tan, Center for Engineering and Sustainable Development & Research, De LaSalle University, Philippines**
"Estimating the Carbon Footprint of Tuna Fisheries."

16:00 – 16:30 **Prof. Rashid Sumaila, Fisheries Economics Research Unit Centre, University of British Columbia, Canada**
"Fixing the Broken Triangle: Insights from Game Theory."

16:30 – 16:45 **Summary of Day 1**

16:45 – 16:50 **CTI Secretariat and Close Day 1**

18:30 - **DINNER hosted by WWF**

Wednesday, 22 October 2008 – Day 2

Workshop Day

Master of Ceremonies: Mr. Andi Soesmono

BREAK OUT GROUP TEAMS
GROUP 1: Facilitator – Dr. Lida Pet-Soede; Rapporteur – Dr. Jose Ingles
GROUP 2: Facilitator – Dr. Dorothy Zbicz; Rapporteur – Ms. Megan Bailey
GROUP 3: Facilitator – Mr. Mark Stevens; Rapporteur – Ms. Moestika Panca
GROUP 4: Facilitator – Prof. Rashid Sumaila; Rapporteur – Mr. Paolo Mangahas

9:00 – 9:30	**Ms. Sian Owen, Facilitator** *Recap of Day 1 & Expectations, Objectives, Outcomes & Instructions for Day 2*
9:30 – 12:00	**Discussion on Objective 1: Identify innovative ways of management of tunas that will help and compliment existing management of tunas (e.g. in the areas of Governance, Markets and/or Trade of Tunas)**
10:30 -	**Tea break (during discussion groups)**
12:00 - 13:30	**LUNCH BREAK (beside the meeting room)**
13:30 – 16:00	**Discussion on Objective 2: Identify sources of sustainable financing for the management of tuna fisheries in the CT through trade and markets.**
15:00 -	**Tea break (during discussion groups)**

Plenary Session

(Chair – Dr. Jose Ingles)

16:00 – 17:00	**Presentation of results of each group (10 min each) by each group's facilitator followed by a plenary session for 30 minutes Q & A**
17:00 – 17:15	**Wrap up of Day 2 (Ms. Sian Owen)**
17:15–17:30	**Housekeeping announcements (Secretariat)**
17:30	**Close Day 2**

Thursday 23 October 2008: DAY 3

PLENARY

(Chair – Dr. Andi Soesmono)

9:15 – 9:30	**Outline agenda for Day 3**
9:30 – 12:00	**Discussion of the Results and Workshop Recommendations**
10:30 -	**Tea Break**
12:00 - 12:10	**Presentation of Appreciation to the Speakers**

12:10 – 12:25 Closing Remarks (Mr. Saut Hutagalung, Director of Foreign Trade, MMAF, Indonesia)

12:30 – LUNCH BREAK (beside the meeting room)

The meeting hall will be available for the rest of the day for use of those who would like to continue their discussions.

Annex 2: LIST OF PARTICIPANTS

APEC WORKSHOP ON THE ECONOMIES SECURITY AND SUSTAINABLE TUNA FISHERIES IN THE CORAL TRIANGLE

Borobudur Hotel - Jakarta, 21 - 23 October, 2008

No	Name of Participant	Contact Address	Participation	Country of Origin	Delegation of Institution	
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13	**Ali Soepardan**		Key Speaker	Indonesia	Economy	DG of CF - MMAF
14	**Anang Noegroho**	anang2009@yahoo.com	Project Overseer	Indonesia	Economy	MMAF
15	**Saut Hutagalung**	sautphgalung@yahoo.com	Closing Speaker	Indonesia	Economy	MMAF
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Annex 3: Full Working Group Discussion Notes

APEC FWG, MMAF Indonesia, WWF Workshop on
Economic Security and Sustainable Tuna Fisheries in the Coral Triangle
Jakarta, Indonesia – Hotel Borobudur
Breakout Discussion – 22 October 2008

On Day 2 of the Workshop on Tuna in the Coral Triangle, the participants broke into four discussion groups to address questions related to management of tunas and sustainable financing, using the presentations from Day 1 as a basis for discussion. Each group had representation from industry, government and academia, as well from the various CT countries present at the workshop, resulting in lively and creative discussion. This summary reflects some key points and highlights from each of the four discussion groups.

BREAKOUT GROUP 1

DISCUSSION ON OBJECTIVE 1:
Identify innovative ways of management of tunas that will help and complement existing management of tunas

- Tuna friendly processing technology can increase Indonesia's value-added.
- Help the government to identify strategic inputs on CT tuna management, especially looking outside the traditional management frameworks and including all stakeholders.
- Thailand uses fishing bans and closures for management.
- PNG uses 100% observer coverage and vessel monitoring systems and satellite monitoring to monitor fishing activities and to complement the port sampling, port state measures, licensing and permitting, etc.
- PNG uses regional agreements on air surveillance and patrols to improve monitoring and enforcement effectiveness.
- Indonesia reports weaknesses in its existing institutional frameworks, caused by: lack of involvement and awareness from all stakeholders. RFMOs could help to stimulate/encourage member countries on approaches to sustainability relating to trade in sustainable fisheries management (eco-labelling, commitment from buying/ landing ports not to accept fish from unlicensed vessels).
- Indonesia reported on the role of fishing associations with industry members and strengthening the role of these associations.

Public Awareness
- Thailand encourages the large industry players to support awareness-raising for sustainability.
- ANOVA (tuna importer) said that the importing countries and industries should be involved in public awareness-raising.
- PNG said that local people as resource owners should lead cooperation and talk with buyers.

Relationship with industry
- Getting all CT countries to agree on issues can help to maximize the effectiveness of conventional management measures. The issues, we could max the usage of conventional management

- ANOVA indicated that this could also contribute to avoiding purse-seining of tuna.
- PNG added the use of FADs as well and their related juvenile by-catch.
- The role of the purchasing industry can also be improved by increasing their role in licensing of fishing, rather than allowing the fisheries industry to do the licensing.
- Industry has a constant problem with a constant supply of raw material.

FADs and Juvenile By-catch

- Eco-labelling can help influence this.
- Incentives can be provided for peer monitoring and instruction on sustainable fishing practices, such use of more juvenile-friendly FADs and restrictions on use of drifting FADs.
- Industry can help to provide incentives for sustainable FAD use.
- Thailand uses certificates/ documents/ licensing to restrict catch
- PNG said that managing trans-shipment is especially important, especially declaring the specific catch they receive.

Sharing of information and Monitoring

- PNG stressed that sharing of information is crucial to port security and that long-range identification and tracking systems are important.
- Regional information exchange is important for monitoring and surveillance of activities, including legal agreements such as the Niue Treaty.
- Indonesia suggested that data and information are important in fisheries management and that improvement of their logbook system is needed.
- ANOVA asked how this can be done in small scale vessels and Indonesia responded that it is important to begin with the larger vessels first.
- In PNG, the government has established a working group on observing and is paying for it. They are then billing the industry for it when they apply for licenses.
- The U.S. asked about the need for training for law-enforcement and technology on tuna management and the possibility of new tuna policies with a new administration.

Regional / International Cooperation

- PNG reported on pressure from the EU that provides incentives on compliance with their *phytosanitary* standards for fish exports.
- Indonesia that sustainable fishing organizations are dealing with swimming crabs, that to date do not have management frameworks in place.
- Thailand suggested that a platform and agreement are needed for all stakeholders to agree on the problem and practices of what is appropriate sustainable management
- Indonesia suggested that for them stimulating sustainable mindset is accomplished faster through government to government interactions.
- PNG reported on boat buy-back programs in Chinese Taipei to scrap long-line vessels. This is causing fishers to switch to purse-seines or smaller boats, due to inadequate controls on this. It is important to control fishing effort, not just fishing capacity and to limit the number of vessels.

CONCLUSIONS

- The need for new management is less than the need to improve the weaknesses in existing conventional management by raising awareness and involvement from all stakeholders to stimulate and encourage member economies to apply sustainable management approaches.
- It is important to find a platform for all stakeholders to be able to meet and find agreement and a common understanding on the problem before applying specific solutions.

DISCUSSION ON OBJECTIVE 2:
Identify sources of sustainable financing for the management of tuna fisheries in the CT through trade and markets

- Waste is a significant issue in domestic markets.
- The demand for higher quality is needed in order to guarantee higher prices.
- ANOVA reported that with higher quality it is not necessary to catch as much to earn good money
- Maximizing the use of tuna waste products, such as tuna *gelatin*, *collagen*, fertilizer, pet food, fish meal, etc. can help to improve the value-added from tuna caught.
- Industry should be brought in to help brainstorm about waste management, alternative uses for waste products, use of aquaculture, etc.
- Is it possible to use alternative baits for tuna fishing and not use as bait fish that is also used for human consumption.
- Not knowing the price of fishing and not having fixed prices on catch leads to over-fishing. Setting economic targets and fixing prices for hand-line catch can help this.
- But will fishers really stop fishing once they have enough?
- Indonesia reported that improved transparency of licensing could improve sustainable management.
- PNG reported that their fisheries taxes go straight to the government.
- Thailand reported that domestic production is taxed, but no payment is required at the fishing port.

How to capture ecosystem values of spawning ground?

- PNG stressed the importance of selling days of fishing rather than unlimited licenses; controlling effort rather than capacity.
- Indonesia reported that it might be possible to request larger quotas for economies that hold some critical spawning grounds.
- ANOVA reported that they can get 10-15% higher prices for MSC-certified fresh fish.
- Indonesia agreed this is true for albacore as well.
- MPAs and fisheries closures are one method to protect spawning grounds and habitats.
- An FAO study in 1985 revealed that buy-back policies have helped to reduce shrimp fleets and reduce pressure on tuna spawning grounds.
- Debt-for-nature swaps can be used to fund marine projects to support sustainable fisheries management

BREAKOUT GROUP 2

Objective 1: MANAGEMENT AND GOVERNANCE

- The timing of this workshop is the key for providing the possibility to inform not only APEC but also the planning of CTI (next 5 years). It can also be brought forward at Manado conference.

Outside of what is currently being done, are there any other approaches to governance at the national/ regional and/or global levels that could improve sustainability?

- Concern was expressed over the relationship of CTI with WCPFC, IOTC etc.? Countries are already working on conservation and management measures and

requirements for the RFMOs and the CT should not duplicate but complement these. There may be need for additional resources.

- The CTI is organized by the 6 governments of the CT to address marine issues, with meetings at the technical, ministerial and heads of state levels.
- It is important to identify the different components of fisheries management and the status of these components and what is needed across each country. Perhaps a management and governance gap analysis. For example, the scientists need better data.
- Is it possible to create a database across the CT?
- If such a gap analysis is done at the regional level, it is important to consider local needs and capacity and concern for artisanal fishers.
- Malaysia reported that it is always important to convince governments to invest in conservation and that a rent drain study on tuna could be very helpful here. For example, if money is invested in conservation and regulation, what financial returns can the government expect? Can industry help to finance marine conservation in the way that the oil palm industry in Malaysia is expected to invest in research and development? Currently, fishery license fees are very low.
- Can other CT countries learn from the experience of PNG as to how to encourage governments to invest in sustainable management and conservation?
- Industry is concerned with sustainable supply. Indonesia used to be the largest tuna supplier, but has experienced a huge decline. Manado alone used to supply 20-25 containers per month, but now only 1. What are threats to sustainability? Number one threat may be overfishing – too much catch, fishing juveniles, pollution, destruction of important spatial areas. We see the result of FADs today with purse seiners. What are the problems? What are the fixes?
- Why is there a decline in landings? Overfishing!
- Can countries assist and invest in each other? Can the Philippines help invest in Indonesian private sector? For example, the Philippines do not have fish, but Indonesia does, but not enough capacity to process it. A Philippine plant is currently producing 100 T per day in Indonesia. But for the CT, it does not really matter where overfishing is occurring (Philippines or wherever). The stock is overfished, and we need to work on stock sustainability as well as local sustainability.
- The CTI has come together, because they see the decline – but they have not listed the reasons. Scientists report that overfishing is occurring, with juvenile fishing on FADs the primary reason. Is this mainly from CT countries or DWFNs?
- 90% of Indonesian fisheries are small scale. Indonesia is working on increasing the quality of landed fish and exports. This will allow increased exports, without increasing catch, but provide better quality. Current losses are around 50% of the catch, and the government is working to get it down to 20% to increase that available for export.
- It is critical to understand how much fish there is and how much is being caught, and then to provide governments with tools to allocate the appropriate catch. Capacity to enforce is essential.

Linking Markets and Trade with Fisheries Management

- RFMOs are beginning to keep vessel lists of vessels permitted to fish. Countries can jointly agree on trade restrictions against countries flagging blacklisted vessels. For example, bluefin can be tracked from boat to port to restaurant, with documentation accompanying individual fish.
- The Magnusson-Stevens Act in the U.S. will begin ensuring that the exporting countries will be required to demonstrate that they are taking measures to enforce against IUU fishing and excessive by-catch.

- The definition of by-catch is important as some countries take the view that if what is caught is eaten, then it is not by-catch. Clarification is needed for exporting countries.
- The Philippines and Indonesia have mesh size regulations. The Philippines recently distributed fish rulers to fishers, showing minimum fish sizes, to raise awareness.
- Sharing of "best practices" could help with trade links. Food safety certification by EU takes a long time. The Philippine Fisheries Association took 3-4 years to be certified and conducted over 100 training sessions. They could help share their experiences with other countries and help to translate this knowledge to environmental sustainability of fisheries as well.
- How can we make sustainable fishing the "rule," and see that fisheries don't "discard" or lose certain percentage of catch because of poor post-harvesting practices. Increasing quality instead of quantity to can lead to increased revenues from fisheries. Quality assurance working groups can help to increase the quality of the tuna caught.
- Are there incentives to encourage fisheries to be more sustainable and reduce overfishing? Incentives can include education for children of fishers (Philippine government is doing this), which can help to reduce the number of fishers in future generations.
- ANOVA does not buy fish caught during certain times of year (when small yellowfin are prevalent). It is necessary to provide incentives for fishers to not fish low value species and create the label of "responsible tuna fishers" among fishers themselves.
- SPC can perhaps provide insights to the CTI in how countries with similar interests can come together to improve sustainability of tuna fisheries.

Will there be any losers from such new/improved sustainable governance regimes? If so, who are they? How should/will their loss be addressed?

- In the Philippines, WTPO has regulated effort in time, with seasonal closures of purse seine fishing. There are 45-day closures. The compliance incentives received are higher prices of tuna after the closures due to decreased supply.
- The WTPO has some 20 members, including PNG, Philippines, Indonesia, and could possibly offer some insights to the CTI on tuna.
- Many countries (and consumers) have a vested interest in small fish not being caught, so that fish can be supplied in the future. Some resources will have to go back into protecting the spawning and nursery areas. Can CT countries find creative ways of saying to the world – give us a reason not to fish the small fish?

Recommendations

1. The CTI should not duplicate WCPFC and existing institutions, but complement existing structures. It is important to formalize why the CTI exists, and what benefits it brings to CT countries? Is there something that the CTI can provide that the WCPFC or IOTC cannot accommodate? Specific needs of CT 6 to be addressed? Increased bargaining power for this group of countries at the international table of existing institutional structures.
2. Gap analysis: Identify the components of fisheries management across the CT countries – including government and private sector
3. Governments need to understand how conserving resources can lead to benefits (rent drain studies, CT6 governments helping each other with this).
4. Develop a regional plan of action (RPOA) on fishing capacity, based on FAO Guidelines. This can also include effort controls, gears, mesh size, FADs, closures, etc. A common approach is needed to control capacity and ensure that are measures harmonized among countries. a) ID regulations that apply for fisheries management for that area, share regulations, including licensing, mesh sizes, common FAD practices (for example an RPOA on FADs), b) then share

data, fisheries profiles, etc. and develop a standardized, searchable database for CTI data.

5. Develop a better understanding of the framework for tuna fisheries in the CT – under what framework are we currently working? Do all have the same information, same impressions of stocks, etc.? Agree on clear definitions.
6. Share best practices for trade, with training along the production chain and buyers working together.
7. Outline and agree upon incentive structures to encourage responsible fishing and respect gear restrictions, closed times/areas, etc.

Objective 2: SUSTAINABLE FINANCING

What are the current inefficiencies which, if addressed, could promote sustainability through a more efficient use of resources? Are there ways to channel some of the profits generated from improved

- Current inefficiencies include: loss of tuna due to poor post-harvesting practices; over-capacity (fewer boats could catch same fish); waste in length of supply of fish (too long at sea can result in spoilage, if limited access to ice).
- The mother-boat system of having one large boat with ice and bait and smaller boats fishing might help to address this.
- With current fuel prices, the industry is operating at break even or even at loss, with little room for paying more. Supermarkets and large chains may be an entry price. Canned tuna can still withstand price increases without significantly reducing demand. Retailers need to demand sustainable seafood, perhaps through laws in importing countries. Dolphin-safe tuna campaigns and regulations worked.
- Can the CT set its own price of tuna, without being driven by markets in Thailand or Ecuador? The current price of skipjack is currently at $1700/tonne, having increased from $200-$400 per tonne a few years ago.
- The ex-vessel price for skipjack could stay the same, but import taxes on non-sustainable sources could serve as incentives (agreed through RFMOs or other international agreements to be WTO-compliant.)
- By-catch has a seasonality to it. Allowable by-catch of juvenile yellowfin should only be very small or zero. If the skipjack catch is reduced by 20% from yellowfin measures, then the price should increase automatically. Market feedback mechanisms can help with the proper motivations.
- EU requires that national legislation of members have health and quality control measures. Importing countries could have similar measures and legislation to require sustainable fisheries.
- Indonesia may only have the yellowfin or bigeye for a few weeks while they are young. Once they have migrated on, Indonesian fishers may never have access to them again. Equity issues need to be taken into account.
- Philippines and Indonesia have devolved responsibility for fisheries management, but multiple levels of management can complicate it.
- MPAs - The process of migration makes MPAs difficult. Should Indonesia have to pay the costs of management in perpetuity to enforce an MPA to protect juveniles or should the costs of protection be shared by those who benefit (i.e. WCPFC, IOTC, importing countries, consumers)? Perhaps the private sector should invest more into WCPFC for management costs. In the Philippines, the industry helps the government with WCPFC dues.
- Tuna Trust Fund - Importing countries and other stakeholder could contribute based on the quantity of their catch/value. (Similar to WCPFC dues structure.)
- The more emphasis on sustainability – the higher the price. Market mechanisms are in place.

- Skipjack should to pay its way – the costs it imposes on other species and industries (long-liner) are not being internalized in its price. The Dolphin-Safe effort in the Eastern Pacific has exported purse seine effort to the CT in the last 20 years.

Recommendations

1. Use supermarkets and large retailers as an entry point to generate demand for sustainable seafood and put pressure on canneries to ensure a sustainable supply of YF in the market.
2. Importing countries work together to tax unsustainable sources, with funds going back into sustainable tuna management.
3. A regional initiative is needed to share the costs and benefits among countries of any management plan and to be able to negotiate with importing countries.
4. Can we demand juvenile-bycatch-free tuna?
5. Importing countries should agree to incorporate national legislation for tuna sustainability (similar for quality measures.)
6. The nature of migratory stocks makes spatial management of tunas highly costly to some countries (i.e. Indonesia and the Philippines), with benefits enjoyed by others (i.e. PNG Solomons, WCPFC members, importing countries). But MPA placement on spawning or nursery grounds may be important management measures. The challenge is to equalize the costs and benefits.
7. Establish a Tuna Trust Fund, funded by all stakeholders to help contribute to the financing of MPA monitoring and enforcement on spawning and nursery areas.

BREAKOUT GROUP 3

Objective 1: MANAGEMENT AND GOVERNANCE

- Tuna management should be free of political interference (in PNG, regulatory powers have been invested in a national NFA board consisting of NGOs, industry and communities. Revenues generated go directly to the NFA and only excess funds return to national treasury. Other CT countries may use this as a model for political and financial independence of management.
- In Malaysia, CTI actions will overlap with those of the SSME. It is important to take care that such subdivisions do not fragment the CTI objectives.
- Learn from small groups like the PNA that sits under the FFA and deals with the WCPFC to strengthen management regimes. FAO is involved in data gathering.
- Better cooperation is needed between the CTI and PNA and Vietnam. The latter represent >50% of global catch. Management measures should be consistent.
- Better coordination is needed among agencies of market and trade and investments and resource.
- Look into the relationship between tuna demand and supply, related to pricing.
- Look for other potential partners and agencies (e.g. NOAA) wanting to participate in CTI and ensure that CTI has a policy on to accommodate such partnerships.
- Improve coordination between CTI and WCPFC: maybe hold a CTI side event at WCPFC in Busan, or present at FFA prior to WCPFC meeting. Shared information between CTI and WCPFC on tuna (already requested by WCPFC).
- Need a unified tuna policy across CTI.
- Indonesian management operates under the fisheries act of 2004. Tuna fisheries involve some 545,000 boats, 90% small scale, with only 1% >30 gross tonnes.

- PNG clarified that one reason for Indonesia not joining the WCPFC has been interpretation of the archipelagic principle where WCPFC interpret archipelagic waters as part of WCPFC jurisdiction.
- Research support needed for decision making process. WCPFC-GEF tagging projects; in Malaysia (govt supported projects) on size composition and distribution. PNG undertakes port samplings
- Funding needed to collect data on: electronic logbooks (PNG) , life cycle of tunas, identify spawning areas, number of dependents on tuna, juvenile tunas, ecosystem services, setting of economic targets rather than biological targets, species composition, consultation and approval of stakeholders, capacity-building needs, WCPFC has good list of what countries need.
- NSF possible source of funds. Also research funds, and other agencies. CT countries could use capacity-building to learn to prepare good fundable proposals.
- Fishing base should be clustered: allow bidding (ministerial act No. 5 of) of allowable quota: backed by research as well. Still to be tried and tested due to comments from B&I
- Explore requiring all catch for transshipment to go through a few transshipment vessels for easier monitoring and inspection.
- Malaysia suggested that where already gazetted MPAs contain or adjoin spawning/ nursery areas, they could simply be expanded without the necessity of going through rigors of normal MPA gazeztting and delimiting process.
- "World Heritage" designations for marine areas could be used to create protected areas for spawning given the external pressure to meet the requirements.
- End all fishing on FADs.

Objective 2: Economics, Sustainable Financing

- Use the Broken Triangle concept to raise funds using the issue of juvenile bycatch of migratory tunas
- Place tax on cans of tuna with proceeds to go back to tuna management.
- Branding of CT tunas with premium to generate funds, advantage is to that it can command higher prices, and funds go directly to conservation and management.
- Setting of up quotas as Tuna shares that are tradable (for WCPFC and the high seas). EEZ quotas are still set by countries.
- Hold roundtable discussions to pursue these new ideas presented above.
- Energy efficiency reduces costs, but could undermine sustainability if quotas and other stringent management measures are in place
- Because increases in efficiency lead to increased profits, subsidies could be removed or redirected
- Pricing of tuna with ecosystem services incorporated needs to be developed.
- The pricing system for sashimi is dictated by the market in Japan. CT needs control of the resource or of the market. Cooperation within the CT is the best way to influence that.
- Organize association of CT business and industry to agree to cooperate on changing /reforming way things are done. E.g. forming a tuna-alliance to help moderate prices and supply
- Private-public partnerships: USAID – sustainable fisheries management could be available to the CTI, PPPs are considered long term source of funds. CT countries need to be trained and their capacity to raise funds and build partnerships strengthened.
- Lending agencies that lend to tuna industry needs to be reformed to promote sustainable management.

- Promote tourism for tunas and sport fishing (catch and release). Quotas of longline or handline could be exchanged for sports fishers, and the tuna could be tagged before releasing.

BREAKOUT GROUP 4

Objective 1: MANAGEMENT AND GOVERNANCE

- Need comparative studies on current systems (industry versus government / regional versus global) and how they can be improved and made more relevant to CT issues
- Lack of capacity and manpower is an issue that should be addressed through regional frameworks. Resources and manpower possibly available from World Bank, GEF. Capacity Building / training: through bilateral or multilateral arrangement (e.g., monitoring, control, surveillance)
- WCPFC is already established – may not be perfect at this point, but an important existing institution. Would be ideal if Malaysia could join, or at least become a cooperating non-member, since they do not really fish tuna in the WCPFC region. However, since they are already a part of the SSME, they might join or agree to cooperate.
- A strong CTI Secretariat is needed —one that will be able to coordinate all activities within the CTI. It is easier to work in a small group. Would help for CTI to have a cohesive structure/ Secretariat so as not to depend on the resources (funds and manpower) of other countries / offices.
- ASEAN, APEC, and WCPFC could contribute funding to CTI Tuna projects.
- PNG's experience suggests that minimal political interference has strengthened fisheries management.
- Scientists and policy makers need to collaborate and make use of science for better decision making
- Science and social development must also be included as pure science is usually not well-accepted by politicians (i.e. Philippines). Politicians and policy-makers need to be able to translate science into social development and tangible policies and activities and votes. An institutional framework is needed to help translate science into workable solutions.

Information Requirements

- Many discrepancies in data collection and sharing among countries. A more collaborative approach in data collection, sharing, and usage should be established within the CT. Data quality needs improvement, since different methods are used. CT collaboration on tuna can start with research and data collection, to promote shared understanding and lay the foundation for further cooperation. Data collection collaboration has already started in the Philippines with money from GEF, but only covers a limited area as of now (Vietnam, Philippines, Indonesia). Training on common data collection and processing is already a yearly activity under the WCPFC. CT could make use of this existing framework, now only in its second year.
- Current set up in data collection is not working because trust among countries is lacking and much data is held in confidence by fishers and industry. In the Philippines, penalties have proven to encourage data sharing and cooperation
- When dealing with discrepancies in data, who decides which data is superior and should be used?

- Level of cooperation among countries is low at the moment and an external arbiter is needed for resolving conflicting interests (i.e. different data results) WCPFC has such an arbitration panel for conflict resolution that is science-based. .
- Data collection should integrate all pertinent information (e.g., science, trade and markets, socio-economic conditions, politics, etc)—which entails a multi-sectoral approach
- Comparative studies on current systems (industry versus government / regional versus global) are needed to improve CT tuna management
- There are many discrepancies in data collection and sharing among and between countries. A more collaborative approach in data collection, sharing, and usage should be established within the CT
- Lack of capacity and manpower is an issue that should be addressed through regional frameworks
- Sound data is needed on:
    - catch, markets, and trade
    - outcome of scientific research
    - viability of fisheries
    - social-economic status of fishing community
- Obtaining accurate information, especially for catch is very challenging. Chinese Taipei has a computer software system that helps screen garbage data
- Fish stock status must be established for every fishing ground to help develop best practices.
- Buyer countries can push producer countries to provide good data, through dictating what they will buy and what not to buy based on such data. Buyer countries need to have a better understanding of current policies in producer countries so as to make realistic demands. Producer countries should have clear and shared policies and regulations.
- In the Philippines, fisheries management pays attention to “reproductive health” and population control measures to help reduce pressure on resource use, especially education for women. This illustrates how government departments work in silos and need to work together to support shared issues such as food and economic security and environmental conservation.
- Data should be collected that reflects the real conditions of fishermen.
- Research and data are needed on types and amounts of fishing subsidies
- Economic valuation of resources can help to promote better and equitable trade negotiations.
- Better data and studies are needed on marine ecosystems and food chain dynamics
- Better data is needed on how to improve capacity in reducing wastage
- More information is needed on tuna life-cycles—where they spawn, grow, breed. This information is needed to help protection of habitats
- At present, such information is scattered. A common database could help to pool them and create a higher profile.
- There are still a lot of unknown facts about tuna—because of changing environmental patterns, it is difficult to establish baseline data on such species that depend on shifting environmental conditions
- Data collection should integrate all pertinent information (e.g., science, trade and markets, socio-economic conditions, politics, etc)—which entails a multi-sectoral approach
- Pressure to provide quality fisheries data should come from the private sector and consumers;
- Non-sharing of data from the private sector is a hindrance.

Linking Markets and Trade with Fisheries Management

- Expand the existing catch documentation schemes to improve traceability of catch. Markets have the responsibility to not buy undersized fish—catch information will help markets identify "legality" of the stocks they are purchasing
- There is a need to employ catch retention schemes to help reduce wastage and stop high grading—this can be addressed by observer programmes
- Avoiding the use of FADs will help reduce fishing pressure—although it is difficult to implement
- Need to develop a cost effective technology to avoid catching juveniles. Japan is already using certain gears to help reduce juvenile catch—still in an experimental stage. Observer programmes or retention schemes may not necessarily save and protect by-catch—having the right technology is important. There must be a way to allow juveniles to grow without hampering fishing effort on target species
- Market demand and consumer willingness to pay should act as a positive catalyst for sustainable tuna fisheries management (consumer awareness)
- PNG has a FAD management policy on anchored FADs—floating FADs are hard to monitor. But anchored FADs are not always good either (i.e. typhoons can destroy them and leave behind structures that interfere with fish's natural movement in water)
- Minimizing juvenile catch is already being discussed by certain bodies (e.g., Kobe meeting)
- Small artisanal fisheries can also be detrimental to the environment. Small fishers may suffer from high-level policies that do not always address on-the-ground scenarios. High level policies should reflect on-the-ground scenarios
- **Size-based tariff system may be good to implement—the smaller fish you catch, the more you pay. But which countries will be willing to introduce taxation of fish?** Indonesia categorizes its tuna catch (grade A, B, C) and also looks into weight and size. However, there is not much price distinction on tuna size. Tariff may also be based on other environmental indicators / values, and not just size. WTO must be consulted if size-based tariffs are applied to exports or imports.

Key Points

- There is room for the private and public sectors to work together to curb tuna stock decline through incentive / penalty schemes with regard to catching juveniles
- High level policies should reflect on-the-ground scenarios
- Market demand should act as a positive catalyst for sustainable tuna fisheries management (consumer awareness)
- Technology should be effectively utilized to help improve fisheries management

Compensating Losers from Sustainability Measures?

- Who will pay for closure seasons? Example, if Indonesia will not be allowed to fish for 6 months, who will pay for this gap?
- Fishermen always suffer—the government will need to help—Chinese Taipei bought fisher's boats to help compensate for their loss. Fishers that remain at sea will also have to pay a certain amount.
- Establishing strict quotas is one method to control fishing effort
- Need more size analysis—optimum size to catch fish—what age would be good to optimize your investment—size and age dictates costs: what gear to use, etc. Indonesia has a size regulation for tuna, **but some markets demand smaller sizes. Japan for example, has a demand for baby fish.**
- Provide incentives along various points in the supply chain to help reduce impacts on losers
- Short-term losers: the economy and the industry; long-term losers: none; Resistance to cooperation stems from short-term costs. Losing and gaining, short-term and long-

term is not always obvious. It is a delicate balancing act, requiring considering the larger picture
- Sometimes, a loser will continue losing depending on the scenario. On a larger scale, reducing fishing effort is not necessarily good for the environment—land-based farming takes its toll as well.
- In the Philippines and Indonesia, fishing effort has significantly decreased due to fuel increase
- Those who stop fishing should be compensated, but those who continue to fish should pay a certain amount for the privilege.

Objective 2: SUSTAINABLE FINANCING

1. What aspects of the tuna trade could be used as management handles to improve sustainability?
- There are already existing management handles in place—a complete a thorough assessment of these should be conducted to see how they can be improved
- Size and or weight requirements may be used as management handles
- Limit the number of buyers—X percent of total catch may be sold to buyers
- Look into existing management handles (a number already in place) to see how they can be adapted to CT and improved (e.g., dolphin-safe tuna, etc).
- Certain regional fisheries commissions already have something in place to help curb IUU
- Allocation of fishing days—"buying" fishing days can help control fishing effort and generate funds for tuna management in tuna producing countries
- Purse seiners should be required to pay for juvenile catch, should they or longlines?

2. Current inefficiencies which could be altered to promote sustainability
- Small sized fish have low value, but if allowed to grow, increase in value.
- Benefits should accrue to those in charge of allowing tunas to grow into adults
- Technology to avoid catching juveniles has not been adequately developed
- Who do we charge? Purse seiners? Purse seiners are very harmful because they catch a mixture of all species—this is a problem that is hard to control—it's still going on—700 tons a day of mixed species. Purse seiners should be controlled to help reduce juvenile catch—but there will be social, economic, political consequences.
- Purse seine versus longline—who catches more juveniles? Sometimes these two types intersect. In Indonesia, many longlines used to catch tuna the right way (10 years ago)—today they have converted to purse seining
- Currently, it is difficult to identify juvenile yellow fin and big eye tunas from skipjacks
- Form a stronger licensing regime—but enforcement has to be strong
- Allocation of fishing days—"buying" fishing days can help control fishing effort and generate funds for tuna management in tuna producing countries (PNG)
- Countries like Indonesia have many traditional fishing boats that are hard to monitor and record
- Lack of political will is a huge detriment—governments are key to solving these problems (lack of enforcement and corruption)
- Lack of awareness and interest among fishers on sustainable fishing—they just want to make money and feed their family
- Unregulated use of FADs has contributed to the problem
- Skipjack prices has increased, which is why purse seine fishing has increased recently
- RFMOs have inadequate "teeth" to penalize governments

2. Incorporating ecosystem services into the pricing of the tuna?

- Realistically, pricing cannot be controlled—it is all about supply and demand in global markets. In Canada, the price of wild salmon in higher than farmed salmon, because it has a higher consumer demand. This can work for "green" products. Consumers should be willing to pay more. Consumer demand for sustainable tuna should be able to dictate pricing.
- Taxation would be more realistic—placing a value on ecological services—revenue from fish landings will add up to billions
- Apply the carbon trading scheme to fisheries
- Mechanism for countries to be penalized for IUU—difficult to enforce because it would implicate the whole country. But nationals who invest in foreign vessels that commit IUU should be penalized by their own governments. Need for a "global" authority to control countries on IUU.
- Fishing fees should be implemented. The Philippines used to implement fishing fees for hand lining in the Moro Gulf (fishers had to pay a certain amount to fish within this protected area) Funds were used to improve management.
- Taxation scheme may be imposed through international treaties—to force countries to comply
- Nourishment costs should also be taken into consideration. How much natural resources does an adult tuna require? This concept is open to much debate regarding the balance of nature.
- Identify one country within the CT that can create an economy of scale to compete with Thailand (medium, long-term)
- Tuna alliance/ cartel concept should be explored more. However, tuna is a perishable commodity which may not work well with this scheme.

5. What other sources of financing could be exploited to raise funds for sustainable tuna management?

- Taxes
- Donation from international bodies
- NGOs investing in land—enough money to buy-off fishers
- Support for small fisherman—subsidies / alternative livelihoods to help reduce fishing effort (e.g., ecotourism). Promote change of profession among fishers. In Hong Kong, 75% of fishermen are willing to change their profession given the right training and opportunities
- Micro-credit schemes for fishermen to draw them away from fishing
- Education
- Address the employment of CT nationals in high sea fishing to help shift pressure

6. "Fixing the broken triangle"?

- Cooperation and funding (in-country) have been challenges within the CT
- Benefits should be clear for governments—substantiate the "what in it for me" rationale
- PNG wants to set up a National CT Working Group—but where will the money come from?
- Regional bodies already exist (WCPFC, IOTC)—which already look into tuna management. CTI should not form another layer on the same issue?
- Is the CTI tackling tuna issues because the WCPFC and IOTC are not adequate for management in this region? Reef fisheries seem ok for CTI to tackle, but tuna seems to be more of an RFMO responsibility. But the CT spans and supplies 3 different tuna RFMOs, so needs are unique.
- CTI can supplement the RFMOs —a small coalition to help support RFMO objectives and provide funds to WCPFC and IOTC (similar to SPC or PNC). A CTI Committee within the WCPFC may be formed, with its own mandates and resolutions. This will help complement, not duplicate functions. Important to establish clear delineation and

level of cooperation between WCPFC, IOTC and CTI, and to take advantage of already established mechanisms.

- Provide clear benefits for countries to cooperate within the CTI / WCPFC framework

Annex 4: Full Working Group Recommendations

A. Science

1. Identify tuna spawning and nursery sites and migratory routes.
2. Research into the real extent in nature of the decline of tuna, better stock assessments, better understanding of life history characteristics, what are the reasons and who are responsible for its decline.
3. Collaboration between scientists and policymakers for better decision-making (set up institutional framework to help translate science into workable solutions). Data collection should integrate all pertinent information (e.g., science, trade and markets, socio-economic conditions, politics, etc), which entails a multi-sectoral approach.
4. Determine fish stock status for every fishing ground to help develop best practices appropriate for each.

B. Communications

1. Report progress at World Oceans Congress in Manado (May 2009).
2. Disseminate results of research to target audiences, relevant stakeholders, including women working in fisheries-related policy and industries.
3. Have CT country members report workshop outcomes to relevant RFMOs at annual meetings. Send workshop report to relevant RFMO Secretariats.
4. Share “best practices” of tuna management measures and enforcement; linkages with trade such as from quality assurance; collaboration with industry, etc.
5. Share lessons learned from PNG national fisheries management regime.
6. Share the background and value-added of the CTI.
7. Raise consumer awareness to strengthen market demand for sustainable tuna management.
8. Improve buyer countries understanding of current policies in producer countries, so as to make realistic demands for sustainable management.

C. Policy

1. Understand existing institutions, organizations and relationships (e.g. WCPFC, IOTC, etc.) in order to complement rather than duplicate their responsibilities.
2. Conduct comparative studies on current management systems and frameworks (industry versus government / regional versus global) to improve and make more relevant to CT issues
3. Identify and agree regionally on the necessary components of good fisheries management.
4. Develop a CT Regional Plan of Action (RPOA) for the management of tuna fishing capacity based on FAO guidelines, including effort controls, gear types, mesh size, FADs, closures, and regulations, etc.
5. Ensure national legislation in CT to comply with importing country requirements (i.e. EU, US, Japan) for both quality assurance and sustainable management.

6. Tuna importing countries work together through RFMOs and other arrangements to implement national legislation for tuna sustainability (similar to measures for phyto-sanitary safety and quality).
7. Launch a “platform”/roundtable for collaboration where key stakeholders, including policy-makers, decision-makers, fishing industry and buyers, can agree on problems and potential solutions for sustainable CT tuna management.
8. Support and strengthen the CTI Secretariat as an institutional mechanism / framework for collaboration to support tuna management in the CT.
9. Utilize the CTI as a small group (like the PNA that sits under the FFA and interacts with WCPFC) to strengthen the regional management of tunas, including in the relevant RFMOs.
10. Improve coordination between CTI and WCPFC and IOTC to complement rather than duplicate efforts (e.g. hold CTI side event at WCPFC in Busan, present also at FFA prior to WCPFC meeting, better resource sharing across CTI & WCPFC, present workshop outcomes to IOTC annual meeting)
11. Set up RFMO quotas as tuna shares that is tradable among countries (with domestic quotas set by relevant coastal countries).
12. Improve collaboration among national departments to support shared issues, (e.g. food and economic security, environmental conservation, etc.) For example, in the Philippines, fisheries management works with “reproductive health” / population control to help reduce pressure on resource use. Education is important, especially for women and girls.
13. Identify external arbiter to resolve potential conflicts (e.g., different data results)
14. Collect data on types and numbers of existing government subsidies relevant to CT tuna.

D. Information Management

1. Develop a standardized, searchable regional database of fisheries profiles and information relevant to CT tuna management. Establish program to improve quality of data, beginning with country collaboration on research and data collection.
2. Examine existing agreements (e.g. IMO) for information-sharing options on IUU fishing, trade, transshipment, and monitoring and enforcement.
3. Work with the private sector to facilitate better sharing of industry data across the CT.

E. Finance

1. Identify potential donors and strategies for supporting tuna research and data collection.
2. Establish Tuna Trust Fund that includes importing countries, consumers and other stakeholders who benefit from sustainable management, to use as a source of additional financing for CT sustainable tuna management and enforcement. This could even be in the form of bonds or deposits by fishers that could be refunded if they comply with all regulations. Dues could be based on catch/ value (similar to WCPFC dues structure).

3. Debt-for-nature swaps used to fund marine projects such as tuna MPAs linked to sustainable fisheries management.
4. Lack of funding and resources should be addressed collaboratively through regional frameworks.
5. Develop programs to provide alternative livelihoods to those leaving the fishing sector permanently in an effort to improve sustainability. Take advantage of those temporarily leaving the sector due to increased fuel costs to help make the transition permanent. Those who get out of fishing can be compensated, but those who continue fishing to pay for the privilege, through license fees, etc.
6. Use micro-credit schemes to encourage sustainable practices or draw fishers away from fishing.
7. Reform lending practices of agencies lending to tuna industry to encourage sustainability.
8. Look into possibilities using existing taxes and levies more effectively for tuna management.
9. Higher quality and demand for sustainable product draws higher prices, which can provide incentives for sustainable management. The price of skipjack should include the external environmental costs it imposes on other species and industries. If skipjack catch is reduced from measures to protect yellowfin juveniles, then the price will increase automatically through market feedback mechanisms.
10. Build public-private partnerships for sustainable fisheries management and reducing juvenile bycatch, with training in CT countries to develop such partnerships.
11. Importing and exporting countries explore size-based tariff systems on tuna – smaller the fish, higher the tariff. May also incorporate other environmental indicators. Awareness campaigns to prevent markets from demanding small fish.

F. Economics

1. Study on economic rent drains in tuna industry to identify losses from current management system and potential economic gains from improved management.
2. Identify incentive structures (e.g., both positive and negative, such as penalties, taxes, education programs, etc.) to encourage responsible fishing.
3. Conduct valuation on resources to inform better and equitable trade negotiations (payment for environmental services). Also include ecological costs of tuna nourishment, as ecosystems must supply enough to feed them.
4. Formation of a CT alliance of states to enhance negotiation positions on pricing and access agreements, similar to the FFA.
5. Manage CT fisheries according to both biological and socio-economic targets.
6. Use carbon trading schemes as model for CT tuna fishery trade.
7. Use fees, licenses as incentives for sustainable fishing and to generate revenue for management and enforcement.

8. Remove or redirect subsidies to increase efficiency and profitability. Take advantages on improved efficiency leading to increased profits to remove or redirect subsidies.
9. Expand catch documentation schemes to improve traceability of catch and help markets identify sustainably caught tuna.
10. Use observer programs to employ catch retention schemes to reduce waste and high grading of catch.

G. Technical

1. Develop a regional management plan for FADs. Eliminate the use of floating FADs and implement requirements on anchored FADs to reduce their negative impacts, such as design, seasonal closures during migrations and spawning, etc.
2. Identify optimal management measures for different gear types fishing in the CT.
3. Improve post-harvest handling practices to reduce waste and improve profit margins for small scale tuna fishers and for those (often women) engaged in post-harvest handling, processing and selling in local markets.
4. Develop new cost-effective technologies to avoid catching juveniles. (Japan is experimenting with certain gears to reduce juvenile catch)
5. Explore opportunities for centralised catch for transshipment for easier monitoring, such as requiring that all catch be first landed on specified transshipment vessels rather than docks.
6. Explore expanding area or regulations for already gazetted MPAs that adjoin or include tuna spawning/ nursery areas (easier political process than establishing new MPAs).
7. Use “World Heritage” designations as drivers to produce protected areas for spawning, given the external pressure to do the requirements.

H. Capacity-Building

1. Training on common data collection and processing. Make use of existing framework under the WCPFC.
2. Conduct local training on proposal writing and maintaining donor relations.
3. Conduct regional training in best practices on tuna management and enforcement.
4. Implement capacity building / training through bilateral or multilateral arrangements (e.g., monitoring, control, surveillance)
5. Address lack of capacity and manpower through regional frameworks.

I. Business/Investment

1. Explore possibilities for eco-labelling and certification of CT tuna fisheries.
2. Develop effective canning capacity within the CT to keep revenues within the region.
3. Target supermarkets and large retailers as an entry point to demanding more sustainable seafood, and pressuring canneries. Take advantage of the benefits of price premiums.
4. Explore possibilities for levy on cans of tuna, to be invested back into responsible management.

5. Brand CT tunas with premium to generate funds to go directly back into conservation and management.
6. Promote tourism for tunas and sport fishing (catch and release; e.g. trading quotas of longline or handline for sports fishers; tag the tunas before releasing)
7. Buyer countries pressure producer countries to provide good data. Importing countries can dictate what to buy and what not to buy based on such data.
8. Use existing associations to better regulate fisheries and trade (e.g. quality assurance).

Annex 5: Results of the Workshop Shared with the CTI – SOM Meeting in Manila

23 October 2008

At the end of a successful and dynamic two and a half days, participants at the APEC-Indonesia's Ministry of Marine Affairs & Fisheries-WWF workshop "Economic Security and Sustainable Tuna Fisheries in the Coral Triangle" agreed upon a set of top priorities. We would like to share the highlights of the priority actions identified in the workshop with the CTI Senior Officials, for consideration as inputs to the CTI Plan of Action:

Science & Information Management

a) Identify tuna **spawning and nursery sites and migratory routes**. (Establish **fish stock status** for every fishing ground to help develop best practices.)
b) Develop an accurate and complete standardized **regional tuna database**. (Establish program to improve quality of data. Country collaboration can start from research and data collection. Establish training programs to develop capacity to collect consistent, high quality data across the region. Build relationships with private sector to facilitate better sharing of datasets.)

Policy & Economics

c) Develop **CT Regional Plan of Action** for the management of tuna fishing capacity based on FAO guidelines.
d) Form a CT alliance of states to **enhance negotiating positions** on pricing and access agreements.
e) Use **existing marine & fishing associations** to better regulate fisheries and trade (e.g. quality assurance).
f) Launch a **platform for collaboration** on tuna management, bringing together key policy makers and decision makers across relevant industry sectors and other stakeholder groups.
g) Manage CT fisheries according to both **biological and socio-economic targets**. As part of this strategy, establish **incentive structures** to increase sustainability, efficiency and profitability.
h) Identify potential donors and **strategies for fund raising**. One key component of a sustainable finance strategy should be a **CTI Tuna Trust Fund**.

Communications

i) **Improve buyer countries' understanding** of current policies in producer countries so as to make realistic demands.
j) Invest in **targeted communications strategies** across CTI tuna activities to ensure effective information flows and shared understanding and buy-in for continued collaboration.

Technical

k) Develop cost effective technology to **avoid bycatch of juvenile tunas.**
l) Develop **regional management plan for FADs**.

These highlights reflect a certain emphasis on short-to-medium term priorities. It was noted, however, the need for these to be set within a longer term enabling financial and political context.

The above recommendations form a subset of over 60 conclusions that will be incorporated into a report for the APEC Fisheries Working Group (delivery: November 2008). The workshop results will further be developed into a set of recommendations for the CTI Secretariat (delivery: December 2008) to be used as input to the 4th CTI Coordination Committee meeting, as well as the next Senior Officials and Ministerial meetings, early in 2009.

Progress on these activities could be reported at the World Ocean Conference in Manado, in May 2009.

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