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Final Report for Workshop on Market-Based Improvements in Live Reef Fish Food Trade (LRFFT)

Sanur Paradise Plaza Hotel, Bali, March 1-3, 2011

Fisheries Working Group

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Preface



The workshop, “Market-Based Improvement in the Live Reef Food Fish Trade” was held at Sanur Paradise Plaza Hotel, Bali – Indonesia from the 1st to 3rd March, 2011 under the heading of Sustainable Trade and Resource. This three-day workshop provided a forum for various stakeholders involved in the Live Reef Fish Food Trade in Asia Pacific Region to discuss and review the need for market based incentives for improving management of the trade in live reef fish.

The APEC-Fisheries Working Group, Ministry of Marine Affairs and Fisheries of Indonesia, WWFs Coral Triangle Program and WWF Indonesia, jointly supported this workshop on Market-Based Improvements in Live Reef Food Fish Trade was largely devoted to examining the best available instruments and approaches for implementing best practices to support a more sustainable live reef food fish trade and the ecosystems the trade impacts on.

Participants included experienced academicians, business actors, bureaucrats, International NGOs, and representatives of 14 APEC economies. The workshop consisted of 3 plenary sessions, invited presentations, 3 breakout sessions, comprehensive discussions leading to a number of follow-up recommendations that were accepted by all participants.

We thank all of the workshop participants for the contributions and energy. Particular thanks to the facilitators and break-out facilitators as well as speakers and all those who sent oral and written comments to the draft write-up. We would also like to thank Mr. Luis Tsuboyama and Ms Evelyn Low from the APEC Secretariat who has guided and supported us in delivering this project and the local organizing committee who has supported both our technical and clerical matters in order to ensure the success of the workshop.

We fully anticipate that the outcomes of the workshop will be beneficial in supporting of the overall objectives of the APEC Fisheries Working Group.



Director of Foreign Market Development

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List of Acronyms and Abbreviations

APEC	- Asia Pacific Economic Cooperation
APFIC	- Asia Pacific Fisheries Commission of FAO
ASEAN	- Association of Southeast Asian Nation
CCRF	- Code of Conduct for Responsible Fisheries
CITES	- Convention on International Trade of Endangered Species
CT	- Coral Triangle
CTI	- Coral Triangle Initiative
EAFM	- Ecosystem Approaches to Fisheries Management
FAO	- Food and Agriculture Organization of the United Nations
FWG	- Fisheries Working Group
GAP	- Good Aquaculture Practice
HACCP	- Hazard Analysis and Critical Control Points
HHW	- Hump Head Wrasse (Napoleon wrasse)
HKCSM	- Hong Kong Chamber of Seafood Merchants
IGLFF	- Indonesian Grouper and Lobster Fisheries Foundation
IISD	- International Institute for Sustainable Development
IUU	- Illegal, Unreported and Unregulated (Fishing)
LRFFT	- Live Reef Food Fish Trade
LRFF	- Live Reef Food Fish
MMAF	- Ministry of Marine Affairs and Fisheries
MPA	- Marine Protected Area
NGO	- Non-government organization
NOAA	- National Oceanic and Atmospheric Administration
PPP	- Private Public Partnership
RPOA	- Regional Plan of Action
USCTI	- US Support to the Coral Triangle Initiative
WWF	- World Wide Fund for Nature or World Wildlife Fund

Overview of Supplementary Project Activities

Key Objectives

The key objectives of this APEC Project were to improve management of the LRFFT, including aquaculture, in the region through market based initiatives and stronger regional cooperation at both a policy and operational level by:

- i) building support for, and agreement on, mechanisms or frameworks that can provide the platform for cooperative engagement on strengthening Standards, and better addressing joint issues of trade and sustainability for the LRFFT and
- ii) Developing a roadmap for implementing policy initiatives and market-based LRFFT conservation reforms consistent with an Ecosystem Approach to Management of Fisheries (EAFM)¹

In particular the project was focused on establishing informal forums or networks to serve as a platform for dialogue and exchange in response to industry needs and building capacity among stakeholders to better manage the trade and to use that to try and effect transformation of the fisheries supply chain. Project objectives were to be achieved through two complementary, industry focused components;

- i) Convening an international workshop(s) to bring together national and regional participants from government and industry and the NGO community. Several national and sub-regional workshops were instrumental in delivering the key objectives and outputs of this project
- ii) Use cooperative solutions to strengthen the application of existing 'voluntary' LRFFT Standards, including via a feasibility assessment for establishing prototype collaborative LRFFT management models (i.e. certification and eco-labeling programs). A series of papers have been developed to review the feasibility of strengthening existing 'voluntary' LRFFT Standards² further through trade mechanisms such as certification and eco-labeling programs and examine opportunities for applying trade mechanisms to this small-scale fishery sector.

There have been ongoing LRFFT programs within the region led by the World Wildlife Fund (WWF) and the Coral Triangle Initiative (CTI). This APEC supported project has helped secure regional governance and policy outcomes that will be pivotal to effecting long-lasting and meaningful reform in this regional trade.

¹ APEC project FWG #206-FS-01.1; Ecosystem based approach: A comparative assessment of the Institutional Response in Fisheries Management within the APEC Economies. The case of Demersal Fisheries (Phase 1)

² APEC project #205-FS-01.1; Creating the International Standard for the Trade in Live Reef Food Fish

Key Project Outputs

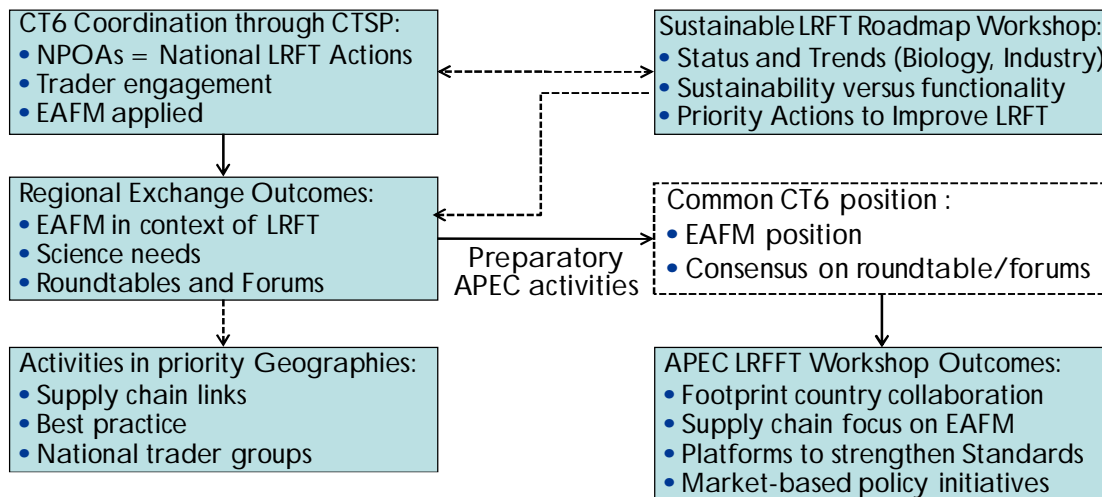
The project goal was to facilitate a multi-stakeholder process involving business, industry, scientific and technical experts and the community of Asia-Pacific economies to develop regionally relevant and cooperative approaches to improve management of the LRFFT.

The promised outputs were delivered through a series of workshops and commissioned reports. In addition to the workshop proposed as part of this proposal workshops were scheduled through leveraging existing programs, such as the USAID-funded US Coral Triangle Initiative and WWF's Coral Triangle Program (CTP) to host preparatory regional-level workshops that contributed to achievement of outcomes. Two regional level meetings were convened (see Figure 1):

1. The 1st Regional Workshop: "Towards a More Sustainable Live Reef Food Fish Trade in the Coral Triangle" involving NGOs, academic community and government representatives was convened in Hong Kong in December 2009
2. A Regional Exchange workshop comprising six Coral Triangle governments and selected resource experts was convened in Sabah, Malaysia in October 2010.

Each meeting built on and fed into each other with this APEC project being the culmination of earlier efforts and crucial in helping secure regional governance and policy outcomes pivotal to effecting long-lasting and meaningful reform in this regional trade.

Figure 1: Sequence of regional workshops



In addition to these workshops, two publications were commissioned by WWF's CTP to inform the debate going forward, these being:

1. A supply chain review and market intervention analysis with the objectives of: reviewing, updating, and deepening the collective understanding of the current supply chain for the LRFFT and using this to assess the implications for the viability of potential market or policy interventions aimed to create a more environmentally sustainable LRFFT.

2. A report on the possible development and implementation of a live reef food fish trade certification & accreditation program with the objectives of: reviewing existing certification and accreditation programs, reviewing and commenting on the content of the current International LRFFT Standard, reviewing the feasibility of strengthening existing 'voluntary' standards further through establishing a prototype certification scheme and providing a proposed framework for how to move forward with a certification and labeling of LRF fisheries

A summary of the major findings of these activities and a series of recommended actions from each as they relate to the project outputs follows.

1st Regional Workshop: "Towards a More Sustainable Live Reef Food Fish Trade in the Coral Triangle, Hong Kong, December 2009"

This was a technical workshop, supported in part by the International Coral Reef Initiative focused on bringing together practitioners to present the most up-to-date information on the LRFFT and to:

- i. Identify and prioritize existing knowledge and key information and regulation gaps
- ii. Outline a roadmap and strategy to address unsustainable aspects of the LRFFT

The outputs of this workshop have contributed to Sub-Objectives 1, points a), b) and e) and Output 5. i. and iii. of the proposal document.

The outputs from this workshop included a comprehensive update and analysis on:

- Trade data trends for major source and consumer countries, price trends and market demand forecasting, including mariculture production including full-cycle and capture-based mariculture
- Knowledge gaps of the status and trends of trade in LRFF at both the national and regional scale
- Current policy and regulatory framework at local and national levels in both source and demand economies, including multi-lateral agreements and new initiatives;
- demand-side and supply-side strategies at national and regional scales for strengthening partnerships between governments, NGO's, institutions and the private sector
- The development of a strategic roadmap to meet priority biological, ecological and socio-economic indicators that could make the LRFFT a more functional trade and consolidate future efforts at the national and regional level to improve the LRFFT across the entire Coral Triangle

A series of recommendations from this workshop are summarized in the table below.

Issue	Recommendations
<p>While its generally accepted that over-exploitation is prevalent in the LRFFT, there remains considerable gaps in knowledge of LRFF stocks with little or no data available at national levels to inform management, while regulations do not exist for LRFF fisheries in most countries</p>	<p>There is limited capacity in-country to implement sophisticated monitoring programs to collect data: Priority science needs must be matched with in-country capacity to develop simplified approaches that can be used to identify “trends” in specific indicators (i.e. average fish weight and fish size). Efforts should be directed at:</p> <ul style="list-style-type: none"> • developing simple “rules of thumb” yield estimates such as crude estimates of annual yields per linear or square kilometer of reef, under various conditions; • A review of legislation specific to live reef fish needs to be undertaken for countries engaged in the LRFFT;
<p>The ongoing export of Illegal, Unreported and Unregulated LRFF by fishing vessels</p>	<p>Live transport boats continue to exploit limited enforcement capacity in remote parts of the CT region to illegally collect and export LRFF, which often include the CITES listed humphead wrasse and other endangered grouper species.</p> <p>Regulation in Hong Kong that exempts registered fishing vessels from having to declare their cargo of live fish is hindering efforts at regulatory reform. Better outcomes will require implementing prioritized actions at supply and demand-end of value chain such as:</p> <ul style="list-style-type: none"> • imposing temporary moratoria to prohibit export of keystone species (i.e. HHW); • requiring exports only be permitted from designated ports under newly enacted Ports State Measures agreements; • supply country demonstration of commitment to reform such as forming industry alliance’s to pilot BMP among members • increased government to government dialogue facilitated by NGOs (e.g. WWF) and regional platforms (e.g. USCTI)
<p>With increasing demand for LRFF and with stocks already showing signs of overfishing, mariculture is being increasing identified as the means to meet</p>	<p>Aquaculture will not solve the issue of resource overexploitation and other regulatory and livelihood measures are necessary to compliment it if sustainability remains the main goal . these include:</p> <ul style="list-style-type: none"> • stability in production, quality of product and adequate,

Issue	Recommendations
future	<p>but not over-supply is necessary for aquaculture industry to meet market expectations</p> <ul style="list-style-type: none"> • Promotion of full cycle responsible mariculture production in accordance with environmental best-practice; • This is challenging where small-scale producers in remote locations dominate and increased emphasis on use of cooperatives is needed
Wild-stocks are showing signs of heavy localized over-exploitation with culture of juvenile / undersize fish becoming a “livelihood” industry	<p>In many locations, where stocks are heavily overfished, wild-caught juveniles are being captured for 'grow out' in cages until they reach market size – a practice that will be disastrous in the long term. In some countries governments consider this as an “alternative livelihood. Caged fish don't contribute to replenishing wild stocks and high rates of extraction of LRFF are already resulting in fishing down the food chain, with unknown long-term ecosystem impacts. Emphasis needs to be on “recovery” of stocks in relation to LRFFT.</p>
In order to effect <u>real</u> change, whole supply chain-of-custody initiatives and refinement of existing business models must be supported	<p>There is a need to work along the entire supply chain of the LRFFT, from reefs to dinner plates and to identify crucial intervention points for effecting change. In this context, management of the LRFFT would benefit from:</p> <ul style="list-style-type: none"> • Multi-stakeholder initiatives being instigated at supply and demand ends of market chain that will require support from NGOs to link sellers and buyers interested in supporting more responsible capture and marketing of LRFF; • Business-models where traders of fish in source countries can be more “independent” can lead to improved stewardship of resources. As such initiatives that provide financial support (e.g. micro-credit, sustainable financing) for traders to exit from a “patronage” relationship will provide incentives for improved practices and longer sustainability horizons
There continues to be conflicting and disparate data on markets and trade and in particular trade of LRFF within mainland China	<p>Scenario analysis and anecdotal reports suggests demand in the main consumer markets is evolving with China emerging as major source of increased demand for LRFF. This is evidenced by price for LRFF being as much as 50-75% higher than in traditional Hong Kong markets. Increased demand from China will be the major driver of sub-standard practices becoming more prevalent and perverse in their</p>

Issue	Recommendations
	<p>outcomes But “reliable” data on trade remains elusive. To enable more informed discussion between stakeholders there is need for:</p> <ul style="list-style-type: none"> • dedicated research and analysis of movements of LRFF between Hong Kong and mainland China and trends in prices is required and a significant study should be conducted as a priority • Need for stronger engagement with government agencies in mainland China (e.g. Chinese Academy of Sciences) to implement MOUs and joint research programs;
<p>Workshop outcomes need to be adopted into other regional and national programs to maintain a momentum</p>	<p>There are a number of current and ongoing LRFFT initiatives in the region the present an opportunity to continue to push for improvements in how the LRFFT is managed at national and regional scales. Efforts should be targeted at:</p> <ul style="list-style-type: none"> • Identifying prioritized actions requiring trans-boundary and regional focus and making sure these are incorporated into national and regional work programs and activities such as: <ul style="list-style-type: none"> ○ USCTI LRFT Regional Exchange workshop; ○ APEC FWG LRFT workshop ○ Coral Triangle Support Program (CTSP) regional activities in CT6 countries ○ National CTSP programs (e.g. Philippines and Malaysia) • Utilize and leverage multi-donor agency support for LRFT activities from CTSP partners (e.g. NOAA) and external donors in CT6 source countries (e.g. Philippines)
<p>Acknowledging that whole of supply chain approaches are needed to achieve reform in the LRFFT, there is a need to build and manage multi-stakeholder (government, NGOs and private sector) alliances</p>	<p>Extensive effort is needed to build agreement on those mechanisms or frameworks that can provide a platform for cooperative engagement with the private sector. These include</p> <ul style="list-style-type: none"> • refining and implementing measurable standards of best-practice such as the International LRFFT Standard with participation and support of all stakeholders • establishing informal forums or networks to serve as a platform for dialogue and exchange in response to industry needs and building capacity among

Issue	Recommendations
	stakeholders to better manage the trade; <ul style="list-style-type: none"> • training on the International LRFFT Standard as a voluntary Code of Practice for industry

Regional Exchange Workshop in Support of the Coral Triangle Initiative, Ecosystem Approaches to a Sustainable Live Reef Fish Trade in the Coral Triangle Sabah, Malaysia, October 2010

The Coral Triangle Initiative (CTI) on Coral Reefs, Fisheries and Food Security involving the six economies of Indonesia, Malaysia, Papua New Guinea, the Philippines, Solomon Islands and Timor-Leste aims to ensure the region’s marine resources sustainability including the LRFFT. A CTI workshop on the LRFFT was convened to define regional-level collective actions for achieving more effective management and a more sustainable LRFFT in the Coral Triangle including through the application of an ecosystem approach to fisheries management (EAFM) to improve sustainability; reform of fisheries policy and collaborative engagement with industry in support of sustainable management practices.

This workshop was an opportunity for the CT6 countries to blend sharing, policy collaboration and action and also as a preparation for the upcoming APEC LRFT Workshop to be hosted by Indonesia. The workshop resulted in:

- i) **An initial review** of the existing region-wide policy framework EAFM and the LRFT, and sharing of relevant case studies;
- ii) **Identification of** science needs among CT6 countries for improving LRFT management and practical applications around collecting that information at pilot sites
- iii) **A review of** multi-stakeholder forums or roundtables that may be appropriate to the Coral Triangle countries and the LRFT;
- iv) **An agreement on** a common set of issues for presenting a coordinated CTI regional position at subsequent regional fora; and
- v) **the identification of** next steps and collective efforts towards reforming the LRFT, including engagement beyond the CT6 countries

The outputs of this workshop have contributed to Sub-Objective 1, points c), d) and g), Sub-Objective 2, points b) and c) and Output 5. ii. and iii. of the proposal document.

Building a consensus for the CTI on managing the LRFT was a core workshop objective. Recommendations for collective action revolved around the three main workshop themes.

Session / Theme	Outputs / Outcomes
1. Common Understanding of and Support for EAFM	<ul style="list-style-type: none"> i. To base national level fisheries management policies on EAFM principles ii. CT6 to encourage (now) and require (later) Hong Kong /China governments to help ensure imported LRFF are from responsibly managed, legal sources (i.e. IUU) iii. Complementary management standards be developed, promoted, and enforced across CT6 for high risk LRFF species (e.g. Hump Head Wrasse) iv. Encourage and facilitate Public-Private Partnerships for full-cycle aquaculture/ mariculture of important LRFT species using Better Management Practices v. Standardize the management of LRFT across the CT6 countries (codes of practice; traceability) vi. Standardize statistical data needs relevant to CT6 capacities ,to improve the management of LRFT

Science as a core EAFM component is under-valued in Coral Triangle countries. there are substantial gaps in knowledge relevant to LRFF fisheries as well as to all coastal and inshore finfish fisheries. Addressing priorities will require external support and partnering amongst CT6 countries (governments, NGOs, academic institutions) and international agencies with examples of support including technical assistance, collaborations and engaging additional technical partners such as NOAA.

Session / Theme	Outputs / Outcomes
2. Science Needs for Management of LRFT, including performance indicators	<ul style="list-style-type: none"> i. To determine the seasonality, location and behavior of Fish Spawning Aggregation Sites (FSAS) by species ii. To improve knowledge of status of stocks of coral fish and their habitats to inform management on exploitation rates, particularly in relation to stock recovery iii. To support development of “viable” full cycle mariculture production thru improved knowledge and technology transfer, technical assistance and market intelligence iv. To improve traceability (i.e. chain of custody) of LRFF coming from wild-caught and aquaculture production

The formation of an inclusive CTI multi-stakeholder initiative (also known as a Round Table) that seeks to ensure the sustainability of the LRFFT in recognition that all actors along the LRFF supply chain have an important role to play in the sustainable production of LRFF.

Session / Theme	Outputs / Outcomes
3. Developing regional multi-stakeholder Forums and Roundtables	<ul style="list-style-type: none"> i. Formation of an inclusive CTI multi-stakeholder initiative such as a forum or roundtable can aid in ensuring sustainability of the LRFT ii. Issues and concerns affecting the LRFT include <ul style="list-style-type: none"> – Across CT LRFT and species under threat as result of over-exploitation and unsustainable fishing practices – RPOA and NPOAs identify need for practical solutions to LRFT sustainability involving the private sector – Multi-stakeholder initiatives /platforms (Forums or Roundtables) may be an appropriate mechanism for engaging actors along LRFT supply chain iii. <u>Technical Working Group</u> established to Formulate and endorse TOR to establish a sub-committee / working group to consider appropriate model including composition involving <u>markets and the private sector</u>

Session / Theme	Outputs / Outcomes
4. Presentation of outputs and recommendations from Regional Exchange at APEC Fisheries Working Group (FWG) supported project “Market-Based Improvements in the Live Reef Food Fish Trade” to be held in Indonesia in early 2011	<ul style="list-style-type: none"> i. Two presentations made at the APEC FWG workshop : <ul style="list-style-type: none"> – A Senior Official to present on behalf of the CTI that <ul style="list-style-type: none"> a) CT6 working together to manage LRFT in their waters more sustainably under and EAFM b) CT6 seeking the cooperation of other nation states and LRFT stake-holders – Designated Participant from the CTI LRFT Regional Exchange workshop to present workshop results including recommendations to the SOM

In terms of a “road map” going forward, forward following the APEC workshop, between March and June 2011, preparations for first CTI Forum on Management of and International Trade in Coral Reef-Based Organisms including developing national level networks will be undertaken with the first CTI Forum meeting to be held with support of CTI Secretariat or EAFM Working Group in September 2011.

A Report On The Possible Development And Implementation Of A Live Reef Food Fish Trade Certification & Accreditation Program

The outputs of this workshop have contributed to Sub-Objective 1, point f), Sub-Objective 2, point a) and d) and Output 5. iv. of the proposal document.

The primary objectives of this report were to provide direction and strategic advice as to the possible development and implementation of a LRFT certification and accreditation program, including:

1. A review of various certification and accreditation programs, including the International LRFFT Standard to compare their certifiability and the rigor against the international guidance for standards production (i.e. ISO Guide 2, ISO Guide 72 and ISEAL Code For Standards Setting) and a comparison of these with FAO's Guidelines for Eco-labeling of Fish and Fishery Products from Marine Capture Fisheries
2. Provide a proposed framework for how to move forward with a certification and labeling of LRF fisheries giving close consideration to i) whether the LRFFT would need a separate eco-label and/or certification and accreditation program, ii) How the existing International LRFFT Standard could operate and how it should be structured in the short and medium term, iii) costs of creating, administering and maintaining a certification scheme, iv) Chain of custody issues distinctive to the certification and eco-labeling of live fish and v) identifying post-certification needs;
3. A critical review of the feasibility of strengthening the existing 'voluntary' standards through establishing a prototype certification scheme.

In terms of #1 above, the following table summarizes the above comparisons.

Table 1 - Summary Of Fishery Standard Comparisons

Standard	Easy to certify consistently to the standard	ISO Guide 72	ISO/IEC Part 2	ISEAL Code Of Conduct	FAO's Guidelines for Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries
<i>The International Standard for the Trade in Live Reef Food Fish (TLRFF)</i>	Clear & Simple				
<i>Marine Steward Council (MSC) Principles and Criteria & MSC's Risk-based approach to</i>	Complex system				Does NOT comply with full third party independence
<i>Marine Aquarium Council (MAC) Standards</i>	Clear & Simple				
<i>The Global Aquaculture Alliance Scheme (GAAS)</i>	Simple				Does NOT comply with full third party independence
<i>ISO 9001: 2008 – Quality Management System (QMS)</i>	Clear & Simple			ISEAL criteria is based on ISO	
<i>ISO14001: 2004 – Environmental Management System (EMS)</i>	Clear & Simple			ISEAL criteria is based on ISO	
<i>Friends of the Sea Farmed Products Certification Criteria</i>	Simple				Does NOT comply with full third party independence
KEY					
	Excellent=				
	Very Good=				
	Good=				
	Basic=				
	Poor=				

Throughout this report, the assumption that certification was the final solution for sustainable harvesting of LRF was not prophesized. The emphasis was on the feasibility of strengthening existing 'voluntary' standards further through establishing a prototype certification scheme, tagging into international certification programs such as ISO14001 or making use of existing systems such as the Marine Stewardship Council (MSC).

Consideration was also given to the efficacy of a certification program separately for the LRFFT given the unique aspects of artisanal/subsistence fishing, aquaculture and the transportation of live fish products. This report discussed ultimately drew conclusions as to the way 'certification' may be used to maintain sustainability of the LRFFT.

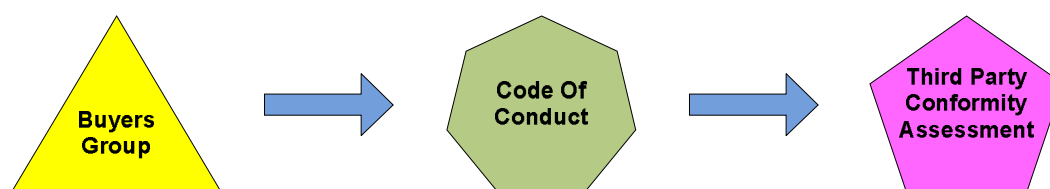
The existing main certification programs within the marine fisheries sector such as the Marine Stewardship Council (MSC) and the Marine Aquarium Council (MAC), both have chosen not to undertake fisheries certification directly but to be certifier accreditation and standards writing bodies. There is no reason why in theory, a specific body (e.g. Live Reef Food Fish Certification Council) cannot be established to perform accredited certification of the LRFFT Chain of Custody if properly regulated to ISO17021 by an accreditation agency. One benefit of this approach is that such certification would comply with the FAO Eco-labelling Guidelines and will be financially self sustaining as certification is a commercial activity.

Involvement of NGO's over the last ten years with certification programs such as the Forest Stewardship Council (FSC), MSC and MAC has helped to produce good international certification standards through inclusive stakeholder consultation. There are however, still questions around the credibility of certification offered by these programs.

An opportunity may exist for a more meaningful meld between NGO interests and conventional 'ISO Type' certification programs. The move by the fishing industry to embrace international quality management and environmental management such as ISO9001 and ISO14001 has been slow but this is slowly changing with several importers of aquarium species engaged in looking at using ISO9001 and ISO14001 as certification standards. Outside of the seafood and fishing sector, ISO certification is becoming more established with over 1 million organizations now being certified to ISO9001. This report proposes that for the LRFFT, the certification of the members of the chain of custody for the LRFFT be to ISO9001 with the existing International LRFFT Standard being used as the criteria by which performance is measured to that standard.

The role out of such a program will take time and it is suggested that a BASEC type approach is adopted over a five year period as Figures 1 below.

Figure 1 - Suggested Progression of an LRFFT Certification Program



Two significant aspects of this approach are that certification will be much cheaper as it can be delivered locally in most cases and not require 'western' certifiers to be used. The proposed LRFFTCC will be self-financing which has not been achieved by MAC or the MSC to date and looks as though will not be in the future.

THE LIVE REEF FOOD FISH TRADE (LRFFT) A SUPPLY CHAIN REVIEW AND MARKET INTERVENTION ANALYSIS

This document summarizes the results of a rapid supply chain assessment for the Live Reef Food Fish Trade (LRFFT) with two primary objectives, these being to:

1. Review, update, and deepen the collective understanding of the current LRFFT, supply chain including the flow of fish, estimated value at each point on the chain, the number of actors involved at each link and an understanding of the relative dynamics and power structures contained within and along the market chain
2. Assess the implications for the viability of a range of potential market or policy interventions aimed to create a more environmentally sustainable LRFFT

The outputs of this workshop have contributed to Sub-Objective 1, points a), c) and f), Sub-Objective 2, point c) and e) and Outputs 5. ii. of the proposal document.

Market-based interventions (e.g. certification, buyer standards, moratoria, consumer guides, etc.) are indirect mechanisms to reform practices on the water. The design of new interventions should therefore be informed by the limitations of influencing the supply chain. At a minimum, a good intervention design requires an accurate understanding of the current structure and dynamics of the trade. In particular, it is important to understand the limitations of the portfolio of options given those realities.

According to this report, the most commonly used market-based approaches in North America and Europe (e.g. consumer advisory work, major buyer purchasing standards, certification, and fishery improvement partnerships) are likely to have very little traction in this fishery in the next several years. Efforts to change public opinion (e.g. celebrity chefs in China) may have some traction, but will take many years if not decades to reach a sufficient scale to choke demand. Furthermore, trade measures are seen as being able to do little to directly influence fishery practices on the water with tightening the trade is at best only a starting point in a multi-decadal effort to improve this industry. According to the report authors, a handful of clear priorities emerge on the trade front:

1. **Fix the Hong Kong imports loophole** – Historically, any LRFF landed by fishing vessels in Hong Kong has not been classified as imports or food and is believed to be the primary route for IUU fish. In early 2011, the Hong Kong Government announced the implementation of a new Food Safety Ordinance, which reclassifies LRFF as food, requires all local food producers, importers and distributors to register with the government, and to keep trade record (one step up and down the supply chain) for

- different time-frame depending on the food categories. The new ordinance may substantially improve data tracking.
2. **Link import data with export data** – To help reduce IUU, Hong Kong should share import country-of-origin data with relevant government agencies in source countries.
 3. **Track Hong Kong re-export data** – Currently, Hong Kong does not effectively track re-exports of LRFF to mainland China, especially those shipped by vessels or speedboats, preferring instead to turn a blind eye to LRFF entering China.
 4. **Control vessel-based imports** – Hong Kong should consider creating a special public vessel registry for LRFFT vessels. This would allow exporting countries to black-list vessels involved in IUU.
 5. **Create allies in the air carriers** – Pressure international air carriers to develop internal LRFFT policies, potentially only carrying fish for which there is proper documentation from complying states.
 6. **Improve granularity of Chinese import data and enforcement** – Encourage China to develop better data tracking and enforcement on imports, primarily to discourage the illegal trade of LRFF that are skipping Hong Kong and being routed directly to China. China is not currently implementing CITES Appendix II for marine species, which represents a massive loophole that needs to be improved not only for the LRFFT, but for marine species generally.

From this supply chain review, a number of factors or challenges were identified as likely to complicate any effort to reform the trade through market-based approaches although a number of positive factors were also acknowledged.

Challenges to improving the LRFFT through market approaches
1) In terms of a better supply of LRFF, there is currently insufficient supply of LRFF that meet “best practices” at the production level apart from Australia and some farmed product. From a market perspective it is difficult to direct buyers to something “else” that is better.
2) Illegal fishing is widespread. Despite laws and regulations being in place in most countries, they are poorly enforced. Policy reform efforts focus considerable attention on protecting spawning aggregation sites, which is critical but not sufficient. In a few places there are concentrated efforts to set up TURF-like systems, but these are the exception.
3) Many fishermen are independent, largely unregulated, and have few viable alternative livelihoods. Some fishers are trapped in a system of patronage and debt requiring they sell their product exclusively to a middleman who provides boats, gear and loans during bad seasons. Others earn lucrative incomes they do not want to give up.
4) There is no existing certification system that could be applied and it would be costly to develop one. Characteristics of the trade and poor management of fisheries make LRFF not appropriate for MSC. The Fishery Improvement Partnership (FIP) approach used by WWF, SFP and others is not promising for the LRFFT because of a lack of concentration of engaged buyers capable of exerting downward pressure on producers and processors (i.e. fishers and traders).

5) Illegal trade is a major problem. For major source countries (Indonesia, Malaysia, Philippines) illegal trade occurs between them (e.g. Philippines into Malaysia), as well as between all three into Hong Kong via transport boat. Efforts to limit exports (e.g. proposed Palawan quota system) would be circumvented through illegal shipments or transshipping to more lenient municipalities.
6) The end markets for the LRFFT do not have any brand vulnerability; they are mostly individual restaurants in China, on Hong Kong, and in other parts of Asia. There is little interest in CSR among any segment of the LRFFT, save multi-national hotel chains (e.g. Marriott) and a few selected restaurants.
7) No segment of the industry appears dependent on multi-laterals or Equator Banks for financing.
8) At current price levels the wild product (LRFF) is supply limited, rather than demand limited, meaning that production is relatively price inelastic at current levels. Low opportunity costs mean fishermen will continue to race for fish, even if the price falls. Demand is also set to grow with the rising middle class in China. Fractionally reducing demand would not linearly reduce fishing effort.
9) Similarly, the increasing scarcity of the product is not an effective limit. Because LRFF are partly a status symbol, lower value species which may be more abundant are not effective substitutes for higher value species. Rather, they are complementary goods. The scarcity of the product may actually <i>stimulate</i> demand despite higher prices (e.g. bluefin tuna or diamonds).

Positive factors in efforts to improve the LRFFT through market approaches
1) The growth in aquaculture production may ultimately be able to ease the fishing pressure on some species if it can reduce price escalation, although collection of juveniles for grow-out and feed issues are challenges. Data from Hong Kong indicates average prices have fallen marginally over the last decade, while prices for select wild caught species continue to rise. Farmed fish now represent a large majority of overall production made up of low value grouper species (i.e. green grouper) some mid-priced species (i.e. tiger grouper) and one high priced species (highfin grouper)
2) Traders, who are relatively powerful in LRFFT, presumably have an interest in ensuring long-term supply. While fishermen also have an interest in sustainability, it is more difficult to solve the commons problem in the absence of strong fishery management.
3) Supply chains are not that long – there are typically just 4-5 steps in the chain. Importantly, there are a few points of aggregation in the supply chain (i.e. choke points), including Hong Kong and Chinese wholesale markets, LRFF import vessels and commercial freight airlines.
4) The illegal trade may be a natural point of intervention – in particular the carrier vessels that come into the Hong Kong port may be vulnerable to more stringent regulations, traceability requirements, and bi-lateral cooperation in the event of stricter importing country legislation.
5) Grouper are semi-sessile and may be more easily managed with community-based

systems or TURFs than more migratory pelagic fish. There are a handful of efforts to create community-based management that are promising if they can be scaled up. Community-based management systems have better prospects for combating IUU and improving long-term decision making.

6) There is increasing use of air freight to transport LRFF into Hong Kong and mainland China. These companies (Cathay Pacific, UPS, DHL, etc.) have much more vulnerable brands, and may be amenable to working with governments to improving the legality of the trade.

7) The Chinese are slowly shifting in their perspectives toward sustainability. In the next five years, it is possible that there will be a very different dialogue compared to what is taking place now. WWF Hong Kong is starting to lay the ground work now around building consumer and corporate awareness of seafood sustainability issues.

This report laid out four (4) potential campaigns that could be built around the LRFFT. The underlying objective of a campaign is to create incentives for better fishery practices on the water. There needs to be a compelling rationale to leave fish in the water and to avoid destructive practices, including positive incentives such as a price premiums, enhanced market access benefits, or long-term economic gain associated with rebuilding stocks and disincentives, such as penalties associated with effective enforcement, strong measures against illegal trade (boat seizures, jail time), or a reduction in overall demand by influencing consumer tastes. This review divided the world of market-based interventions into four basic categories:

1. **Certification and supply chain engagement:** Efforts to create positive incentives for fishermen to pursue better practices (e.g. eco-labeling or voluntary purchasing standards by industry).
2. **Consumer engagement:** Efforts to reduce demand for LRFF or to increase consumer demand for better products (e.g. consumer education, corporate buyer engagement).
3. **Substitution:** Efforts to promote alternative products (e.g. promoting aquaculture of LRFF in order to reduce price escalation and facilitate action by the supply chain).
4. **Trade interventions:** Efforts to better restrict or better regulate aspects of the trade of LRFF (e.g. tariffs, bans, and trade regulations).

Certification and supply chain engagement: potential to create positive incentives for fishermen through certification or enhanced market access?

The most commonly discussed approaches fall under this category include:

- Certification or eco-labeling of better product to increase price or improve access
Certification or eco-labeling *is not* promising for LRFF in the foreseeable future with the main bottleneck in transformation and compliance with MSC or other eco-label being the absence of effective fishery management for reef fish, compounded by the strong role of illegal and undocumented trade. A compounding bottleneck is the lack

of a market driver for better fishery management and performance and no evidence of willingness-to-pay for better practices.

- Improved market access for better actors through Fishery Improvement Partnership (FIP) approaches, wherein buyers selectively purchase from fisheries engaged in improving their practices

FIPs are an emerging tool in the seafood world involving NGOs partnering with major seafood buyers to promote reforms and are a more promising approach than certification in the near term. A scenario wherein major buyers of LRFF agreed to work with a particularly productive fishery and fishery managers is possible, although obstacles exist such as the formal starting point for FIPs being an MSC pre-assessment which would highlight major shortcomings (overfishing lack of management, destructive gear, etc.), but not specify necessary solutions. A FIP can only be enacted if there is a solution towards which the FIP is working. One positive might be if traders were able to buy or sell exclusive sourcing rights for a particular geography (i.e. a TURF system for traders). Target species are mainly sedentary with small home ranges and able to be “managed” under a TURF system

- General promotion and voluntary adoption of best practice standards

The existing International Standard for the LRFFT was released in 2004 covering both wild and farmed LRFF and the trading activities. Despite the good work that has gone into the standards, it is unclear what its utility is. For the last five years “The standard has been lying around, gathering dust” – essentially “It’s a standard without a home; an orphan.” Relying on the promotion and adoption of a voluntary code of conduct to transform this trade has several shortfalls including that: the “standard” is not currently a standard. It is a statement of principles rather than a set of actionable standards. Turning those principles into actionable standards would be a major undertaking. Organizing a roundtable is the typical path to turn principles into actionable standards; an approach that has been used with aquaculture, palm oil, sugar cane, beef, and other commodities. While a roundtable with industry engagement is being pursued, a serious issue is that there is currently no product that would meet the Standards bar, creating supply challenges for those industry participants who would voluntarily participate. One venue to think about broadening the application of these standards is through the Hong Kong Chamber of Seafood Merchants, an association representing the majority of the LRFFT through Hong Kong, with the goal being the Chamber collectively adopting a series of minimum standards (e.g. minimum size standards, a prohibition on cyanide use, etc.).

Consumer engagement: potential to reduce or shift demand toward better LRFF products in relevant markets (e.g. consumer education or corporate buyer engagement)

Efforts to substantially change the nature of LRFF demand will be extremely challenging. Reducing demand in the foreseeable future, such that it substantially reduces fishing pressure on the water will be difficult if not impossible for reasons including:

- The sustainable food movement in Hong Kong and mainland China is at least a decade behind other parts of the world. By way of example, there is very limited

- market penetration of organic food, FSC-certified timber, MSC-certified fish, fair trade coffee, and other eco-labeled product in these markets. Sustainable seafood has limited traction even in North America, where only a fraction of consumers actively vote their conscience with their wallet
- Any growing eco-consciousness in China will be fighting against a massive market expansion embodied by the increase in the nouveau riche, who are more likely to purchase LRFF than others
 - “Sustainable seafood” awareness will need to be built from near scratch and even if it succeeds it will not crimp demand. By way of example, market campaigns in the U.S. around farmed salmon, Chilean sea bass, shrimp, while relatively successful, haven’t dented consumption despite a decade of work. In Hong Kong and China, the market is less receptive to the eco-sustainability message, and has not been primed with 15 years of campaigning.
 - The idiosyncrasies of LRFF make it more difficult to influence. As a status symbol the consumption of LRFF commands a price well above its protein value and like shark fin soup, it will be difficult to fight against the cultural tide. Even if the price of LRFF fell substantially, fishing pressure is relatively price inelastic at current price levels (i.e. it might continue to occur at nearly the same rate) and in some instances fishing pressure may actually intensify so as to maintain overall yields.
 - With respect to targeting corporate actors or major buyers, the challenges are nearly as large. As discussed, the most likely companies to address LRFF are the large hotel chains, such as Marriott, which already have an internal, international position on sustainable seafood. Apart from Marriott, there are no major corporate commitments in Hong Kong or mainland China around seafood

Substitution: Potential of efforts to promote alternative products (e.g. LRFF aquaculture in order to reduce price escalation and facilitate action by the supply chain)

Promoting responsible full-cycle mariculture of LRFF as a market substitute for wild product, may one positive in this campaign; effectively increasing the price elasticity of demand for wild products. Why buy a wild tiger grouper for \$100 when you can buy a farmed tiger grouper for \$50? Mariculture also transforms the supply chain, enhancing producers’ and buyers’ ability to reject bad products. However while it may be an important supporting tactic, is unlikely to generate direct positive change on its own for several reasons.

- Increasing supply of farmed fish won’t necessarily reduce demand for wild LRFF as the two products are already treated differently by the market (e.g. Hong Kong consumers significantly prefer wild fish over farmed fish)
- The prestige status associated with wild LRFF and that it is a luxury item may mean that demand remains relatively price inelastic, particularly during high demand periods (e.g. Chinese New Year)

- There is conflicting evidence as to how mariculture could influence prices. With a growing demand and shrinking supply, prices for wild-caught product likely to rise despite the upward trajectory of farmed fish.
- From a production standpoint, grouper farming (particularly cage grow-out) is among the worst environmental performers compared to other aquaculture sectors and commodities due to feed inefficiency, cage farming effluent and habitat impacts and the potential for disease transfer, etc. Promoting grouper farming as a means to indirectly reduce pressure on wild stocks will require NGOs adopt a much nuanced position. An alternative is to focus solely on environmental effects of aquaculture, through promoting *better* grouper farming practices.
- The industry is growing rapidly of its own accord, driven by market demand and technological improvements. It is unclear what the NGO community could do to further promote it.

Trade interventions: Are there viable trade-based interventions that can improve LRFF practices? (e.g. tariffs, bans, and trade regulations)

Currently, efforts to improve the market for LRFF are undermined by illegal trade making IUU a natural focal point. Moreover, focusing on “not selling illegal fish” is an easier message to deliver to, than is “selling sustainable fish.” What is most needed is a political discussion about how to deal with Chinese and Hong Kong demand and managing that demand in the future. Trade interventions can be split into two types of approaches:

1. Improving existing systems to help stem the illegal trade of LRFF

- **The Hong Kong imports loophole** – Historically, LRFF landed by Hong Kong fishing vessel in Hong Kong have not been classified as imports or food and no tariffs are paid on the product. This is the primary route for IUU fish. Hong Kong’s growing attention towards sustainability suggests policy advocacy to have LRFF landings by fishing vessel classified as food may bear fruit. WWF Hong Kong with support from WWF’s Coral Triangle Program is working with government to smooth the passage of a new Food Safety Ordinance to close this loophole.
- **Link import data with export data** – To help reduce IUU, Hong Kong should share import country-of-origin data with relevant source country government agencies. This will not be a cure-all, as creative importers and exporters will presumably look for ways to circumvent this, but it would add an additional layer of accountability.
- **Control vessel-based imports** – Hong Kong should consider creating a public vessel registry for LRFF vessels to allow for exporting countries to black-list vessels involved in IUU, and to better track the flow of product through vessels. A second approach would be to suggest an air-only trade of LRFF between source countries and end markets, or to employ designated export hubs.

- **Track Hong Kong export data** – Currently, Hong Kong does not effectively track re-exports of LRFF to mainland China. The current law requires export data be collected, but these are not enforced.
- **Improve granularity of Chinese import data** – Encourage mainland China to develop better data tracking on imports, primarily to discourage the illegal trade between Hong Kong and China. Currently, China collects import data, but not at the level of granularity that it is useful in tracking the flow of the LRFFT. The encouragement might involve a campaign emphasizing the ecological impacts of the LRFFT and the powerful role the Chinese market plays in it.
- **Implementation of CITES II by China** – China is not currently implementing CITES Appendix II for marine species. Humphead wrasse is a CITES listed fish, and is an important test case for the other LRFF. If analysts are unable to track these through international markets, they are unlikely to be able to track other LRFF.

2. Creating new trade measures to substantially restrict the flow of LRFF

- **Create a requirement for air-only transportation of LRFF** – most of the illegal trade occurs via live transport vessels. A multi-lateral agreement to only accept wild LRFF transports via air could significantly reduce IUU. In lieu of that requirement, there is potential to pressure international air carriers who ship the majority of this product (e.g. Cathay Pacific, Singapore Air) and who have brand vulnerability to document and report the trade. Air carriers will be easier to regulate and have more incentive to cooperate.
- **Export quotas** – There are already LRFF export quotas in place for humphead wrasse in some countries, as well as a regional export quota proposed in Palawan. These quotas are currently poorly enforced due to IUU. Having more countries or regions establish export quotas is a viable approach *if* IUU trade can be controlled and the domestic market can be limited.
- **Import and export tariffs** – While the trade may be relatively price inelastic, increasing the cost of the fish to consumer may still dampen interest in LRFF. A tariff is also a mechanism to increase the interest of the relevant authorities in the trade, as well as a potential source of revenue for better management. A multi-lateral agreement to tax the trade of LRFF and to dedicate those funds to the management of the resources would be a huge boon to LRFF fisheries.
- **Improved traceability systems** – Chinese Taipei has enacted a traceability system for LRFF that gives consumers and others the ability to electronically track the fish back to their source. That system is relatively expensive; government subsidized and more suited to aquaculture than wild production. However, if tracking prices dropped a requirement for fish to have a paper trail back to their country of origin could be enforced; linked to food security (see Hong Kong imports).
- **Trade bans and Moratoriums** – As the situation on LRFF situation deteriorates, and reefs become further stressed by climatic changes, the question of whether

there should be *any* international trade around these threatened resources must be raised. A moratorium or ban on trade in certain species (i.e. humphead wrasse) could be enforced or trade could be restricted to farmed product.

Summary

The LRFFT is a pervasive industry which because of its idiosyncratic nature – highly lucrative product in contrast to other fisheries commodities, persistent or growing demand, poor enforcement, limited regulation along the whole market chain, geographic isolation open-access regime with large numbers of small-scale artisanal fishers and a consumer market with less eco-consciousness than markets in the U.S. and Europe – presents tremendous obstacles to reform. The challenges to transform this industry, although daunting, does require a multi-pronged approach to highlight issues and to engage and mobilize the various stakeholders needed to initiate change.

The APEC Fisheries Working Group workshop; “Market-Based Improvements in Live Reef Food Fish Trade (LRFFT)” held recently in Bali thus represents the culmination of a continual series of events, workshops and thought pieces designed to coalesce all the various actors across not only the market chain but also country and regional borders (e.g. source and demand country government agencies, non-government organizations and the technical experts) to firstly *create the debate* and then to begin to *influence the debate* and ultimately to *deliver measurable results* that will *lead to sustainable outcomes*.

All these activities will serve as a compendium of ideas and possible solutions for going forward with our efforts to transform this LRFFT and to move it inexorably toward better managed fisheries, more responsibly produced fish, improved cooperation and collaboration between governments, better informed consumers and more responsible consumption.

Workshop Summary and Recommendations

Delegates from 15 APEC-member economies met in Bali, Indonesia from 1-3 March to participate in the workshop on Market-Based improvements in Live Reef Food Fish Trade. The workshop was co-organized by the Ministry of Marine Affairs and Fisheries of Indonesia (MMAF) and WWF and supported by the Asia Pacific Economic Cooperation (APEC) Fisheries Working Group.

The 3-day workshop, attended by more than 100 delegates, saw experts from the live reef fish food industry sharing experiences and best practices in fisheries management and discussing available market-based opportunities with government, industry, scientists and NGOs to help bring the trade towards a more sustainable path.

Resource persons presented how impacts arising from overfishing and the use of destructive fishing practices, fuelled by an increasing demand for seafood and the lack of effective management and monitoring systems, pose major challenges to the sustainability of this industry. Their presentations illustrated the need for new regional and national whole-of-supply strategies under an Ecosystem Approach to Fisheries to drive transformation and meet these challenges. They indicated how lack of current data impedes the accurate assessment of the trade and thus management of it. The link between management of the live reef food fish trade in this region and the future of coastal communities was also illustrated. Projected trends indicate that demand for responsibly produced seafood from wild-caught and mariculture sources in the region is growing slowly particularly through large international hotel-chains. Existing regional platforms for collaboration between government and private sector to improve the sustainability of this industry were described. The International Standard for the Trade in Live Reef Food Fish — a set of voluntary standards for producing responsibly-caught seafood products was presented.

Delegates shared information to qualify supply chains and differences between producer countries were identified. Delegates agreed that management of the industry is significantly hampered through the lack of data, which is caused partially by the level of complexity in these supply chains as well as the lack of data collection systems in place. Delegates recommended that a key solution to better management is improved data sharing and considered several opportunities to improve data sharing.

Delegates discussed how consumer preferences in the markets for this industry pose challenges for consumer-driven change and agreed that in addition to consumer-oriented approaches, the initiative for best practice adoption that promotes stepwise approaches toward achieving certification should be a priority and should come from the industry itself, facilitated by government regulations and enabling platforms like a roundtable on this industry.

The overarching recommended solutions include:

- creating enabling conditions for more effective fisheries data exchange between demand and supply countries and greater transparency and control on the movement of species being traded — crucial for combating illegal, unreported, and unregulated fishing;
- adopting and testing the International Standard for the Trade in Live Reef Food Fish — a set of standards for producing responsibly-caught seafood products; and
- Creating a public-private Roundtable on Sustainable Live Reef Food Fish Trade in which market demand economies have agreed to participate.

Outcomes of this meeting further included the offer to facilitate exchanging experience between the Australian industry and participants to this workshop, the facilitation of a meeting between Hong Kong China and producing countries to collaborate on import export data improvement, the application of the International Standard for the Trade in Live Reef Food Fish by some of the industry delegates to this workshop and the development of a roundtable for this industry for future consultation and collaboration towards a more sustainable national mariculture industry.

A summary of the recommendations will be presented by the Indonesian government delegation to the APEC-Fisheries Working Group meeting in June and to the members of the Coral Triangle Initiative via its regional secretariat.

Speeches of the Workshop

KEY- NOTE SPEECH

The Need for Bilateral and Multilateral Economy Cooperation in Supporting Sustainability Solutions for the Live Reef Food Fish Trade

By

Dr. Victor PH. Nikijuluw

Director General of Fisheries Product Processing and Marketing
Ministry of Marine Affairs and Fisheries of Indonesia

- Honorable Lead Shepherd of APEC Fisheries Working Group;
- The representatives of APEC Economies;
- The Workshop Facilitators;
- The Workshop Speakers;
- Representative of UNDP;
- The Live Reef Business Actors;
- Distinguished Ladies and Gentlemen;

Very good morning,

First of all, once again, I would like to welcome all of you for attending Live Reef Food Fish Trade in Bali, Indonesia. I am really pleased to join you today for this important meeting regarding the trade of live reef fish for food. I must therefore thank APEC Secretariat, WWF and other institutions jointly with our Ministry of Marine Affairs and Fisheries for organizing this crucial meeting which is aimed at improving the market and trade of the live reef fish in APEC regions. This forum will enable us to share our valuable inputs, experiences as well as future aspiration to improve the sustainable trade of live reef fish.

As you may already aware the trade of live reef fish constitutes a significant amount of economic and social values for both fishers and traders. Nevertheless, some believe the trade of live reef fish remains an elusive industry. There is concern with regard to the sustainability of the fisheries both at business side and ecosystem sides. Scientists estimate that catch of live reef fish has exceeded its sustainable level. This call for our serious attention if we want to keep the fishery alive.

Ladies and Gentlemen,

Fishing for live reef fish, unlike any other fishing is very much dependent upon the healthiness of our coral ecosystem. Good ecosystem would be translated in to more availability of reef fish and vice versa. Therefore, it is not surprising that live reef fishery has been subjected to fluctuation in production and trade. The last two decades when the Indonesia coral ecosystem was in good condition, the Indonesia live reef fishery played a pivotal role as one of the leading reef supplier in the International markets. Nowadays, the situation is as not good as two and three decades ago. Our coral ecosystems are very much disturbed leading to less fish available. As reefs were depleted so did the reef fish

caught. With demand for reef fish remain high, fishers tend to move to other fishing grounds leading to what so-called “boom and bust” operation of the live reef fish.

Ladies and gentlemen,

We all now aware of the fact that the boom and bust of live reef fishing practice would result in unsustainable fishing practice including the use of bomb and cyanide to meet the lucrative demand of overseas markets. In addition, live reef fish players would sometimes engage in IUU fishing such as using illegal documents, entering nation’s fishing areas illegally and other IUU practices. Such activities would undoubtedly lead to worsening both environmentally and economically of live reef fish business. Therefore, combating IUU practices should also be our agenda to manage these precious resources. We must also admit that monitoring of trade of live reef fish is rather weak compared with other fishery. Such a weak monitoring making it even more challenging to manage the fishery and combating IUU fishing of this fishery.

Ladies and gentlemen,

We all witnessed the shift in market trend of the live reef fish during the last decades. Data from various sources indicates that there was contraction in the trade of live reef fish and the shift on species being traded. Various report also indicate that this shift is a result of various causes such as change in mode of transportation, change in demand, health concern, conflict over access to resources as well other factors. Given these trade shifts, all countries engage in live reef fish should take measures to anticipate such changes in order to provide markets with products but at the same times maintaining our ecosystems which provide the reef fish resources.

Ladies and gentlemen,

Business and ecosystem should go hand in hand in our live reef fish business. Sustainable fishing practices especially with regard to live reef fish business and protecting marine environment is precisely the issue which bring us together today. The ocean and the fishery resources are regarded as source of wealth for man and protecting them is one of key elements of managing fisheries business especially for the live reef fish. Given the complexity of the live reef fish business, this is one the challenges in managing the fishery.

Besides destroyed environment, the management of live reef fishery also faces many challenges. We are now not only facing the big problem of overfishing, but also climate change. The gap between supply and demand has put more pressure on the resource leading to severe overfishing. While climate variability has also put added pressure on ecosystem and production sides of the fishery. Therefore ladies and gentlemen, there is huge challenge in our fisheries policy, especially the live reef fish policy to overcome such overfishing and other related problems. In this context ladies and gentlemen, it is important to reform the way we fish and the way we consume the fish. The right market policy, perhaps, can be used to bridge those two things. We must look at a new market policy as an integral part of comprehensive live reef fish management strategies.

Ladies and gentlemen,

I would like to emphasize on the importance of bilateral and multilateral collaboration in promoting LRFFT. Today's fishery management, especially with regard to live reef fish which its trade involves many nations, cannot be handled by sole country alone. The old fashioned way of managing such a complex fishery will not sufficient to bring the fishery in a sustainable way. Fish stock constitutes a shared resource for which we all share a collective responsibility. In this context ladies and gentlemen, it is important to strengthen our bilateral and multilateral collaboration in promoting sustainable live reef fish trade. We must convince ourselves that we should better all make an effort to collaborate to save the business as well as the sustainability of the fish resources by collaborating.

The collaboration poses a key important element to promoting sustainable resource and trade in APEC Region. Considering the common concern for sustainability of resources and trade of LRFFT, APEC-driven collaboration, in turn, will promote sustainable green growth and concretely address issues of food security in APEC Region. I do hope that the outcome of the workshop will build seamless regional collaborations by achieving outcome in specific and focus action. By achieving such outcome, it will support the objective of Fisheries Working as mandated amongst others are to support and promote sustainable practices along sea food chain as well as help ensure sustainability and an economically viable industry.

Thank you for your attention.

OPENING SPEECH

Role of Live Reef Food Fish Trade for Food Security in Asia Pacific Region

By

Dr. Gelwynn Jusuf

Lead Shepherd of APEC Fisheries Working Group

- Director General of Fisheries Products Processing and Marketing, Ministry of Marine Affairs and Fisheries of Indonesia;
- Project Overseer of the Live Reef Food Fish Trade;
- The representatives of APEC Economies;
- The Workshop Facilitators;
- The Workshop Speakers;
- Representative of UNDP;
- Representative of NOAA
- The Live Reef Business Actors;
- Distinguished guests,
- Ladies and Gentlemen;

Good morning,

First of all, I wish to extend a warm welcome to fellow delegates from the various APEC Economies. I also want to thank Indonesia for its warm hospitality and all the efforts spent for the preparation of this Live Reef Fish Food Trade Workshop. In the last decade, Indonesia has always been an active and enthusiastic participant in APEC activities, especially in Fisheries Working Group. Since the Second APEC-related Ocean Ministerial held in Bali, in 2005 which produced Bali Plan of Action, It is therefore quite meaningful that the APEC Fisheries Working Group project held here in Indonesia.

Today, as the Lead Shepherd of the Fisheries Working Group, I'd like to extend my warm welcome to all of participants not only to APEC Economies but also to all live reef fish stakeholders here. I trust that your participation will bring about closer potential cooperation and experience sharing for sustainable live reef food fish trade in Asia Pacific Region. This afternoon and the next two days, we will explore and review challenges and accomplishments based on the preceding workshop on the live reef food fish trade and discuss the directions for future tasks in managing sustainable live reef fish food trade. We hope that with the results of this meeting, we will have a new direction and recommendation and come up with concrete contributions.

Ladies and Gentlemen, Distinguished Guests,

As we know that fisheries is one of major economic activities in the Asia Pacific Region. In many APEC Economies, it plays an important role in income generating activities for coastal communities. For live reef fish, in some of Pacific Economies it provides the

realistic opportunity for their future economic growth and prosperity. The contribution of live reef fish food trade has significant role in addressing food security in the Asia Pacific region.

In terms of food security, APEC Ministers Responsible for Trade met in Arequipa, Peru in 2008 and noted the dramatic increases in prices of many food products. The Ministers collectively agreed that APEC economies could play an important role in the global response to this crisis by maintaining a commitment to open markets and to trade and investment liberalization. APEC Leaders also agreed to support a fully coordinated response and a comprehensive strategy to tackle the food security issue. We note that the outcome of this workshop will obviously contribute to address this important issue.

The role of live reef fish food trade on the food security should focus on the comprehensive approach to provide people access to food, supply reliability, trade, environment security, and sustainability. The trade, environment and sustainability are important components to be addressed in this workshop. We hope cooperation and collaboration amongst producer economies and consumer economies should tackle this crucial issue. Moreover, with the attendance of all stakeholders of live reef fish food trade, I am convinced that the outcome of the workshop will have significant contributions of the APEC goals.

Ladies and Gentlemen, Distinguished Guests,

We must bear in mind that our recommendations must be applicable to APEC economies and be practical and workable. We are aware that sustainable trade on live reef fish is one of essential components of food security through securing livelihood and food availability. So, we have particular responsibility for the sustainability of our resources and trade to address the future food security problem.

Finally, we hope the meeting will be a success and I, once again, thank the Government of Indonesia as a host and the Organizing Committee for enabling this to take place. I look forward to fruitful results in the next few days' meeting.

Thank you very much.

WELCOMING REMARKS

Market Based Improvement in Live Reef Fish Food Trade

By

Saut P. Hutagalung

Project Overseer

- Honorable Lead Shepherd of APEC Fisheries Working Group;
- Honorable Director General of Fisheries Products Processing and Marketing; Ministry of Marine Affairs and Fisheries of Indonesia;
- The representatives of APEC Economies;
- The Workshop Facilitators;
- The Workshop Speakers;
- Representative of UNDP;
- Representative of NOAA;
- The Live Reef Business Actors;
- Distinguished guests;
- Ladies and Gentlemen;

Good morning,

First of all, I would like to welcome all of you to Indonesia for attending this workshop. We are delighted and honored to host the workshop of Market Based Improvement in Live Reef Fish Food Trade today in Bali, Indonesia. This workshop is sponsored by Indonesia, the Ministry of Marine Affairs and fisheries, co-sponsored by Canada, USA, the Philippines and Papua New Guinea, in collaboration with WWF – Indonesia and supported by APEC Fisheries Working.

On this opportunity, I would like to specifically acknowledge the assistance of APEC Fisheries Working Group and the WWF-Indonesia together with our institution, arranging this important workshop.

The workshop is attended by 122 participants, eighteen participants from ten APEC economies, international and national live reef fish food business sector, Indonesian Government Officials, international organization such as UNDP, Info-fish, international speakers from various affiliations, NGO's, and academicians.

Ladies and gentlemen,

As we all know that the preceding Hong Kong and Kota Kinabalu workshops on the same topic, we all agree to build regional stakeholder engagement. This can be carried out through building roadmap for implementing policy initiatives and market based live reef fish trade in consistent with Ecosystem Approach of Fisheries Management (EAFM). The principles of EAFM need to operate within supportive policy framework recognizing economic, social, cultural as well as ecological value component into management action.

We also recognize the importance of cross-border trade issues that need to be addressed as main part of the holistic approach to market-based improvement on live reef fish food trade. In this regard, strengthening cooperation and collaboration to achieve sustainability outcome should be pursued in this workshop. We are aware that this is very complex issue. Therefore, good planning, stakeholder involvement and strong collaboration are imperative and should be an integral part of sustainable trade and resources management solution.

Ladies and gentlemen,

As we are aware that the previous Hong Kong and Kinabalu workshop on the same topic had produced a convergence outcomes to be the final linkages with the outcomes of this APEC workshop. Broad reference of roadmap sustainable of live reef fish food trade had been developed on the Hong Kong and Kota Kinabalu workshop. The convergence of the Hong Kong workshop six CTI countries priorities of the preceding workshop could be basis for further enlarged discussion on this APEC workshop to become roadmap of improvement on sustainable live reef fish food trade.

I do hope that through your participation, presentation and discussion later this morning, we will share knowledge and insights from your expertise and experiences. I also hope that these three days workshop would yield workable policy recommendation and viable market-based improvement on live reef fish trade management in APEC Fisheries Working Group.

I realize that you are fully dedicated to the sessions that will follow but I do hope you will also take time to enjoy fascinating Bali with scenic landscape, friendly people and truly traditionally Bali atmosphere.

Thank you very much.

Final Report

RECORD ON WORKSHOP ON MARKET-BASED IMPROVEMENT

IN LIVE REEF FISH FOOD TRADE

1 – 3 March 2011

INTRODUCTION

1. The workshop on Market-based Improvement in Live Reef Fish Food Trade (LRFFT) was held at Sanur Plaza Hotel, Denpasar (Bali), 1-3 March 2011. The objective of the workshop is to improve management of the LRFFT, including aquaculture, primarily in the Coral Triangle (CT) through market-based initiatives and to strengthen regional cooperation at both a policy and operational level. It was co-organized by the Ministry of Marine Affairs and Fisheries (MMAF), Indonesia and the World Wild Fund for Nature (WWF) with the financial support of the APEC Fisheries Working Group (FWG) and WWF.
2. The workshop was attended by 104 delegates from 15 APEC-economies (Australia, Canada, Hong Kong China, People's Republic of China, Chinese Taipei, Indonesia, Malaysia, Papua New Guinea, Peru, Philippines, Russia, Thailand, United States of America and Viet Nam) representing seafood industry players, government and international agencies, NGO, research institutions, academia and the private sector.
3. The three day workshop comprised 3 plenary sessions and 3 breakout sessions. Serving as facilitator were Dr. Lida Pet-Soede from WWF and Dr. Purwito Martosubroto from Indonesia. A field trip was organized on the last day to visit the facilities of PT Pulau Mas in Denpasar, a company engaged in the LRFFT and who is active in developing more responsible fishing practice and trading in live reef food fish (LRFF).

TUESDAY, 1 MARCH 2011

SESSION 1: OPENING REMARKS

4. In the opening session, Mr. Saut P. Hutagalung, Director of Foreign Market Development, DG of Fisheries Product Processing and Marketing, as the Project Overseer, welcomed the participants. His remarks acknowledged the transboundary nature of the LRFFT and thus emphasizing to the participants the importance of dialogue among participating countries.
5. In his welcoming speech, Dr. Gelwynn Jusuf, Secretary General of the Ministry of Marine Affairs and Fisheries who serves as the Lead Shepherd of APEC Fisheries Working Group, voiced his appreciation to the MMAF and WWF for organizing the workshop, and underscored this APEC forum serving as a follow up to the US Coral

Triangle Initiative (USCTI) LRFFT Workshop in Kota Kinabalu in October 2010 restricted to the six economies of the CTI. He emphasized the importance of food security to the APEC economies and thus underlined the need to link trade and sustainability as an integral part of this food security objective. He closed by sharing his desire that the discussion and deliberation would lead to a successful workshop.

6. The workshop was officially opened by Syafril Fauzi, Secretary of Directorate General of Fisheries Product Processing and Marketing of MMAF on behalf of Dr. Victor PH. Nikijuluw, Director General of Fisheries Product Processing and Marketing. In his keynote speech he underlined the close link between business and environment and the need for intensive bilateral and multilateral dialogues in the process of market based LRFF trade improvement.

PRESENTATION AND PLENARY DISCUSSION

SESSION 2 : SETTING THE SCENE

7. Prior to the presentation of the speakers, Dr. Lida Pet-Soede as facilitator and chair outlined the agenda and proposed proceedings of the workshop, The first session on Day 1 aimed to set the scene and was followed by presentations under the theme of Conservation and Sustainability: Opportunities and Challenges. Presentations and discussion on Day 2 focused on national policy and regional cooperation and collaboration and available best practices. The third day sessions were held in plenary and devoted to synthesizing break-out discussions and developing a consensus summary of the workshop, including recommendations.
8. Presentations in Session 2 were led off by Dr. Muldoon whose review of the status of LRFFT in the Coral Triangle region entitled ***“The live reef food fish trade : Overview and Synthesis”***. Faced by the growing demand for LRFF, mainly from Hong Kong China, the current concerns for the LRFFT including: resources overexploitation and potential fishery collapse, food security and livelihoods of local communities, impacts of destructing fishing practices, and limited enforcement and monitoring of illegal unreported and unregulated fishing (IUU) can only be exacerbated.
9. According to Dr. Muldoon, the past efforts around reforming the LRFFT, have focused on discrete aspects and have been local in their scope leading to some limited successes being achieved but leaving various gaps unresolved in reducing LRFT impacts. These include lack of data on trade, biological and fishing effort data for management data on compliance and best-practice adoption along the supply chain. In the context of Ecosystem Approaches to Fisheries Management (EAFM), considered the primary goal in the management of reef fisheries, even more data are required.
10. He outlined a suite of common aspirational goals around harvest rates, habitat impacts, management and enforcement (including of CITES species), full-cycle mariculture and given the trans-boundary nature of the LRFFT the need for regional mechanisms for collective action and multi-country coordination and multi-stakeholder sustainability initiatives (i.e. trade groups). He presented a synthesis of

LRFFT Priority Actions by Coral Triangle (CT) country and linked these to outcomes from previous LRFFT workshops convened by WWF's Coral Triangle Program in Hong Kong China in November 2009 to develop a "roadmap" for trade reform³ and the USCTI in October 2010 to gain CT country consensus on addressing EAFM issues through market-based approaches (see Annex 3). Recommendations from these events have fed into the current workshop.

11. This presentation was followed by Dr. Allen To, who described WWF Hong Kong China's experience in promoting responsible seafood consumption in Hong Kong with the paper entitled : ***"Linking Market trade and Conservation : Hong Kong's case study"***. The works of WWF Hong Kong China focused on three elements : suppliers, caterers and consumers. In the supplier side, the work was to identify sustainable seafood and develop ocean friendly catalogue. While in the caterer, effort was devoted to develop ocean friendly menu for hotels and clubs and lastly in the consumer side, develop seafood guides and, with the help of hotels and restaurants, "green" seafood menus.
12. A short question and answer period followed these presentations with question raised as to i) how mariculture could help address overfishing given demand will likely exceed natural productivity of the system, ii) the volume of re-exports from Hong Kong China to Southern China, iii) the mechanics of how a responsible seafood menu works and supplier engagement strategies.

SESSION 3 : CONSERVATION AND SUSTAINABILITY : CHALLENGES AND OPPORTUNITIES

13. Session 3 was chaired by Dr. Purwito Martosubroto. The first speaker, Dr. Meryl Williams from the Asia-Pacific Fish Watch presented a paper entitled: ***"Major challenges to regulating small-scale fisheries and trade in South-east Asia with emphasis on LRFFT"*** with the intent of exposing myths that the current underwhelming regulatory landscape could be improved by "Just building more capacity" and that trade issues can support reform by "Just transforming the markets."
14. Dr Williams highlighted issues relating to LRFFT in small-scale fisheries in the region and underlined the importance of understanding in developing trade regulation. In this context she described 6 pillars as important rules in the process, namely (i) knowing the supply chain, (ii) understanding how cultures influence supply and demand, (iii) building capacity to support sustainability, (iv) making sure existing information becomes visible, (v) not oversimplifying, and (vi) not ignoring the other risks. These rules are important in identifying challenges and opportunities and were accommodated in the ensuing discussion during the workshop.
15. Dr. Akhmad Fauzi from Bogor Agricultural University, presented a case study of Indonesia entitled ***"Managing across provincial, national and international jurisdictions : a case study LRF fisheries in Indonesia"***. Dr. Fauzi described the

³ Workshop report at http://wwf.panda.org/what_we_do/where_we_work/coraltriangle/solutions/live_reef_fish_trade/

historical geographic trend of LRFF exploitation which was initiated in the western part of the country and slowly moved to the middle part and finally to the eastern part of the country. The gradual eastward shift is believed to be linked to declining productivity in existing fishing grounds and improved resource availability. He also described challenges faced by the government relating to devolution of authority in the fisheries sector as the regulatory responsibility was decentralized. He described the complexities of small scale fisheries and weak implementation of CCRF and EAFM in Indonesia and reasons for that such as; inadequate rules raising conflict at the local level, the existence of open access fisheries at the provincial and regency level and the institutional shortcomings such as multiple ministries having responsibility for implementing various fishery policy. He demonstrated how the establishment of an MPA around the Wakatobi Regency helped in strengthening fisheries management in that region. However, lack of biological data and fishing effort data impedes good management in fisheries.

16. Dr. Fauzi further elaborated on the challenges, of which includes large proportion of coral reef system have been damaged, fishing occupation as the last resort for coastal communities in remote areas, absence of comprehensive ocean policy, lack of coordination among provincial governments and to a certain degree also among sectors.
17. The last presentation in this session was by Ms. Mavic Matillano, WWF Philippines: ***“An NGO perspective: A multi-sector, multi-stakeholder approach to aiding fisheries recovery through establishing a resource managed areas”*** a case study of an ongoing program underway in Palawan province, Philippines. Taking into account the existence of multiple sectors and players linking to LRFFT, she described WWFs in his work in the Philippines in developing an integrated model that accommodate the interest of those groups. In the intervention WWF develop three activities, namely baseline data gathering, sustainability planning and development or enhancement of policy. In support to these activities WWF played a key role in capacity building, technical assistance on addressing transboundary fishing in the LRFFT⁴, technical assistance in constructing eco-friendly cages and conducting a short research program aimed at identifying fecundity and spawning seasons for target species and the development/enhancement of a database to house data.
18. Mr. Hector Pilego, Executive Chef of JW Marriott Hotel in Hong Kong China presented a paper entitled : ***“Future Fish”***. He described how the hotel has been working closely with WWF Hong Kong China in the promotion of a sustainable seafood menu for its restaurant. The hotel developed seafood guide and the aim is to move in 2 years to 100% sustainable sources seafood. While in many developed countries, like the United State, there is a strong sustainable seafood movement among consumer, there is little consumer interest in Asia for sustainable or responsibly produced seafood. In the United State the pressure comes from general public, while In Asia from corporation with a commitment to Corporate Social Responsibility principles. In the sustainable seafood guide developed by the Marriott

⁴Some of LRFF from Palawan were exported through Sabah

Hotel, the primary types of fish and seafood used by the hotel are grouped into 3 categories : enjoy → best choice (green on the menu), OK → caution (yellow on the menu) and preserve →unsustainable (red of the menu). The Marriott Hotel in Hong Kong China has been working with WWF Hong Kong China for 2 years in developing and promoting their sustainable seafood menu.

19. The last presentation of session 3 was by Mr. Heru Purnomo, Director of PT. Pulau Mas, Bali Indonesia, a company trading in LRFF who presented his paper **“A supply chain partnership and a program to implement best practices and improve sustainability for wild caught LRFF in Indonesia”**. Pulau Mas operates with a shorter supply chain than other LRFF trading companies by dealing directly with fishers; thereby eliminating the need for a middle man. The company is focused building community fisher groups and developing agreements with participating fishers to adhere to more sustainable fishing practices. The agreements requires fishers (1) do not retain Napoleon wrasse (his company doesn't accept any catch of Napoleon wrasse), (2) use only hook and line and do not fish with cyanide or traps, (3) release any fish smaller than 600g which are considered juveniles (his company doesn't purchase fish under 600g, but consolidates catches of small fish for later release into the wild, and does not accept any juvenile fish grown out or cultured in cages), (4) avoid catching spawning fish. The company has established an association called “Indonesian grouper lobster fisheries foundation (IGLFF)” and through this organization he further assists fisher's by providing health care and education subsidies. Mr. Purnomo concluded his presentation by calling for improved support from all levels of Government and the establishment of Public Private Partnerships (PPPs) to support improved management and practices for the LRFFT
20. At the conclusion of Session 3, the workshop facilitator, Dr. Lida Pet-Soede, informed the audience on the first breakout sessions which would address supply chain and consumer market issues. Mr. Matthew Elliot from California Environmental Associates was asked to present his paper **“A supply chain review of the Live Reef Food Fish Trade (LRFFT)”**. His paper indicated that the sourcing of LRFFT is most heavily concentrated in Coral Triangle region with markets centered on Hong Kong China and People's Republic of China. He acknowledged however, that good supply chain data was not readily available. Previous reviews had suggested that the regional LRFF market was valued at approximately US\$ 800M to US\$ 1 billion at the point of sale, based on ~30 tons being traded per year from 1999 – 2002⁵. Using updated figures on volumes traded and retail values for key species, and using the same assumptions on unreported or unrecorded trade, he estimated the total value of LRFFT could be closer to US\$ 2 billion annually. His presentation also identified the objectives and main questions for the breakout session for each of the breakout groups (Markets, Indonesia and Melanesia, The Philippine and Malaysia) which asked groups to address supply chain structure, the mechanisms and processes such as market power and integration, volumes and values for each supply or value chain in various countries, and what were end markets as a basis for further estimation of regional trade.

⁵ Pomeroy *et al* (2005) citing McGilvray and Chan (2001), Padilla *et al* (2003) citing \$ 1 billion from Pratt *et al* (2000), Sadovy (2003) extrapolating \$ 810 million

BREAKOUT SESSION I : DISCUSSION ON SUPPLY CHAINS AND END MARKET

21. The first breakout session comprised 4 group discussions addressing the LRFFT supply chain in the following countries: Indonesia, Malaysia and the Philippines, as well as group discussion specifically addressing markets. Recognizing that data on supply chain and market on LRFFT is still limited, these breakout discussions below were intended to draw on expertise of country representatives from government, industry and NGO sectors to use the current best information available to update knowledge.

- a. **INDONESIA** : Most of the fish resources come from the central (30-40%) and eastern (60-70%) parts of the country. Most of the LRFF are exported with domestic consumption representing only about 5% of the trade. The LRFFT uses both air and sea transportation depending on the company involved and where there fishing activities are based. The use of sea transportation is most common in the remoter eastern part of Indonesia, and is normally facilitated by live transport vessels originating from Hong Kong.

The supply chain in Indonesia can be categorized into three different structures. The first involves a direct transaction between the fishers and the exporters who then sends the LRFF directly to wholesale markets in Hong Kong China. The second chain is almost the same as the first chain, with the exception of a middleman between fishers and exporters. The third chain, which is typical for sea consignment, sees the LRFF pass from fishers to a middleman, and then on to a coordinator and finally to a sea transport vessel for shipment to Hong Kong China.

In terms of price, the price paid to fishers is around Rp 200,000 – Rp 230,000 (US\$ 22 – 25) per kilogram, while the middlemen receives roughly Rp 370,000 (~ US\$ 40), and the exporters Rp 420,000 (US\$ 46). The price at wholesale markets in Hong Kong China is approximately HK\$ 370/catty⁶ or (US\$ 95/kg). In the case of LRFF exported by sea, the coordinator (Supply Chain #3) will charge a consignment fee of US\$ 15/kg, and the price at the exporters is HK \$ 120/catty (or US \$ 50/catty) before reaching wholesale price of US \$ 95. The main export market is Hong Kong China (50%) which receives annual exports of around 1,800 tons, with direct exports to People's Republic of China comprising around 15% of this total⁷. The remaining exports are to Chinese Taipei and Singapore.

The numbers of fishers are in the order of 4,000 involved in chain #1, approximately 2000-3000 for chain #2, and about 800 fishers for chain #3. Where middlemen are involved (Chain #2 and #3) they number around 20-30 individuals.

The participants in this breakout group identified most of the value in the supply chain going to the exporters in Indonesia and the buyers in Hong Kong China, who therefore have most power in the supply chain. It needs to be acknowledged that the observations as to value distribution may be based on "total value" of a shipment as opposed to the value of a "single" fish, such that the exporter's

⁶ One (1) Chinese catty is equivalent to 500grams

⁷ Note that although classed as direct exports to China, these LRFF must first clear customs in Hong Kong before being re-exported to mainland China

revenue is volume-based. In terms of value per unit (fish) the fisher probably retains the most, as well as not having to bear the higher mortality risks faced by exporters and buyers.

- b. **MALAYSIA** : In the case of Malaysia, wild-caught LRFF come largely from Sabah⁸. Most of the wild-caught LRFF are captured in the Philippines waters —Southern Palawan in the west and Tawi Tawi in the east— with an estimated 80-90% of LRFF being illegally imported into Sabah,⁹. Fish from these the Philippines waters are kept in holding cages, either in the Philippines or Malaysian national waters for 4-6 months for grow-out depending on the size at capture. Market size fish are usually consolidated in cages in the Philippine waters before transferring to Sabah. There are about 1,000 fishers in Sabah, and more than 300 holding cage operators, spread across three main centers; Kudat, Semporna/Tawau and Sandakan. Those LRFF transferred to Kudat are transported to Kota Kinabalu by lorry before being shipped by air from Kota Kinabalu to Hong Kong China. Some of the LRFF is exported directly to People’s Republic of China through Guang Zhou and to Chinese Chinese Taipei. The estimated export of LRFF from Malaysia in 2009 was 1,300 tons.

Sea transportation is carried out largely by Hong Kong China flagged vessels and data on these sea shipments is not available. These Hong Kong China vessels are also responsible for illegal transshipments out of Malaysia, although records of the number of such shipments are not available.

In terms of price fishers receive about US\$ 20/kg, while the holding cage operators receive about US \$ 23/kg. The price received by the exporters is around US \$ 30/kg. In Hong Kong China market, the price per kg at the level of importers is around US \$ 40/kg and the price at wholesalers is around US \$ 53 /kg.

- c. **The PHILIPPINES** : LRFF in the Philippines largely comes from Palawan, mainly the northern municipalities of Tay Tay, Araceli, Roxas with growing volumes coming from the southern municipalities such as Quezon. Out of total number of 27,500 LRFF fishers in the Philippines, 20,000 come from the Palawan province. Similarly for middlemen, of a total number of 89 individual middleman, 65 originate from Palawan. According to estimates by the Philippines authorities, exports of LRFF from the Philippines were 500 tons in 2009, while illegal exports to Sabah was estimated at around 608 tons. These illegal estimates are based on the number of registered vessels, average catches per trip and the amount of trips undertaken. Domestic consumption is limited and only caters for hotels and restaurants.

A very large number of LRFF are harvested as juveniles (as small as 250-300 g) and therefore less than market or “good” size (500-600 g). These fish must be grown-

⁸ The production of cultured LRFF species occurs mainly in peninsular Malaysia in the states of Johore, Selangor and Kedah

⁹ While referred to as “illegal”, the movement of LRFF between Philippines and Malaysia is recognised by the respective governments but largely ignored and acknowledged as “informal” trading between the countries

out in sea cages or pens. The number of growout cages in Palawan in 2008 reached 3,000 with an estimated 1024 of these located in the Tay Tay province.

The industry is fragmented with very limited vertical integration. The patronage system still exists in the Philippines where fishers are beholden to selling their catch to the middlemen who provide them with gear, fuel, food and meet other fishing related costs. For these fishers, outstanding costs are deducted from the sale price of the fish. There are however, a growing number of “independent” fishers who are not “trapped” in this debt cycle.

According to this group, the individuals who have power in the supply chain are Hong Kong China importers. The price paid to fishers for “good” size fish is around 2,000 Philippine pesos (US\$ 42), while the middlemen receives around 2,750 pesos (US\$ 57). Unfortunately there are no estimates of prices paid at the exporter level.

- d. **CONSUMER MARKETS.** According to this group, People’s Republic of China is the main market for LRFFT, followed by Hong Kong China. People’s Republic of China imports LRFF from Hong Kong China, Chinese Taipei, and directly from other Southeast Asian countries, including those in the Coral Triangle. Those exported from Chinese Taipei come mostly from aquaculture, while from Southeast Asia imported product comes largely from the wild. Most of the LRFF entering People’s Republic of China is re-exported from Hong Kong China and most enters “illegally” as un-reported fish via Shenzhen and Guang Zhou.

Good data are kept for air consignments of LRFF, but data on LRFF entering Hong Kong China via fishing vessels is poor as LRFF imported by sea are not considered as food. The Hong Kong China Chamber of Seafood Merchants (HKCSM) retains good and data on prices, however not all importers in Hong Kong China are members of the CSM.

There is increased domestic consumption of LRFF by Chinese Taipei and Malaysian consumers. Moreover, in Malaysia there is an increasing trend toward “culinary tourism” whereby wealthy People’s Republic of China’s tourists are holidaying in Sabah for the express purpose of consumption of locally caught seafood, including LRFF.

As well as being major markets for LRFF species, People’s Republic of China and Chinese Taipei are also major producers of LRFF, mostly from aquaculture, and most of which is consumed domestically rather than exported.

WEDNESDAY, 2 MARCH 2011

SESSION 4 : NATIONAL POLICY, REGIONAL COLLABORATION (PPP) AND REGIONAL COOPERATION (GOVERNMENT)

22. Dr. Purwito Martosubroto as Chairman invited Dr. Yvonne Sadovy, Department of Ecology and Biodiversity University of Hong Kong China, to start the session with her presentation entitled **“Regional cooperation on policy, enforcement and IUU fishing – The CITES example”**. She highlighted the major issues faced by LRFFT as being; the lack of monitoring at both export and import points, the capture and retention of juvenile HHW and their subsequent illegal export, the harmonization of legislation that sees good data records for air-only imports but poor monitoring of Hong Kong China vessels importing LRFF by sea, poaching/illegal trade, controls on the trade of LRFF into People’s Republic of China and the handling confiscations of illegal shipments of HHW. Dr Sadovy laid out a chronology of events that led to the listing of the Humphead or Napoleon wrasse on CITES Appendix II and the subsequent controls imposed on its trade such as the requirement for a non-detrimental finding to be carried out to set quota limits. She also acknowledged a number of shortcomings still present in the trade in this species and concluded her presentation by suggesting relevant opportunities for regional cooperation such as enforcement (air-only trade, size limits, controlling the time/place vessels can enter the source country and Hong Kong China), improved implementation of CITES Appendix II by People’s Republic of China, regional communications, and training and capacity building on the handling confiscated animals.
23. Prof Dr. Ching-Ta (Ted) Chuang of National Chinese Taipei Ocean University then presented on the topic of **“Traceability and supply change management in of seafood industry in Chinese Taipei”**. The major source of seafood for the industry in Chinese Taipei is from inshore fisheries, aquaculture and distant water fisheries. For the LRFFT, the main production source is from aquaculture with the main cultured species being the malabar groupers (*Ephinephelus malabaricus*), tiger grouper (*E. fuscogutatus*), orange-spotted grouper (*E. coioides*), and giant grouper (*E. lanceolatus*). Professor Chuang’ presentation outlined the supply chain for cultured fish for both domestic consumption and export and described the development of the national “Traceability” system and the structure of that system that ensures fish produced using Good Aquaculture Practices (GAP) can be tracked from farm to consumer. The aquaculture industry is required to meet with international HACCP requirements. Under the GAP system each individual fish is tagged with barcode to allow it to be traced back to its sources. This traceability information is already available to consumers on the internet and marketing program in place for GAP produced fish.
24. Dr. Meryl Williams of the Asia-Pacific Watch presented on **“Regional Platforms for Collaboration”**. In this presentation she emphasized that while understanding fisheries of the CT6¹⁰ was seen as important, it was not well enough appreciated to

¹⁰ The Coral Triangle countries are Indonesia, Malaysia, Philippines, Papua New Guinea, Solomon Island and Timor Leste

- be able to encourage wide-scale improvements in knowledge of biological characteristics and stocks status. Dr Williams identified a number of regional forums available in Asia such as (i) ASEAN (a mostly economic forum), the APEC Fisheries Working Group, FAOs Asia-Pacific Fisheries Commission, and the Western and Central Pacific Fisheries Commission. She also referenced the *Regional Plan of Action to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region* (marine capture fisheries) as a potential vehicle to improve the management of the LRFFT within the Framework for Human And Institutional Capacity Building in RPOA Member Countries, which includes Indonesia, Malaysia, the Philippines, Papua New Guinea, Thailand, Singapore, Vietnam, Australia, Brunei Darussalam and Cambodia all of which participate in the LRFFT. In addition, in the context of LRFFT, the APEC WG on Fisheries was acknowledged as a good forum considering suppliers and buyers are members of this organization.
25. Mr. John Pontillias, of the Palawan Council for Sustainable Development (PCSD) made a presentation on ***“The outcomes of the USCTI Regional Exchange Meeting” a workshop held in October 2011 in Sabah (Malaysia)***. The focus of the presentation was around regional policy issues. Mr. Pontillias instructed the audience on the development of the Coral Triangle Initiative on Coral Reefs, Fisheries And Food Security and the background to this *Regional Exchange* workshop., He outlined the workshop objective and the major outcomes which fell under three (3) main headings; (1) A Common Understanding of and Support for an Ecosystem Approach to Fisheries Management (EAFM), (2) Science Needs for Management of LRFT, including performance indicators and (3) Developing regional multi-stakeholder Forums and Roundtables for the LRFT. These outcomes were presented to the CTI Senior Officials Meeting in the form of recommendations and all were approved as core future LRFFT activates supported by the CT6 countries. He concluded his presentation by underlining that managing the LRFFT should not solely focus on bio-physical aspect but also on economic social and political considerations.
 26. Mr. Maurice Knight, Chief of Party, Coral Triangle Support Partnership gave a presentation titled ***“US CTI Support Program Overview: Regional collaboration opportunities to address LRFFT Issues”***. He briefed the participants with overall CTI vision and highlighted mechanism for implementation. This includes facilitating development of a “common regional EAFM framework for legislation and policy”, establishing regional/national fisheries learning networks and linking regional universities, supporting LRFT regional framework developed and adopted by at least four of the CT6 countries, supporting development of a regional system of MPAs, developing ecosystem-based indicators for fisheries monitoring protocols , etc.
 27. Dr. Arthur Hanson, Distinguished Fellow at the International Institute for Sustainable Development (IISD), Canada, made a presentation on behalf of the People’s Republic of China Aquatic Products Processing and Marketing Association (CAPPMA) titled ***“The Status of live reef food fish Production and Trade in Mainland China”***. The material presented was the first information on the market for LRFF in People’s

Republic of China collected by a People's Republic of China's organization. Information included sources of production (wild-caught and cultured) and estimates of the proportion of LRFF consumption in People's Republic of China met by aquaculture, wholesale and retail prices of the main traded species, the main sources of imported LRFF, the market structure in terms of trading, transport channels and distribution of LRFF throughout People's Republic of China and the main consumption markets or centers. This presentation also outlined the Status of LRFF Aquaculture in People's Republic of China.

BREAKOUT SESSION II : DISCUSSION ON REGIONAL COLLABORATION

28. Dr. Lida Pet-Soede, as facilitator provided guidance on the second breakout session. The breakout session specifically addressed regional collaboration and cooperation opportunities for the LRFFT. The common challenges in LRFFT start from the unavailability of basic data on the amount of LRFF being traded, both from the exporting countries as well as from the importing countries. Data on the amount of LRFFT through air transportation are generally available, but not from the sea consignment. Furthermore illegal trade through sea transportation is quite common in the region that makes estimation of the amount of LRFF being traded becomes difficult. Thus, urgent need for regional collaboration is well recognized.
29. The question on how to address LRFFT issues regionally was also discussed. Through regional organization are available, such as ASEAN, SEAFDEC, and APFIC, but none of them has yet a special interest in the LRFFT. The LRFF exporting countries and the importing countries are those who have most interest. Roundtable discussion among those members needs to be facilitated and enhanced to keep the momentum. As those countries are members of economies APEC, this organization should be the platform for roundtables. As most of the CT6 are sources of LRFF in the region, the CTI and APEC-Fisheries Working Group would seem the most likely fora for further discussion and negotiation on improvements in the LRFFT. The experience of NGO such as WWF in the region in promoting PPP in the context of sustainable fisheries, would be useful in supporting roundtable discussion.

SESSION 5 : BEST PRACTICES AND MARKET BASED IMPROVEMENTS

30. Dr. Purwito Martosubroto, as Chair invited Dr. Mike Phillips, Senior Scientist WorldFish Center, Malaysia to present his paper entitled ***“Private sector support for an ecosystem approaches to fisheries and including cross-boundary and mariculture issues?”***. Dr Phillips began his presentation with an explanation of an ecosystem approach to fisheries (EAF) and how it strives to balance diverse societal objectives, by taking into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries. His presentation was tailored toward the application of EAFM to aquaculture and the role and importance of improved aquaculture practices in achieving EAF outcomes. He further elaborated on the ecosystem approach as a means to minimize impacts on ecosystems, maintain ecosystem services, and create social and economic values, think about ecosystem scales and develop partnerships all while providing a

framework for institutions and policies that support better management. He identified several challenges in implementing ecosystem approaches such as i) weak market incentives for change, ii) fragmented value chains and lack of incentives, iii) institutional capacity and policy orientation, and iv) the large number of small-scale farmers involved in aquaculture. With best or better practice at the core of an EAF to aquacultures he identified the key drivers of improvement as being (1) better government legislation/policy, (2) providing incentives for buyers and consumers, value chain actors and farmers to improve and the role of production led improvement (e.g. increased revenue and profitability) in the absence of weak markets and drivers.

31. Dr. Arthur Hanson, Distinguished Fellow at the International Institute for Sustainable Development (IISD), Canada, presented his paper ***“Are there opportunities for market-based initiatives in East Asia?”***. His presentation underscored the increasing global awareness on environment issues as reflected by new terms like green growth, green economy, green development and green markets. He also underlined that the sustainability of the markets are highly dependent on regulation, supply/demand factors, incentives, knowledge (pricing dynamics in real time, intervention points in market supply chains, and technology options) and cost internalization. To support the sustainability for the market, regulation should provide framework in promoting market-driven action beyond compliance, penalize unsustainable practices and open for new economic opportunity. In relation to market shifts, Dr Hanson identified several drivers under supply (scarcity, substitution, technology) demand (wealth and consumption growth, tastes, safety and health, global & regional “watches”) that can either be supportive of or detrimental sustainability goals. He also outlined the need for government to play an integral part achieving market-based sustainability shifts by giving incentives to business such as increased access to markets, eco-compensation, price premium/Government Procurement fiscal policies/subsidy & tax shifts/R&D investment. But equally he identified the need for knowledge (intervention points in market supply chains, understand pricing dynamics in real time technology options capacity development) as to how to apply these incentives. He concluded his presentation with examples of market-based approaches.
32. Dr. Geoffrey Muldoon, gave presentation on ***“Creating the International Standard for the Trade in Live Reef Food Fish”***. He began his presentation by outlining the objectives of the LRFFT International Standard as (1) promoting sustainable harvesting / production of fishery resources, (2) being compliant with existing local and national (and international) authorities, (3) recognizing the rights of fishers and other stakeholders, (4) ensuring stakeholder cooperation and involvement and (5) recognizing socio-economic, gender and poverty issues. He elaborated on the development process— multi-stakeholder involvement in various fora (i.e. expert workshops, standards advisory group, in-country consultative seminars and workshops, and in-country field-testing), that led to creating the International LRFFT Standard. Dr Muldoon outlined the general structure of the Standard but acknowledged that since being developed the Standard had been lying around, gathering dust reasoning that the Standard was without a home—an “orphan”—and hence had not been taken up by government or industry. With this background he

introduced the options for taking the Standard forward, such as under a multi-stakeholder sustainability initiative (i.e. a *Roundtable*). He proposed this multi-stakeholder “ROUNDTABLE” could i) manage implementation of the *LRFFT Standard*, ii) maintain the *LRFFT Standard* as a “living document” subject to revision and elaboration, iii) facilitate conducting industry gap analysis along the ‘Chain of Custody’ and iv) conduct outreach, capacity building and extension training programs.

BREAKOUT SESSION III : DISCUSSION ON ISSUES RELATING TO STANDARD

33. A final plenary discussion within Session 5, was followed by the last breakout session, “*Participation and support for adoption and implementation of measurable standards using roundtables and multi-stakeholder sustainability initiatives*”. Dr. Lida Pet-Soede highlighted the breakout session needed to address issues and related question regarding the value of having a Standard for the LRFFT. As a reference for the discussion, a paper entitled “***Creating the international Standard for the Trade in Life Reef Food Fish***” was made available to participants.
34. There was a general appreciation that the Standards must be put in place as vital to the health of fish stocks and that they had been dormant for too long. Considering differences between trades, markets and practices from region to region, it was proposed that the Standard should be divided into two parts : (i) one mandatory component applicable as a global standard; (ii) more flexible, dynamic component able to be adapted specifically to the market/country. In anticipation of the instatement of a roundtable, the first step would be to create a road map for developing the round table. The topic involves different interests and points of view among multiple stakeholders and so it is important to be able to lay out the key issues and roundtable purpose. Several informal meetings around the region would be needed to identify specific needs/ issues before a formal “roundtable” could be convened. One vehicle identified for taking the roundtable idea forward would be the CTI, where the CT countries and APEC economies of Indonesia, the Philippines, Malaysia, and Papua New Guinea have agreed on the need for it.

THURSDAY, 3 MARCH 2011

SESSION 6 : SYNTHESIZING

35. Dr. Purwito Martosubroto, as facilitator invited Dr. Geoffrey Muldoon as head of the Workshop Secretariat to present a summary type of the substance of discussions arising from the plenary as well as breakout session over the previous two days. This summary was presented in terms of challenges and opportunities for action in future. Dr. Martosubroto then invited participants to provide comments, correction and any additional information to improve the proceedings. The session was actively participated in by audience and useful comments and inputs were received to improve the proceedings. Summary of the full discussion appears in Annex 4).
36. Dr. Lida Pet-Soede, as facilitator, chaired the session and presented one page draft summary of the workshop. She then invited inputs, comments, and additional information from participants, upon which the summary is presented in Annex 5. The overarching recommended solutions were proposed in the summary :

- a. Creating enabling conditions for more effective fisheries data exchange between demand and supply countries and greater transparency and control on the movement of species being traded– crucial for combating IUU fishing;
- b. Adopting and testing the international standard for the trade in live reef fish food – a set of standard producing responsibly caught seafood products;
- c. Creating a public-private roundtable on sustainable LRFFT in which market and demand economies have agreed to participate.

WORKSHOP CLOSING

37. In the closing session, Mr. Jaya Wijaya, on behalf of Mr. Saut P. Hutagalung as a Project Overseer and the Ministry of Marine Affairs and Fisheries extended his gratitude for the support and active participation of all participants. He expressed his gratefulness for the cooperation extended by WWF in making the workshop run smoothly. Finally he wished safe journey home to all participants.

FIELD TRIP

38. Participants took the opportunity to visit facilities of PT. Pulau Mas in Denpasar especially had a good look for the valued reef fish in the holding tank ready for further process of export. Mr. Heru Purnomo, the President Director of the company provided explanation on the operational procedures from fishing until unloading the fish into the holding tank. Participants also had a look on the well equipped transport tank that has been commonly used in Australia.

Annexes

ANNEX 1

AGENDA

Day 1: Tuesday 1st March 2011

Session 1: Welcome

- 08:00–08:30 Registration and Coffee
- 08:30–08:40 Welcoming Remarks – Mr. Saut P. Hutagalung, Project Overseer; Director of Foreign Market Development, Directorate General of Fisheries Product Processing and Marketing, Ministry of Marine Affairs and Fisheries of Indonesia
- 08:40–08:55 Opening Remarks – Dr. Gelwynn Jusuf, Lead Shepherd, APEC - Fisheries Working Group
- 08:55–09:15 Keynote Speech – Dr. Victor PH. Nikijuluw, Director General of Fisheries Product Processing and Marketing, Ministry of Marine Affairs and Fisheries of Indonesia
“The need for bilateral and multi-lateral economy cooperation in supporting sustainability solutions for the Live Reef Food Fish Trade”
- 09:15-10:00 **PHOTO, PRESS CONFERENCE AND TEA BREAK**

Session 2: Setting the Scene

- 10:00–10:10 Workshop Overview – Dr. Lida Pet-Soede, Workshop Facilitator
- 10:10–10:30 Dr. Geoffrey Muldoon, Strategy Leader, WWF Coral Triangle Program
“The Live Reef Food Fish Trade in South East Asia: New strategies for achieving sustainability through regional actions”
- 10:30–10:50 Dr. Allen To, Fisheries Officer, WWF- Hong Kong China
“Linking markets, trade and marine conservation: A case study of Hong Kong China and People’s Republic of China”
- 10:50–11:10 Facilitated Questions & Answers

Session 3: Conservation and Sustainability: Challenges and Opportunities

- 11:10–11:30 Dr. Meryl Williams, AsiaPacific-FishWatch
“Major challenges to regulating small-scale fisheries and trade in South-east Asia with emphasis on LRFFT”

11:30–11.50	Dr. Ahkmad Fauzi, University of Bogor, Indonesia <i>“Managing across provincial, national and international jurisdictions: A case study of LRF fisheries in Indonesia”</i>
11:50–12.10	Mavic Matillano, Fisheries Program Director, Palawan, WWF-Philippines <i>“An NGO perspective: A multi-sector, multi-stakeholder approach to aiding fisheries recovery through establishing a resource managed areas”</i>
12:10–12:30	Facilitated Plenary Discussions
12:30–13:30	LUNCH BREAK
13:30–15:00	Facilitated break-out discussion <i>Market and supply chain incentives and disincentives for change</i>
15.00–15.30	TEA BREAK
15:30–15.50	Speakers– Industry perspectives Hector Pilego, Executive Chef, Marriott Hotels <i>“A supply chain partnership program to implement best-practices and improve sustainability: The role of the private sector buyers”</i> Heru Purnomo, Pulau Mas UD <i>“A supply chain partnership program to implement best-practices and improve sustainability: The role of the private sector producers and sellers”</i>
15:50–17:10	Facilitated break-out discussion (<i>continued</i>) <i>Market supply chain inventions and opportunities along the LRFFT value chain</i>
17:10–17:20	Wrap and Close Day 1; Housekeeping
18:00–19:30	Welcome Reception (Ministry of Marine Affairs and Fisheries of Indonesia)

DAY 2 Wednesday 2nd March 2011

08:00–08:30	Assemble, Coffee
08:30–08:50	Recap on main issues from Day 1 (Workshop Facilitators)
08:50–09:00	Questions & Answers

Session 4: National Policy, Regional Collaboration (PPP) and Regional Cooperation (Government)

09.00–09.20	Professor Ching-Ta Chuang, National Taiwan Ocean University <i>“Traceability and supply chain management of seafood industry in Taiwan”</i>
09:20–09:40	Dr Meryl Williams, Hong Kong University, Chair IUCN Groupers & Wrasses Specialist Group <i>“Platforms for regional cooperation in the Asia-Pacific: Mechanisms and frameworks for promoting more responsible fish trade”</i>

- 09:40–10:00 Dr. Yvonne Sadovy, Hong Kong University, Chair IUCN Groupers & Wrasses Specialist Group
“Regional cooperation on policy, enforcement and IUU Fishing – The CITES example”
- 10:00–10:30 John Pontillias, Chief Project Development Officer, Palawan Council for Sustainable Development, Philippines
“Outcomes from USCTI regional exchange meeting – Regional policy issues”
- Maurice Knight, Chief of Party, Coral Triangle Support Partnership
“US CTI Support Program Overview: Regional collaboration opportunities to address LRFFT Issues”
- 10:30–10:45 **TEA BREAK**
- 10:45–12:15 Facilitated break-out discussion
Policy and Regional Collaboration and Cooperation – Mechanisms and platforms for Government and industry including small-scale (Public Private Partnerships
- 12:15–12:30 Plenary – Impressions and comments
- 12:30–13:30 **LUNCH**

Session 5: Best Practices and Market Based Improvements

- 13:30–13.50 Dr. Geoffrey Muldoon
“Existing Best-Practice Standards for LRFFT: Practical solutions for strengthening the International Standard for the Trade in Live Reef Fish Food”
- 13:50–14.10 Dr. Mike Phillips, WorldFish Centre
“Private sector support for an ecosystem approach to mariculture through best practice management”
- 14:10–14.30 Dr. Arthur Hanson, International Institute for Sustainable Development
“Are there opportunities for market-based initiatives in east Asia?”
- 14:30–15.30 Facilitated break out discussions
“Opportunities to apply trade mechanisms in small-scale fisheries using existing/ proposed frameworks incl. roundtables and multi-stakeholder sustainability initiatives”
- 15:30 – **TEA BREAK (during discussion break-out)**
- 15:30–16.45 Facilitated break out discussions
“Participation and support for adoption and implementation of measurable standards using roundtables and multi-stakeholder sustainability initiatives”

16:45–17:30 Report back and facilitated discussion
17:30–17:40 Wrap and Close Day 2
18:30–20:00 **Workshop Dinner**

DAY 3 Thursday 3rd March 2011

08:30 – 09:00 Assemble, Coffee

Session 6: Synthesizing

09:00–10:30 Report back on Day #2 break-out sessions by Facilitator
Facilitated Plenary Session Questions and responses to break-out session
10:30–11:00 **TEA BREAK**

Session 7: The Road Ahead

11:00 –12:30 Group presentations – Refinement, Amendment, Agreement
- Identification of capacity needed by APEC economies to deliver reform **CONSISTENT WITH EAFM** at the national level AND that will facilitate improved regional cooperation
- Roles & responsibilities across sectors and themes. The discussion will include mechanisms and platforms to help deliver agreed meeting outcomes
- Confirm sector commitment to engagement
- Opportunities and platforms for future dialogue, political and industry commitment, and national and regional collaboration
12:30–12:45 Presentations of appreciation to speakers
12:45–13:00 Wrap up & closing remarks
13:00–14:00 **LUNCH BREAK**
14:00–17:00 **FIELD VISIT, SERVED BY WWF-INDONESIA AND PT. PULAU MAS**

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ANNEX 3



Coral Triangle

REGIONAL EXCHANGE WORKSHOP SUMMARY

Ecosystem Approaches to a Sustainable Live Reef Fish Trade in the Coral Triangle

A Regional Exchange and Workshop in Support of the Coral Triangle Initiative

October 12-15, 2010; Kota Kinabalu, Sabah, Malaysia

A CTI workshop on the Live Reef Fish Trade (LRFT) was convened to define regional-level collective actions for achieving more effective management and a more sustainable trade in live-reef food fish in the Coral Triangle. This is one of the actions identified by the *CTI Regional Plan of Action (RPOA)* which was endorsed by the leaders of the six Coral Triangle countries (Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste) at the CTI Summit in Manado in May 2009.

This event was the first time all six countries had convened to focus on achieving output(s) prescribed under the *CTI Regional Plan of Action* on the LRFT. The Live Reef Fish Fishery was adopted as a demonstration fishery to achieve a component of the CTI's RPOA for Goal 2 [*Ecosystem approach to management of fisheries (EAFM) and other marine resources fully applied*]. Under Target 4 of achieving *more effective management and a more sustainable trade in Live Reef Fish and Reef-Based ornamentals* this workshop supported regional actions to i) *Develop a collaborative work program* and ii) *Establish an informal CTI Forum*. With the recent interest in international dialogs on the Live Reef Fish Trade, and the invitation for the CTI to present at the upcoming APEC LRFT Workshop to be hosted by Indonesia, this workshop to build a CT6 mutual understanding and consensus was identified as a rare opportunity to blend sharing, policy collaboration and action.

Participants included fisheries managers, fisheries and ecosystem science advisors and members of the NCC from all six CT countries, and a resource team that included fisheries management and LRFT specialists, and representatives from relevant regional organizations and multi-stakeholder forum/round table specialists.

The workshop resulted in:

- vi) An initial review of the existing region-wide policy framework for Ecosystem Approaches to Fisheries Management (EAFM) and the LRFT, and sharing of relevant case studies;

- vii) An identification of science needs among the CT6 countries for improving management of LRFT and practical applications around collecting that information at network pilot sites in selected countries;
- viii) a review of multi-stakeholder forums or roundtables that may be appropriate to the Coral Triangle countries and the LRFT;
- ix) an agreement on a common set of issues for presenting a coordinated CTI regional position at subsequent regional fora; and
- x) the identification of next steps and collective efforts towards reforming the LRFT, including engagement beyond the CT6 countries

Workshop Background

The Regional Exchange and workshop was conducted from 12 to 15 October 2010 in Kota Kinabalu, Sabah Malaysia. The workshop was held with the Sabah State Ministry of Agriculture and Food Industry/Sabah Fisheries Department as host, the Malaysian CTI Focal Point in the Ministry of Science Technology and Innovation as co-coordinator, and WWF (technical support), in coordination with the CTI countries and the CTI Regional Secretariat. The workshop was supported by the partnership of the US CTI Support Program as event organizer.

The 21 participants from Coral Triangle countries were joined by 10 technical specialists. Running parallel to Day 2 of this workshop, a meeting of more than 10 LRFT Malaysian traders was held in Kota Kinabalu, with a delegation of three traders participating in Day 3 of the CTI LRFT workshop. Participants were also invited to join a field visit to grouper farming cages in Kampung Serusup.

1. Workshop Themes and Objectives

The purpose of the workshop was to support regional collective action of the CT6 countries to have EAFM applied through an illustrative fishery and a parallel activity that contributes to improved management of a Live Reef Fishery leading to a more sustainable trade. The emphasis was on actions that either could not be achieved by individual countries or could be enhanced via collective and consensus approaches and activities, including through engagement with countries beyond the borders of the Coral Triangle. The workshop was structured simply with a mix of plenary sessions to present policy reviews; updates, information, guiding principles, case studies and results of break-out sessions; and several break-out sessions by either country/region or by topic (See Appendix 1).

The workshop had three themes or topics and one synthesis session:

- The first theme focused on creating a *Common Understanding of and Support for EAFM to guide management of the LRFT* through sharing, reviewing and synthesizing EAFM policies in the context of the LRFT. This included CT6 country updates and reviews, expert and case study presentations with discussions on policy needs and capacity gaps.

- The second theme focused on identifying *Science Needs for Management of the LRFT* including defining relevant performance indicators for various levels of operators.
- The third theme of the workshop focused on developing *Forums and Roundtables* through case studies presentations from practitioners and discussion as to the appropriateness and feasibility of these fora towards building stakeholder consensus on a regional Coral Triangle LRFT platform.
- A final session focused on preparing a CTI regional position on specific LRFT issues for a larger, multi-sectoral meeting on LRFT being conducted under the auspices of the APEC Fisheries Working Group; with these recommendations also being submitted for consideration by the Senior Officials Meeting (SOM) of the CTI.

2. Workshop Summary

The first half day of the workshop was used to provide an overview of LRFT previous and current initiatives, to highlight the need for regional and trans-boundary actions and to place the LRFT into its context as illustrative fishery to implement an EAFM strategy. This was followed by presentations by each of the CT6 countries on their status of the LRFT. The morning session wrapped up with a “visioning” session led by the countries on what a responsible and sustainable LRFF industry for the Coral Triangle region might look like.

The afternoon session of Day 1 and the morning of Day 2 of the workshop were dedicated to the first of the three (3) workshop themes – “*EAFM policy review and sharing of lessons learned*”. This theme opened with a presentations by EAFM experts on i) the Practical Application of EAFM Policy to LRFT fisheries in the CT, including an overview of existing LRFT and EAFM policy in each country and an emphasis on control points along production and marketing chains; ii) the Governance Gap and an EAFM with an emphasis on scaling up EAFM locally to achieve provincial and or national-level outcomes and iii) Local Case Studies from the Pacific where EAFM had been incorporated into LRFF fisheries management plans. These presentations were followed by two breakout sessions. The first breakout asked each of three (3) mixed groups to answer a single thematic question, either on i) policy gaps and needs for managing the LRFF fishery within an EAFM framework, ii) specific policy and management options needed to achieve sustainability of the production system or iii) where or what were critical control points for which management actions will have the greatest effect. The second breakout had each country team identify the top three to five policy and management recommendations for the management of the LRFF within and beyond the CTI region.

The second day of the workshop continued with the second theme – “*Science Needs for Management*”. There were three presentations within this theme, i) an overview of “minimum” science needed to enable the LRFF fisheries in the CT to be managed under an EAFM; ii) results from a survey of CT6 countries on type and quality of existing data collection programs grouped according to biological, ecological and socio-economic data; and iii), a case study of a multi-stakeholder LRFF project being undertaken in the Philippines, demonstrating how biological, ecological and socio-economic data are being used to improve management of the LRFF fishery. Break-out groups by country were used

to prioritize country science needs according to main objectives and identify assistance needed to enable countries to meet priorities, followed by a plenary session to synthesis commonalities

The third day of the workshop focused on the last of the workshop themes – *Forums and Roundtables*. The first session included presentations from experts introducing the roundtable approach, case studies on existing roundtable models and identifying benefits of using roundtables to challenge “business-as-usual” outcomes and scenarios. Iterative breakout sessions followed to first consider whether industry sector initiatives were appropriate to sustainability goals and what issues they could address, and second, to identify how to move forward with a regional CTI LRFT Forum.

The last day of the workshop focused on developing a common set of issues and how to present a coordinated CTI regional position on policy, management, science needs, and multi-stakeholder initiatives at the upcoming APEC-supported LRFT workshop in Indonesia. The sessions included preparing the content of a decision memo for consideration by the CTI Senior Officials at the SOM 6 meeting in Manado in November 2010. The workshop closed with agreements on next steps by theme beyond these regional fora including regional coordination mechanisms to improve management effectiveness for the LRFT.

3. Workshop Results

Building a consensus for the CTI on managing the LRFT requires agreement on a common set of issues for presenting a coordinated CTI regional position at subsequent regional fora and the identification of next steps and collective efforts towards reforming the LRFT, including engagement beyond the CT6 countries. These were defined for each of the three main workshop themes.

3.1. An EAFM Approach to the LRFT

From an extensive list of needs identified by the workshop participants to successfully apply an EAFM approach, the following six were given the highest priority for meeting regional needs related to LRFT, the CTI and CT6 countries:

- The need to base national level fisheries management policies on EAFM principles, with LRFF fishery as a priority illustrative example, particularly in addressing the issue of balancing harvesting rates with production capacities of reef ecosystems;
- The need for CT6 countries to collaborate to encourage (now) and require (later) that Hong Kong/China governments work to ensure imported live reef fish are from responsibly managed and legal sources (i.e., not IUU);
- The need for complementary management standards to be developed, promoted, and enforced across CT6 countries for high risk LRFT species (e.g. Hump Head Wrasse);

- The need to encourage and facilitate Public-Private Partnerships for full-cycle aquaculture/mariculture of important LRFT species using better management practices;
- The need to standardize the management of LRFT across the CT6 countries – in terms of codes of practice; certification and traceability; and
- The need to standardize statistical data needs on LRFT species relevant to CT6 countries capacities to improve the management of the LRFT

3.2. Science Needs for Management

The workshop recognized that science as a key component for EAFM is currently under-valued in the Coral Triangle countries. While some data is being collected, there are substantial gaps in knowledge relevant to LRFF fisheries as well as to all coastal and inshore finfish fisheries.

While specific science needs were prioritized, the CT6 participants also identified addressing some of these priorities will require external support and partnering amongst CT6 countries (governments, NGOs, academic institutions) and international agencies to achieve success in establishing data collection programs. Examples of support may include technical assistance, capacity bolstering, collaborations, sharing of lessons learned, and engaging additional technical partners such as NOAA.

Science needs from all six CT countries were compared to identify biological, ecological and socio-economic commonalities both for country-specific objectives and similar objectives across multiple countries. Priority science needs identified include:

- To determine the seasonality, location and behavior of Fish Spawning Aggregation Sites (FSAS) by spawning species;
- To improve knowledge of the status of stocks of coral fish and their habitats in order to inform management on exploitation rates, particularly in relation to stock recovery;
- To improve knowledge of basic life history characteristics of the main target species at geographically relevant scales;
- To support development of “viable” full-cycle mariculture production through improved knowledge and technology transfer, technical assistance and market intelligence; and
- To improve traceability (i.e. chain of custody) of LRFF coming from wild-caught and aquaculture production.

3.3. Roundtables and Forums

Based on Goal #2, Target #4, Actions #1 and 2 of the RPOA, the Workshop participants (through their EAFM Focal Points), recommend SOM approves continued work towards the formation of an inclusive CTI multi-stakeholder initiative (also known as a Round Table) that seeks to ensure the sustainability of the Live Reef Food Fish Trade. The workshop participants recognized the issues and concerns around the ongoing over exploitation and unsustainable practices of the LRFT and an acknowledgement that all actors along the LRFF supply chain have an important role to play in the sustainable production of LRFF. The workshop participants agreed that platforms such as forums and roundtables could be an appropriate mechanism for involving multiple stakeholder including CT6 governments and private sector in improving the sustainability of the trade. The CTI Workshop recommends that any such initiative should address, but not be limited to, the following core issues:

- a. The current high demand for wild LRFF, exotic species, small fry's;
- b. The current lack of regulations on fish size (i.e. size at maturity, juvenile);
- c. Direct shipments of LRFF from producer to importers that bypass in-country exporters (i.e. IUU fishing);
- d. Traceability of LRFF
- e. Illegal/bad practices by stakeholders along the value chain (i.e. trade small or undersize fish, transport other wildlife commodities together with live fish to compensate for loss earnings)
- f. The current state of poor collection of statistical data on biology and socio-economic indicators;
- g. Low level of awareness on the issues surrounding the sustainability of LRFF amongst stakeholders along the value chain;
- h. Unfair pricing for fishers/collectors/buyers; and
- i. The current high mortality of LRFF during transport.

Based on this common agreement the CT6 country delegates to the regional exchange proposed the establishment of a Technical Working Group under the EAFM Working Group to consider the appropriate model in which a multi-stakeholder initiative can be implemented to promote the sustainability of the LRFT. It was further agreed by the participants to request that the Senior Officials (during SOM 6) task the EAFM Focal Points and Regional Secretariat to:

- i. Formulate and endorse the composition of the aforementioned Working Group (involving the CT6 governments, the markets and the private sector),
- ii. Formulate and endorse terms of reference of the aforementioned Working Group

3.4. Participation in APEC-supported LRFFT regional workshop session as CTI

An APEC-supported LRFT Workshop (*Market-Based Improvements in the Live Reef Food Fish Trade*) is scheduled to be held in February 2011 in Indonesia. The participants of the CTI LRFT Workshop are invited to present the results of the October 12th–15th, 2010 Kota Kinabalu Regional Exchange Workshop (*Ecosystem Approaches to a Sustainable Live Reef Fish Trade in the Coral Triangle*) as part of an session on regional collaboration and coordination during the APEC-sponsored workshop. The CTI LRFT participants, through the EAFM Focal Points, recommend two speakers represent and present on behalf of the CTI and the LRFT Workshop (see TOR / Proposal for APEC Presentation):

- a) A Senior Official to present the following message on behalf of the CTI to APEC participants on the topic of LRFT
 - The CT 6 are working together as a block towards managing the LRFT in their waters,
 - The CT 6 are working toward more sustainable and ecosystem-based fisheries practices region-wide to protect our resources and food security,
 - The CT6 seek the cooperation of other nation states and LRFT stakeholders to move the LRFT towards sustainable and equitable practices.
- b) An EAFM Focal Point from one of the CT 6 countries, who was also a Participant from the CTI LRFT Regional Exchange workshop, to present the results of the workshop including the recommendations to SOM (See Exec Summary).

2. Road Map forward

This workshop has successfully contributed to the designated Regional Actions under Target 4 of Goal 2 of the RPOA. To this point the LRFT has been acknowledged as a demonstration fishery through which to achieve a component of the CTI's RPOA for GOAL 2.

As the work-stream for the developing a regional EAFM roadmap proceeds, the LRFT will continue to intersect with this overarching EAFM goal at a operational level, particularly with regard to having demonstration sites at national levels, to recruiting private sector “champions” and integrating them into these demonstration sites and in developing LRFT policies in support of EAFM principles (i.e. IUU). It is feasible that all three of the themes addressed during this workshop will be applied at varying levels in support of achieving regional EAFM goals. A plan for next steps in this work stream has been developed. The major milestones include:

November 2010: Report to NCCs and Agencies

- LRFT Workshop Team sends the Executive Summary and Draft Decision Memo to PNG Focal Point for presentation to the SOM in Manado from 10th – 12th November, 2010
- LRFT Workshop Team sends the Executive Summary, followed by Report to all participants and the CTI Regional Secretariat.

November 2010: APEC FWG LRFFT Workshop Representatives Identified

- The CTI LRFT participants, coordinate with EAFM Focal Points to identify and recommend two speakers for the APEC Workshop in February, 2011
 - A Senior Official to present the CTI and a Message from CTI to APEC participants on the topic of LRFT, and
 - An EAFM Focal Point and Participant from the CTI LRFT Regional Exchange to present the results of the workshop including the recommendations

December 2010: Establishment of a Technical Working Group (optional)

- The LRFT Team, consisting of CT6 representatives and partners begins to work with CTI Secretariat or EAFM Working Group to form a small sub-Working Group (involving the CT6 governments, the markets and the private sector) and to formulate and request endorsement of a Terms of Reference for this Working Group

Jan/Feb 2010: APEC FWG LRFFT Workshop preparation

- The LRFT Team works with nominated EAFM Focal Point to prepare presentation for the APEC Workshop in February, 2011

February 2011: APEC FWG LRFFT Workshop implementation

- CTI Representatives present at APEC, including recommendations from LRFT workshop and TOR for CTI Informal Working group
- Non-CT APEC member economies endorse CTI Informal Working group in Workshop Recommendations

March/ June 2011: Work with CT6 EAFM Focal Points to prepare for first CTI Forum on Management of and International Trade in Coral Reef-Based Organisms including developing national level networks

September 2011: First CTI Forum meeting held with support of CTI Secretariat or EAFM Working Group

3. Workshop Closing

Overall the discussions in closing and evaluation forms were quite positive with most participants feeling the workshop had met or exceeded its objectives and their expectations. The workshop organization and materials and the range and quality of the experts were noted with appreciation. Participants noted that outputs and recommendations from all three themes were excellent given the limited time; and most commended the overall good organization of the workshop, facilitator support and

guidance. Participants were comfortable with next steps and enthusiastic about the opportunities to take the recommendations forward to other CTI and regional forums.

The CT6 participants agreed that it would be critical to follow up on this workshop and to build on the momentum it has created to begin to put in place recommendations and priorities identified in relation to collection, collation and application of biological, ecological and socio-economic data as this continues to be one of the key stumbling blocks to improved management of the LRFFT.

ANNEX 4 BREAKOUT SUMMARY

This summary highlights the synthesis from the discussion during the 3 breakout sessions in the last two days. The highlight is grouped into various sections which individually preceded by questions.

SECTION 1

How can we consolidate regional activities to achieve common goals including but not limited to the following issues:

- a. What is the scope and what are the challenges for regional cooperation in the LRFFT
- b. Are existing efforts at regional cooperation working and if so why and if not, why not (examples of successes and failures relevant to the LRFFT)

Challenges

1. A main problem is the gaps in import (transport vessels) and export data that would allow better management of the industry and resources. It appears that People's Republic of China does not collate any data at all and now that fish is sold directly from producing countries into People's Republic of China (not all goes via HK China) that is an issue. Major data gap is transshipment of LRFF to mainland People's Republic of China and for direct imports into People's Republic of China for which species specific data not collected.
2. There are various aspects to the data gaps and discrepancies between those from government/FAO and industry coming from different reasons. There were some suggestions on how to focus and improve data availability, but relevant to this session it was noted that there is no regional forum that deals with this.
3. The producing countries have different systems for export, and the enforcement on export licenses is lacking. Some market players go directly to the fish cages and the paperwork is fraud.
4. Free trade agreements for the region were discussed as both opportunities and challenges.
5. While there are many regional platforms, there is no regional body that covers all countries involved in the LRFFT, there is no platform that realistically focuses on LRFFT, the existing forums are not legally binding, and the trans-boundary nature of LRFFT poses a challenge.
6. Platforms and data system approaches that exist and are possibly useful to consider were listed: For data issues: Plan for Database in PNG to be created –including economy, market data (National Fishing Authority), -CTI – LRFFT is a goal. PNG revised Management plan -SSME Action Plan deals with all aspects of the LRFFT. For mariculture: SEAFDEC. For Trade practices: Conduction of NDF study for humphead wrasse (Malaysia) HHW. Additional CITES, SSME, BIMP. For policy: ASEAN, APEC, CITES. For demand/end users: APEC, CITES.

Opportunities

7. Some suggested that FAO could take on the data gap problem and could start with the Harmonised Code System that Hong Kong China has set up. People's Republic of China was suggested to also look at the HK system. However "formal" data collection from Hong Kong China vessels needs to be more systematically collected.
8. Others suggested that APEC could be the regional platform for LRFFT management improvement focusing on: Human health issues (natural poisoning, use of chemicals), Food security – from the point of view of countries competing for resources, and Traceability.
9. Mapping the "area" and issues covered by existing regional platforms will allow seeing which ones are relevant to support addressing LRFFT issues and where gaps exist.
10. Rather than creating new platforms, "inject" LRFFT discussions for addressing in existing platforms as relevant.
11. Engage People's Republic of China in existing regional platforms specifically in LRFFT issues.
12. Individual governments should improve licensing systems and work to follow an international standard. PPPs are opportunities at this level as well as national roundtables to address country specific challenges and approaches.
13. HHW should be sent via air only and regional agreement between producing countries and Hong Kong should be considered for this.
14. Some suggested to look at stakeholder driven management process (for example NOAA Catch shares) –empowering the community, reducing overall responsibility of central government. Scientific information given to stakeholders, they draw up their own management plan. Positive/ negative changes made by fishermen and affect fishermen. This model has had proven success –incomes and stocks of participating fisheries have increased.
15. It was suggested to consider a coral reef regional fisheries management organization.
16. Promote the harmonization of import / export data by key species?
17. Create a regional body to bring together all trade players.
18. Enforcement of regulations at the international level needs to be addressed.
19. A Regional body can help promote / communicate / identify success stories to inspire others.
20. Regional body can initiate education and capacity-building activities.

SECTION 2

Where do policy trends and industry realities converge? Where are the national/regional policy gaps in relation to?

- a) Data collection and sharing
- b) IUU and traceability

On Data collection and sharing

Challenges

21. Species-specific detail is missing in data.

22. No specific item on LRFF in forms – lack of a harmonized code both at export / import levels.

Opportunities

23. Industry should collect data through systems that are easy for fishers to work with. The system should comply with HACCP standards as that benefits tracing in case of health and food safety issues.
24. Develop harmonized code (see #22) for species which can be used by all countries :
- a. This can build on the success of HK
 - b. This can help with human health issues (natural poisoning)
 - i. Traceability and human health issues depend on the right government level initiative to track species for possible poisoning (Ciguatera) and relates to traceability
25. Mode of transport of data – affects data collection ; if there were restrictions on mode of transport (mode of transport impact on data collection (e.g. air or sea) but idea of export /import HUBs, there could be more effective data collection.
26. Regional trade cooperation for importers and exporters (e.g., shrimp) has worked.
- o Promotion of mariculture fish products that follows best practices
- Preparedness of industry to participate and the willingness of market to engage that will present opportunity to meet challenges more effectively.

On IUU and traceability

Challenges

27. Priority for governments to address IUU in this industry is low due to misunderstanding about economic value of this industry.
28. IUU still exists; lack of cooperation between countries / national governments in international IUU issues .
29. CITES isn't working fully for Humphead Wrasse.

Opportunities

30. Tracing must be initiated and incentivized from the demand side, because it is easier.
31. Recommendation that all LRFF export should be by airplane, not vessels. Vessels trade from Hong Kong China is the key to address the loophole. From yesterday's group discussion, there is information that the shipment from Hong Kong China vessels is twice as much as from the airplane, but no clear record to trace that data.. For 2009, Air imports ~8,000t, Registered FVs estimated to be 3,600t. FV imports extrapolated from Voluntary reports. For imports data is dependent on customs data for air, and for re-exports data is on air and FV is dependent on customs data.
32. Reduce the numbers of Hong Kong China vessels. The Hong Kong China government even said that the vessels are illegal, not recorded on their system.
33. Put official government observers which are incorruptible for monitoring.
34. Governments should make a regulation that all vessels that carry LRFF should be registered.

35. The Hong Kong China government to share data with the Indonesian, Malaysian, and the Philippines governments.
36. Governments should be educated about what is going on in the trade and about the value of it.
37. Develop traceability system, mapping the chain of custody indicating players with bad practices. Government should also develop specific regulation on this?
38. Divide the fishery coordination on small and big scale industry, and develop fisherman groups in the small scale industry. These groups are easier to monitor and influence for better practices.
39. Is it possible for countries to make the trade so complicated to conduct that it becomes a disincentive?
40. Possibility of legalizing the trade of Humphead Wrasse from the Philippines? The challenge with this though is that this species is mainly caught in the Philippines using cyanide. In the Philippines HHW exports are currently banned forcing trade underground and illegal. To help manage trade in the Philippines the export of HHW could be legalized but real challenge is in amending the law in Phil very difficult. Also in Indonesia the use of cyanide is main method of catching HHW. Consider banning trade.
41. Can HHW be moved into Appendix 1 of CITES to ban trade and gain support of People's Republic of China? HHW best suited to Appendix 2 BUT because of IUU and fact that measures to control trade not working could make argument for HHW to move to App 1. One other option is a "moratorium" to allow for population recovering and address IUU problems not only for HHW but for other LRFFT species. In terms of lag time, listing on Appendix 1 may take long time.
42. Can we look at the relevance and example of the LACEY Act for controlling imports into demand countries? For example rejecting import of endangered species or species caught illegally from other exporting countries – respect the laws of exporting countries.
43. Philippines and Malaysia cross border Navy agreement for enforcement (foreign vessels); right now this is only specific to poaching.
44. Communication between countries on illegal imports under CITES.
45. Develop a shared website? One that is password enabled
 - a. Build on Hong Kong China's CSD
46. Common minimum size as one possible regulation in exporting countries for certain species. This is the size at which fish are caught, not the size at which fish are exported (after grow-out). Minimum size regulations address management and sustainability issues.
 - a. A practical approach to sustainable management
 - b. Easily understood between countries
 - c. Relatively easy to enforce
47. IUU traceability – registration of companies engaged in the trade.

SECTION 3

What are the opportunities and challenges for Public-Private Partnerships

Challenges

48. The business case has to be strong and has to be developed.
49. There is no LRFF association, from the producers' side.
50. Must recognize special needs of small traders. Need a mechanism to include smaller farmers. Most PPP tend to focus on the big guys, while the small guys who are responsible for 70% are squeezed out.
51. Few opportunities for PPP at the regional level exist, no examples to work from.
52. Weak policy is likely to be that the problem is so multidimensional and context changes from region to region.

Opportunities

53. A PPP mechanism from WWF, in collaboration good buyer and good financial institution to work together to do business in sustainable environment. The Banyan Tree Hotel to have a partnership with the Fishermen with the benefit is transferred to the Fishermen. So the fishermen are now more loyal.
54. The government should provide legal basis for PPP and a legal framework for LRFFT.
55. The need to set up a regional LRFF association, which involved the producers and the buyers.
56. People's Republic of China – think about the RSPO, it takes time to set up, but there is a positive shift now.
57. The Hong Kong China Chamber of Seafood Merchants is a great way to start. To make sure the sustainability of production.
58. Vietnam has developed 16 MPAs all over the country to support small scale fisherman, as well as develop alternative livelihood for them. Collaboration between government, NGO and private sectors is needed to ensure the sustainability in small scale fishery.
59. Private sector adopting MPAs as measures for long-term sustainability could be considered.
60. Promotion of mariculture research to make that more feasible and responsible?

SECTION 4

1. First impressions on Standard
 - a. For example is this a Standard that could obtain better prices OR allow market access OR Improve fishery sustainability/responsibility)
 - b. Is there something missing?
61. First Impression on the Standards is that they :
 1. are based on sound science
 2. do not reinvent the wheel
 3. represent at a basic level, what we want to achieve

62. Considering differences between trades, markets, and practices from region to region, standard should be split into two parts:
 1. One mandatory component applicable as a global standard
 2. More flexible, dynamic, adapted specifically to the market/ country
63. Demonstrate how to improve the trade and how to implement sustainable management practices –good for environment, good for market.
64. Idealistic to believe the Standards will be taken up on a voluntary basis –some sort of regulations need to come into play.
65. Very well put together, content is sufficient and comprehensive but as they stand they are a guide rather than a stimulus for change (NEED TO BE QUANTIFIED).

On Experiences:

66. In Hong Kong China, eco-labels may have better outcome for industry than expecting consumers to pay a premium price. If MSC-labeled are fish more expensive, demand may fall (i.e. not consumer supported). Improved success if promote MSC to Food and Beverage industry (hotels, restaurants).
67. In contrast in Chinese Taipei, GAP (Good Aquaculture Practice) premium prices can be received for GAP products and has been “tipping” point for greater demand for GAP products.
68. International sustainability standards are supported by People’s Republic of China’s government. In People’s Republic of China it is important to communicate and present existing standards and criteria (e.g. LRFFT International Standard) carefully to People’s Republic of China government to ensure they are supported and applied by government. For GAP (aquaculture) product (e.g. shrimp tilapia) People’s Republic of China is number one country for adopting International Standards.

On Challenges/Opportunities

69. The Standards need to be shared with the business sectors/industry for pilot testing. They need to be applied. How can we make people to testing it and making it more realistic?
70. Trading across borders introduces complications when complying with local regulations (standard states that local laws need to be abided by). Lack of consistency –e.g.: Antibiotic injections legal in some countries, illegal in others.
71. Best practice document should be created?
72. Use the Aquaculture Dialogue process or Roundtable to further develop Standards for grouper farming - move toward ASC certification. Reference should be made to the FAO Aquaculture Certification guidelines.
73. A lack of international attention/concern outside the CTI countries for the LRFT but grouper aquaculture is a more global issue that could be supported by an Aquaculture Dialogue.
74. In the absence of Certification a tool/platform is needed to oversee and support the regulations being implemented (see #86 - Standard as a compliance driven requirements to enable export).

75. Wild-caught and aquacultured LRFFT are targeting two different consumer markets and those consumer purchasing cultured fish know what they are buying. This is a good opportunity to promote cultured fish produced using better practices.
76. Hong Kong China people do not like cultured fish, including grouper. They prefer wild-caught fish. If they know it is a cultured grouper then the profit will decrease. But, most consumers do not know it.
77. Could create better price going forward. non-cyanide assured fish get a better price because they are better quality. Increasing market for chemical-free as well as responsibly sourced product.
78. LRFFT should learn from salmon issue on cultured versus wild caught fish. Can we learn from Taiwan (i.e. GAP) who produces mainly cultured grouper (96%)?
79. Technology to support traceability for those producers who support the standards.
80. Public-private partnership that could support use of technology such as a "Tracking System". The need for carrot and stick incentive for those traders who support the adoption of the Standards. Incentive such as a "Tracking System" is a must.
81. Use environment health or even human health as the hook for compliance with the Standard.
82. Sustainable feed sources – as far as the group knows, there are no such sources. Solution needed. Pellets are not a viable option (growth, taste of fish is not sufficient). Reported cases of dynamite fishing to catch feed for grouper(!)
83. The term 'trash fish' has given the industry a bad name, trash fish are not necessarily 'targeted' for that purpose. Feed issue is a very controversial issue, needs to be re-visited in the standard. New document being drawn up on capture based fisheries by FAO which addresses some of these issues.

SECTION 5

1. Should this Standard become
 - a. Something quantifiable to facilitate certification
 - b. Make compliance driven requirement to enable exports
 - c. Or are there other approaches we should consider?
84. Who will approve the standard? Who has authority to issue certification? How will certification be obtained when Standard is so broad? (e.g. No destructive fishing – there is no official definition for destructive fishing). [*Challenge*]
85. It was suggested the 'People's Republic of China GAP model' was should be emulated in the ASEAN region (i.e. Regional Basis)? Traders in the group impressed by mode. [*Opportunity*]
86. It was proposed that this standard could be adopted regionally as a private standard BUT it was unclear where funding would come from if the Standard was privately managed. One suggestion was from the traders that want to obtain the 'certification' BUT the advantage of a government-led system in terms of funding was suggested. [*Challenge /Opportunity*]
87. Group liked the idea of using the Standard as a compliance driven requirements to enable export. [*Opportunity*]

88. Traders argued that using the Standard as a compliance driven requirements could encourage IUUs because they will usually take the easiest option, whereas with certification they would not be inclined to use illegal shipping routes because they would be proud of their fish. [*Challenge /Opportunity*]

SECTION 6

Could a roundtable take this forward (next group will be what to take forward)

89. A roundtable should have a few more facts, goals Need to create a sense of urgency (see Patrick's file). Need to Lay out a TOR for Roundtable to describe aims, purpose, objective to initiate discussion around formation of Roundtable.
90. Roundtable with the business sector to get basic facts first. If the discussion is started with certain standards or regulation it will take longer period?
91. There needs to be a follow-up mechanism after the roundtable. [*Challenge /Opportunity*]
92. There is a need for a "Roundtable" champion from any sector. [*Challenge /Opportunity*]
93. The government needs to be engaged on a "Roundtable" development. [*Opportunity*]
94. Who will take ownership of the Roundtable. [*Challenge*]
- o Umbrella association from the business sector. [*Opportunity*]
95. Strict compliance to regulation from the demand side (supply chain) as the most influential trigger for the people to pay attention. The 'trigger' case happened in People's Republic of China, when demand ask for certain regulation such as IUU.
96. Gradual approach to buyer: start from advocacy to not selling illegal fish, then move to sustainable trade.
97. Roundtable must be convened by an organization/ country that neutral, open, transparent, credible, reaches out to all stakeholders, access to budget. Approach to buyer: start from advocacy to not selling illegal fish, then move to sustainable trade (Step-wise).
- o ASEAN +3
 - o APFIC
 - o Industry association
 - o WWF (help initiate)
- Need for support to this process from enabling agencies such as Worldfish/NACA.
98. Ideally create an organization in its own right out of the scheme so that the setting up organization can take a step back. Maybe more commitment if championed by the demand side –based in People's Republic of China or Hong Kong China?
99. There are a number of Key "strategic" players
- o CTI. Need to go beyond CTI. APEC can get bigger participation, because CTI is under APEC FWG.
 - o RPOA on promotion of responsible fishing practice and combating IUU fishing
100. There are a number of Roundtable needs
- o Secretariat, Money, Purpose/objectives.

101. Current standard should be used as a platform for the code of conduct.
102. Roundtable – stakeholders not just restricted to aquaculture, but the whole trade – wild capture inclusive.
103. First step would be to create a road map to the round table - the topic involves different interests and points of view among stakeholders so it is important to lay out issues and purpose. Several informal meetings around the world to identify specific needs/ issues before a formal convention.



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