



**THE CORAL TRIANGLE INITIATIVE  
ON CORAL REEFS, FISHERIES AND FOOD SECURITY**

**Activity Report: Coral Triangle Initiative  
Regional Business Forum (CTI-RBF)  
October 10-11, 2011, Kuala Lumpur, Malaysia**



Government of Malaysia



# Activity Report: Coral Triangle Initiative Regional Business Forum (CTI-RBF) October 10-11, 2011, Kuala Lumpur, Malaysia

**Prepared for the US Agency for International Development**

**By Tetra Tech ARD, Inc. under Contract No. EPP-I-00-06-00008-00**

**US CTI Support Program Document No. I3-USCTI-11**

## **DISCLAIMER**

**The views expressed in this document do not necessarily reflect the views of the United States Agency for International Development or the United States Government.**

**Cover Photo: Sustainable Fish Farmers in Penang, Malaysia**

# CONTENTS

ACRONYMS.....	3
EXECUTIVE SUMMARY .....	4
SESSION PROCEEDINGS .....	7
Day 1 .....	7
Welcome Remarks .....	7
Special Keynote Address.....	7
Presentation of PPP Scholarships to CT6 Delegates .....	8
Special Address 1: Safeguarding the Ecological and Economic Benefits and Sustainable Growth of Coral Triangle Resources.....	8
Plenary 1: Enabling the Private Sector in Managing Coral Triangle Resources for Sustainable Business Opportunities & Long-Term Economic Growth .....	9
Scene-setting Address: National Ocean Policy Framework - Wealth Creation through a Healthy, Secure and Sustainable Ocean.....	9
Interactive Forum: Green Investments for a Blue Economy and Institutional Arrangements for Public-Private Sector Engagement .....	10
Plenary 2: Motivating the Private Sector to Adopt Green Business Solutions.....	12
Keynote Address.....	12
Interactive Forum:.....	13
Sustainable Marine Business Solutions .....	13
Eco-Tourism, Environment & Communities.....	14
Interactive Forum:.....	16
Technology & Innovation for Food Security.....	16
Day 2.....	17
Concurrent Roundtables.....	17
Special address 2: Zero Waste Water – Stop Sea Pollution.....	17
Presentation of Regional PPP Models and Best Practices .....	17
Day 2 Wrap-up and Conclusion .....	21
Official Closing Ceremony .....	23
ANNEXES.....	25
A.1 Agenda.....	25
A.2 List of Participants .....	28
A.3 Roundtable Reports .....	40
Roundtable 1: Science, Technology & Innovation for Sustainable Fisheries & Aquaculture for Food Security.....	40
Roundtable 2: Renewable Energy, Green Transportation and Logistics .....	45
Roundtable 3: Sustainable Eco-Resources & Biodiversity Management .....	49

# ACRONYMS

ASC	Aquaculture Stewardship Council
BC	Blue Carbon
BPMIGAS	Badan Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi Indonesia
CDM	Clean Development Mechanism
CSR	Corporate Social Responsibility
CT6	CT Countries (Indonesia, Malaysia, Philippines, Papua New Guinea, Solomon Islands, and Timor-Leste)
CTI	Coral Triangle Initiative
CTI-RBF	Coral Triangle Initiative Regional Business Forum
CTSP	Coral Triangle Support Partnership (USAID/Asia)
EU	European Union
GPS	global positioning system
ICT	information and communication technology
IMO	International Maritime Organization
IUU fishing	illegal, unreported, unregulated fishing
MOSTI	Ministry of Science, Technology & Innovation, Malaysia
MPA	marine protected area
MSC	Marine Stewardship Council
NAMA	Nationally Appropriate Mitigation Actions
NCC	National CTI Coordination Committee
NFA	National Fisheries Authority
NGO	non-governmental organization
NPOA	National Plan of Action
OTEC	ocean thermal energy conversion
PNA	Parties of the Nauru Agreement
PNG	Papua New Guinea
PPP	Public-Private Partnerships
RDMA	Regional Development Mission for Asia
REDD+	Reducing Emissions from Deforestation and Forest
RPOA	Regional Plan of Action
RSPO	Roundtable on Sustainable Palm Oil
SDC	Sabah Development Corridor
SSME	Sulu Sulawesi Seas Marine Eco-region
STI	science, technology and innovation
TEEIP	Tourism Energy Efficiency Investment Program
TIHPA	Turtle Islands Heritage Protected Area
UN	United Nations
USA	United States of America
USAID	United States Agency for International Development
US CTI	United States Support to the Coral Triangle Initiative
VMS	Vessel Monitoring System
WOC	World Ocean Council
WWF	World Wildlife Fund for Nature

# EXECUTIVE SUMMARY

On October 10-11, 2011, the Government of Malaysia and its CTI National Coordinating Committee, in partnership with WWF and the US CTI Support Program, hosted the 2<sup>nd</sup> Coral Triangle Initiative Regional Business Forum (CTI-RBF) in Kuala Lumpur, Malaysia. International business leaders and senior officials from Malaysia, Indonesia, Philippines, Papua New Guinea, Solomon Islands and Timor-Leste participated in discussions on the use of innovation to promote sustainable solutions in the Coral Triangle region—the *richest area of marine life on Earth*. This forum provided a unique opportunity for participants to engage the private sector and senior policy makers at the highest levels of government to help shape sustainable management strategies at the regional, national, and local levels throughout Asia and the Pacific region. A complete forum agenda is provided in Annex A1.

## CTI-RBF Objectives

Through a series of interactive panel sessions, roundtable discussions, and networking breaks, the CTI-RBF sought to achieve several objectives:

- To engage business and industry leaders in developing innovative solutions which are both profitable and sustainable for the Coral Triangle region;
- To promote collaboration among the private sector, CTI member countries, NGOs, and international institutions to address green investment opportunities for increased economic growth;
- To catalyse new partnerships between the private sector and governmental institutions that foster shared goals for sustainable marine resources; and
- To ensure continuous commitment from key sectors in supporting CTI member countries' goals towards sustainable development.

## Participants

The CTI-RBF 2011 attracted a total of 188 participants, representing 43 percent from government institutions, 25 percent from the private sector and 32 percent from civil society and academia. Participants included representatives of business and industry, local and national government agencies, nongovernmental organizations and academic institutions working in the Coral Triangle region. Business and industry leaders represented sectors including eco-tourism, information technology, shipping and logistics, green investment, and commercial fisheries. A complete list of participants is included in Annex A2.



*Key dignitaries from Malaysia and the United States convene prior to the opening ceremonies of the CTI-RBF.*

## Business and Industry Innovations

During the 2-day event business leaders highlighted innovations that can be implemented to sustain the marine resources in the Coral Triangle. Mr. Michael T. Jones of Google USA encouraged the audience to harness technology to increase awareness of the priority issues in the Coral Triangle region through geographic visualization of problems and mapping of critical resources using Google Earth. Mr. Syed Alwi, CEO of Algatech International, presented the cutting-edge advances of algae technology which makes algae a viable food product to meet future sustainable food demands.

Several private sector representatives provided case studies where these innovations have been used successfully and can be easily adapted in the Coral Triangle. For example, Mr. Anthony Wong, Managing Director of the Frangipani Lankawi Resort, constructed wetlands to treat wastewater at the resort. This sustainable solution provided ancillary benefits such as attracting wildlife which helps control mosquitos and other insects. Ms. Jenny Lim of NOKIA shared a new technology that was used in the Philippines to

download data to mobile phones. This application can expand the geographic reach of data collection from rural populations and accelerate the frequency of data reporting from fishery sectors.

## Scholarships Offered to Strengthen PPP Skills

To further strengthen the capacity of the CTI countries in forging partnerships with the private sector, the CTI Regional Secretariat presented a full scholarship to each CTI country delegation for an upcoming six-week online PPP skills building course. The scholarship recipients are expected to participate in future business forums to demonstrate progress in private sector engagement.



*Participants at the CTI-RBF listen to an interactive forum on technology and innovation for food security.*

## Public-Private Partnerships Announced

Each of the six CTI countries announced new partnerships with the private sector, or highlighted progress on their private sector programs since the first CTI Regional Business Summit held in the Philippines in 2010. In some cases the partnerships that were presented are in the formative stages and the CTI-RBF provided a platform for the private sector to publicly commit to move forward with these agreements. Over the past year MOSTI, WWF, the US CTI Support Program has worked with many of the CT6 countries to develop the public-private partnerships (PPPs) which were presented at the CTI-RBF.

The PPPs underscored the benefits of involving multiple stakeholders to solve some of most challenging issues in the Coral Triangle. Several of the PPPs addressed new technologies and practices at the regional and national scale that will protect sensitive marine species, increase fishery yields and reduce the number of unintended by-catch. At the community level, several partnerships showcased how the formation of cooperatives among small-scale fishermen can strengthen their competitiveness in the marketplace and lead to the adoption of sustainable practices. Highlights of the PPPs announced include the following:

- **ANOVA Foods**, an international seafood processing company, pledged to adopt more rigorous fishing standards to satisfy American consumer demands for sustainable seafood products.
- **Shangri-La hotels** have teamed with local fishermen in Malaysia to promote sustainably-sourced seafood in their restaurants and protect the dugong's sensitive habitat.
- **BPMIGAS**, Indonesia's upstream oil and gas regulator, announced their intention to partner with the Government of Indonesia in the management of the Anambas marine protected area, providing long-term sustainable financing schemes and ensuring benefits for the community.
- **Seafresh of the Netherlands**, in partnership with local suppliers, the Government of Germany and WWF formed a partnership to improve management of tuna handline fisheries at two sites in the Philippines to safeguard its sustainability.
- **The Artisanal Fishermen's Association of Solomon Islands** has partnered with the Ministry of Fisheries and Marine Resources to promote the sustainable development and harvesting of fishery resources in the Solomon Islands.
- **Benih Jaya Aqua Company** is partnering with a Malaysian University to mass-produce sea



*Representatives from the Berungus community in Sabah, Malaysia, are recognized for their efforts to support sustainable fishing practices.*

cucumbers using cutting-edge technology to help satisfy the global demand for sea cucumber products and create employment for local business and fishing communities.

- **PT. Sari Segara Utama**, a tuna longline vessel company, adopted the use of circle hooks instead of traditional “J” hooks on all their vessels to reduce the chance of injury to turtles and other unintended by-catch.
- **The PPKNK Boat Owners Association** has partnered with the Sabah Parks and Department of Fisheries in Malaysia to develop a fisheries management plan that will promote sustainable fishing and good fishing practices in the Tun Mustapha Park.
- **The Manus Fishers Cooperative Society** is working at the provincial level in Papua New Guinea to improve the sustainability of the fisheries at the community level.

## Roundtable Sessions

Three concurrent roundtable sessions were held on fisheries and aquaculture, renewable energy and green transportation, and eco-resources and biodiversity. In each session experts first presented background information on the topic which was followed by discussion and a question-and-answer segment. The participants then summarized key results and developed recommendations which were presented in the subsequent plenary session. The primary outputs from the sessions included scaling up innovative technologies across the region, sharing business models that can be adapted to different countries and strengthening legislation and compliance frameworks for innovative practices such as renewable energy. Annex A3 includes summary reports from each roundtable session.

## Next Steps

The CTI-RBF was considered a great success, which was echoed by many different organizations. The participants identified several follow-up actions to build on the momentum from the forum:

- The CT6 representatives agreed to prepare a report on the CTI-RBF for presentation to their senior officials, recommending that CTI-RBF be held annually. In addition, the CT6 representatives will recommend the formation of a CTI business council.
- The Government of Indonesia, in partnership with Timor-Leste, expressed interest in hosting the next CTI Regional Business Forum.
- Several private sector participants developed new contacts at the CTI-RBF for their products and services. For example, a representative from NOKIA met with representatives from the Solomon Islands, Papua New Guinea, and Timor-Leste to explore how they could use NOKIA’s cellular technology to develop online survey forms to collect fisheries data. A representative from the Norpac Fisheries Export Company identified several possible contacts for sustainable seafood products.
- BPMIGAS agreed to explore the possibility to highlight the PBMIGAS PPP at the upcoming Oil and Gas World Congress by PETRONAS which will be held in Kuala Lumpur, Malaysia in June 2012.



*Business leaders discuss sustainable strategies during the networking marketplace.*

# SESSION PROCEEDINGS

## DAY I

### WELCOME REMARKS

The Hon. Datuk Seri Panglima Dr Maximus Johnity Ongkili, JP  
*Minister of Science, Technology & Innovation, Malaysia*

Datuk Seri Dr. Maximus J. Ongkili, the Minister of Science, Technology and Innovation (MOSTI) of Malaysia, welcomed all participants to this year's CTI-RBF. He expressed a special gratitude to Datuk Seri Musa Aman, the Chief Minister of Sabah for his presence to address the participants. Sabah is the only state in Malaysia that lies within the 5.7 million square kilometre boundary of the Coral Triangle.

This year's forum builds on the CTI Business Summit 2010 which took place in Manila, Philippines. The theme of this year's forum reflects the conscious and deliberate actions that need to be undertaken to find solutions to sustainably manage the finite resources for present and future generations. He hoped that this year's CTI-RBF would serve as a platform where opportunities were presented to help shape sustainable strategies that are profitable and sustainable for the region. He also envisioned that new partnerships between private institutions, CTI members, NGOs and international organizations can be formed to further the cause for the Coral Triangle.

The blending of science, business and decision making is critical to fully capitalize on innovations for a more sustainable marine management. This, however, must be done without jeopardizing integrity and sustainability. Information and communication technology also play a critical role in enabling the participation of the public. Technologies such as mobile phones, broadband, and GPS provide valuable tools and access to information, exploration, navigation, data resource management, and entrepreneurial activity.

Datuk Seri Dr. Ongkili concluded his remarks by reaffirming Malaysia's commitment to the Coral Triangle Initiative.

### SPECIAL KEYNOTE ADDRESS

Y.A.B. Datuk Seri Panglima Musa bin Haji Aman  
*Chief Minister of Sabah, Malaysia*

Datuk Seri Musa Haji Aman, Chief Minister of Sabah, first thanked the organizers for inviting him to deliver the keynote address. He reminded the audience about the fragility of the Coral Triangle ecosystem and that one must never assume that it has infinite resources. Many people remain unaware that the Coral Triangle represents the highest diversity of marine life in the world, covering 75 percent of all coral species known to science, and is home to more than 3,000 species of reef fish and a refuge to six of the world's seven marine turtles.

Datuk Seri Musa reminded the audience that in recent years threats have increased within the Coral Triangle, such as overharvesting of resources and many other unsustainable practices. These practices can lead to unwanted repercussions such as income loss and a loss of reliable food and livelihood supply for more than 150 million people living within the Coral Triangle.

It is imperative for all the stakeholders to collaborate in managing the resources in this region. It is estimated that the total value of coral reefs and mangroves in the Coral Triangle may amount to USD 2.3 billion per year in terms of fisheries, tourism and other related activities. Healthy reefs and mangrove systems also offer protection from storms. The Coral Triangle also has the potential to generate energy from waves, tides and thermal sources.

Despite the benefits offered within the Coral Triangle, a portion of the population still lives in poverty. Therefore, we should find ways to change this situation and operate in a more sustainable manner. For instance, in the interest to further develop tourism in the Coral Triangle, one must be mindful of the impact such an activity will have on marine resources. There is a need to create a mechanism along the lines of accreditation and certification to better regulate the tourism industry.

The Sabah state government has created several initiatives that will benefit the region's ecosystems. Apart from being the sole representative of Malaysia within the Coral Triangle boundaries, Sabah is also part of the Sulu-Sulawesi Marine Eco-Region (SSME) which is at the apex of the Coral Triangle. The Sabah Development Corridor serves as a budget development plan that aims to accelerate economic growth while ensuring sustainable management of state resources.

The creation of new businesses from PPPs will help leverage the state's inherent strength such as its strategic location and rich resources, which includes oil and gas, as well as its cultural and biological diversity. The Sabah state government has taken proactive measures to integrate the planning and management of valuable coastal and marine resources through shoreline management policies adopted in 2007.

The CT6 governments and NGOs can strengthen the links between the public and business communities to create an economy based on sustainable development and programs for everyone who live in the Coral Triangle. The creation of a CTI Business Council or a CTI Trust Fund would be appropriate to strengthen the corporate governance process and to stimulate regional efforts for sustainable harnessing of the CTI.

Datuk Seri Musa Aman concluded his address by officially opening the CTI-RBF 2011.

## **PRESENTATION OF PPP SCHOLARSHIPS TO CT6 DELEGATES**

Dr. Ir. Suseno Sukoyono

*Executive Chair, CTI-CFF Regional Secretariat/ Adviser & Expert Staff Member to the Minister of Marine Affairs & Fisheries for Economic, Social & Cultural Affairs, Ministry of Marine Affairs & Fisheries, Indonesia*

Dr. Ir. Suseno Sukoyono congratulated Malaysia for organizing this important event demonstrating that Malaysia is championing the cause of the Coral Triangle Initiative. The private sector has always been an important player in fueling economic growth in the region. The six governments within the Coral Triangle launched the CTI in 2009 to safeguard our marine and coastal resources. At that time it was widely recognized that business and industry must be engaged to effectively implement the CTI Regional Plan of Action. While some of the Coral Triangle countries have successfully formed partnerships with the private sector, reaching out to business and industry is still a new concept for many of Coral Triangle governments. To help build the capacity of the Coral Triangle countries to more effectively involve the private sector in meeting the goals of the CTI, a full scholarship will be provided to a recipient in each of the six countries for an upcoming learning program entitled: *PPP Skills and Competency Development Course*.

This six-week online course is sponsored by the Institute for Public-Private Partnerships (IP3) and designed to provide organizations and institutions that are currently designing or implementing PPP programs with a practical, hands-on, and results-oriented capacity building experience that will further their PPP planning and implementation objectives.

Dr. Sukoyono thanked IP3 for providing these scholarships and hoped that the participants in this learning program will use these new skills to develop a PPP that can be presented at a future CTI Regional Business Forum. He then presented scholarship certificates to the heads of each of the CTI delegations.

## **SPECIAL ADDRESS I: SAFEGUARDING THE ECOLOGICAL AND ECONOMIC BENEFITS AND SUSTAINABLE GROWTH OF CORAL TRIANGLE RESOURCES**

Dr. Lida Pet-Soede

*Leader of the Coral Triangle Network Initiative, WWF*

Dr. Pet-Soede described the Coral Triangle region as an area covering the seas of Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste. It gets its name from the scientific delineation around the waters that have reefs of more than 500 species of hard coral. The Coral Triangle is also home to one of the most populated places on Earth. It directly provides food and livelihoods for more than 120 million people in the area. Seafood contributes on average more than 35 percent to the dietary protein of the people living within the region and many of the coastal communities have little alternative to eat anything else.

Dr. Pet-Soede then presented several facts and figures. First, she that scientists are estimating that on average the world today consumes what 1.5 planets would need to produce. In other words, we are using resources more than what nature could replenish. The World Bank calculates that 2.5 billion people live below the poverty line of USD 2 per day. Fortunately, the number of people living in extreme poverty, which is under USD 1.25 per day, is declining. While there has been significant progress towards achieving the Millennium Development Goals, many of these people are subsisting on natural resources provided by the environment which is severely stressed.

This is why the talk of a green economy has begun. In ecology all things are related. Protecting nature and reducing the footprint means balancing local needs and lowering requirements. Therefore we need to share responsibility to find solutions. Protecting the Coral Triangle is a prime example of the importance of acting now. The United Nations defines the green economy as one that results in improved well-being, social equity, significantly reducing environmental risk and ecological scarcities. In other words a green economy can be thought of as one that is low carbon, resource efficient and socially inclusive. From that perspective one can consider how growth and income and employment ambitions could be driven by public and private investments focusing on issues such as carbon emissions and pollution, enhancements of energy and resource efficiency, and prevention of the loss of biodiversity.

The CT6 governments have recognized the need to talk about a blue economy. In the regional and national plans of action, commitments are included to implement transformational action to ensure a flow of benefits from the resources into conservation management, address poverty reduction and conservation with a people-centred approach, and designate sustainable management on marine coasts as important national agendas. We are reminded that the 1<sup>st</sup> Coral Triangle Business Summit in the Philippines was over a year ago and some exciting progress has been made since that time.

Dr. Pet-Soede concluded with a reminder that nature adjusts to natural disturbances and even nature works very hard to adjust to human disturbances and it continues to provide millions of people with goods and services every day. What will we do for nature?

## **PLENARY I: ENABLING THE PRIVATE SECTOR IN MANAGING CORAL TRIANGLE RESOURCES FOR SUSTAINABLE BUSINESS OPPORTUNITIES & LONG-TERM ECONOMIC GROWTH**

### **Scene-setting Address:**

### **National Ocean Policy Framework - Wealth Creation through a Healthy, Secure and Sustainable Ocean**

Dato' Dr. Sharifah Zarah Syed Ahmad  
*Deputy Secretary-General (Policy) Ministry of Science Technology & Innovation, Malaysia*

Dato' Sharifah Zarah described the challenges posed by the coastal and marine ecosystem today. The Malaysian government's National Key Economic Areas address seven marine related fields so that the government is proposing a national ocean policy framework as a precursor to a more coherent national ocean policy.

The vision is for a healthy and productive ocean, rich in biodiversity and heritage, wisely managed, safe and secure, and economically developed for the equitable benefit of all, now and in the future. Four goals are

described in order to achieve this vision: 1) understand, conserve and restore the ocean environment, 2) support sustainable economic growth and opportunities, 3) practice good ocean governance, and 4) achieve participatory, responsible and sustainable development.

Implementation strategies are also planned to focus on marine science and technology, marine industry development, ocean renewable energy, marine climate change and ocean acidification management, sustainable marine resources management, ocean enforcement, education, heritage, and tourism. Dato' Sharifah reminded the audience that our ocean is the heart of our planet. It is our life support system that we must protect and restore.

### **Interactive Forum: Green Investments for a Blue Economy and Institutional Arrangements for Public-Private Sector Engagement**

#### **Business Leadership and Collaboration to Sustain Coral Triangle Ecosystem Goods and Services**

Paul Holthus

*Executive Director, World Ocean Council*

Mr. Holthus presented the concept that the ocean is an interconnected system that supports a wide range of uses where its sustainability requires responsible use by all users. As ocean users operate based on sectors, they must work in tandem to secure the ocean's sustainability. The World Ocean Council formed as a business leadership alliance to bring ocean industries together and catalyze leadership and collaboration in addressing ocean sustainability.

The World Ocean Council provides the following functions for its members:

- Coordinating proactive industry input key ocean policy processes,
- Developing informed, coordinated, proactive industry input to marine spatial planning,
- Catalyzing collaboration on science-based solutions to shared issues,
- Creating cross-sectoral ocean industry councils in key regions, and
- Improving ocean understanding through industry involvement in ocean science, observations, and data sharing.

In the Coral Triangle region business collaboration needs to ensure ecological and economic sustainability; complement the capacity and resources of government agencies, civil society and academic institutions; create the structure and process for progressive companies from broad range of industries to collaborate; and address priority issues, such as marine pollution, habitat degradation/destruction, maritime accidents, introduction of invasive species, marine debris, and marine science and ocean monitoring.

A Coral Triangle Business Council should be established to ensure the future health of the Coral Triangle marine ecosystem and the critical economic and social benefits it provides. Through this business council the members could work towards responsible use of marine space and resources, sustained marine ecosystem goods and services, create synergies, economies of scale and business benefits in tackling these issues collectively, engage constructively with governments and civil society to achieve common goals for the region.

#### **Blue Carbon - A new approach for reducing the impacts of climate change in the Coral Triangle by conserving coastal ecosystems**

Anissa Lawrence

*Director, TierraMar Consulting*

Ms. Lawrence introduced the concept of blue carbon and outlined the opportunities, benefits and challenges in the Asia Pacific Blue Carbon Initiative. She then illustrated how the ocean plays a vital role in managing greenhouse gasses within its three ecosystems—the salt marshes, mangroves and seagrass beds.

The coastal ecosystem plays an important role as it has a high rate of carbon sequestration. Therefore, blue carbon provides a win-win opportunity to generate an increased understanding of blue climate concepts and secure regional and government support leading to policy initiatives.

Because the Asia-Pacific is rich with coastal ecosystems, an Asia-Pacific Blue Carbon Initiative will be very beneficial. Its aim should be to mainstream the blue carbon agenda into regional, national and community initiatives in Coral Triangle and Pacific regions, that are in line with global initiatives underway. This initiative will also improve the livelihoods of local communities involved, protect the environment and produce many opportunities for business engagement as well.

## **Blue Carbon in the Coral Triangle: Integrating Strategies to Achieve Real Outcomes**

Mr. Sebastian Thomas

*University of Queensland*

Mr. Thomas focused his presentation on strategies needed to achieve real outcomes of the Asia-Pacific Blue Carbon Initiative in the Coral Triangle. Carbon can now be traded as a commodity. Carbon itself can be considered as a proxy towards other ecosystem services but more importantly, businesses need to reduce their greenhouse gas emissions. As a result, businesses are developing various strategies such as offsetting.

At the University of Queensland, the Global Changes Institute is very involved in the blue carbon network. The Institute explores how marine systems can be integrated into the global economic policy architecture towards sustainable practices. In other words, how can we make blue carbon work? REDD+ is an example of a government-to-government approach. It is public sector driven and includes many mitigation programs. Other nongovernment initiatives such Clean Development Mechanism and VDS are popular as well.

He also pointed out some synergies between market instruments, and policy mechanisms that exist such as the Nationally Appropriate Mitigation Actions (NAMA). To date, Indonesia and Papua New Guinea are the only CT6 countries that have submitted their NAMA. With reference to the CTI, Mr. Thomas believes that it can continue to improve its mechanisms by incorporating blue carbon into its framework.

To successfully develop blue carbon several factors must be met. There must be strong government support, a policy framework at the national level, and strong engagement of NGOs and civil society. He concluded his speech by proposing that the CTI function in such a way that it can create business partnerships with NGOs, and work with governments to create paths to integrate the blue carbon initiative into CTI.

## **Panel Discussion**

*Q: What is your proposal if we have to take the route into the REDD+? Are there any examples that can be adopted?*

A: Mr. Thomas. There is a lot happening in this area although there are many challenges. We are working towards overcoming these barriers. The international community, business as well as policy makers, is working together. While barriers exist, many organizations are working to overcome them. For example, in my university, my students are preparing project design documents which comply with the regulations using existing methodologies and also using new ones. So that if someone from the government asks whether we can get money from planting mangroves, I would say yes we could. So those barriers are being brought down gradually. In the University of Queensland Sustainable Management Alliance in Research & Training, we do a lot of work in capacity building. We run courses and workshops. So in this kind of approach we work with the various stakeholders to build the capacity to do REDD+.

A: Mr. Holthus. If i may just add to that, in blue carbon there are many opportunities. But in the meantime, the reality is that we need the ecosystems for a variety of services they provide. And we ought to be looking at the reasons why so much of the seagrass beds and mangroves are being destroyed. Right now we need to maintain them, restore them and sustain them well.

A: Mr. Thomas. Just one more thing I would like to add. As the systems come online, businesses will respond. They will make a choice to either offset carbon in a factory like China or to support the coastal system in Indonesia or Malaysia if the costs even out.

*Q: What does blue carbon do about ocean acidification?*

A: Ms. Lawrence. I'm not a scientist, but I think it could slow down the acidification process of the ocean.

A: Mr. Thomas. I would just add from an ecological point of view, while acidification is seriously affecting coral reefs, you can have local modulations. So if you remove all coastal vegetation of seagrass and/or mangroves along the coastlines you can have a low pH system.

*Q: I run an ecotourism business. I would like to ask whether I qualify to get blue carbon incentives for reforestation in Kinabatangan although the areas are scattered?*

A: Ms. Lawrence. Yes. In blue carbon there is a scheme called bundling where you have different pieces of land but they are then bundled together for the scheme.

## **PLENARY 2: MOTIVATING THE PRIVATE SECTOR TO ADOPT GREEN BUSINESS SOLUTIONS**

### **Keynote Address**

#### **Using Information Technology to Support and Defend the Coral Triangle**

Mr. Michael T. Jones

*Chief Technology Advocate, Google Inc. USA*

Mr. Jones showed how images and organized information can be used to promote causes and educate the masses to support them. Google tries to bring people from a broad understanding to a local and specific understanding of things and causes be it humans or corals.

Information can be a powerful tool to help address concerns. With technology, mapping entire environments can be possible using tools such as Google Earth. More importantly it takes people from merely knowing to a more specific understanding. For example, two years ago the Indonesian and the U.S. government collaborated with Google to map an undersea area north of Manado for the first time.

The changes and advancements in technology are happening at an astonishing pace. Mr. Jones conceived of Google Earth with three friends over a dining table 10 years ago. Now, Google Earth has been accessed by one billion people. People also can communicate more freely. Over 183 billion SMS texts, emails and electronic messages are sent daily. A decade ago, this was nearly zero. This is an exciting feature on how the advancement of technology can affect lives. Still, when we examine the usage of the internet compared to the entire world population, it is only 22 percent. In other words, four out of five people do not have this access to information via the internet.

Technology also serves as a tool that can enable people to understand issues and help address causes. With technology we can empower people with information. Yet we must organize information to make it universally accessible. Shared information is powerful and can go between governments, business and citizens.

### **Panel Discussion**

*Q: There is information overload. How do you see the future unfolding in terms of filtering the right information that one needs?*

A: Information overload occurs because the tools one uses in obtaining information is inadequate. With tools we can filter and organize the information.

*Q: How do you get information and how did you put it out?*

A: We built a system where users can provide input to disseminate information.

*Q: What technology has really worked as a lever to get people rallying behind a cause?*

A: I give two examples: YouTube for visual media, and Facebook and Twitter for social messaging. YouTube is good because it is a video, where even though it may be a bad video, the information is real.

## **Interactive Forum: Sustainable Marine Business Solutions**

### **Sustainable Marine Business Solutions**

Mr. Maurice Brownjohn

*Commercial Manager, Parties of the Nauru Agreement Office*

Mr. Brownjohn provided an overview of the Parties of the Nauru Agreement (PNA). It was established by eight island nations spread over an area of the central and western Pacific Ocean. The primary purpose for the creation of the PNA is the sustainable management of tuna. In 2009, the PNA decided to concentrate on a hands-on approach instead of focusing merely on policy.

Fish is vital to the PNA economy and culture. Fish is also their only major renewable resource. Today PNA waters produced almost 50 percent of global skipjack supply and 30 percent of the world's tuna. PNA traditionally supplies the big processing nations such as USA, the European Union, and Latin America.

In the last decade PNA has attracted an estimated 60 percent of new investment globally in processing. Existing processing plants are in Marshall Islands, Solomon Islands, and several hubs in Papua New Guinea. Factories are given domestic fishing licenses to ensure supply. The advantage of fishing / processing packages is that the more lucrative fishing operations can economically support processing in marginal economic environments as scales of economy in the hubs grow, with surety of fish supply with preferential access and freight savings.

Current direct employment in PNA processing is estimated at 8,000-10,000 and is expected to double in 2012, with continued growth projected. This tends occur in hubs where there is available labour, utilities, water, land, ocean freight services, and other infrastructure. Local innovations and new markets add significant profits to the local economies. For example, "black meat" is a by product from tuna processing that otherwise would be destined for fish meal, and is now marketed locally.

Perhaps the biggest incentive for investment is currently the Interim Economic Partnership Agreement that gives global sourcing and 24 percent tariff preference into the EU for fish processed fish onshore and exported under Chapter 16.

The fishing industry in PNA has also helped the development of other sectors, such as the service industry, manufacturing and even entertainment. The many benefits compound into a vibrant economy.

The PNA has used a multi-pronged approach such as closing high seas pockets to stop illegal, unreported, and unregulated (IUU) activities especially misreporting of catches. This provided a refuge for tunas, but most importantly it meant that all fishing was now only in PNA economic zones and transshipping in PNA ports where parties have sovereign rights, can monitor and have absolute control.

Other initiatives include technology applications such as 100 percent vessel monitoring system (VMS) tracking for all boats, 100 percent complete observers, e-reports, and setting limits and controls to maximize biological and economic sustainability.

In conclusion, good governance, conservation and sustainability pays. But to achieve this government and industry need work together and be empowered.

### **Private Sector Sustainable Fisheries**

Mr. Blane Olson

*Director, ANOVA Food, LLC*

Mr. Olson provided an overview of the ANOVA Food Group, a company based in the Netherlands and the United States. He highlighted the company's commitment to sustainability. In 2007, sustainable fisheries were adopted as a core value of the company and that by 2011, 70 percent of the products are to be

certified sustainable. Today, 90 percent of ANOVA's products are certified sustainable by bodies such as Naturland, Global GAP and AquaGap.

ANOVA defines sustainability in its business through several mechanisms including the following: 1) certification with Marine Stewardship Council, Aquaculture Stewardship Council, Naturland, AquaGap or in a Fisheries Improvement Program, 2) partnership with a legitimate NGO Partner such as WWF, 3) conduct of a pre-assessment by an independent 3rd party, 4) establishment and implementation of a timeline, and 5) interaction with the managing government or body for that fishery.

A core policy of ANOVA for fishing sustainability is to always improve the economic, social, and ecological welfare and sustainability of the community. For example, ANOVA taught local fishermen to catch only 1 or 2 big tuna fish a day which can be made into high quality sashimi and in return earn more by adding value and at the same time making the fishery more sustainable.

Yet there are still serious issues and an overall decrease in global tuna fishing, and non-regulation of purse seine industry in Indonesia. However, lessons such as from the success of the PNA can be applied in managing purse seines. Sustainability involves all fisheries, and if you ignore one then it is all for nothing. CTI should encourage government, industry and NGOs to work to regulate all tuna catch in Indonesia. The Government of Indonesia needs to effectively manage the tuna fishery.

### **Sustainable Marine Business Solution: BPMIGAS Perspective**

Mr. Parulian Sihotang  
BPMIGAS, Indonesia

Mr. Sihotang described how sustainable marine business solutions can be found in the oil and gas industry. BPMIGAS acts as a regulatory body and provides the legal framework where oil and gas industries operate in Indonesia. Under a production sharing contract scheme, the government covers 85 percent of the total production cost and the contractors the remaining 15 percent.

Several initiatives have been introduced to support sustainable solutions. For example, the Bright and Green Initiatives act as licenses to operate for contractors. The incentives are provided if contractors undertake the following: 1) provide energy to the surrounding area, 2) conduct socio-economic enlightenment and empowerment, 3) manage environmental protection and restoration, and 4) help achieve socio-economic benefits for local communities.

BPMIGAS will encourage the participation of all production sharing contractors operating in surrounding operation areas to support any project in line with the Bright and Green policy. BPMIGAS is willing to engage in multi-stakeholders dialogue or working groups to search for sustainable financing source to support relevant projects within the upstream oil and gas activities.

### **Panel Discussion**

*Q: Is there a commonality when you listen to each other from your presentations on what constitutes a framework because of differing situations among the industries?*

A: Mr. Sihotang. I think the coordination and synergy among the various stakeholders should be the foundation for the framework.

A: Mr. Olson. The synergy in itself is always about corporate social responsibility.

A: Mr. Brownjohn. With respect to the fisheries issue, I think Indonesia is different from PNA because PNA is trying to increase output while maintaining sustainability. In Indonesia they should scale down to maintain sustainability.

## **Interactive Forum: Eco-Tourism, Environment & Communities**

### **Arafura and Timor Seas**

Dr. Ir. Tonny Wagey  
University of British Columbia

CTI Regional Business Forum

Dr. Wagey first provided an overview of the Arafura and Timor Seas, which are a series of coastal areas surrounding Indonesia, Papua New Guinea, Australia and Timor-Leste. This region provides a crucial biological and geo-physical link between the Pacific and Indian Ocean, and part of the Coral Triangle. The El Nino-Southern Oscillation and the Indian Warm Pool exist in these seas which can greatly influence the world's climate and ocean circulation. This region is also an important shipping route and source of non-living resources, such as oil and gas, and mineral deposits. There are approximately 4 million people living in the region with very high poverty rates.

Dr. Wagey elaborated on the challenges faced to develop the Arafura and Timor Seas as an eco-tourism destination. In many cases the necessary infrastructure is lacking and the distances to potential tourism sites are far from current facilities. However, there are opportunities for development which he hoped would be acted on in the future.

### **Tourism Energy Efficiency Investment Program**

Mr. Chris Andrew

*Principal, Sustainable Forward Consulting Group & CEO, Greenlight Technology Group Pty. Ltd, Australia*

Mr. Andrew stated that tourism can significantly impact a country's ecological footprint. For example, Fiji's ecological footprint is 3.7 hectares compared to a combined 1.7 hectares for Papua New Guinea and the Solomon Islands. He then described the Tourism Energy Efficiency Investment Program (TEEIP) and suggested this model might work well in the Pacific region.

TEEIP is a business engagement strategy with a focus on "Business for Environment." It brings together conservation, technical, tourism, financial and government sectors. WWF has participated in the funding and development of TEEIP. TEEIP also includes a carbon offset component with projected energy savings of 20 to 40 percent which provides an immediate benefit. A proportion of the energy savings are re-invested into the surrounding environmental landscape. These benefits help to enhance the tourism brand.

TEEIP focuses on immediate activities that are feasible. By focusing on simple technologies that increase efficiencies, immediate benefits can be realized which increases buy-in by the local community. Primary efficiencies can be gained in lighting, refrigeration, and air conditioning. The savings from energy use can then be channelled to self-financed reinvestment in marine environment. This leads to local jobs which increases industry resilience.

### **Eco-tourism, Environment and Communities**

Mr Albert Teo Chin Kion

*Chairman, Borneo Ecotourism Solution & Technologies Society Sabah*

Mr. Teo stressed that ecotourism must be environmentally responsible, nature based, ecologically sustainable, focused on education and interpretation, and benefit the local community. He shared his experiences in ecotourism from his four business ventures: 1) Borneo Eco Tours (1991) - developing human, business and knowledge capital, 2) Sukau Rainforest Lodge (1995) - developing natural, human, business and knowledge capital, 3) Bavanggazo Longhouse (1996) – Advisor/community-based longhouse accommodation, developing human and knowledge capital, and 4) Borneo Ecotourism, Solutions and Technologies or B.E.S.T (2007) – a community/environment profit foundation to develop human and knowledge capital.

Through his extensive efforts in promoting ecotourism he has implemented a code of practice, developed human capital, innovated new products, produced books and videos, and created value through community and environment projects.

### **Panel Discussion**

*Q: Is there any guidance in facing challenges, to make eco-tourism in remote areas successful?*

*A: Mr. Albert Teo. The situation is ten times harder than what I've shared. It's all about discipline, perseverance and being creative.*

A: Mr. Wagey. But it is still possible. There have been some successful projects, where business and activities are growing. But we still have to be cautious on the environmental concerns that I have mentioned earlier. So in terms of getting into stable businesses, we have to be very selective.

## **Interactive Forum: Technology & Innovation for Food Security**

### **Managing Malaysia's Fisheries to Increase Food Supply**

Dato' Panglima Ahamad Sabki bin Mahmood

*Director-General, Department of Fisheries Malaysia & Chairperson, SEAFDEC Council of Directors, Southeast Asian Fisheries Development Centre (SEAFDEC)*

Mr. Dato' Sabki focused his presentation on the Malaysian experience in managing its fisheries for food supply. Malaysia's 3<sup>rd</sup> National Agriculture Policy highlights several targets such as to increase the per capita intake of fish by 1.9 percent from 46 kg to 55 kg, and to increase the revenue from deep sea fishing to 600 metric tonnes per year by 2020.

The Malaysian government has also put special emphasis on developing the aquaculture sector. The government plans to create an aquaculture industrial zone for sustainable aquaculture. The government also intends to provide more technical, financial, and infrastructure support to facilitate the development of fisheries. The government also intends to promote deep sea fishing to ensure fisheries as a source of food supply for the nation.

### **Mobile Technology in Food Security**

Ms. Jenny Lim

*Head of Corporate Social Investment, APAC, NOKIA, Singapore*

Ms. Lim shared the experience of NOKIA helping the Philippines better manage its food supply through the use of mobile technology. In order to monitor the price and stock of rice and corn, NOKIA worked with the Philippine government to establish a data gathering system which uses mobile phones to collect the data.

The NOKIA Data Gathering system works by collecting field data on critical issues using mobile phones instead of paper forms, PDAs (personal digital assistants) or laptops. Data can be sent from remote locations and analyzed in an accelerated manner.

The success and reliability of the NOKIA data gathering has been used worldwide in places such as Europe, Asia, and Africa. It is cost-competitive, efficient, and reduces waste.

### **Algae: Food for the Future**

Mr. Syed Isa Syed Alwi

*Group CEO & Founder, Algaetech International Group of Companies*

Mr. Alwi illustrated the limitations with the current global food supply. This is due to what he terms as *fossil food*—food that is generated using fossil resources. Fossil food production uses intense amounts of freshwater, prices rise with the price of oil, and environmental damages result from soil erosion and degradation. Eventually crops fail as this is not a sustainable practice.

Moving forward we need to select food sources that are fossil-free, environmentally friendly, require minimal amounts of fresh water, and provide a sustainable and affordable means of production. All of these requirements can be met with algae. Algae, such as Spirulina, is high in many nutrients and can help solve many nutritional imbalances. Algae can also serve as a fuel source through extraction of its oils. In addition to a food source, algae acts as giant filters and can be used to clean waste water.

In conclusion, algae and algae technology can be used in future food production to provide a reliable and sustainable food source for the world.

## Panel Discussion

*Q: Regarding making algae the main source of food, fuel, and clean water, how do you think it's going to happen, and when will it happen?*

*A: Mr. Alwi. We started the project seven years ago, at the same time as other countries in Europe and the United States. But the problem with large companies is that it takes them so long to decide on anything. And that has always been the problem. But I believe that there are a lot of small companies that are really working on it, and I'm very happy to announce that Malaysia is a step ahead of other countries. One of our clients, a company called the Pahang Bio-diesel, has obtained 5,000 acres of land in Rompin, Pahang, to build what would be the largest algae farm in the world at the moment. That project will be taking off as early as January 2012, and we are the technology provider for that project. On the other hand, as far as the wastewater and energy's concern, the Malaysian wastewater company Indah Water Konsortium, and the Malaysian Ministry of Science, Technology, and Innovation have shown their interest to start the Omega Project in Malaysia, which is basically culturing algae in seawater in large bags. So yes, we are doing something and it's happening now.*

## DAY 2

### CONCURRENT ROUNDTABLES

Three roundtable sessions were held in the morning on Day 2 to provide small, interactive discussions among participants on specific topics. The topics included the following:

- Roundtable 1: Science, Technology & Innovation for Sustainable Fisheries & Aquaculture for Food Security
- Roundtable 2: Renewable Energy, Green Transportation & Logistics
- Roundtable 3: Sustainable Eco-Resources & Biodiversity Management

Each roundtable prepared a plan highlighting action items which was presented at the plenary session in the afternoon of Day 2. A detailed summary from each of the roundtables is included in Annex A.3 of this report.

### SPECIAL ADDRESS 2: ZERO WASTE WATER – STOP SEA POLLUTION

Mr. Anthony Wong

*Group Managing Director, the Frangipani Langkawi Resort & Spa, Malaysia*

Mr. Wong presented a case study to highlight how wetlands are used to treat wastewater at the Frangipani Langkawi Resort and Spa. After sewage water is treated by septic tanks, the grey water is channeled to the wetland where the aquatic plants such as water hyacinth, water spinach, water mimosa, thalia geniculata, vetiver, duckweed and water lily further treat the grey water by absorbing pollutants such as phosphate, ammonia and urea from the grey water.

Wetlands are natural filters that trap particles and break down and transform pollutants into nontoxic forms. In addition, the wetlands attract wildlife such as amphibians, turtles, birds, and mammals. Several types of fish such as African catfish, snakehead fish and tilapia are found in the pond. They are used as mosquito control in the pond. Ducks help clean the pond from weeds and algae and also help to control mosquito larvae.

### PRESENTATION OF REGIONAL PPP MODELS AND BEST PRACTICES

Prof Datin Paduka Dr Khatijah Modh Yusoff

*Deputy Secretary-General (Science), Ministry of Science, Technology & Innovation, Malaysia*

Prof. Datin Paduka Dr Khatijah Modh Yusoff reviewed the interactions from the previous two days among business leaders, government officials, development partners, and members of the academic community.

She highlighted the stimulating discussions on innovative approaches that can help sustain marine resources while promoting economic growth for the millions of people within the Coral Triangle. It is only through this collaboration with so many different stakeholders that we can truly develop common solutions that are so critical to the future of the Coral Triangle.

Representatives from each of the CT6 countries were then called on stage to receive a certificate of appreciation from Prof Khatijah in recognition of the outstanding partnerships that have been forged in each of the Coral Triangle countries between the private sector and the governments.

## **MALAYSIA**

### **A Partnership for the Collaborative Management of Tun Mustapha Park, Malaysia**

#### **Partners**

- Persatuan Permilikan Kapal Nelayan Kudat (PPKNK) Kudat Boat Owners Association
- The Department of Fisheries Malaysia (DoF)-Sabah

PPKNK is a non-profit society of commercial boat owners and fishermen that work with the government on the legal and management aspects of fishing operations, resource management, and sustainability issues on behalf of its members. PPKNK is working with Sabah Parks and DOF to develop a fisheries management plan as part of an overall integrated management plan for the proposed Tun Mustapha Park (TMP). Through this partnership, PPKNK will provide fisheries-related data and information that will be useful for the zoning process for TMP, while promoting sustainable fishing and good fishing practices among its members and staff employed by its members.

### **A partnership to Support Responsible Fishing Practices to Protect Endangered Dugongs and their Habitat**

#### **Partners**

- Shangri-La TanjungAru Resort
- Berungus Community

This partnership is intended to support fisheries and habitat conservation by the Berungus Community which lives within the boundaries of the proposed Tun Mustapha Marine Park. This area is also home to Malaysia's second largest concentration of coral reefs, mangroves, seagrass beds and endangered species including turtles and dugongs. The Shangri-La TanjungAruResort (STAR) in Kota Kinabalu has adopted the dugong as their resort mascot and is supporting the actions of local communities as they protect habitats and implement sustainable fishing practices that will help protect dugongs.

STAR is also buying sustainably caught fish from the Berungus Community to support the community's efforts to stop destructive fishing practices on their local reefs. The fish are specially processed and sent to Kota Kinabalu on a weekly basis for the kitchens and guests of STAR. Several other communities, who are aware of the partnership, are now enquiring about how they can join in the partnership or form their own partnership with other hotels.

### **A Partnership to Conserve Marine Turtles in Northeast Semporna Priority Conservation Area, Malaysia**

#### **Partners**

- Matakang The Reef Resort
- PomPom Resort
- Sabah Wildlife Department

This partnership is in support of marine turtle conservation in the northeast islands of the Semporna Priority Conservation Area. Four species of turtles can be found in Semporna. The endangered Green and Hawksbill turtles nest regularly in the area and they are totally protected species under the Sabah Wildlife Enactment. There are several threats to turtle nests including nesting beach erosion, egg poaching, natural

predators, and others. The resort operators routinely conduct monitoring of these turtle nests. The Sabah Wildlife Department is providing expertise, training, and quarterly monitoring assistance to the resorts' hatcheries. A memorandum of understanding for this collaboration is currently being pursued.

## **A Partnership for the Sustainable Culture of Live Reef Fish**

### **Partners**

- Shangri-La Penang
- Marine Fish Farmers Association of Malaysia

As the demand for live marine fish in the region has grown, so has the number of fish farmers growing fish in cages. There was a desire to make this industry more sustainable and provide the fish farmers with information on new developments in technology and practices. Fish farmers banded together to form an association to strengthen their competitiveness in new markets. The Shangri-La group in Penang is supporting this initiative and has expressed their interest in wanting to source sustainably harvested fish (capture/ farmed). This partnership will continue to transform the live marine fish culture industry in Malaysia and the adoption of these best practices will reduce pressure on the already fragile situation of marine resources in the region.

## **Use of Cutting Edge Technology to Mass Produce Premium Sea Cucumber by Induced Spawning**

### **Partners**

- Benih Jaya Aqua SdnBhd
- The International Islamic University of Malaysia

Benih Jaya Aqua Company has partnered with the International Islamic University of Malaysia to apply cutting edge technology to mass produce sea cucumbers to help satisfy the global demand for sea cucumber products and create employment for local business and fishing communities. The partnership also conducts research on spawning and grow out techniques and explores the medicinal and pharmaceutical properties of sea cucumber.

## **INDONESIA**

### **Recognition towards Progress on Indonesia Moratorium on Humphead Wrasse**

#### **Partners**

- Ministry for Marine Affairs and Fisheries (MMAF), Indonesia
- WWF-Indonesia

The Humphead wrasse is one of the most sought after fish for the live reef fish trade and stocks have been severely depleted. In addition, juveniles (less than 10 cm) are collected for the aquarium fish trade which further accelerates the depletion of the wild population of humphead wrasse. After a series of intensive discussions regarding the issue, a Ministerial Decree has been created to institute a moratorium on humphead wrasse trade that is undergoing a review process in the MMAF's Legal Department.

### **Partnership to Replace Circle Hooks to Reduce Injuries to Turtles and other Bycatch**

#### **Partners**

- PT Sari SegaraUtama
- WWF-Indonesia

PT. Sari Segara Utama, a tuna longline vessel company, adopted a new innovative design to use circle hooks instead of traditional "J" hooks on all their vessels to reduce the chance of injury to turtles and other unintended by-catch. The circle hook is designed to prevent the hook from being swallowed by turtles.

### **Induction into the Seafood Savers Program**

### **Partners**

- ANOVA Foods
- WWF-Indonesia

ANOVA has signed a memorandum of understanding with WWF-Indonesia to be part of the WWF Seafood Savers Program. The Seafood Savers Program works with the fisheries industry to improve the use of fishing and fish processing practices that are more environment-friendly.

## **Partnership to Share Management of Marine Protected Areas**

### **Partners**

- BPMIGAS, Indonesia
- Directorate General of Coasts, Small Islands and Marine Affairs, Indonesia

Two of the biggest challenges for effective marine protected area management (MPA) is sustainable financing and ensuring benefits for local people within MPAs. These partners are tackling both at the same time through public-private partnerships in the newly declared Anambas Marine Protected Area in Indonesia covering 1.2 million hectares of marine area. BPMIGAS and the Indonesia Ministry of Marine Affairs and Fisheries are working together to develop sustainable financing mechanisms for the Anambas MPA that directly involves local communities, the oil and gas sector, local governments and the national government.

## **PAPUA NEW GUINEA**

### **A Partnership to Promote Community Fisheries Management**

#### **Partners**

- Manus Fishers Cooperative Society (MAFISCO), Papua New Guinea
- National Fisheries Authority

The only means of livelihood and income for the Manus coastal and atoll communities in Papua New Guinea is through fishing. The Manus Provincial Government, in its endeavor to support community fisheries, has legislated the formation of the Manus Fishing Cooperatives as a hub for community fisheries marketing, learning and development. The vision of Manus Fisheries Cooperatives is to assist fishermen and women to have access to fair markets so that community fisheries can be sustainable in the long-term. This PPP will enable engaging local community managed marine areas to be more effective, and be the avenue to which communities will have access to fair markets, improve income and livelihoods.

## **PHILIPPINES**

### **A Partnership Program for Sustainable Tuna Fisheries**

#### **Partners**

- Coop/Bell Seafood of Switzerland
- Seafresh of the Netherlands
- Government of Germany
- Philippine Bureau of Fisheries and Aquatic Resources (BFAR)
- WWF Coral Triangle Programme

This public-private partnership has brought together European seafood companies and their local suppliers, the Government of Germany and WWF to work together for a common cause—to improve management of tuna handline fisheries at two sites in the Philippines to safeguard their sustainability.

The growing demand for a stable supply of responsibly-caught and processed tuna from well-managed fisheries has catalyzed this partnership. Two European seafood companies and the Government of

Germany invested to co-fund these two Fisheries Improvement Projects: both are artisanal handline fisheries targeting yellowfin tuna for sashimi markets.

With an estimated 4,000 small boats belonging to these two fisheries, the project uses the standard of the Marine Stewardship Council (MSC) as the guiding framework to improve management and put the tuna resources on a course of sustainability. This, combined with special focus on value-chain promotion and establishment of direct supply to improve market access, will provide the incentives as rewards for good practices.

Two unique features characterize this partnership. It has a huge social dimension that seeks to improve not just the resources but more importantly, the well-being of the community. In addition, it has a built-in financial scheme that will enable the project to continue its operation even after the partnership ends after four years. This partnership could serve as a model to scale up Fishery Improvement Programs covering other sites and commodities.

## **SOLOMON ISLANDS**

### **Partnership to Support the Sustainable Development and Harvesting of Fishery Resources**

#### **Partners**

- Artisanal Fishers Association of Solomon Islands (AFASI)
- Ministry of Fisheries and Marine Resources

The Artisanal Fishermen's Association of Solomon Islands (AFASI) comprises members who share a common goal of going into fishing and fisheries related businesses. The association has a membership of approximately 350 members with widespread representation from all the different provinces in the Solomon Islands and is made up equally of men and women. The goal of the association is to promote the sustainable development and harvesting of fishery resources. The association liaises closely with the Ministry of Fisheries and Marine Resources which has provided financial assistance for the establishment of their office, and provided training to its members on how to start a fishing business.

## **TIMOR-LESTE**

### **Progress to Support for Community-level Ecotourism Activities within Nino Konis Santana National Park**

- Ministry of Agriculture and Fisheries, Timor-Leste

Timor-Leste is starting to engage private enterprises within Nino Konis Santana National Park. With ecotourism presenting enormous potential for economic growth in coastal areas, the Government of Timor-Leste supports the local community to develop small-scale industries, such as guesthouses, fishing expeditions and arts and crafts. These developments form an important part of Timor-Leste's commitment towards its National Plan of Action for the Coral Triangle Initiative.

## **DAY 2 WRAP-UP AND CONCLUSION**

Prof Dr Nor Aieni Haji Mokhtar

*Director, National Oceanography Directorate, Ministry of Science, Technology & Innovation, Malaysia*

Prof Nor Aieni invited representatives to present the the outcomes from the roundtable discussions held earlier in the day. The resolutions outlined the key points to ensure that roles, growth and development of the marine environment in the CTI region will always be in tandem with continuous long-term sustainability.

### **Recommendations / Resolutions for Roundtable I: Science, Technology and Innovation for Sustainable Fisheries & Aquaculture for Food Security**

Research and assessment on food security for the whole Coral Triangle is important. This will allow for investments and government enabling policies to address those food security aspects as they vary throughout the region. Furthermore, it could inform development and innovation in technology to improve food security where it matters most. In case of several external factors influencing seafood production, this knowledge will facilitate decisions between producing seafood for exports or for domestic purposes.

Technology available to share information and connect producers – fishers and farmers with buyers and consumers such as what was described by NOKIA would improve the understanding and the profiling of those farmers and fishers who are responsibly producing seafood and it could provide information to producers about what the market is asking for. In addition, it would enhance the awareness of the Asian consumers either on environmental sustainability or social livelihood issues which could eventually lead to an increased demand for sustainable seafood even within this region.

Innovative incentives and financial support for example from blue carbon mechanisms and platforms like Seafood Savers and MSC could scale up some early examples of sustainable and responsible initiatives in the Coral Triangle region throughout the broader sector and across the entire region.

In Science, Technology and Innovation (STI), there is a role for the government and private sectors to play. The government can create enabling conditions to ensure livelihoods and food security, and the private sector can work on consolidating different supply chains so that even small producers (fishers and farmers) have benefit of market access and additional benefits of reducing waste and loss of product quality.

## **Recommendations / Resolutions for Roundtable 2: Renewable Energy, Green Transportation & Logistics**

Participants in Roundtable 2 recommended the creation of a small team within one of the CTI technical working groups to include members from the CT6 countries and the private sector. The goal of this team would be to consider, prioritize and promote actions towards the following:

- Conducting a tabletop review of existing assessments and feasibility studies.
- Reducing the impacts of marine transportation through such actions as having at least 2 Coral Triangle countries complete the ratification of the global Ballast Water Convention; urging organisations involved in offshore oil and gas as well as countries to use best practices; developing additional management mechanisms to address transit in the more sensitive marine areas and sea lanes of the Coral Triangle hot spots.
- Developing renewable energy and alternative energy options as one of the main sources of energy throughout the Coral Triangle, through such actions as: sharing of technology and business cases to improve livelihoods and environmental management of businesses, which are already commercially viable, and creating a model area to install some best renewable energy practices.
- Encouraging CT6 states to strengthen national legislation and compliance, and where necessary to enact new laws that develop regulatory frameworks for renewable energy, its potential, risks, operations and beneficiaries; and that sustainably manage marine resources including renewable energies, marine habits within the exclusive economic zones.

## **Recommendations / Resolutions for Roundtable 3: Sustainable Eco-Resources & Biodiversity Management**

Participants in Roundtable 3 provided recommendations within five broad categories to improve the sustainability of eco-resources and biodiversity management.

The CTI Platform:

- Conduct of more interactive roundtable dialogue sessions that are catered to specific stakeholders
- Implementation of solutions that are in weighted in accordance to competing stakeholder interests
- Recognition for the need for adaptation in designing sustainable solutions
- Recognition for the need to balance development and environmental conservation efforts
- Incorporation of lessons learned from the Roundtable on Sustainable Palm Oil platform/experience

Need for good national and international framework/guidelines:

- Recognition of transboundary issues, needs trans-national partnerships
- Recognition of linkages between issues and solutions
- Consideration of case studies for best practices to be adopted in other sites

Need for climate change adaptation (CCA):

- Development of a dedicated CCA platform for dialogue among various stakeholders.
- Identification and inclusion of climate change resilience issues in planning efforts.

Need for Business Models for Remote Islands:

- Use and apply for existing “sustainable funding streams” through identification of issues and link innovative solutions from different sectors; e.g. carbon trading, energy saving solutions, sustainable protection and eco-tourism, good marine and coastal spatial planning.

Need for education and awareness campaigns:

- CTI Campaign – current program for the development of an interactive CTI website, increase public awareness, fund raising activities, etc
- Increase capacity building
- Support more research / data and information collection for better decision making
- Undertake projects for sites “zero pollution – very polluted – clean environment” as case studies.

Prof Nor Aieni then presented these recommendations and resolutions the Hon. Datuk Fadillah bin Haji Yusof, Deputy Minister of MOSTI Malaysia on 11 October 2011.

## OFFICIAL CLOSING CEREMONY

The Hon. Datuk Haji Fadillah bin Haji Yusof  
*Deputy Minister of Science, Technology & Innovation, Malaysia*

The Hon. Datuk Haji Fadillah bin Haji Yusof, the Deputy Minister of Science, Technology & Innovation commenced the Closing Ceremony by welcoming and thanking the participants and guests for their continuous support and keen interest. He was encouraged by the notable participation from the private sector. It is essential that the business communities continue to harness science, technology and innovation (STI), create new vibrant businesses that lead to green economic growth, and encourage high-growth and innovation-based entrepreneurship. It is critical to instill awareness and confidence in the business communities, especially the small and medium enterprises, on what STI can do to promote and enhance businesses, commerce and entrepreneurship. The adoption of STI will create new opportunities and ensure product enhancement and development of new processes.

The tell-tale signs of the ocean and climate changes are cause for concern—floods and rising sea levels, increased storm surges, extreme weather conditions, and warming temperatures. We have taken the ocean for granted and polluted the seas and treated the resources as inexhaustible. The ocean is now over-stressed where large areas are deficient in oxygen and nutrients due to over-fishing, pollution, habitat degradation and ocean acidification. There is a dire need to share technology and business cases to improve the livelihoods of the population in the Coral Triangle.

Over-fishing is the most imminent threat to the marine environment due to accelerated depletion in our fish stocks. Investments in long-term regional cooperation for new technologies and innovative eco-system-based management approaches must be made. Initiatives from this forum will have far-reaching impact to the region and teach us to be the responsible users of the ocean. Malaysia is committed to further explore the blue carbon mechanism and numerous innovative incentives.

The Hon. Datuk Haji Fadillah expressed his hope that more PPPs and collaborations can be identified to generate more economic wealth and ensure that resources from the oceans are managed in a sustainable manner. New and innovative ways of doing and managing businesses is the order of the day. To ensure business sustainability via science and technology, MOSTI, through the National Oceanography Directorate

is well-positioned to be the key enabler in sustainable exploitation of the ocean by increasing the percentage of ocean-related innovation-driven initiatives. MOSTI is also aware that it has a long way to go but cognizant of the responsibility to educate the future generation of our oceans and the role that they play to ensure a better future of our planet. The main concern is that we need to realize that our marine resources are finite and the future of our planet matters. We need to harness science, technology and innovation to address these grand challenges.

The Hon. Datuk Haji Fadillah concluded by reminding the forum participants to be mindful of ignorance and greed which are among the root causes of the deplorable conditions of the ocean today and threats facing the oceans and marine life. It is happening. Only the magnitude and details such as whether we have reached the tipping point yet remain. Now is the time to act. Therefore, it is imperative that the collaborations and partnerships created during the forum are for mutual benefits to be shared equitably.

END OF FORUM

# ANNEXES

## A.1 AGENDA

### MONDAY: 10 OCTOBER 2011

8:00 am - 9:00 am	Arrival & Registration of Delegates / Welcome Coffee & Tea
<b>OFFICIAL OPENING CEREMONY</b>	
9:00 am - 9:20 am	National Anthem 'Negara Ku' / Doa Recital
9:20 am - 9:25 am	Multimedia Presentation 'THE ECOLOGICAL & ECONOMIC VALUE OF THE CORAL TRIANGLE IN FOSTERING SUSTAINABLE BUSINESS GROWTH IN THE REGION'
9:25 am - 9:30 am	WELCOME REMARKS <b>The Hon. Datuk Seri Panglima Dr Maximus Johnity Ongkili, JP</b> Minister of Science, Technology & Innovation, Malaysia
9:30 am - 9:45 am	SPECIAL KEYNOTE ADDRESS & OFFICIAL OPENING CEREMONY <b>Y.A.B. Datuk Seri Panglima Musa bin Haji Aman</b> Chief Minister of Sabah, Malaysia
9:45 am - 10:15 am	PRESENTATION OF PPP SCHOLARSHIPS TO CT6 DELEGATES <b>Dr Ir. Suseno Sukoyono</b> Executive Chair, CTI-CFF Regional Secretariat / Adviser & Expert Staff Member to the Minister of Marine Affairs & Fisheries for Economic, Social & Cultural Affairs, Ministry of Marine Affairs & Fisheries, Indonesia
10:15 am - 11:00 am	Refreshments & Networking  <b>Forum Facilitator &amp; Moderator:</b> <b>Ms Veronica Pedrosa</b> <b>Lead News Anchor &amp; Presenter / Correspondent, Al-Jazeera English, Bangkok</b>
11:00 am - 11:20 pm	SPECIAL ADDRESS I: SAFEGUARDING THE ECOLOGICAL & ECONOMIC BENEFITS AND SUSTAINABLE GROWTH OF CORAL TRIANGLE RESOURCES <b>Dr Lida Pet-Soede</b> Leader of the Coral Triangle Network Initiative, WWF
<b>PLENARY 1:</b> <b>ENABLING THE PRIVATE SECTOR IN MANAGING CORAL TRIANGLE RESOURCES FOR SUSTAINABLE BUSINESS OPPORTUNITIES &amp; LONG-TERM ECONOMIC GROWTH</b>	
11:20 am - 11:40 am	SCENE-SETTING ADDRESS: SCIENCE, TECHNOLOGY & INNOVATION TOWARDS A SUSTAINABLE GREEN GROWTH <b>Dato' Dr Sharifah Zarah Syed Ahmad</b> Deputy Secretary-General (Policy), Ministry of Science Technology & Innovation, Malaysia
11:40 am - 1:00 pm	INTERACTIVE FORUM: GREEN INVESTMENTS FOR A BLUE ECONOMY & INSTITUTIONAL ARRANGEMENTS FOR PUBLIC-PRIVATE SECTOR ENGAGEMENT  ✦ <b>Mr Paul Holthus</b> Executive Director, World Ocean Council, USA  ✦ <b>Ms Anissa Lawrence</b> Director, TierraMar Consulting, Australia  ✦ <b>Mr Sebastian Thomas</b> Researcher, School of Business, University of Queensland & GM (Research & Innovation), UQ SMART, Australia
1:00 pm - 2:00 pm	Networking Luncheon
<b>PLENARY 2:</b> <b>MOTIVATING THE PRIVATE SECTOR TO ADOPT GREEN BUSINESS SOLUTIONS</b>	
2:00 pm - 2:40 pm	KEYNOTE ADDRESS: USING INFORMATION TECHNOLOGY TO SUPPORT AND DEFEND THE CORAL TRIANGLE <b>Mr Michael T. Jones</b> Chief Technology Advocate, Google, Inc., USA
2:40 pm - 3:25 pm	INTERACTIVE FORUM: SUSTAINABLE MARINE BUSINESS SOLUTIONS  ✦ <b>Mr Maurice Brownjohn, OBE</b> Commercial Manager, Parties of the Nauru Agreement (PNA) Office, Republic of Marshall Islands  ✦ <b>Mr Parulian Sihotang</b>

	Vice President Management Representative, Upstream Oil & Gas Executive Agency (BPMIGAS), Indonesia ✦ <b>Mr Blane Olson</b> Director, ANOVA Food, LLC & ANOVA Asia, Indonesia
3:25 pm - 4:15 pm	INTERACTIVE FORUM: ECO-TOURISM, ENVIRONMENT & COMMUNITIES ✦ <b>Dr Ir. Tonny Wagey</b> Research Associate, UBC Fisheries Centre, University of British Columbia, Canada & Regional Coordinator, Arafura & Timor Seas Expert Forum (ATSEF), Indonesia ✦ <b>Mr Chris Andrew</b> Principal, Sustainable Forward Consulting Group & CEO, Greenlight Technology Group Pty. Ltd., Australia ✦ <b>Mr Albert Teo Chin Kion</b> Chairman, Borneo Ecotourism Solution & Technologies (BEST) Society, Sabah & Managing Director, Borneo Eco Tours, Malaysia
4:15 pm - 4:30 pm	Coffee Break
4:30 pm - 5:30 pm	INTERACTIVE FORUM: TECHNOLOGY & INNOVATION FOR FOOD SECURITY ✦ <b>Dato' Panglima Ahamad Sabki bin Mahmood</b> Director-General, Department of Fisheries Malaysia & Chairperson, SEAFDEC Council of Directors, Southeast Asian Fisheries Development Centre (SEAFDEC) ✦ <b>Ms Jenny Lim</b> Head of Corporate Social Investment – APAC, Nokia, Singapore ✦ <b>Mr Syed Isa Syed Alwi</b> Group CEO & Founder, Algaetech International Group of Companies, Malaysia
5:30 pm - 5:45 pm	Day 1 Wrap-Up & Conclusion by Ms Veronica Pedrosa
8:00 pm - 10:00 pm	Partnership Dinner hosted by <b>The Hon. Datuk Seri Panglima Dr Maximus Johnity Ongkili, JP</b> , Minister of Science, Technology & Innovation, Malaysia & Special Screening of <b>'Census of Marine Life'</b>

## TUESDAY: 11 OCTOBER 2011

8:30 am - 10:00 am	Arrival of Delegates / Welcome Coffee & Tea
--------------------	---

### CONCURRENT ROUNDTABLES

(10:00 am – 12:00 pm)

<b>ROUNDTABLE 1:</b> SCIENCE, TECHNOLOGY & INNOVATION FOR SUSTAINABLE FISHERIES & AQUACULTURE FOR FOOD SECURITY	<b>ROUNDTABLE 2:</b> RENEWABLE ENERGY, GREEN TRANSPORTATION & LOGISTICS	<b>ROUNDTABLE 3:</b> SUSTAINABLE ECO-RESOURCES & BIODIVERSITY MANAGEMENT
Convenor / Discourse Leader: <b>Dr Lida Pet-Soede</b> Leader of the Coral Triangle Network Initiative, WWF	Convenor / Discourse Leader: <b>Mr Ahmad Zairin Ismail</b> Senior Vice President – Energy, Manufacturing, Building & ICT, Malaysian Green Technology Corporation (Greentech Malaysia)	Convenor / Discourse Leader: <b>Dato' Dr Dionysius S.K. Sharma</b> Executive Director & Chief Executive Officer, WWF-Malaysia & <b>Ms Rili Djohani</b> Founding Board Member & Executive Director, Coral Triangle Centre (CTC), Indonesia
Discussants: <ul style="list-style-type: none"> <li>• <b>Dato' Goh Cheng Liang</b> President, Marine Fish-Farmers Association of Malaysia &amp; Group Executive Chairman, GST Group of Companies, Malaysia</li> <li>• <b>Prof Dr Ridzwan Rahman</b> Team Leader, Strategic Environmental Assessment on Food Security, Sabah</li> <li>• <b>Mr Patrick Caleo</b> Country Manager, Marine Stewardship Council (MSC) Australia &amp; New Zealand</li> <li>• <b>Mr K. Sineenart Chuichulcherm</b> Asian Sourcing Manager, Mars Global Petcare, Thailand</li> <li>• <b>Ms Margareth Meutia</b> Senior Officer, SEAFOOD SAVERS Secretariat, WWF-Indonesia</li> </ul>	Discussants: <ul style="list-style-type: none"> <li>• <b>Atty. Pete H. Maniego, Jr.</b> Chairman, National Renewable Energy Board (NREB), Philippines</li> <li>• <b>Mr Gopal R.</b> Vice President – Transportation &amp; Logistics Practice, Asia Pacific / Country Head - Malaysia, Frost &amp; Sullivan</li> <li>• <b>Mr Carl Probert</b> Managing Director, Niu Industries (Fiji) Limited, Fiji Islands</li> <li>• <b>Ms Badariah Othman</b> Advisor, Insurance &amp; Legal Regulatory, Malaysia Shipowners' Association (MASA), Malaysia</li> </ul>	Discussants: <ul style="list-style-type: none"> <li>• <b>Datuk Dr Beatrice Beth Baikan</b> Environmental Advisor &amp; Consultant for the Sabah Palm Oil Industrial Cluster / Managing Director, Sustainable Environment Planning &amp; Management Consultants Sdn. Bhd. &amp; Board Member, Universiti Malaysia Sabah (UMS), Malaysia</li> <li>• <b>Mr Darrel Webber</b> Director-General, Roundtable in Sustainable Palm Oil (RSPO), Malaysia</li> <li>• <b>Mr Romeo B. Trono</b> Country Executive Director, Conservation International - Philippines</li> </ul>

12:00 pm - 2:30 pm	Luncheon & Networking Marketplace & Exhibition Highlights
<b>Forum Facilitator &amp; Moderator:</b> <b>Ms Charlie MacPherson</b> <b>Senior Communications Manager, US CTI Support Program, Bangkok, Thailand</b>	
2:30 pm - 3:00 pm	SPECIAL ADDRESS 2: ZERO WASTE WATER – STOP SEA POLLUTION <b>Mr Anthony Wong</b> Group Managing Director, The Frangipani Langkawi Resort & Spa, Malaysia
3:00 pm - 3:45 pm	PRESENTATION OF REGIONAL PPP MODELS AND BEST PRACTICES <b>Prof Datin Paduka Dr Khatijah Mohd Yusoff</b> Deputy Secretary-General (Science) Ministry of Science, Technology & Innovation, Malaysia
3:45 pm - 4:00 pm	DAY 2 WRAP-UP AND CONCLUSION <b>Prof Dr Nor Aieni Haji Mokhtar</b> Director, National Oceanography Directorate, Ministry of Science, Technology & Innovation, Malaysia
4:00 pm - 4:15 pm	OFFICIAL CLOSING CEREMONY <b>The Hon. Datuk Haji Fadillah bin Haji Yusof</b> Deputy Minister of Science, Technology & Innovation, Malaysia
4:15 pm - 5:30 pm	Refreshments & Business Networking / End of the Business Forum

## A.2 LIST OF PARTICIPANTS

### **ABDUL HAFIZ Mohd Hatta**

Unit Perancangan Ekonomi (EPU)  
Jabatan Perdana Menteri,  
Blok B5 & Blok B6,  
Pusat Pentadbiran Kerajaan Persekutuan  
62502 Putrajaya, MALAYSIA  
Tel: 603-88725518 Fax: 603-88883644  
Email: [abdulhafiz@epu.gov.my](mailto:abdulhafiz@epu.gov.my)

### **ABDUL KADIR Ishak, Dr.**

Agensi Nuklear Malaysia,  
MALAYSIA  
Tel: 603 8928 2974 Fax: 603 8928 2977  
Email: [abdul\\_kadir@nuclearmalaysia.gov.my](mailto:abdul_kadir@nuclearmalaysia.gov.my)

### **ABDUL KADIR Syed Abdullah, Syed**

Pusat Penyu dan Ekosistem Marin (TUMEC), Institut  
Penyelidikan Perikanan, Jabatan Perikanan Malaysia, Rantau  
Abang, Dungun, Terengganu, MALAYSIA  
Tel: 609-8458169 Fax: 609-8458017  
Email: [syedjohor@yahoo.com](mailto:syedjohor@yahoo.com)

### **ABDULLAH Mohammad, Dr.**

Faculty of Forestry  
Universiti Putra Malaysia  
UPM Serdang, 43400 Selangor, MALAYSIA  
Tel: 603 8946 7191 Fax: 603 8943 2514  
Email: [amohd@putra.upm.edu.my](mailto:amohd@putra.upm.edu.my)

### **ACOSTA, Rene**

Regional Environment Program Specialist  
USAID/US CTI Support Program  
Regional Development Mission Asia  
Athenee Tower, 25th Floor,  
63, Wireless Road, Lumpini, Patumwan, 10330  
Bangkok, THAILAND  
Tel: +662-257-3000 Fax: +662-257-3099  
Email: [racosta@usaid.gov](mailto:racosta@usaid.gov)

### **ADIBI RAHIMAN Md. Nor**

Department of Fisheries Malaysia  
Kementerian Pertanian dan Industri Asas Tani  
Wisma Tani, Aras I-6, Blok Menara 4G2,  
Presint 4, Pusat Pentadbiran Kerajaan Persekutuan  
62628 Putrajaya, MALAYSIA  
Tel: 603 8870 4759 Fax: 603 8889 1794  
Email: [adibi@dof.gov.my](mailto:adibi@dof.gov.my)

### **AHMAD Ismail, Prof**

Professor  
Universiti Putra Malaysia  
Department of Biology, Faculty of Science  
UPM Serdang, 43400  
Selangor, MALAYSIA  
Tel: 603 8946 6617 Fax: 603 8656 7454  
Email: [aismail@science.upm.edu.my](mailto:aismail@science.upm.edu.my)

### **AHMAD Ismail, Prof**

Professor  
Universiti Putra Malaysia  
Department of Biology, Faculty of Science  
UPM Serdang, 43400 Selangor, MALAYSIA  
Tel: 603 8946 6617 Fax: 603 8656 7454  
Email: [aismail@science.upm.edu.my](mailto:aismail@science.upm.edu.my)

### **AHMAD ZAIRIN Ismail**

Senior Vice President  
Energy, Manufacturing, Building & ICT  
Malaysian Green Technology Corporation  
CTI Regional Business Forum

No 2, Jalan 9/10  
Persiaran Usahawan  
Seksyen 9, Bandar Baru Bangi  
43650 Selangor darul Ehsan, MALAYSIA  
Tel : 603-8921 0808 Fax : 603-8926 6104  
E-mail: [zairin@greentechmalaysia.my](mailto:zairin@greentechmalaysia.my)

### **AIDA MAIZURA Mazlan**

Ministry of Science, Technology & Innovation  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

### **ALIPOSA, Judah Singzon**

VSO Bahaginan Foundation, Inc.  
Unit 305, Pacific Corporate Center  
131 West Avenue, Barangay Bungad  
1105 Quezon City,  
Manila, PHILIPPINES  
Tel: +639178552633 Fax: +632 3762160  
Email: [judah.aliposa@vsobahaginan.org](mailto:judah.aliposa@vsobahaginan.org)

### **AMARAL, Aleixo Leonito**

National Focal Point  
Ministry of Agriculture and Fisheries  
Rua Presidente Nicolao Lobato Comoro, Dili, TIMOR-  
LESTE  
Tel: +670 7507658  
Email: [Aleixo\\_la@yahoo.com](mailto:Aleixo_la@yahoo.com)

### **ANDREW, Chris**

Principal  
Sustainable Forward Consulting Group &  
CEO  
Greenlight Technology Group Pty. Ltd.  
Unit 17, 1, Talavera Road, North Ryde  
NSW 2113, AUSTRALIA  
Tel : +61-2-9889 4441 Fax : +61-2-9887 1333  
E-mail: [chris.andrew@glgt.com.au](mailto:chris.andrew@glgt.com.au) / [tim.rahn@glgt.com.au](mailto:tim.rahn@glgt.com.au)

### **ASIAH Ahmad, Datin Dr**

Deputy Under-Secretary  
Ministry of Science, Technology & Innovation (MOSTI)  
National Biotechnology Division  
Level 4, Block C4, Complex C,  
Federal Government Administrative Centre,  
62662 Putrajaya, MALAYSIA  
Tel: 603-8885 8315 Fax: 603 8881 0579  
Email: [asiah@mosti.gov.my](mailto:asiah@mosti.gov.my)

### **AWANG NOOR Abd. Ghani**

Fakulti Perhutanan  
Jabatan Pengurusan Hutan  
Universiti Putra Malaysia  
Pejabat Naib Canselor  
Universiti Putra Malaysia,  
UPM Serdang 43400  
Selangor, MALAYSIA  
Tel: 603-89467171 Fax : 603 – 899432514

### **AHAMAD SABKI bin Mahmood, Dato' Panglima**

Director-General  
Department of Fisheries Malaysia & Council Director  
Southeast Asian Fisheries Development Centre (SEAFDEC)  
Ministry of Agriculture & Agro-based Industries  
Wisma Tani  
Levels 1-6, Menara 4G2, Precinct 4  
Federal Government Administrative Centre  
Putrajaya, MALAYSIA

Tel: 6038889 5855 / 8870 4004 ext 4009  
E-mail: [ahamadsabki@dof.gov.my](mailto:ahamadsabki@dof.gov.my)

**ANIS FADZDIA Kamaruzaman**  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**ANITA Talib, Dr.**  
Deputy Director  
Centre for Marine and Coastal Studies  
University Sains Malaysia  
11500 Pulau Pinang, MALAYSIA  
Tel: 604-8852750 Fax: 604-8852751  
Email: [anita@usm.my](mailto:anita@usm.my)

**AZHAR Syed Elias, Syed**  
Director  
GST Aquaculture (Batu Kawan) Sdn Bhd  
No. 9, Lorong IKS Simpang Ampat D,  
MK 15, Kws. Industri Simpang Ampat,  
Simpang Ampat, 14100 Pulau Pinang, MALAYSIA  
Tel: 604 568 2277 Fax: 604 568 2278  
Email: [cm\\_capital@yahoo.com](mailto:cm_capital@yahoo.com)

**AZIATUN NASSHIHA Burhan**  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**AZLAM SHAH Alias**  
Government Affairs Director  
Tesco Stores (Malaysia) Sdn Bhd  
Head Office, Level 3, No. 3, Jalan 7A/62A Bandar Menjalara,  
52200 Kuala Lumpur, MALAYSIA  
Tel: 603-62875202 Fax: 603-62876007  
Email: [Azlam.Alias@my.tesco.com](mailto:Azlam.Alias@my.tesco.com)

**AZMI Maaris**  
Pegawai Laut A44  
Port Klang Authority  
Beg Berkunci 202, Jalan Pelabuhan Utara  
42005 Pelabuhan Kelang,  
Selangor Darul Ehsan, MALAYSIA  
Tel: 603-31688211 Fax: 603-31689117

**AMIN Mustapah**  
Director  
Seamonkey Dive Centre  
PJ Palms Sports Center, Shop G, I Lorong Sultan,  
46200 Petaling Jaya,  
Selangor Darul Ehsan, MALAYSIA  
Tel: 603-7956 9658  
Email: [amin@seamonkey.com.my](mailto:amin@seamonkey.com.my)

**AUGUSTINE, Julie Margreth**  
Finance Officer  
Department of Environment & Conservation, Papua New  
Guinea  
P.O. Box 6601 Boroko National Capital District,  
PAPUA NEW GUINEA  
Tel: +675 713 57382  
Email: [jAugustine@dec.gov.pg](mailto:jAugustine@dec.gov.pg)

**ANUWAT Chamnan**  
Commercial Manager, Raw Material  
MARS Petcare (Thailand) Co. Ltd  
799 Mu 4, Chantuk, Pakchong,  
Nakhon Ratchasima, 30130  
THAILAND  
Tel: +66 (0) 4431 0500 ext 442 Fax: +66 (0) 4431 6005  
Email: [anuwat.chamnan@effem.com](mailto:anuwat.chamnan@effem.com)

**AVTAR Singh**  
Ministry of Housing & Local Government  
Level 3, Block C Centre  
Damansara Town Centre  
50782 Kuala Lumpur, MALAYSIA  
Tel: 603-2093 4877 Fax: 603-2093 3764  
Email: [avtar@kpkt.gov.my](mailto:avtar@kpkt.gov.my)

**BADRUL HISHAM Mohamad Jan, Dr**  
University of Malaya  
Vice Chancellor's Office  
University Of Malaya  
Lembah Pantai, 50603  
Kuala Lumpur, MALAYSIA  
Tel: 03 7956 8400 Fax: 03 - 7954 7551  
Email: [badrules@um.edu.my](mailto:badrules@um.edu.my)

**BINSON, Augustine**  
Sabah Parks  
Lot 45 &46, Level 1-5  
Block H Signature Office  
KK Times Square Coastal Highway  
88100 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 6088-523500 Fax: 6088-486435  
Email: [sabahparks@sabah.gov.my](mailto:sabahparks@sabah.gov.my)

**BROWNJOHN, Maurice**  
Commercial Manager  
Parties of the Nauru Agreement (PNA) Office  
P.O. Box 3992, Majuro 96960  
MARSHALL ISLANDS  
Tel: +692-625 7626 / 7627 EXT 23 Fax : +692-625 7628  
Email: [Maurice@pnatuna.com](mailto:Maurice@pnatuna.com)

**CAKTI MUDARA, I Gede Arya Pande**  
PT Sari Segara Utama  
Jl Pelabuhan Benoa, Dauh Puri Kangin, Denpasar Barat  
80112, Bali, INDONESIA  
Tel: + 62 361 720853 Fax: + 62 361 720695  
Email: [aryacakti\\_rrv@hotmail.com](mailto:aryacakti_rrv@hotmail.com)

**CALEO, Patrick**  
Country Manager – Australia & New Zealand  
Marine Stewardship Council (MSC)  
MSC Regional Office – Asia Pacific  
10/46-48, Urunga Place  
Miranda, Sydney, NSW 2228, AUSTRALIA  
Tel: +61-2-9524 8400 Fax: +61-2-9524 8900  
Email: [Patrick.caleo@msc.org](mailto:Patrick.caleo@msc.org)

**CHEUNG, C.W.**  
WWF - Hong Kong  
Room 1001, 10/F, Block A, Seaview Estate, 2 Watson Road  
HONG KONG  
Tel: +(852)3557-6016 Fax: +(852)2566-6886  
Email: [cwcheung@wwf.org.hk](mailto:cwcheung@wwf.org.hk)

**CHUA Tiam Wee**

National President  
SMI Association of Malaysia  
5-5 Jalan USJ 9/5Q  
Subang Business Centre  
47620 Subang Jaya, Selangor,  
MALAYSIA  
Tel: 603-8023 0685 Fax: 603-8024 1731  
Email: [chuatiamwee@yahoo.com](mailto:chuatiamwee@yahoo.com)

**ALDRIE, DR A. Amir**  
Lecturer / Research Fellow  
Institute for Environment & Development (LESTARI)  
Universiti Kebangsaan Malaysia (UKM)  
UKM Bangi, 43600 Selangor, MALAYSIA  
Tel: 603 8921 4144/ 4149 Fax: 603 8925 5104  
Email: [aldrie@ukm.my](mailto:aldrie@ukm.my) / [aldrie@gmail.com](mailto:aldrie@gmail.com)

**DJOHANI, Rili**  
Founding Board Member & Executive Director  
Coral Triangle Center (CTC)  
Jalan Danau Tamblingan No 78  
Sanur, Bali 80228, INDONESIA  
Tel: +62-361-289338 Fax: +62-361-289116  
Email: [rnovianti@coraltrianglecenter.org](mailto:rnovianti@coraltrianglecenter.org)  
[www.coraltrianglecenter.org](http://www.coraltrianglecenter.org)

**DE VREEZE, Lucy**  
PhD Student  
University of Tasmania  
Faculty of Law Locked Bag 89 Hobart, TAS Australia 7000  
AUSTRALIA  
Tel: +61 3 6226 7560 Fax: +61 3 6226 7623  
Email: [lacde@utas.edu.au](mailto:lacde@utas.edu.au) / [Lucy.deVreeze@utas.edu.au](mailto:Lucy.deVreeze@utas.edu.au)

**ENDANG JATI Mat Sahid**  
Head of Energy Economics  
UNITEN  
Putrajaya Campus, Jalan IKRAM –UNITEN,  
Kajang, 43009 Selangor, MALAYSIA  
Tel: 603 8921 2382 Fax: 603 8921 2360  
Email: [endang@uniten.edu.my](mailto:endang@uniten.edu.my)

**FATAI, David Balaga**  
Principle Fisheries Officer  
Ministry of Fisheries & Marine Resource, Solomon Islands  
P.O.Box G13, Honiara  
SOLOMON ISLANDS  
Tel: +677 39143 / 677 7410911  
Email: [dfatai@fisheries.gov.sb](mailto:dfatai@fisheries.gov.sb)

**FOO Soo Lee**  
Golden Fresh Sdn Bhd  
4572, Jalan Chain Ferry  
12100 Butterworth, Penang, MALAYSIA  
Tel: 604-333 3388 Fax: 604-323 7799  
Email: [eunicekoo@fresh.com.my](mailto:eunicekoo@fresh.com.my)

**GELBER, Matthias**  
International Speaker  
Maleki GMBH  
Bangunan SSA, No. 9 Jalan Bangsar Utama 3, Bangsar Utama  
59000 Kuala Lumpur, MALAYSIA  
Tel: 603-2282 9909 Fax: 603-2283 1699  
Email: [matthiasgelber@gmail.com](mailto:matthiasgelber@gmail.com)

**GOH Cheng Liang, Dato'**  
CTI Regional Business Forum

President, Marine Fish-Farmers Association of Malaysia /  
Group Executive Chairman, GST Group of Companies  
Marine Fish-Farmers Association of Malaysia / GST Group of  
Companies, MALAYSIA  
Email: [goh.chengliang@gstgroup.com.my](mailto:goh.chengliang@gstgroup.com.my)

**GOPAL R**  
Vice President & Country Head – Asia Pacific  
Frost & Sullivan GIC Malaysia Sdn. Bhd.  
Suite E-08-15, Block E, Plaza Mont' Kiara  
2, Jalan Kiara, Mont' Kiara  
50480 Kuala Lumpur, MALAYSIA  
Tel: 603-6204 5831 / 6204 5800 Fax: 603-6201 7402  
Email: [rgopal@frost.com](mailto:rgopal@frost.com)

**HARI RAMALU Ragavan**  
Programme Manager (Energy & Environment)  
UNDP Malaysia  
Wisma UN, Block C, Kompleks Pejabat Damansara, Jalan  
Dungun, Damansara Heights, 50490  
Kuala Lumpur, MALAYSIA  
Tel: 603 2095 9122 Fax: 603 2095 2870  
Email: [hariramalu.ragavan@undp.org](mailto:hariramalu.ragavan@undp.org)

**HAMMOND, Tara**  
Area CSR and Sustainability Manager  
Shangri-La  
c/o WWF-Malaysia  
20 Jalan Aru,  
Tanjung Aru, 88100 Kota Kinabalu, Sabah  
MALAYSIA  
Tel: 6088-327 881 Fax: 6088-244 871  
Email: [tara.hammond@shangri-la.com](mailto:tara.hammond@shangri-la.com)

**HORNAL, Regina**  
Head of Planning and Finance  
Ministry of Agriculture and Fisheries, Timor Leste, Rua  
Presidente Nicolao Lobato Comoro, Dili  
TIMOR-LESTE  
Tel: +670 7632912

**HAFIZAH Ahmad**  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**ISA Syed Alwi, Syed**  
Group CEO & Founder  
Algaetech International Group of Companies  
Algaetech Research Centre (ARC)  
PT. 5517, Technology Park Malaysia  
Bukit Jalil  
57000 Kuala Lumpur, MALAYSIA  
Email: [syedisa@algaetech.com.my](mailto:syedisa@algaetech.com.my)

**Johari**  
Agensi Penguatkuasaan Maritim Malaysia (MMEA)  
Jabatan Perdana Menteri,  
Aras 4-11, One IOI Square,  
IOI Resort, 62502 Putrajaya, MALAYSIA

**JONES, Michael T.**  
Chief Technology Advocate  
Google, Inc.  
1600, Amphitheatre Parkway  
Mountain View, CA 94043

USA  
Tel : +1-650-253 0000 Fax : +1-650-253 0001  
Email: [mtj@google.com](mailto:mtj@google.com)

**JARINA Mohd Jani**

Lecturer  
Universiti Malaysia Terengganu  
Mengabang Telipot, 21030 Kuala Terengganu, MALAYSIA  
Tel: 609 6683407 Fax: 609 6692166  
Email: [jarina@umt.edu.my](mailto:jarina@umt.edu.my)

**JUMAHAT Ujang, Haji**

Kementerian Pertanian dan Industri Makanan  
Aras 7 & 8, Wisma Pertanian Jln Tasik Luyang Beg Berkunci  
2049, 88624 Kota Kinabalu Sabah  
MALAYSIA  
Tel: 6088-283636 / Fax: 6088-283633

**KRAFT, Thomas**

Managing Member  
Norpac Fisheries Export  
3125 Eastlake Ave. E  
Seattle, WA 98102  
USA  
Tel: +(206) 328-5157 Fax: +(206) 325 4280  
Email: [thomaskraft@mac.com](mailto:thomaskraft@mac.com)

**KAIDALOVA, Viktorija**

Project Manager  
Delegation of the European Union to Malaysia  
Suite 10.1, Menara Tan & Tan  
207 Jln Tun Razak  
50400 Kuala Lumpur, MALAYSIA  
Tel: 603-27237373 Fax: 603-27237337  
Email: [viktorija.kaidalova@eeas.europa.eu](mailto:viktorija.kaidalova@eeas.europa.eu)

**KANG, Michael**

Vice President  
SMI Association of Malaysia  
5-5 Jalan USJ 9/5Q  
Subang Business Centre  
47620 Subang Jaya, Selangor, MALAYSIA  
Tel: 603-8023 0685 Fax: 603-8024 1737  
Email: [michael@smisme.com](mailto:michael@smisme.com)

**KUCKAT, Hendrik**

WWF Indonesia  
Jl Umalas I, Gg Vila Umalas I I  
80361 Kerobokan, Bali, INDONESIA  
Tel: +6282147652490 Fax: +62361732406  
Email: [hendrik.kuckat@gmail.com](mailto:hendrik.kuckat@gmail.com)

**KAMILIA Kassim**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**KONG Fen Hin, Christopher**

PPKNK  
c/o WWF-Malaysia  
Suite 1-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah  
MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
E-mail: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**KHAIRUL NIZAM Dahalan**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**LIM Kok Eng**

Managing Director  
SS Microbial Sdn Bhd  
No. 30 Jalan PJS 7/19  
Bandar Sunway  
46150 Petaling Jaya, Selangor, MALAYSIA  
Tel: 603-5636 1869 Fax: 603-5636 1771  
Email: [kelim@ssmicrobial.com](mailto:kelim@ssmicrobial.com)

**LAWRENCE, Anissa**

Director  
TierraMar Consulting  
P.O. Box 1260  
Sutherland  
Sydney, NSW 1499, AUSTRALIA  
Tel : +61-419-903 800 Fax : 0061-612-9258 0176  
E-mail: [anissa@tierramar.com.au](mailto:anissa@tierramar.com.au)

**LOKE, Dr Daphne**

Special Assistant to Group Managing Director  
Tanco Holdings Bhd  
No.1, Persiaran Ledang, Off Jalan Duta,  
50480 Kuala Lumpur, Malaysia  
Tel: 603-2093 6188 ext 770 Fax: 603-2093 0500  
Email: [daphneloke@tancoresorts.com](mailto:daphneloke@tancoresorts.com)

**MOHAMED ZAINI Abdul Rahman**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**MOHD IZZUDDIN Anuar**

Research Officer, Institute for Environment & Development  
(LESTARI)  
Universiti Kebangsaan Malaysia (UKM)  
43600 Bangi Selangor Darul Ehsan  
MALAYSIA  
Tel: 603 8921 4144/ 4149 Fax: 603 8925 5104  
Email: [iz\\_anuar@yahoo.com](mailto:iz_anuar@yahoo.com) / [aldrie@ukm.my](mailto:aldrie@ukm.my)

**MAKLARIN Lakim, Dr**

Assistant Director (R&E)  
Taman-Taman Sabah  
Sabah Parks Head Office  
Level 3, Lot 46, Block H, Signature Office, KK Times Square,  
88806 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 6088-523508 Fax: 6088-523533  
Email: [maklarinlakim@gmail.com](mailto:maklarinlakim@gmail.com)

**MANIEGO, JR., Atty. Pete H.**

Chairman  
National Renewable Energy Board (NREB)  
Department of Energy  
Energy Center  
Fort Bonifacio, Taguig City 1630, PHILIPPINES  
Tel : +63-2-502 5999  
Email: [phmaniego@gmail.com](mailto:phmaniego@gmail.com)

**MISIBINI, Alick Dan**

Financial Controller  
Ministry of Fisheries & Marine Resource, Solomon Islands  
P.O.Box G13, Honiara, SOLOMON ISLANDS  
Tel: +67739143  
Email: [amisibini@fisheries.gov.sb](mailto:amisibini@fisheries.gov.sb)

**MULDOON, Dr. Geoffrey**

WWF Coral Triangle Programme  
Jl. Umalas I, gang Villa Umalas no 11  
Kerobokan, Bali  
80361 Denpasar, Bali, INDONESIA  
Tel: +62 811380047 Fax: +62 361 4732406  
Email: [geoffrey.muldoon@wwf.panda.org](mailto:geoffrey.muldoon@wwf.panda.org)

**MALANGKING, Mary Isidore**

Head, Tourism & Research Division  
Ministry of Tourism, Culture & Environment  
5-7th Floor, Block A, Wisma Tun Fuad Stephens  
Karamunsing, 88300 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 6088 253 666 / 217916 Fax: 6088 236 005  
Email: [mary.malangking@sabah.gov.my](mailto:mary.malangking@sabah.gov.my)

**MOHD SALLEH Hj. Din, Prof. Dato' Wira Dr**

Director  
Universiti Malaysia Perlis (UniMAP)  
Kompleks Pengajian 4, Jalan Jejawi Sematang,  
02600 Arau, Perlis, MALAYSIA  
Tel: 604 979 8525 Fax: 604 978 2749  
Email: [sallehdin@unimap.edu.my](mailto:sallehdin@unimap.edu.my)

**NURULHUDA Ahmad Fatan**

The Worldfish Center  
MALAYSIA

**NADIAH FATIN Mohd Ikhsan**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008  
Email: [nadiah@mosti.gov.my](mailto:nadiah@mosti.gov.my)

**NOR AIENI Haji Mokhtar, Prof. Dr**

Director, NOD  
National Oceanography Directorate  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 03-88858531 Fax: 03-88893008  
Email: [noraieni@mosti.gov.my](mailto:noraieni@mosti.gov.my)

**NORIHAN Mohd.Salleh, Prof. Dr.**

Bahagian Bioteknologi  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 03-88858531 Fax: 03-88893008  
Email: [norihanms@mosti.gov.my](mailto:norihanms@mosti.gov.my)

**NURUL AINY Yahya**

Bahagian Hal Ehwal Antarabangsa  
Jabatan Peguam Negara, MALAYSIA  
Tel: 603-88722403 Fax: 603-88902218  
Email: [nurulainy@agc.gov.my](mailto:nurulainy@agc.gov.my)  
CTI Regional Business Forum

**ONG Ka Wooi**

Live Reef Fish Trader  
c/o WWF-Malaysia,  
Suite 1-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah  
MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
Email: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**OLSON, Blane**

Director  
ANOVA Asia  
Jalan Ikan Tuna II, Block C18-19, Benoa Harbour  
Permogon, Denpasar, Bali, INDONESIA  
Tel: +62-361-728 908 Fax: +62-361-721 739  
Email: [bolson@anovafoodgroup.com](mailto:bolson@anovafoodgroup.com)

**OLISUKULU, Ramcy George**

Secretary  
Artisanal Fishers Association of Solomon Islands  
C/-Waterfront Nightclub P.O.Box 694 Honiara,  
SOLOMON ISLANDS  
Tel: +677 7526595 / 677 7475964  
Email: [afasi2008@gmail.com](mailto:afasi2008@gmail.com)

**PROBERT, Carl**

Director  
Niu Industries (Fiji) Limited  
Former Government Supplies Yards, Walu Bay  
FIJI ISLANDS  
Tel : +67-9-3240067 Fax : +67-9-324 0069  
E-mail: [Lesley@niuindustries.com](mailto:Lesley@niuindustries.com)

**PEDROSA, Veronica**

Lead News Anchor & Presenter / Correspondent  
Al-Jazeera English  
Bangkok, THAILAND  
Email: [veronica.pedrosa@aljazeera.net](mailto:veronica.pedrosa@aljazeera.net)

**PATEL, Monica**

Project Coordinator  
WWF South Pacific Programme  
4, Ma'afu Street,  
Private Mail Bag, Suva, FIJI ISLANDS  
Tel: +679 331 5533 / Fax: +679 331 5410 /  
Email: [mpatel@wwfpacific.org.fj](mailto:mpatel@wwfpacific.org.fj)

**RAZALI Kasim**

Agensi Penguatkuasaan Maritim Malaysia (MMEA)  
Jabatan Perdana Menteri,  
Aras 4-11, One IOI Square,  
IOI Resort, 62502 Putrajaya, MALAYSIA  
Tel: 603-8995 7000 Fax: 603-8941 4527  
Email: [razali.kasim@mmea.gov.my](mailto:razali.kasim@mmea.gov.my)

**RIDZWAN Abdul Rahman, Prof Dr**

Team Leader  
Strategic Environmental Assessment on Food Security  
Sabah, MALAYSIA  
Email: [ridzwan.ar11@gmail.com](mailto:ridzwan.ar11@gmail.com)

**RUMPET, Richard**

Senior Research Officer  
Bintawa, Jalan Perbadanan,  
P.O.Box 2243  
93744 Kuching, Sarawak, MALAYSIA

Tel: 6082 334144 Fax: 6082 331281  
Email: [ippcs@streamyx.com](mailto:ippcs@streamyx.com) /[richardrum@yahoo.com](mailto:richardrum@yahoo.com)

**ROFINA YASMIN Dato'Othman, Prof. Dr**

Under Secretary  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 4, Block C4, Complex C,  
Federal Government Administrative Centre,  
62662 Putrajaya, MALAYSIA  
Tel: 603 8885 8189 Fax: 603 8888 4050  
Email: [yasmin@mosti.gov.my](mailto:yasmin@mosti.gov.my)

**SHAHARUL AZUAN Aziz**

Penolong Pengarah  
Jabatan Perkhidmatan Awam  
Bahagian Pasca Perkhidmatan  
Aras 3, Blok C2, Kompleks C,  
Pusat Pentadbiran Kerajaan Persekutuan, 62510  
Putrajaya, MALAYSIA  
Tel: 603 8885 4621 Fax: 603 8888 6359  
Email: [azuan.aziz@jpa.gov.my](mailto:azuan.aziz@jpa.gov.my)

**SHAHRUDDIN Yusof, Haji**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531

**SIM Yee Kwang**

Science Officer  
Centre for Marine and Coastal Studies  
University Sains Malaysia  
11500 Pulau Pinang, MALAYSIA  
Tel: 604-8852750 Fax: 604-8852751  
Email: [anita@usm.my](mailto:anita@usm.my)

**SHAHRIDAN FAIEZ Mohideen Abdul Kader, Dr.**

Ever Nexus (M) Sdn. Bhd.  
130 Jalan Ara, Bangsar, 59100 Kuala Lumpur, MALAYSIA  
Tel: 603-2284 4545 Fax: 603-2228 4004  
Email: [ykemuncak@gmail.com](mailto:ykemuncak@gmail.com)

**SAADIAH Shariff, Raja**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**SUTARJI Kasmin, Assoc. Prof. Dr**

Faculty of Environmental Studies  
Universiti Putra Malaysia  
Pejabat Naib Canselor  
Universiti Putra Malaysia, UPM Serdang  
43400 Selangor, MALAYSIA  
Tel: 603 89466736 Fax: 603 - 8948 7273  
Email: [sutarji@env.upm.edu.my](mailto:sutarji@env.upm.edu.my)

**SYMINGTON, Keith**

WWF Coral Triangle Programme  
22/273 Au Co, Tay Ho District  
IPO 180 Tay Ho District, Hanoi  
VIETNAM  
Tel: +84914435348  
Email: [keithsymington@yahoo.ca](mailto:keithsymington@yahoo.ca)

**SIHOTANG, Parulian**

Vice President Management Representative  
Upstream Oil & Gas Executive Agency  
Badan Pelaksana Kegiatan Usaha Hulu Minyak & Gas Bumi  
(BPMIGAS), Kantor Pusat BPMIGAS  
Gedung Wisma Mulia, Lantai LG, 22, 23, 27 – 29, 30, 31, 33,  
36, 38, 39 & 40, Jl. Gatot Subroto No 42  
Jakarta 12710, INDONESIA  
Tel: +62-21-292 41607  
Email: [andini@bpmigas.go.id](mailto:andini@bpmigas.go.id)

**Suhaimah**

International Islamic University Malaysia  
Jalan Istana Abdul Aziz  
25200 Kuantan, Pahang Darul Makmur  
MALAYSIA

**SITI NAHDATUL ISNAINI Said Hussin**

Institut Agro-Bioteknologi Malaysia (ABI)  
MALAYSIA  
Tel: 603-89432360 Fax: 603-89416229  
Email: [isnaini@mosti.gov.my](mailto:isnaini@mosti.gov.my)

**TEO, Albert Chin Kion**

Chairman  
Borneo Ecotourism Solution & Technologies (BEST) Society  
& Managing Director  
Borneo Eco Tours Sdn. Bhd.  
Lot 1, Pusat Perindustrian  
Kolombong Jaya, Mile 5.5  
Kota Kinabalu 88450 Sabah, MALAYSIA  
Tel : 6088-438 300 Fax : 6088-438 307  
E-mail: [albert@borneoecotours.com](mailto:albert@borneoecotours.com)

**TEH Poh Kwee**

Director  
SS Microbial Sdn Bhd  
No. 30 Jalan PJS 7/19  
Bandar Sunway  
46150 Petaling Jaya, Selangor, MALAYSIA  
Tel: 603-5636 1869 Fax: 603-5636 1771  
Email: [kelim@ssmicrobial.com](mailto:kelim@ssmicrobial.com)

**TENG Mee Lian, Crosby**

Technical Executive  
Wind wheel Tree Turbine Sdn Bhd  
No. 11, Jalan Sutera Merah 3, Taman Sutera, 81300 Johor  
Bahru, MALAYSIA  
Email: [Crosby.teng@yahoo.com](mailto:Crosby.teng@yahoo.com)

**TRONO, Romeo**

Country Executive Director  
Conservation International – Philippines  
# 6, Maalalahanin Street  
Teachers Village  
Diliman, Quezon City 1101  
PHILIPPINES  
Tel : +63-2-924 8235 Fax : +63-2-435 6446  
Email: [rtrono@conservation.org](mailto:rtrono@conservation.org)

**TOH, Peter**

FROSCO  
12, Jalan TIB 1/3,  
Taman Industri Bolton,  
Batu Caves, 68100 Selangor, MALAYSIA  
Tel: 603-6185 9262 Fax: 603-6185 9279  
Email: [work@froscoweb.com](mailto:work@froscoweb.com)

**TAN Wan Hin, Dr.**

University of Malaya  
Department of Geography  
50603 Kuala Lumpur, MALAYSIA  
Tel: 603-7967 5602 Fax: 603-7967 5457  
Email: [tanwh@um.edu.my](mailto:tanwh@um.edu.my)

**WONG Kok Kiong, Paul**

Senior Principle Assistant Secretary  
Ministry of Housing & Local Government  
Level 3, Block C Centre,  
Damansara Town Centre, 50782 Kuala Lumpur,  
**MALAYSIA**  
Tel: 603-2093 4877 Fax: 603-2093 3764  
Email: [paulwong@kpkt.gov.my](mailto:paulwong@kpkt.gov.my)

**WAGEY, Dr Ir. Tonny**

Research Associate  
UBC Fisheries centre  
University of British Columbia  
UBC Fisheries Centre  
2203, Main Hall  
Vancouver B.C. V6T 1Z4, CANADA  
Tel : +1-604-822 2731 Fax : +1-604-822 8934  
Email: [t.wagey@fisheries.ubc.ca](mailto:t.wagey@fisheries.ubc.ca)

**WEBBER, Darrel**

Director-General  
Roundtable in Sustainable Palm Oil (RSPO)  
RSPO Secretariat  
Unit A-33A-2, Menara UOA Bangsar  
No 5, Jalan Bangsar Utama 1, Bangsar  
59000 Kuala Lumpur, MALAYSIA  
Tel: 603-2302 1500 / Fax : 603-2201 4053  
Email: [darrel@rspo.org](mailto:darrel@rspo.org) / [laila.wilfred@rspo.org](mailto:laila.wilfred@rspo.org)

**WEIROWSKI, Fred**

Director  
Blue Life ecoservices Ltd  
20 Denai Pinang 30, Tanjung Tokong  
10470 Penang, MALAYSIA  
Email: [fred@weiroski.com](mailto:fred@weiroski.com) / [fred@bluelifeeco.org](mailto:fred@bluelifeeco.org)

**WONG, King**

Benih Jaya Aqua Sdn Bhd  
No. 58 B, Jalan Sultan Ismail,  
50250 Kuala Lumpur, MALAYSIA  
Tel: 03-21442144 Fax: 03-21410660  
Email: [benih.jaya.aqua@hotmail.com](mailto:benih.jaya.aqua@hotmail.com)

**Yafieda**

Dentsu Utama Sdn. Bhd.  
Unit 1-1 Level 1, Block B, Plaza Damansara, 45 Medan Setia  
Satu, Bukit Damansara  
50490 Kuala Lumpur, MALAYSIA  
Tel: 603-20962212 Fax: 603-20962313  
Email: [yafieda@dentsutama.com.my](mailto:yafieda@dentsutama.com.my)

**ZAMZURINA Zulkifli**

Kementerian Sumber Asli & Alam Sekitar  
Malaysia  
Tel: 603-88861667 Fax: 603-88904021  
Email: [zamzurina@nre.gov.my](mailto:zamzurina@nre.gov.my)

**BAIKAN, Datuk Dr Beatrice Beth**

Environmental Advisor & Consultant for the Sabah Palm Oil  
Industrial Cluster /  
Managing Director  
CTI Regional Business Forum

Sustainable Environment Planning & Management  
Consultants Sdn. Bhd.  
Board Member  
Universiti Malaysia Sabah (UMS), MALAYSIA  
Tel : 6088-320 000 Fax :6088-320 223  
Email: [crd@ums.edu.my](mailto:crd@ums.edu.my)

**BAIDILLEH Ghazali**

Penolong Pengarah Kanan Belanjawan  
Kementerian Kewangan Malaysia  
Bahagian Pengurusan Belanjawan,  
Aras 7, Blok Utara, No. 5, Persiaran Perdana, Presint 2, Pusat  
Pentadbiran Kerajaan Persekutuan, 62592 Putrajaya,  
MALAYSIA  
Tel: 603 8882 3810 Fax: 603 8882 3809  
Email: [baidilleh.ghazali@treasury.gov.my](mailto:baidilleh.ghazali@treasury.gov.my)

**BADARIAH Othman**

Advisor - Insurance & Legal Regulatory  
Malaysian Shipowners' Association (MASA)  
F1-18, level 1  
City Point, Kompleks Dayabumi  
Jalan Sultan Hishammudin  
50050 Kuala Lumpur, MALAYSIA  
Tel : 603-2275 2136 Fax : 603-2260 2575  
Email: [badaria@masa.org.my](mailto:badaria@masa.org.my)

**CHEN, Chung Fung**

Marine Biologist  
Institute Of Biodiversity and Environmental Conservation  
Universiti Malaysia Sarawak  
94300 Kota Samarahan  
Sarawak, MALAYSIA  
Tel: 6082-581000 Fax: 6082-583004  
Email: [oijin@sepilok.com](mailto:oijin@sepilok.com)

**CONDRAD SION, Kenneth**

Taman-Taman Sabah  
Lot 45 & 46, Level 1-5  
Block H Signature Office  
KK Times Square Coastal Highway  
88100 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 6088-523500 Fax: 6088-486435  
Email : [sabahparks@sabah.gov.my](mailto:sabahparks@sabah.gov.my) / [sabahparks@gmail.com](mailto:sabahparks@gmail.com)

**CHANG Kok Min**

PPKNK  
c/o WWF-Malaysia,  
Suite 1-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah  
MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
Email: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**CHITDRAKANTAN Subramaniam**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008  
Email: [schitdra@mosti.gov.my](mailto:schitdra@mosti.gov.my)

**DARMAWAN, Dr.**

CTI Regional Secretariat  
Directorate General of Marine, Coast & Small  
Islands Affairs  
Mina Bahari II Building, 7th Floor  
Ministry of Marine Affairs & Fisheries

Jl. Medan Merdeka Timur, No.16 Jakarta Pusat, 10110  
Jakarta, INDONESIA  
Tel: +62 811 874482  
Email: [darmawan@indo.net.id](mailto:darmawan@indo.net.id)

**DRIJVER, Carel**

WWF- Netherlands  
Driebergseweg 10, JB Zeist, P.O.Box 7,  
AA Zeist, 3700,  
THE NETHERLANDS  
Tel: +31 (0)30 693 7333 Fax: +31 (0)30 691 1685  
Email: [cdrijver@wwf.nl](mailto:cdrijver@wwf.nl)

**DENESWARI Sivaguru**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662 Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**FAZRULLAH RIZALLY Abdul Razak**

Sabah Parks  
P.O.Box 10626, 88806 Kota Kinabalu, Sabah  
MALAYSIA  
Tel: 6088-523500 Fax: 6088-486435  
Email: [sabahparks@sabah.gov.my](mailto:sabahparks@sabah.gov.my) / [sabahparks@gmail.com](mailto:sabahparks@gmail.com)

**FADILAH Bin Haji Yusof, The Hon. Datuk Haji**

Deputy Minister of Science, Technology & Innovation  
Ministry of Science, Technology & Innovation  
Level 7, Block C5  
Kompleks C  
Federal Government Administrative Centre  
62662 Putrajaya, MALAYSIA  
Tel : 603-8855 8001 (dir) / 8885 8000 (gen)  
Fax : 603-88889070  
E-mail: [fadilah@mosti.gov.my](mailto:fadilah@mosti.gov.my)

**FADZILLAH Mansor**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**GALID, Rayner Stuel**

Jabatan Perikanan Sabah  
MALAYSIA  
Tel: 6088-247602 Fax: 6088-240511  
Email: [ryner.galid@sabah.gov.my](mailto:ryner.galid@sabah.gov.my)

**GHUFRAN Redzwan, Dr.**

University of Malaya  
Institute of Ocean and Earth Sciences  
Universiti of Malaya, 50603 Kuala Lumpur,  
MALAYSIA  
Tel: 603 7967 4640 Fax: 603 7967 6994  
Email: [ghufran@um.edu.my](mailto:ghufran@um.edu.my)

**GULAMSARWAR Jan Mohammad, Haji**

Pengarah Bahagian Pelesenan dan Pengurusan Sumber  
Jabatan Perikanan Malaysia  
Aras 1, Wisma Tani  
Lot 4G2, Presint 4  
Pusat Pentadbiran Kerajaan Persekutuan  
62628 Putrajaya, MALAYSIA  
Tel: 603-88885620 Fax: 603-88891786  
Email: [gulamsarwar@dof.gov.my](mailto:gulamsarwar@dof.gov.my)  
CTI Regional Business Forum

**HOLTHUS, Paul**

Executive Director  
World Ocean Council  
3035, Hibiscus Drive, Suite 1,  
Honolulu, Hawaii, 96815  
USA  
Tel: +1-808-277 9008  
Email: [paul.holthus@oceanCouncil.org](mailto:paul.holthus@oceanCouncil.org)

**HAIZAN HAZLEEN Hakim**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**HII Yii Siang, Prof. Madya Dr**

Pensyarah / Timbalan Pengarah RMIC  
Universiti Malaysia Terengganu (UMT)  
Fakulti Agroteknologi dan Sains Makanan (FASM) 21030 ala  
Terengganu, MALAYSIA  
Tel: 609-66831411/3215 Fax: 609-6693493  
Email: [hii@umt.edu.my](mailto:hii@umt.edu.my)

**INGLES, Jose**

Strategy Leader  
WWF Coral Triangle Programme  
65 Mindanao Avenue, Pagasa,  
1103 Quezon City, PHILIPPINES  
Tel: +632 920-7923 Fax: +632 927-0247  
Email: [Ingles.jose@gmail.com](mailto:Ingles.jose@gmail.com) / [jingles@wwf.org.ph](mailto:jingles@wwf.org.ph)

**JUMAHAT Intang, Haji**

Timbalan Setiausaha (TSUT )  
Pejabat Timbalan Setiausaha Tetap  
Kementerian Pertanian & Industri Makanan Sabah  
Aras 7 & 8, Wisma Pertanian Jln Tasik Luyang  
Beg Berkunci 2049  
88624 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 6088-283636 Fax: 6088-283633

**JAY, Marie Power**

Bloo Lagoon Padangbai, Bali  
25 Elitis Mentari, Valencia, 47000 Sungai Buloh, Selangor  
MALAYSIA  
Fax: 603- 2773 5399  
Email: [myrtpowerjay@gmail.com](mailto:myrtpowerjay@gmail.com)

**JUMIN, Rebecca**

WWF-Malaysia  
Suite 1-6-W11, 6th Fl, CPS Tower  
No.1, Jln Centre Point  
88000 Kota Kinabalu, Sabah  
MALAYSIA  
Tel: 6088 262 420 Fax: 6088 242 531  
Email: [alim@wwf.org.my](mailto:alim@wwf.org.my)

**JAMILI Sarabi**

Berungus Community  
cc/o WWF-Malaysia  
Suite 1-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
Email: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**KAMARUZHAMAN Mat Zin,**

S2S, MOSTI  
National Oceanography Directorate  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008  
Email: [asiah@mosti.gov.my](mailto:asiah@mosti.gov.my)

**KNIGHT, Maurice**  
Chief of Party, CTSP  
US CTI Support Program/CTSP  
One Wolter Place Bldg.  
Jl. Wolter Monginsidi No.63B  
Mezzanine Floor, Kebayoran Baru, 12180 Jakarta Selatan  
INDONESIA  
Tel: +62 21 739 44 57 Fax: +62 21 739 45 31  
Email: [Maurice.Knight@wwfus.org](mailto:Maurice.Knight@wwfus.org)

**KHATIJAH Mohd Yusoff, Prof Datin Paduka Dr**  
Deputy Secretary-General (Science)  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C5, Parcel C  
Federal Government Administrative Centre  
62662 Putrajaya, MALAYSIA  
Tel : 603-8885 8017 (dir) / 8885 8000 /  
Fax : 603-8888 9000 / 8888 6070  
Email: [kyusoff@mosti.gov.my](mailto:kyusoff@mosti.gov.my)

**KAHN, Benjamin**  
Director  
APEX Environmental  
Kotak Pos 19, Kantor Pos Sempidi  
Kerobokan 20351  
Bali, INDONESIA  
Tel: +6281337315802  
Email: [kahn.benjamin@gmail.com](mailto:kahn.benjamin@gmail.com)

**KAMARUDIN Abdul Karim Laing**  
Berungus Community  
c/o WWF-Malaysia  
Suite I-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
Email: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**KASSEM, Kenneth**  
Head of Marine Conservation, WWF-Malaysia  
Suite I-6-W11, 6th Fl, CPS Tower, Ctr. Point Complex.  
No.1, Jln Centre Point, 88000 Kota Kinabalu, Sabah,  
MALAYSIA  
Tel: 6088 262 420 Fax: 6088 242 531  
Email: [kkassem@wwf.org.my](mailto:kkassem@wwf.org.my)

**KONG Yu Fook**  
Live Reef Fish Trader  
c/o WWF-Malaysia,  
Suite I-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah  
MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
Email: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**K. SINEENART Chuichulcherm**  
Asian Sourcing Manager  
Mars Global Petcare  
Wrigley Co. (Thailand) Ltd.  
122-122 /1, Nonsi Road, Chongnonsi 10120  
Bangkok, THAILAND  
CTI Regional Business Forum

Tel: +66-2-681 8780  
Email: [sineenart.chuichulcherm@effem.com](mailto:sineenart.chuichulcherm@effem.com)

**LE CLUE, Sophie**  
Director  
ADM Capital Foundation  
Room 2406, 9, Queens Road Central  
Central HONG KONG  
Tel: +85293044697 Fax: +85228106865  
Email: [slc@admcf.org](mailto:slc@admcf.org)

**LIM, Jenny**  
Head of Corporate Social Investment – APAC  
Nokia Asia Pacific, SINGAPORE  
Email: [jenny.j.lim@nokia.com](mailto:jenny.j.lim@nokia.com)

**LIEW Hock Chark, Prof. Madya**  
Universiti Malaysia Terengganu (UMT)  
MALAYSIA  
Tel: 609-6684253 Fax: 609-6693493  
Email: [hcliew@umt.edu.my](mailto:hcliew@umt.edu.my)

**MUSA Haji Aman, Datuk Seri Panglima Haji**  
Chief Minister of Sabah  
Chief Minister's Office  
17th Floor, Wisma Innoprise,  
Jalan Sulaman, Teluk Likas,  
88817 Kota Kinabalu, Sabah, MALAYSIA

**MOHD SAID Hinayat**  
SUR Sabah  
MALAYSIA

**MACPHERSON, Charlie**  
Senior Communications Manager  
US CTI Support Program  
Tetra Tech Inc.  
10306 Eaton Place, Suite 340  
Fairfax, Virginia 22030-2201  
UNITED STATES  
Tel: +1-703-385-6000  
Email: [Charlie.macpherson@tetrattech.com](mailto:Charlie.macpherson@tetrattech.com)

**MCMAHON, Dennis**  
CEO, Green Business - JV Marketing Sdn Bhd  
JV Marketing Sdn Bhd c/o Maleki GMBH  
Bangunan SSA, No. 9 Jalan Bangsar Utama 3, Bangsar Utama,  
59000, Kuala Lumpur, MALAYSIA  
Tel: 603-2282 9909 Fax: 603-2283 1699  
Email: [dennis@gbjvt.com](mailto:dennis@gbjvt.com) / [matthiasgelber@gmail.com](mailto:matthiasgelber@gmail.com)

**MANGALIS, Melissa**  
Marine Biologist  
Pom Pom Island Resort  
c/o WWF-Malaysia,  
Suite I-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
Email: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**MEUTIA, Margareth**  
Seafood Savers Programme, WWF Indonesia  
WWF-Indonesia  
Kantor Taman A9, Unit A-1,  
Jl. Mega Kuningan Lot 8-9 / A9,  
Kawasan Mega Kuningan, 12950 Jakarta, INDONESIA  
Tel: +62 21 576 1070 Fax: +62 21 576 1080  
Email: [mmeutia@wwf.or.id](mailto:mmeutia@wwf.or.id)

**MOHD LAZIM Mohd Saif**

Pusat Penyu dan Ekosistem Marin (TUMEC), Institut Penyelidikan Perikanan, Jabatan Perikanan Malaysia, Rantau Abang, Dungun, 23000 Dungun Terengganu, MALAYSIA  
Tel: 6 09-8458169 Fax: 6 09-8458017

**NURASHIKIN Ahmad**

Majlis Keselamatan Negara  
MALAYSIA

**NOORAINIE Awang Anak**

Senior Programme Officer  
TRAFFIC Southeast Asia  
Unit 3-2, Jalan SS 23/11, Taman SEA  
47400 Petaling Jaya, Selangor, MALAYSIA  
Tel: 603-7880 3940 Fax: 603-7882 0171  
Email: [naatsea@po.jaring.my](mailto:naatsea@po.jaring.my)

**NORHANA Mat Salleh,**

Kementerian Pengajian Tinggi, MALAYSIA  
Tel: 603-88706641 Fax: 603-88706842  
Email: [norhana@mohe.gov.my](mailto:norhana@mohe.gov.my)

**NOGAMI, Kenji**

Strategic Solution Director, Strategic Solution & Services Division  
Dentsu Asia Pte. Ltd.  
77 Robinson Road, #24-01 Robinson 77,  
068896 SINGAPORE  
Tel: +(65) 6837-2212 Fax: +(65) 6837-2262  
Email: [kenji.nogami@dentsu.co.jp](mailto:kenji.nogami@dentsu.co.jp)

**NIZAM Othman**

Port Klang Authority  
Beg Berkunci 202, Jalan Pelabuhan Utara  
42005 Pelabuhan Kelang, Selangor Darul Ehsan, MALAYSIA  
Tel: 603-31688211 Fax: 603-31689117

**NOOR HASLINDA Zainuddin**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**ONG Li Ling**

B Eng. B Commerce Manager  
Tenaga Nasional Berhad  
Tingkat 5, Bangunan Ibu Pejabat TNB  
129, Jln Bangsar  
59200 Kuala Lumpur, MALAYSIA  
Tel: 603-2296 6567 Fax: 603-2282 1419

**ONGKILI, Maximus Johnity, Datuk Seri Panglima Dr**

Minister of Science, Technology & Innovation  
Ministry of Science, Technology & Innovation  
Level 7, Block C5, Kompleks C  
Federal Government Administrative Centre  
62662 Putrajaya, MALAYSIA  
Tel: 603-8855 8008 / 8885 8000 Fax: 603-88889070  
Email: [ongkili@mosti.gov.my](mailto:ongkili@mosti.gov.my)

**PAKZAD, Amin**

Finance Manager  
US CTI Support Program/PI  
Chartered Square Building 29<sup>th</sup> Floor, Unit 2902  
152 North Sathorn Road, Bangkok,  
CTI Regional Business Forum

Bangkok 10500, THAILAND

Tel: 662-637 8517 Fax: + 662-637 8520

Email: [amin.pakzad@tetrattech.com](mailto:amin.pakzad@tetrattech.com)

**PET-SOEDE, Dr Lida**

WWF Coral Triangle Program Leader  
WWF Indonesia  
Kantor Taman A9, Unit A-1, Jl. Mega Kuningan Lot 8.9/A9,  
Kawasan Mega Kuningan, Jakarta 12950  
INDONESIA  
Tel: +62-21-576 1070 / Fax : +62-21-576 1080  
Email: [pet@wallacea.wwf.or.id](mailto:pet@wallacea.wwf.or.id)

**PINTO, Ervina Soares**

CTI National Focal Point  
Ministry of Agriculture and Fisheries, Timor Leste  
Rua Presidente Nicolao Lobato Comoro, Dili,  
TIMOR-LESTE  
Tel: +670 7312312  
Email: [vinamor74@yahoo.com.au](mailto:vinamor74@yahoo.com.au)

**PRASMADJI, Narmoko**

Dir-Gen of Marine, Coast & Small Islands Affairs  
Ministry of Marine Affairs & Fisheries  
Mina Bahari II, 7th Floor, Jl. Medan Merdeka Timur, No 16  
Jakarta Pusat  
10110 Jakarta, INDONESIA  
Tel: +62 21 386 0532  
Email: [n\\_prasmadji@yahoo.com](mailto:n_prasmadji@yahoo.com)

**RABIATUTADAWIAH Mohd Jalil**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**RUBIO, Dely P.**

PENR - PAWB  
PHILIPPINES  
Email: [delrubio@gmail.com](mailto:delrubio@gmail.com)

**RIDZWAN Hashim, Prof. Dr**

International Islamic University Malaysia  
Jalan Istana Abdul Aziz  
25200 Kuantan, Pahang Darul Makmur  
MALAYSIA

**SHAMSIAH Haji Jirat**

Bahagian Pelancongan, Sumber Alam Sekitar  
Unit Perancang Ekonomi Negeri Sabah  
MALAYSIA  
Tel: 6088-450800 Fax: 6088-450998  
Email: [shamsiah.jirat@sabah.gov.my](mailto:shamsiah.jirat@sabah.gov.my)

**SHANTA DEVI Balajiram**

Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C4, Complex C,  
Federal Government Administrative Centre  
62662, Putrajaya, MALAYSIA  
Tel: 603-88858531 Fax: 603-88893008

**SMIEEE Mohd Rizal Arshad, Assoc. Prof. Dr**

Universiti Sains Malaysia  
School of Electrical and Electronics Engineering  
Engineering Campus, Nibong Tebal, 14300 Pulau Pinang  
MALAYSIA

Tel: 604 599 5843 / 6004 Fax: 604 594 1023  
Email: [rizal@eng.usm.my](mailto:rizal@eng.usm.my) / [dr.rizal@gmail.com](mailto:dr.rizal@gmail.com)

**SUHAIMI Md. Yasir, Dr.**

Universiti Malaysia Sabah  
88400 Kota Kinabalu, Sabah  
MALAYSIA  
Fax: 088-435 324

**SABAR Md Hashim**

Senior Manager, Regulatory Relation Management  
Tenaga Nasional Berhad  
Tingkat 5, Bangunan Ibu Pejabat TNB  
129, Jln Bangsar  
59200 Kuala Lumpur, MALAYSIA  
Tel: 603-2296 6567 Fax: 603-2282 1419

**SHARMA, Dato' Dr Dionysius S.K.**

Executive Director & CEO  
WWF-Malaysia  
49, Jalan SS 23/15, Taman SEA, Petaling Jaya  
47100 Selangor Darul Ehsan, MALAYSIA  
Tel : 603-7803 3772 Fax : 603-7803 5157  
Email: [dsharma@wwf.org.my](mailto:dsharma@wwf.org.my)

**SUKOYONO, Dr Ir. Suseno**

Executive Chair, CTI-CFF Regional Secretariat / Adviser &  
Expert Staff Member to the Minister of Marine Affairs &  
Fisheries for Eco., Social & Cultural Affairs, Ministry of Marine  
Affairs & Fisheries  
CTI Regional Secretariat, INDONESIA  
Tel: +62-21-351 9070 Fax: +62-21-352 0338

**SUMAMPOUW, Monique**

WWF-Malaysia  
Suite 1-6-W11, 6th Fl, CPS Tower  
No.1, Jln Centre Point  
88000 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 6088 262 420 Fax: 6088 242 531  
Email: [alim@wwf.org.my](mailto:alim@wwf.org.my)

**Suharsono**

Senior Scientist, Oceanography Research Center  
Indonesia Science Institute  
Jalan Raden Saleh No.43 Jakarta  
INDONESIA  
Tel: +628 11904806  
Email: [shar@indo.net.id](mailto:shar@indo.net.id)

**SHARIZAL Shaarani**

Ever Nexus (M) Sdn. Bhd.  
130 Jalan Ara, Bangsar  
59100 Kuala Lumpur, MALAYSIA  
Tel: 603-2284 7575 Fax: 603-2284 0041  
Email: [sharizal@ever-nexus.com](mailto:sharizal@ever-nexus.com)

**SALEHUDDIN Zakaria**

Agensi Penguatkuasaan Maritim Malaysia (MMEA)  
Jabatan Perdana Menteri  
Aras 4-11, One IOI Square,  
IOI Resort, 62502 Putrajaya, MALAYSIA  
Tel: 603-8995 7000 Fax: 603-8941 4527  
Email: [salehuddin@mmea.gov.my](mailto:salehuddin@mmea.gov.my)

**THIRUKANTHANCHANDRA Segaran**

Institute of Marine Biotechnology, Universiti Malaysia  
21030 Kuala Terengganu, MALAYSIA  
CTI Regional Business Forum

Fax: 609-6683105  
Email: [thiru@umt.edu.my](mailto:thiru@umt.edu.my)

**TEH Lay Hoon, Evelyn**

Graduate Student, Masters (Tech) Environmental  
Management  
University Malaya, MALAYSIA  
Tel: 603 7967 4640 Fax: 603 7967 6994  
Email: [tehlayhoon@gmail.com](mailto:tehlayhoon@gmail.com)

**THOMAS, Sebastian**

Researcher  
School of Business  
University of Queensland & GM (Research & Innovation)  
UQ SMART, University of Queensland, Brisbane St Lucia  
QLD 4072, AUSTRALIA  
Tel: 0061-7-3365 1111  
Email: [seth.thomas@uq.edu.au](mailto:seth.thomas@uq.edu.au)

**TO, Allen**

WWF-Hong Kong  
Room 1001A, 10/F, Block A,  
Seaview Estate, 2 Watson Road, North Point  
HONG KONG  
Tel: +852 98310471  
Email: [ato@wwf.org.hk](mailto:ato@wwf.org.hk)

**TIGHE, Stacey**

Senior Regional Coordinator  
US CTI Support Program/PI, INDONESIA  
Tel: +62 811 909 379  
Email: [stighe@usciti.org](mailto:stighe@usciti.org) / [stacey.tighe@gmail.com](mailto:stacey.tighe@gmail.com)

**WAN SITI FATIMAH Wan Ahmad**

Pegawai Tadbir  
Port Klang Authority  
Beg Berkunci 202, Jln Pelabuhan Utara  
42005 Pelabuhan Kelang, Selangor Darul Ehsan  
MALAYSIA  
Tel: 603-31688211 Fax: 603-31689117  
Email: [fatimah@pka.gov.my](mailto:fatimah@pka.gov.my)

**WATIE Ambu,**

Group Manager  
Innoprise Corporation Sdn Bhd  
P.O.Box 11623  
88817 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 6088-326 521 Fax: 6088-326 522  
Email: [wariambu@yahoo.com](mailto:wariambu@yahoo.com)

**WONG, Anthony**

Group Managing Director  
Asian Overland Services Tours & Travel Sdn. Bhd. /  
Director, The Frangipani Langkawi Resorts & Spa  
No 39 & 40, Jalan Mamanda 9  
Ampang Point, Ampang, 68000  
Selangor Darul Ehsan, MALAYSIA  
Tel : 603-4252 9100 / 4251 9840 Fax : 603-4257 1133  
Email: [Anthony@asianoverland.com.my](mailto:Anthony@asianoverland.com.my) /  
[Anthony@frangipanilangkawi.com](mailto:Anthony@frangipanilangkawi.com)

**WONG, Irwin**

Live Reef Fish Trade Fisheries Officer  
WWF-Malaysia  
Suite 1-6-W11, 6th Fl, CPS Tower  
Centre Point Complex  
No.1, Jln Centre Point, 88000 Kota Kinabalu, Sabah  
MALAYSIA

Tel: 6088 262 420 Fax: 6088 242 531  
Email: [yiwong@wwf.org.my](mailto:yiwong@wwf.org.my)

**WONG, Johnny**

PPKNK  
c/o WWF-Malaysia  
Suite I-6-W11, 6th Floor, CPS Tower, No. 1 Jalan Centre  
Point, 88000 Kota Kinabalu, Sabah, MALAYSIA  
Tel: 60 88 262 420 Fax: 60 88 242 531  
Email: [ayong@wwf.org.my](mailto:ayong@wwf.org.my)

**YIP Hin Wai**

Universiti Putra Malaysia  
UPM Serdang, 43400 Selangor, MALAYSIA  
Tel: 6 03-8946 6617 Fax: 6 03-8656 7454

**ZAINUDIN Bachok, Dr**

Deputy Director  
Universiti Malaysia Terengganu (UMT)  
Mengabang Telipot  
21030 Kuala Terengganu,  
MALAYSIA  
Tel: 609-6683123 Fax: 609-6692166  
Email: [zainudinb@umt.edu.my](mailto:zainudinb@umt.edu.my)

**ZARAH Syed Ahmad, Dato' Dr Sharifah**

Deputy Secretary-General (Policy)  
Ministry of Science, Technology & Innovation (MOSTI)  
Level 6, Block C5, Parcel C  
Federal Government Administrative Centre  
62662 Putrajaya, MALAYSIA  
Tel : 603-8885 8176 Fax : 603-8888 9000  
Email: [zarah@mosti.gov.my](mailto:zarah@mosti.gov.my)

## A.3 ROUNDTABLE REPORTS

### Roundtable I: Science, Technology & Innovation for Sustainable Fisheries & Aquaculture for Food Security

*Convenor / Discourse Leader:*

**Dr Lida Pet-Soede**

Leader of the Coral Triangle Network Initiative, WWF

*Discussants:*

**Dato' Goh Cheng Liang**

President, Marine Fish-Farmers Association of Malaysia & Group Executive Chairman, GST Group of Companies, Malaysia

**Prof Dr Ridzwan Abdul Rahman**

Team Leader, Strategic Environmental Assessment on Food Security, Sabah

**Mr Patrick Caleo**

Country Manager, Marine Stewardship Council (MSC) Australia & New Zealand

**Mr K. Sineenart Chuichulcherm**

Asian Sourcing Manager, Mars Global Petcare, Thailand

**Ms Margareth Meutia**

Senior Officer, SEAFOOD SAVERS Secretariat, WWF-Indonesia

## SUMMARY OF PRESENTATIONS

### **Marine Fish-Farmers Association of Malaysia (MFFAM)**

Dato' Goh Cheng Liang

*Pro-tem President, MFFAM*

MFFAM promotes and encourages the development of aquaculture and other related activities in Malaysia. MFFAM provides recommendations, assists members to obtain certification in best aquaculture practices and sustainable aquaculture products. MFFAM is concerned about sustainability, traceability, and eco-friendly methods.

Discussion Questions:

- What kind of best aquaculture practices certification is recommended for our adoption?
- What incentives/financial support are available for MFFAM to carry out best aquaculture practices?
- Where can seafood producers meet with buyers who are sourcing for sustainable seafood and willing to pay for premium prices?

### **Strategic Environmental Assessment (SEA) on Food Security**

Prof. Dr. Ridzwan Abdul Rahman

*Team Leader, Strategic Environmental Assessment (SEA) on Food Security*

SEA is a study conducted under the Economic Planning Unit (EPU) to explore whether it is applicable to other Coral Triangle countries. SEA examines Sabah Development Corridor's blueprint 2008-2025 for environmental and social impacts. The study objectives are to provide an indication of the long-term impacts (negative and positive) resulting from strategies and programmes under SDC and provide baseline report on impacts. The strategies aim to enhance quality and productivity for food-based agriculture and ensure Sabah can become self-sufficient in the production of the basic food requirements of the State. Programmes include agriculture-excel outreach program, agri-business acceleration, modernized collection. The study investigates the influence of external factors on food security, e.g., weather conditions. The study will include scenarios, scoping (env. Issues examined - 4), food basket (paddy, meat, fish, veges, fruits),

public participation, external factors, and analysis. If this study is relevant for the CT6 countries, we would be keen to share experiences.

## **The Marine Stewardship Council: A Brief Introduction**

Mr. Patrick Caleo

*Country Manager – Australia & New Zealand Marine Stewardship Council (MSC)*

The Marine Stewardship Council (MSC) is an NGO, non-advocacy organization formed in the 1990's out of a broader concern about government's abilities to solve problem on fisheries on own, and award incentives for fisheries to do the right thing. There are two standards: 1) environmental standard for well managed sustainable fisheries, and 2) a traceability standard for chain of custody. The program works through a voluntary application process, assessed against the MSC standard by 3<sup>rd</sup> party independent certifiers. Fish from successfully certified fisheries such as the MSC eco-label leads to commercial advantages and therefore encourages more companies to become certified. Currently 10 percent of the world's wild capture fisheries are MSC-certified. This includes more than 80 countries, which has doubled every year since 2004 (strongest in Europe, Canada, Japan, U.S., and Australia), showing growing interest in this region.

Case study: Malaysia – Pacific West certified last November. Heavily investing in awareness and promotional activities in schools, media, and retailers. Why? For sustainability, image, differentiation, loyalty (customers & staff feel good about doing the right thing), and CSR.

Discussion questions:

- Ignoring the issue of costs, what are obstacles for MSC in Asia?
- Could Asian consumers be engaged positively on seafood sustainability?
- Adoption of the MSC program has been driven strongly by retailer commitments in other parts of the world. Do you predict a similar trend here?

## **MARS: Perspectives on MARS Fish Sustainability Program**

Ms. K. Sineenart Chuichulcherm

*Asian Sourcing Manager, Mars Petcare (Thailand) Co. Ltd.*

In 2007 MARS used 22,000 tons of tuna and 3,000 tons of sardines/mackerel in its production. By 2020 MARS plans to shift to 100 percent sustainable wild catch and sustainable aquaculture sources. Seafood products sourced doesn't impact the availability of food for human consumption in the region. MARS switched from yellowfin tuna to skipjack, bonito, and tongol. MARS also increased the use of tuna red meat by-product which reduced tuna usage by 30 percent since 2007. Typical challenges faced include obtaining reliable information on sustainable sources, and ensuring the right sources for sustainable fish certification. MARS wishes to develop a stronger collaboration with governments and NGOs, to connect with experts and stakeholders to help have objective approach to sustainability (lead to right direction, provide sufficient info to understand real sustainability issues), build strategies and action plans to educate consumers.

## **Supporting the Transition to Sustainable Seafood**

Ms Margareth Meutia

*Corporate Campaigner for Marine & Marine Species Programme & Senior Officer  
SEAFOOD SAVERS Secretariat*

Global retailers are facing an increasing seafood demand and because most of the world's fisheries are fully exploited, they are looking at the Asia-Pacific region to source sustainable seafood (US, Europe). One of the challenges is to determine what 'responsibly produced' seafood looks like in a developing world context. Local businesses want to make sustainability a commitment, but in the absence of certified products, how can we reward best practices? In 2009 the Seafood Savers Program assisted domestic producers to meet increased demands from buyers outside Indonesia for more sustainably produced seafood. The Seafood Savers Program acknowledges initiatives that meet 'responsible' fisheries, facilitates information flow, provides a bridge between producers and buyers of sustainable/responsible seafood

products, and supports businesses aspiring to achieve MSC/ASC certification (bridging mechanism). The Fishery/Aquaculture Improvement Projects work towards MSC certification, develops seafood company commitment, provides technical advice from fishery consultants, and partners with local stakeholders to develop and implement on improvement projects. We strive for continual improvement using a ladder of progression (MSC/ASC) to achieve international sustainability standards and provide incentives/rewards.

Discussion questions:

- Could some products not ever be certifiable?
- What does sustainable seafood look like in a developing world context?
- What's more important, a price premium or market access? Why and what does this mean for marketing more responsible produced product?
- How can we build a platform of membership? How can the platform provide benefits through connecting people regionally?

## DISCUSSION

**Question: Do you produce food for your country or to export? How do you view food security?**

*Ms. Sineenart:* We produce food for the petcare industry. MARS wants to reduce use of fish for pets, and more for the people. It's about the owner's perception, some are not aware of food shortage issues globally and food chain availabilities. We need links for businesses to find producers that are on their path to sustainability. If they are not certified, how do we meet each other? We can look to smaller farmers.

*Mr. Kraft:* The biggest hurdle is there is no clear-cut communication channel. We must improve the communication chain. Logistics chain provides what people want vs. what can be supplied. There is no communication at the end consumer.

*Ms. Sineenart:* About the owner's perception, some are not aware of food shortage issues globally and food chain availabilities. Better communication can be created throughout the supply chain between the producers and a facilitating organisation that can provide information.

**Question: Have fish farmers expressed a desire to carry out better practices for the sake of consumers?**

*Mr. Dato' Goh:* MFFAM is very new, still in pro-tem phase. Seven states from Malaysia have registered under the association. They are also urging Sabah and Sarawak to join the association to group small farmers together and unite for sustainable cause.

**Question: How do you use technology to make connections, to raise awareness and bring consumers to 'experience the farm'. NOKIA's proposal?**

*Mr. Caleo:* It's a function of what comes first – fisheries or retailers? You must find a strategy that picks on the tool/group with largest voice. Use technology to understand more on how it can best apply in our situation.

*Ms. Lim (NOKIA):* Proposed to use software/survey tool by NOKIA to provide information for certification around the world. We can look at how field communications work and how to apply it (i.e whether to use url codes? Can phones scan the logo with MSC?). We can identify what to communicate to consumers who want to make a conscious choice on sustainable food.

*Mr. Caleo:* We need to find ways to ascertain how and where to navigate this information to consumers so that they don't get bombarded by information and still inspire them to make a choice to MSC.

**Question: From farmers to consumers – how does Seafood Savers provide that communication/connection?**

*Ms. Meutia:* Producers and buyers usually do not know where to buy sustainable seafood. A platform is available through Seafood Savors. If there is technology, it will benefit the initiative as we can utilize it to create database on website. That way, you don't have to contact WWF staff personally, you can access information and contacts directly. Applications can also be helpful i.e., for mobile phones.

**Question: Is Asia ready for these developments? Are retailers ready for gadgets or information to be readily available?**

*Mr. Thomas:* There is a lot of demand that is not sustainably sourced, so we must find ways to change that demand. For example, Gordon Ramsey did a documentary on shark finning, and managed to get several restaurants in London to remove shark fins from menus. Retailers need to take a stand, as there are traditions in Asia that some may question to be acceptable. Is the definition of 'sustainable seafood' changing or going to change? The understanding of the definition has to take into account climate change impacts, changing products, resilience and other factors.

*Mr. Caleo:* Everyone has a definition of 'sustainability'. Will MSC need to look at social issues/climate change issues in going forward with their standards? Possibly. 'Sustainable' is a broad term. The challenge is the complexity it brings, bringing something new in would be a major thing to carry out; an issue worth talking about.

*Prof. Ridzwan:* Do CT6 countries have adequate information before they can proceed with sustainable fisheries and aquaculture? Before we can look at science and technology for sustainable fisheries, we have the impression that in the Coral Triangle especially, the information on production, availability, and affordability, is not available. Hence talking about 'sustainability' without this knowledge is difficult. If we have this information, where can we use it in CT6 countries, especially to address issues like hardcore poverty?

**Question: Studies have been done on people of the PNA, on sustainable fisheries management. This is an original idea: pride of local 8 nations that have access to their own resources and can manage them. The notion of sustainability in the markets is not there, instead it's national pride for local products. Is it an important distinction?**

*Mr. Brown/John:* This is a complex issue. How did we measure up against international standards? Who are the beneficiaries? Who is really demanding the certification for sustainability? Is it targeting consumers or businesses? There is a lot of business-to-business interaction, some is deemed controversial. While there has been progress with MSC, there is opposition from brands that are not yet certified since they want to set their own standards and self-certification.

**Question: Is sustainability about food for local communities, or is it about stocks, jobs, local fishermen, or the broader Coral Triangle?**

*Mr. Caleo:* MSC is business-to-business, the responsibility is on the brands to show consumers their commitment. I understand the sentiment of competing brands. We will need to look into future direction of this.

*Mr. Brown/John:* I see sustainable fisheries for community involvement. MSC is driven from the other direction.

*Mr. Caleo:* Companies make a commitment for their own reasons, which vary.

*Ms. Sieneenart:* Some retailers are involved in sustainable practices to secure share in stocks, or it is good for CSR.

**Question: Some large corporations do talk about their sustainable practices and are clear in their communication on this matter. What are the challenges of a large company? Why don't certain corporations communicate to the public about their sustainable activities?**

*Ms. Hammond (Shang-ri La):* Shangri-La takes a humble approach and a modest step in its communication. We're not trying to advertise or market on green practices to avoid backlash.

*Ms. Sineenart:* MARS also takes a humble approach. It doesn't declare all of its green practices or methodologies on its label. Emphasis is to educate and convey sustainability to its suppliers, allow them to see the importance, to share its green experience with others and have its business partners to have same commitment.

*Mr. Caleo:* Is it important for companies to be seen doing the right thing? Sometimes yes, sometimes no. Some are just happy about being sustainable and don't see the need to talk about it. If they do choose to talk about it, it can encourage participation by other companies.

*Ms. Meutia:* Interesting points have been raised about how companies choose not to be so loud about their sustainable efforts. Seafood Savers is about acknowledging these efforts, making their profiles look good in the public eye. All this while, Seafood Savers assumed that corporations want to achieve a good image. If this is not the case, what are the motivations for these corporations? (Do they want market access? To make a good public impression? For CSR?)

*Dr. Muldoon:* Is sustainable fisheries consumer driven or market driven? We need to find out why companies want to do it. Is it for market appeal? MSC is not driven by food security issues. The prospect of green washing is there if we're not careful. Certain messages sent to the public are not entirely correct. For example, companies initially join because they want to, but after that others join the bandwagon to keep up with others. Organizations like WWF brings ground support for these initiatives. Question for the floor: Is there a better market for aquaculture in Malaysia with certification and acknowledgment of its best practices (main driver for formation of MFFAM)?

**Question: Dato' Goh, what were the driving force behind formation of MFFAM? Is it to boost individual company performance which will result in better market access?**

*Mr. Dato' Goh:* Currently what we're doing now is traditional, involving small farmers. Due to external factors like climate change, we can see less capture. We realize the importance of sustainable aquaculture today. Technological expertise needs to be improved in the industry, which will allow more investors to come in with better technology. We also still have high demand from overseas but not enough to supply (e.g., seabass). MFFAM is important to enable farmers to converge and share ideas as well as technology from other countries.

**Question: How can 'Blue Carbon' be incorporated? Traditional farming with low-impact, importance for livelihoods, food security vs. clearing coastal areas for big scale aquaculture. Are there incentives to keep farms low-impact and get incentives to maintain mangroves for the Blue Carbon scheme?**

*Mr. Amaral (Timor Leste):* We must think how to develop farming businesses if semi-intensive/small scale farming is the way to go.

*Mr. Thomas:* Innovations do exist in terms of aquaculture, e.g., Borneo Research Institute is using vegetable material to feed fish. Another innovation: algae to farm in an oceanic environment. We can also explore ways for carbon sequestration cradle-to-cradle for sustainable management through innovative ways. For small-scale fisheries, we encourage not just focusing on blue carbon, but to bring carbon into thinking. If we can have small-scale fishers in local communities find ways to improve supply chain management and achieve an overall reduction of GHGs in cooperatives, then we can use these mechanisms as offsets. The challenge is a collaborative cooperative approach.

*Mr. Amaral:* My understanding of 'sustainability' for Timor-Leste now is food security for locals. How do we sustain the business aspect in the future? How do we incorporate blue carbon, green carbon resources into the economy?

*Mr. Anyssa:* Where is the role of government in all of this? Governments must not work in silos but look at integrated approaches to coastal protection and water supply. Blue carbon is anticipated to be implemented 5 to 10 years into the future. What we need now is integrated approach.

**Question: How can these farmers and fishers find the incentive to make the change? (Especially now when fishing conditions difficult and low catch)**

*Mr. Brown/John:* Go back to fundamentals, at the village-level. Fishers and farmers need to produce what the market demands. At the village-level, provide what the local community wants, and the market opportunity is at urban level/ business areas. How to bring about the linkage? Cooperatives? Local traders? Small commercial enterprises as focal point? Big corporations? Someone needs to coordinate/advise fishermen and back it with trade and dollars, consolidate with trade volume. Put linkage between consumers and villagers. MSC has rigid criteria. The key to MSC is chain of custody, and must ensure that this is rigid. Now the scenario is getting more and more eco-labels which creates confusion.

## **Final Statements**

*Ms. Meutia.* What exactly do corporations wants in pursuing sustainable efforts?

*Mr. Caleo.* Think of yourselves as consumers, support those who are doing the right thing, talk to friends and families about it.

*Dr. Ridzwan.* Business communities can play their role in creating awareness at the community level to ensure that issues on food security and sustainability are addressed. There's a big gap between communities and business, awareness must be stepped up.

## RESOLUTIONS/RECOMMENDATIONS

**Research and assessment on food security for the whole Coral Triangle is important.** This will allow for investments and government enabling policies to address those food security aspects as they vary throughout the region. Furthermore, it could inform development and innovation in technology to improve food security where it matters most. In case of several external factors influencing seafood production, this knowledge will facilitate decisions between producing seafood for exports or for domestic purposes.

**Use available technology to share information and connect producers** – fishers and farmers with buyers and consumers such as what was described by NOKIA. This would truly improve the understanding and the profiling of those farmers and fishers who are responsibly producing seafood and it could provide information to producers about what the market is asking for. In addition, it would enhance the awareness of the Asian consumers either on environmental sustainability or social livelihood issues which could eventually lead to an increased demand for sustainable seafood even within this region.

**Innovative incentives and financial support is needed.** For example, from blue carbon mechanisms and platforms like Seafood Savers and MSC, could scale up some of the early examples of sustainable and responsible initiatives in the Coral Triangle region throughout the broader sector and across the entire region.

**In Science, Technology and Innovation (STI), there is a role for the government and private sectors to play.** The government can create enabling conditions to ensure livelihoods and food security, and the private sector can work on consolidating different supply chains so that even small producers (fishers and farmers) have benefit of market access and additional benefits of reducing waste and loss of product quality.

## Roundtable 2: Renewable Energy, Green Transportation and Logistics

*Convenor / Discourse Leader:*

**Mr Ahmad Zairin Ismail**

Senior Vice President, Energy, Manufacturing, Building & ICT

*Discussants:*

**Atty. Pete H. Maniego, Jr.**

Chairman, National Renewable Energy Board (NREB), Philippines

**Mr Gopal R.**

Vice President – Transportation & Logistics Practice, Asia Pacific / Country Head - Malaysia, Frost & Sullivan

**Mr Carl Probert**

Managing Director, Niu Industries (Fiji) Limited, Fiji Islands

**Ms Badariah Othman**

Advisor, Insurance & Legal Regulatory, Malaysia Shipowners' Association (MASA), Malaysia

## SUMMARY OF PRESENTATIONS

### **National Philippines Energy Act of 2008**

Atty. Pete H. Maniego, Jr.

Chairman, National Renewable Energy Board (NREB), Philippines

The national Philippines Energy Act of 2008 is an example for national renewable energy policy. The Act includes both fiscal and non-fiscal tax incentives to businesses, it sets time and quantity targets toward increasing the use of renewable energy (based on a lesson learned from Spain), sets minimum standards for percentage of renewable energy as a source for industry and government, thereby creating a market for renewable energy.

The Philippines uses the acronym **BIGSHOW** to promote its renewable energy programs:

**BI = bio-fuels.** Philippines is an agricultural country and this promotes new products

**G= geothermal.** Geothermal projects were initiated in the 1970s and are expanding and replicating. Volcanic arc tectonics produces huge amounts of geothermal energy; Philippines is already the 2<sup>nd</sup> largest producer of geothermal energy in the world.

**S= solar.** Latitude allows great access to solar power.

**H= hydro.** Gravity and rain, rivers, as well as ocean waves and currents provide source.

**O= ocean thermal energy conversion (OTEC).** Deep adjacent waters allow the upwelling of cold waters for source.

**W= wind.** The Philippines is already the largest producer of wind power in SE Asia.

At present there are more than 230 renewable energy projects underway and 384 project applications in process for new activities and replications. They still need a roadmap to help guide the process strategically, and have a few PPP business models to polish and promote.

## Discussion

OTEC is still experimental for now, with a 10MWatt plant producing now; although it has the potential to produce 3 times more energy than the other forms combined. A quick growth is predicted (Subic Bay is next pilot plant site proposed). Earlier models also proposed OTEC as a logical link with the aquaculture of cold water species since the risk of species invasion would be low since they could not survive the warm water environment if released (unless they adapted!). OTEC may also be applicable for algae culture, but it is still under review.

The Philippines is now at the forefront of OTEC and related research on the implications of this energy source. The carbon-saturated, nutrient-rich, cold water could impact ecosystems and cause an unintended enrichment of surface waters. There is an international team working on these pilots and studies. The technology is from the United States, based on Hawaii's experience with OTEC. The proponent is from the UK, and the service contractor is from France. All teams must involve Philippine universities for monitoring and research, and all must comply with the environmental guidance. This is still a prototype and tightly managed.

## Transportation and Logistics

Mr Gopal R.,

*Vice President – Transportation & Logistics Practice, Asia Pacific / Country Head - Malaysia, Frost & Sullivan*

The “greening” of transportation and logistics is a universal issue as markets are becoming more global, not just for CTI. Most functions in a supply chain are not currently “green” and making them “green” may add costs. A green supply chain should include benefits such as improving the bottom line, mitigating risks, adding social value, or adding environmental value.

There are several parts within a supply chain that can be evaluated for “greenness”:

- Sourcing: Is it local or distant?
- Value added production: Where is this done-local or distant or 3<sup>rd</sup> location?
- Pricing, warehousing, inventory costs: Costs and “greenness” of middlemen, storage, shelf-life
- Outputs: products, packaging, and waste produced in process and after purchase/use
- Transport to end users
- Reverse logistics of transport, to reclaim recycle/reuse

Questions to determine the “greenness” of practices include the following:

- Warehousing: what methods are used for heating/cooling, controlling pests, and cleaning the space?
- Assets: How are they bought and managed? Are they energy efficient? Are your operations

environmentally friendly (electric carts, temperature controlled, solar powered, use of rechargeable batteries?)

- Transportation: Does the vehicle have current environmental inspection? Is it fuel efficient or does it use biofuels? Are the tires in good shape? Does the vehicle have cruise control for efficient fuel use? What is the size of vehicle/efficient loads?
- Logistics: Do you use paperless tracking and filing? Are your reverse logistics efficient? Does your inventory create waste or efficiency or add costs and operations? What sized shipments does your product break down into? Do you use any hazardous materials and if so, how managed? Are your offices energy efficient (light bulbs, thermostat, recycling, etc.)?

At present there are few, if any, regulations or requirement to conduct “green practices” in the supply chain. Only “virtuous” companies are attempting this now so there is not a lot of market for the services. Practices that can be adopted include use of solar energy for stations and warehouses and offices, use of rain harvesting for cleaning vehicles and equipment; reduction of energy in operations, reduction/elimination of hazardous materials, use and generation of alternate fuels, use of biodiesel or electricity when possible in operations, reduction of emissions of greenhouse gases, and mitigation through green planting to offset emissions.

## Discussion

*Question: If there are few regulations yet, are there at least standards that could be applied/followed?*

Answer: Yes, but not across the markets. The Institute of Electrical and Electronic Engineers (IEEE) regulations exist in Europe, and the U.S. has a norm for iron dumping—these will become eventual green supply chain regulations.

*Question: It appears that none of the Coral Triangle countries have transportation initiatives on non-water transport and are still dependent primarily on imported fossil fuels.*

Answer: There are some young initiatives on liquefied petroleum gas and battery-operated vehicles, biking to work, car pooling, etc., but these are small savings overall—we need much more. As for advances for good practices to reduce the impacts of shipping on the marine environment (hull fouling, spills, marine pollution, etc.)—these are different from land-based issues. The research on marine transport systems and their impacts is not very well published: the various vessel operators maintain most of the information. There have been some cases of trying to use solar power to power ships at times; and a move to require ships in port to use renewable energy sources. Rail operators are saying they are still the cleanest environmentally and there is a move to increase rail transportation.

## BioFuels

Mr Carl Probert

*Managing Director, Niu Industries (Fiji) Limited, Fiji Islands; Modular biodiesel processor capabilities: Fiji*

Mr. Probert described his experience seeking a reverse cargo to return from the Fiji islands for economic reasons, which introduced him to the coconut biofuel business. Fuel is priced controlled in Fiji, and there was an inconsistent supply of fuel. A shipping company needed a consistent reverse cargo and ballast when returning from delivering its primary cargo to the islands. Generating biofuel from the coconut industry was a means to convert the coconut waste stream to fuel. This improved the local transportation market to export cargo. The technology process was miniaturized for the island communities and can provide renewable energy for a single island. There are now 3 biofuel mills with plans to expand to 20 mills. Communities have an immediate source of income (coconuts for cash) and fuel to power generators, stimulating their local economy. Ice plants are now coming on-line, and more products are available to export from the islands to external markets. All of the island mills are now creating a surplus of fuel which can also be exported. The biofuel is also now servicing the resorts.

This is one attractive feature to offer eco-tourists: a low-carbon impact on tourism as a by-product of efficient business operations. The biofuel is a community-based product, but now Fiji is looking to scale up in joint ventures with government. The World Bank participates in 3 larger joint ventures in development,

with 30-40 decentralized mills around Fiji which allows local production of the fuel and safe, inexpensive storage of excess until ready to export. This has led to a new Fiji regulation which requires 5 percent of all diesel fuel to include biofuel. The coconut production is also providing livestock feed, so there is no waste produced.

## Discussion

*Question: Coconuts are ubiquitous in the Coral Triangle. Why is this process working now, a closed system, locally run operation, vs. 30 years ago when island biofuel failed?*

*Answer:* The difference was the government incentive to use biofuels, including tax holidays, etc., as well as the large increase in the cost of fossil fuels in the last 10 + years. Also, there are new uses being found for the different parts of the coconut: Pepsi is investing in coconut oil (healthy alternative to corn oils), and using the coconut water in beverage products. Coconut husks are being used to prevent soil erosion.

## Marine Cargo Operators and Energy Efficiency

Ms Badariah Othman

*Advisor, Insurance & Legal Regulatory, Malaysia Shipowners' Association (MASA), Malaysia*

Marine cargo operators want to avoid corals. No one wants to have a ship wreck: it is very costly and the local citizens who help clear the reefs are impacted and unhappy. Therefore the insurance companies require training and charts, electronics, etc. as a good safety is good business. But in reality, 95 percent of the world's cargo moves by marine transport at some time. And for the most part, this requires fossil fuels for energy, although there have been some limited success and trials with wind (difficult and inconsistent), solar (still trying to find a good model), and nuclear (unsafe).

Over the last century, hulls have grown in size, and are now hundreds of meters in length. The big question is how to search for the "Triple E: Environmental friendly, Economical and Efficient". There is at present little incentive to go green for energy use since insurance underwriting is based on safety (no pollution) and the efficiency of your operation (i.e., propulsion). Avoiding disaster and pollution drive the transportation regulations and liability limits for marine transportation operators. MARPOL (International Convention for the Prevention of Pollution from Ships) regulations are for pollution prevention, not energy efficiency. There are more and more hazards as more of the coastal areas are inhabited and communities are at greater risk if there were an accident. Even then, the pilots or captains are being held responsible as scapegoats for the remarkable few failures, rather than the industry at large, due to the reluctance to raise the costs of cargo transport. However, the few big disasters that do occur are devastating and create a lot of press due to local costs and losses.

Current efforts to improve energy efficiency in the marine cargo sector include the use of photo-voltaic cells to collect solar energy; use of wind energy from sails, rotors, turbines and kites, and the re-examination of nuclear (at one time there were 700 nuclear powered marine vessels, mostly military, but safety for commercial use is still not tested). It is clear that the emissions of CO<sub>2</sub> is everyone's business and the marine transportation generates a lot of CO<sub>2</sub>, so the maritime industry needs to continue working on this issue; but there needs to be some incentives or technology research breakthrough to make a big difference in the short run.

## Discussion

*Question: The Coral Triangle is unique in having two of the world's largest archipelagos, and major shipping lanes that connect oceans. How can the Coral Triangle protect its waters in the face of these major sea lanes which are also used by migratory species (fish stocks, marine mammals) and the large volume of sea traffic?*

*Answer:* There are ways to prohibit or regulate certain types of vessels, but a lot of the smaller vessels are not regulated. The CT6 could work together as a group with the International Maritime Organization (IMO) and the marine transportation industry to develop specific regulations that exclude certain types of vessels (single hulled) or require additional management of the sea lanes, particularly by using the IMO Particularly Sensitive Sea Areas Initiative.

As for the use of renewable energy, ASEAN has an initiative, but we need to start understanding the impact that fossil fuels vs. renewable energy will have on the conditions of the Coral Triangle. We also need to explore other feasible alternatives such as building overland pipelines to absorb the increasing volume of fuel being transported in the region.

## RESOLUTIONS/RECOMMENDATIONS

WE RECOGNIZE/ agree:

- There are models and initiatives in place that apply and should be share and implemented.
- There are already new technologies evolving and potential to share within the Coral Triangle.
- That marine transportation threatens the region through Invasive species from ballast water, interactions with migrating threatened species in the sea lanes, and other forms of marine pollution in sensitive areas.
- The overwhelming need for energy in the communities of the CT6 for industry, development and livelihoods, and the role that renewable and green energy can provide to the CT6.

WE COMMIT

- To increase our use of renewable and green energy approaches in our own operations
- To build and share awareness on the available technologies to our local and CT6 counterparts
- To promote and develop best practices where needed, based on the best available science.

WE RECOMMEND TO CTI

To create a small team under one of the CTI technical working groups with members from the CT6 countries and the private sector, to consider, prioritize and promote actions towards the following:

- Conducting a tabletop review of existing assessments and feasibility studies.
- Reducing the impacts of marine transportation through such actions as having at least 2 Coral Triangle countries to complete the ratification of the global Ballast Water Convention; urging organisations involved in offshore oil and gas as well as countries to use best practices; developing additional management mechanisms to address transit in the more sensitive marine areas and sea lanes of the Coral Triangle hot spots.
- Developing renewable energy and alternative energy options as one of the main sources of energy throughout the Coral Triangle, through such actions as: sharing of technology and business cases to improve livelihoods and environmental management of businesses, which are already commercially viable, and creating a model area to install some best renewable energy practices.
- Encouraging CT6 states to strengthen national legislation and compliance, and where necessary to enact new laws that develop regulatory frameworks for renewable energy, its potential, risks, operations and beneficiaries; and that sustainably manage marine resources including renewable energies, marine habits within the exclusive economic zones.

## Roundtable 3: Sustainable Eco-Resources & Biodiversity Management

*Convenor / Discourse Leader:*

**Dato' Dr Dionysius S.K. Sharma**

Executive Director & Chief Executive Officer, WWF-Malaysia

&

**Ms Rili Djohani**

Founding Board Member & Executive Director, Coral Triangle Centre (CTC), Indonesia

*Discussants:*

**Datuk Dr Beatrice Beth Baikan**

Environmental Advisor & Consultant for the Sabah Palm Oil Industrial Cluster / Managing Director, Sustainable Environment Planning & Management Consultants Sdn. Bhd. & Board Member, Universiti Malaysia Sabah (UMS), Malaysia

**Mr Darrel Webber**

Director-General, Roundtable on Sustainable Palm Oil (RSPO), Malaysia

**Mr Romeo B. Trono**

Country Executive Director, Conservation International - Philippines

## **SUMMARY OF PRESENTATIONS**

### **Sustainable Eco-Resource and Biodiversity Management - Insight and Perspective**

Datuk Dr Beatrice Beth Baikan

*Environmental Advisor & Consultant for the Sabah Palm Oil Industrial Cluster / Managing Director, Sustainable Environment Planning & Management Consultants Sdn. Bhd. & Board Member, Universiti Malaysia Sabah (UMS), Malaysia*

Several sustainability initiatives have been initiated, the pace of progress has been slow. Generally, the challenges to reduce human pressure on eco-resources remain the same. Problems such as discharge of sewerage and solid waste are still prevalent due to lack of proper / adequate infrastructure. This problem is compounded / made worse during the flood season. Other issues include overharvesting of fish stocks, carbon-induced climate change, and poverty.

There are several solutions to improve sustainability such as public-private partnerships (PPPs); public awareness & education programs; corporate social responsibilities (CSR) projects; the development of a 'Adopt a Village' program; volunteer programs and innovation efforts in relation to "Waste to Wealth".

Discussion questions:

- Can we achieve sustainability in managing ecological resources if the integrity of these assets is not maintained?
- Can we achieve sustainability beyond the profitability factor?
- Are we in a situation where our ecological resources can be sustainably managed, or have we 'overshot' it?

### **Introduction to the Roundtable on Sustainable Palm Oil (RSPO): Who we are, what we do & issues in sustainable business in palm oil industry**

Mr Darrel Webber

*Director-General, Roundtable on Sustainable Palm Oil (RSPO), Malaysia*

The Roundtable on Sustainable Palm Oil (RSPO) was formed in 2004 with the objective to promote the growth and use of sustainable palm oil products through credible global standards and active engagement with various stakeholders. RSPO is a not-for-profit association which has seven categories for membership. It ranges from oil palm producers, palm oil processors or traders, consumer goods manufacturers, retailers, banks and investors, environmental or nature conservation NGOs and social or developmental NGOs - to develop and implement global standards for sustainable palm oil. Currently the RSPO has 650 members from more than 50 countries.

In most cases palm oil plantations are located within the areas that have the highest rates of poverty. These countries are mostly developing countries (except for Singapore). Unfortunately, the palm oil industry has the largest environmental footprint affecting the biodiversity and livelihood of the communities. RSPO's priority is to ensure that its members understand and apply good plantation practices to reduce its environmental footprint as much as possible. On the other hand, the social welfare of the communities within plantation developments has improved as job opportunities and infrastructures are provided.

The RSPO has developed the RSPO Principles and Criteria for Sustainable Palm Oil Production (RSPO P&C) to serve as a global guideline for sustainable palm oil production. They are one of the toughest

standards for sustainable agriculture production. This standard includes elements of transparency and traceability throughout the supply chain. The reception of the standards has been very encouraging, and as of October 2011, the Certified Sustainable Palm Oil products have captured approximately 10 percent of global crude palm oil over the span of three years of introducing the certification. The 10 percent market share is equivalent to approximately 5 million hectares of palm oil plantation.

## **Turtle Islands Ecotourism Development: a Transboundary PPP in the CTI**

Mr Romeo B. Trono

*Country Executive Director, Conservation International - Philippines*

The Bilateral Cooperation on Ecotourism Development for Turtle Islands Heritage Protected Area (TIHPA) treaty limits includes Philippine and Malaysian waters, specifically the Turtle Islands Wildlife Sanctuary, Baguan Island and Turtle Islands Park. Tawi-Tawi Island in the Philippines is a potential tourism location and could use a model similar to the one used at Selingan Island, Sabah. Various conservation initiatives have been developed such as the Malaysia-Philippines MOU on Turtle Islands Heritage Protected Area (TIHPA) in 1996; the SSME Tri-National Program initiated in 2006; the Conservation International Sulu-Sulawesi Seascape Program and USAID Coral Triangle Support Partnership.

There are several issues faced by the islands including the need to protect sea turtles and its local environment while at the same time enhancing the social well-being of the local communities. More importantly, there are unresolved territorial claims over the area. There are many benefits of ecotourism and several island attractions can provide a niche tourism product for the area. For example, Baguan Island has delineated a marine no-take zone and has identified a Land Strict Protection Zone and Tourism Development & Activity Zone on the island. The areas zoned for development covers 3.28 hectares in comparison to the total island area of 36.29 hectares.

Bilateral relationships and cooperation has developed in the recent years between the two countries in areas such as the development of an ecotourism framework and guidelines and programs to sustain conservation activities. The programs established for TIHPA are in line with five out of the 12 principles in the CTI Regional Plan of Action (RPOA in the context of MPAs and protection of threatened species.

Discussion questions:

- In reference to foreign policies in territorial claims, are there any policies / initiatives / recommendations that can address such issues to be applied in TIHPA?
- Would a High-End/Low-Volume OR Low-End/High-Volume be more beneficial for TIHPA?
- Would gaming or casinos be acceptable as one of the island tourism attractions?

## **DISCUSSION**

### Island-based Tourism Management

Comment: In reference to improvements in tourist-related revenue and management in TIHPA, a participant suggested the development of a cross-border tourist management plan between the countries towards ferrying tourists from one island to another with the cooperation of respective countries' immigration agencies.

Comment: Currently, throughout the Coral Triangle region, there is a general lack of proper eco-tourism / tourism Code of Practice to address the livelihood of the island communities due to lack of political will. There is potential to improve communities' livelihood through the production of handicrafts made from wastes; creation of recycling businesses; and to use debris from the sea to produce furniture. Innovations, such as for island sewage management, should be simple, practical and affordable and shared amongst businesses for free.

### Palm Oil Production & Management

Question/Comment: Palm oil production activities almost always raise issues regarding water quality in rivers and reduced habitat for wildlife. In Malaysia, there are many palm oil smallholders especially in

Terengganu who use substantial amount of fertilizers and this affects the water quality of nearby water streams.

Answer: These smallholders are probably not members of the RSPO and thus are beyond the influence of RSPO. This is one of the biggest challenges facing RSPO; i.e., one set of regulations in each country with regards to management of palm oil production. Therefore, unless the companies are members of RSPO, there are no guarantees that sustainable production and management of palm oil are being practiced. These challenges are more prevalent in African countries, Thailand and Indonesia.

Recommendation: The roundtable agreed that a form on 'incentive' programs can be introduced to smallholders that can result in cost saving and leads to higher profits.

#### Island-based Climate Change issues

Issue: The Turtle islands Heritage Protected Area (TIHPA) is struggling to raise funds for climate change adaptation programs where a vulnerability impact assessment can be undertaken that can lead to the development of Climate Change Adaptation Plan.

Recommendation: Add 'Climate Change Resilience' elements into the Plan.

#### General Needs Identified from Participants

- Need for a platform to discuss factors for implementations to achieve sustainability
- Need to identify under what conditions PPPs can work.
- Need to increase awareness to all stakeholders that there is a close impact-relationship between activities done on-land and the marine environment and vice versa.
- Need to be aware that sustainable solutions for today might be different for future situations; therefore need to adapt to changing environment
- Need to recognise that stakeholder workshops should be organised appropriately in accordance to level of position of the participants; often, community representatives are silent in the presence of superior officers such as directors, etc.

## **RESOLUTIONS/RECOMMENDATIONS**

### **CTI Platform**

- Need for more interactive roundtable dialogue sessions catered to specific stakeholders
- Implementation of solutions must be in accordance to 'weighting' based on competing stakeholder interests
- Recognize the need for adaptation in designing sustainable solutions
- Recognise the need to balance development & environmental conservation efforts
- Apply lessons learned from RSPO platform / experience

### **Good national and international framework / guideline**

- Recognize transboundary issues and the need for trans-national partnerships
- Need to recognize linkages between issues and solutions
- Consider case studies for best practices to be adopted in other sites (science & technological & management innovations)

### **Climate Change Adaptation**

- Need to have a dedicated CCA Platform for dialogues
- Identify and include climate change resilience issues into overall management plans

### **Business Model for Remote Islands**

- Utilize and apply for existing "sustainable funding stream" through identification of issues and link innovative solutions from different sectors; e.g. carbon trading, energy saving solutions, sustainable protection and eco-tourism, good marine and coastal spatial planning.

### **Education & Awareness Programs**

- CTI Campaign – Support current program for the development of an interactive CTI website – to increase public awareness – fund raising activities / opportunities – events - etc...
- Need for more capacity building
- Need for more research / data & information for better decision-making
- Undertake project for sites "zero pollution – very polluted – clean environment" as case studies