



**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/009**

Agenda Item: IV C b i

## **OFWG 02-2014 - Workshop on the Climate Change Impact on Oceans and Fisheries Resources: Agenda**

Purpose: Information  
Submitted by: Japan



**5<sup>th</sup> Oceans and Fisheries Working Group Meeting  
Boracay, Philippines  
10-12 May 2015**



**Asia-Pacific  
Economic Cooperation**

APEC PROJECT (OFWG 02 2014)

Implemented by JAPAN, Co-sponsored by Peru, Philippines, & Viet Nam

**PROGRAM**

**Workshop on the Climate Change Impact on Oceans and Fisheries Resources**  
9<sup>th</sup> May 2015, Boracay Island, Philippines

**Opening<sup>1</sup>**

- **Welcome Remarks**  
Atty Asis G. Perez, Department of Agriculture Undersecretary for Fisheries and Bureau of Fisheries and Aquatic Resources Director
- **Opening Key Remarks**  
Prof. Nobuaki Okamoto, President, Tokyo University of Marine Science and Technology, Japan

**1. Impact of Climate Change on Marine Environment**

- **Meteorological Views about Climate Change**  
Dr. Ruby Leung, Pacific Northwest National Laboratory, United States
- **Impact on Marine Environment**  
Prof. Victor Ariel Gallardo, Professor of the Department of Oceanography, Universidad de Concepcion, Chile
- **Impact of Climate Change on Coastal Ecosystem and Practice for Adapting**  
Dr. Shaobo Chen, Professor, Zhejiang Mariculture Research Institute, China

**2. Striking Feature of Impacts**

- **Ocean Acidification**  
Dr. Christopher Sabine, Director, Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration (NOAA), United States
- **Stresses on Marine Biodiversity**  
Dr. Sheila G. Vergara, Director of Biodiversity Information Management of ASEAN Centre for Biodiversity

**3. Luncheon Speech**

- **Implications for Marine Ecosystem**  
Dr. Yoshihisa Shirayama, Executive Director, Japan Agency for Marine Earth Science and Technology (JAMSTEC), Japan

**4. Arctic, as the Most Affected Ocean**

- **Sea Ice Decline**  
Dr. Koji Shimada, Associate Professor, Department of Ocean Science, Tokyo University of Marine Science and Technology, Japan
- **Implications for Global Trade and Distribution System**  
Dr. Natsuhiko Otsuka, Manager, North Japan Port Consultations Co. Ltd.

**5. Vulnerability of Fisheries**

- **Climate Change Effects on Fisheries**  
H.E. Mr. Árni Mathiesen, Assistant Director General, Food and Agriculture Organization of the United Nations (FAO), Fisheries and Aquaculture Department
- **Adaptations to Ecosystem Affects and Marine Environmental Shifts**  
Mr. Masanori Miyahara, President, Fisheries Research Agency, Japan
- **Blue Carbon**  
Dr. Achmad Poernomo, Director General, Ministry of Marine Affairs and Fisheries, Indonesia

**6. Evening Session: Adaptation, as a Key Role in Decreasing Risks**








Panel Discussions on the Adaptations to the Environmental Shifts Caused by Climate Change, by All Lecturers








**Closing**

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<sup>1</sup> Moderator (APEC Project Overseer): Dr. Akima Umezawa, Cabinet Counsellor, Government of Japan

**Workshop on the Climate Change Impact on Oceans and Fisheries Resources**  
**List Speakers / Lecturers**

	<p>Atty. Asis G. Perez          Director, Bureau of Fisheries and Aquatic Resources</p>
	<p>Prof. Nobuaki Okamoto  <i>President, Tokyo University of Marine Science and Technology, Japan</i></p>
	<p>Dr. Ruby Leung  <i>Pacific Northwest National Laboratory, United States</i></p>
	<p>Prof. Victor Ariel Gallardo  <i>Professor of the Department of Oceanography, Universidad de Concepcion, Chile</i></p>
	<p>Dr. Shaobo Chen  <i>Professor, Zhejiang Mariculture Research Institute, China</i></p>
	<p>Dr. Christopher Sabine  <i>Director, Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration (NOAA), United States</i></p>
	<p>Dr. Sheila G. Vergara  <i>Director of Biodiversity Information Management of ASEAN Centre for Biodiversity</i></p>

	<p><b>Dr. Yoshihisa Shirayama</b>  <i>Executive Director, Japan Agency for Marine Earth Science and Technology (JAMSTEC), Japan</i></p>
	<p><b>Dr. Koji Shimada</b>  <i>Associate Professor, Department of Ocean Science, Tokyo University of Marine Science and Technology, Japan</i></p>
	<p><b>Dr. Natsuhiko Otsuka</b>  <i>Manager, North Japan Port Consultations Co. Ltd.</i></p>
	<p><b>H.E. Mr. Arni Mathiesen</b>  <i>Assistant Director General, Food and Agriculture Organization of the United Nations (FAO), Fisheries and Aquaculture Department</i></p>
	<p><b>Mr. Masanori Miyahara</b>  <i>President, Fisheries Research Agency, Japan</i></p>
	<p><b>Dr. Achmad Poernomo</b>  <i>Director General, Ministry of marine Affairs and Fisheries, Indonesia</i></p>
	<p><b>Moderator (APEC Project Overseer)</b>  <b>Dr. Akima Umezawa</b>  <i>Cabinet Counsellor, Government of Japan</i></p>



**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/010**  
Agenda Item: IV C d i

**Concept Note - Capacity Building for the  
Establishment of a Marine Biotoxins Reference  
Laboratory**

Purpose: Consideration  
Submitted by: Malaysia



**APEC**  
PHILIPPINES  
2 0 1 5

**5<sup>th</sup> Oceans and Fisheries Working Group Meeting  
Boracay, Philippines  
10-12 May 2015**

## APEC Concept Note

<b>Project Title:</b>	Capacity Building for the Establishment of a Marine Biotoxins Reference Laboratory
<b>Fund Source (Select one):</b>	
<input type="checkbox"/> General Project Account (formerly Operational Account) <input type="checkbox"/> TILF Special Account <input checked="" type="checkbox"/> APEC Support Fund	
For ASF: As per Guidebook Ch. 3, list ASF Sub-fund if appropriate for this project:	
<b>APEC forum:</b>	Ocean and Fisheries Working Group
<b>Proposing APEC economy:</b>	Malaysia
<b>Co-sponsoring APEC economies:</b>	Philippines
<b>Expected start date:</b>	July 2015
<b>Expected completion date:</b>	Dec 2016
<b>Project summary:</b> Describe the project in under 150 words. Your summary should include the project topic, planned activities, timing and location:  <i>(Summary must be no longer than the box provided. Cover sheet must fit on one page)</i>	Intoxication from consumption of fish especially shellfish contaminated with paralytic shellfish poisoning (PSP) toxins in the region is becoming more frequent and has led to hospitalization and fatalities. PSP toxins are produced by marine dinoflagellates. Human fatalities have been recorded in the Philippines and Malaysia over the last thirty years from consumption of contaminated shellfish. Animal bioassay based on mice has been the method of choice for many years but current thinking on animal ethics is forcing countries to move into chemical analyses. The major drawback of the chemical method is the dependence on certified reference materials of marine toxins. Only a handful of laboratories are capable of producing these standards, with the National Research Council of Canada being a major supplier. Unfortunately, many of these toxins, especially saxitoxins (STX), a potent neurotoxin, are listed in the Chemical Weapons Convention (CWC) and the movement of such materials across countries is strictly controlled. To minimise movement of such potent poisons, to ensure public safety and to facilitate trade between APEC economies, this project is proposed to upgrade the present laboratory to an accredited reference laboratory and acquire the technology to produce the toxin standards for distribution to APEC economies.
<b>Total cost of proposal: (APEC funding + self-funding):</b> USDUSD250,000	<b>Total amount being sought from APEC (USD):</b> USD108,000  <i>By category: Travel: USD 12,000 R&amp;D costs: USD50,000          Hosting: USD 11,000 Publication &amp; distribution: Other: USD35,000</i>

**Project Overseer Information and Declaration:**

**Name:** Ismail Bin Ishak

**Title:** Division Director

**Organization:** Department of Fisheries Malaysia

**Postal address:** Fisheries Research Institute, BatuMaung, 11960 Pulau-Pinang, Malaysia

**Tel:** cell:60164384392; off 6046262210 **E-mail:** ismail4852@gmail.com

As Project Overseer and on behalf of the above said Organization, I declare that this submission was prepared in accordance with the Guidebook on APEC Projects and any ensuing project will comply with said Guidebook. Failure to do so may result in the BMC denying or revoking funding and/or project approval. I understand that any funds approved are granted on the basis of the information in the document's budget table, in the case of any inconsistencies within the document.

Ismail Bin Ishak

*Name of Project Overseer*

**Date:** 26 February 2015

## Project Synopsis

1. **Relevance – Benefits to region:** What problem does the project seek to address? What is the relevance of the project? Does it have sustained benefits to more than one economy?

Toxins from certain species of marine microalgae have been responsible for mass mortalities of seabirds and fish, and for the contamination of shellfish, fish and crustaceans eventually posing a health hazards to humans. The trade in fish and fish product is very important in APEC and many economies have stringent regulations to ensure the safe consumption of these products. This project is to address the need for the eventual establishment of a biosecure and accredited reference laboratory for the production of selected toxin standards and analyses thereof. Towards this goal the project seeks to secure the service of an expert to help assess the current facility, identify weaknesses and recommend actions to establish the said facility towards international standards. The expert is also required to help establish the R&D needs for the culture of selected toxin-producing microalgae and eventual extraction and purification of toxins for use as standards for analyses. The facility shall serve the country and other APEC economies in terms of training in analyses and supply of standard toxins (or certified reference materials).

**Relevance – Rank:** Which Rank in the annual *APEC Funding Criteria* does this project fall under? Briefly explain why. Is it also linked to other Ranks? If so, briefly explain which/how.

This project is aligned to the APEC's Rank 1 (Projects that demonstrate a direct link to promoting regional economic integration via free and open trade and investment) and supports capacity building and is linked closely to the Human Security, APEC Second Trade Facilitation Action Plan and the Science and Technology sub-funds. The ability to efficiently manage the threat to humans will help facilitate trade within the region. The project will also support the flow of technology between partner economies.

2. **Objectives:** Describe the 2-3 key objectives of the project. (e.g. ensure workshop participants will be able to...; to create a framework...; to develop recommendations...; to build support...; to revise strategies...; to create an action plan;...to increase knowledge in; to build capacity in... etc.)

1. To secure the services of an expert in marine biotoxins with expertise in planning and developing a biosecure and accredited laboratory
2. To enhance the R&D capability in the culture, extraction, purification and validation of selected marine toxin standards and analyses thereof.
3. To provide scheduled training courses in the analyses of selected marine toxins to scientists from APEC member economies within the sub-region.

3. **Alignment – APEC:** Describe specific APEC priorities, goals, strategies, workplans and statements that the project supports, and explain how the project will contribute to their achievement.

The proposed project is in line with APEC's primary goal of promoting sustainable economic growth and prosperity towards a dynamic and harmonious Asia-Pacific community by championing free and open trade and investment, promoting and accelerating regional economic integration, encouraging economic and technical cooperation, enhancing human security, and facilitating a favourable and sustainable business environment.

**Alignment – Forum:** Briefly explain how the project is aligned with your forum's workplan / strategic plan.

The project is aligned to primarily to the Working Group on Oceans and Fisheries under the purview of the SOM Steering Committee on Economic Cooperation. Among the major strategies of the working group are: a) to facilitate trade and investment opportunities that promote the sustainable use of fisheries, aquaculture, and marine ecosystem resources; and, b) to develop a regional approach with improved coordination for the implementation of various instruments, and c) to ensure the conservation and sustainable use of marine resources as well as protection of marine ecosystems needed to support fisheries and aquaculture

4. **Methodology:** How do you plan to implement the project? In this section, briefly address the following:

- **Workplan:** Project timelines, dates of key activities and deliverable outputs.  
Project duration: 24 months

**Key activities**

Activity	Duration	Timeline
1. Expert visit to Malaysia	2 weeks	July 1 – 14 2015
2. Upgrading of facility	6 months	Aug 2015 – Feb 2016
3. R&D of toxin production	18 months	Oct 2015 – June 2016
4. Expert on toxin production	2 weeks	Oct 1 – 14 2015
5. Visit to established toxin production facility (2 persons)	2 weeks	Nov 1 – 14 2015

- **Beneficiaries:** The proposed selection criteria for participants, beneficiary profiles (e.g. workshop participants, end users, policy makers, researchers/analysts, gender) and how they will be engaged.

Globally and regionally, the list of marine toxins of concern and incidences of intoxication is growing in fish and fish products. This APEC sub-region (South East Asia) is a very important source of fish and fish products, either from the wild or cultured, for markets around the world (USA, Europe, China and Japan etc.). With the establishment of the facility at the Fisheries Research Institute, Department of Fisheries Malaysia, we hope to serve the sub-region, in providing relatively cheap source of toxin standards for use in regulatory laboratories and R&D purposes; as well as serves as a training center for new analytical methods over that of mouse bioassay and to be compliant to the strictest of standards to achieve accreditation to serve as Proficiency Test Provider within the sub-region. The seafood industry will be better served and trade in fish shall be facilitated.

- **Evaluation:** Potential indicators developed to measure progress, project outcomes and impacts/successes. Where possible provide indicators which could assess impacts on women.

Activity	Key Performance Indicator	Outcome	Impacts
1. Expert visit to assess capacity	Report on recommendations	A biosecure reference laboratory established	Secure facility in conformance to the Chemical Warfare Convention requirements.
2. R&D on toxin production	Mass culture established	Toxin(s) purified and validated	Toxin standard (s) available within the region and safe seafood assured
3. Researchers visit to established toxin production facility and exposure current analytical techniques	2 researchers (one woman) acquired knowledge	Researchers ready to undertake independent research	Researchers to share acquired knowledge especially on analyses of various toxins

- **Linkages:** Information on other APEC and non-APEC stakeholders and how they will be engaged. If and how this proposal builds on (but does not duplicate) the work of other projects. How will this activity promote cross fora collaboration?

The current laboratory has the capability to analyse toxins (Saxitoxins and tetrodotoxins) following collaboration with the University of Jena, Germany in 2007 – 2010 and is familiar with the requirements of the European Commission on food regulations pertaining to marine biotoxins in shellfish. The proposed project shall be linked to the agenda of APEC's Food System and the Committee on Trade and investment Chemical Dialogue.





**Asia-Pacific  
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**2015/SOM2/OFWG/011**

Agenda Item: IV C d ii

## **Concept Note - Food Security and Climate Resilience Programme**

Purpose: Consideration  
Submitted by: Papua New Guinea



**APEC**  
PHILIPPINES  
2 0 1 5

**5<sup>th</sup> Oceans and Fisheries Working Group Meeting  
Boracay, Philippines  
10-12 May 2015**

## APEC Concept Note

<b>Project Title:</b>	Papua New Guinea Food Security and Climate Resilience Programme
<b>Fund Source (Select one):</b>	
<input type="checkbox"/> General Project Account (formerly Operational Account) <input type="checkbox"/> TILF Special Account <input checked="" type="checkbox"/> APEC Support Fund For ASF: As per Guidebook Ch. 3, list ASF Sub-fund if appropriate for this project:	
<b>APEC forum:</b>	Ocean and Fisheries Working Group (OFWG)
<b>Proposing APEC economy:</b>	Papua New Guinea
<b>Co-sponsoring APEC economies:</b>	United States of America, P.R of China, Philippines
<b>Expected start date:</b>	January, 2016
<b>Expected completion date:</b>	December, 2016
<b>Project summary:</b>  Describe the project in under 150 words. Your summary should include the project topic, planned activities, timing and location.  <i>(Summary must be no longer than the box provided. Cover sheet must fit on one page)</i>	This project is directed at improving the food security of vulnerable populations of APEC Member Economies whilst preserving the marine ecosystems. Three provinces in PNG have been proposed in the pilot-Manus; Milne Bay; and East New Britain. This component will adopt a ridge to reef approach with interventions extending to the watershed areas on land where run-off is delivered into the marine managed areas. The component will include; implementation support for locally managed marine areas, conservation and management plans; rehabilitation and establishment of mangrove forests, sago in estuarine and coastal environments; the demonstration of buffer strips adjoining waterways and coastal areas; the demonstration of aquaculture, aquarium and mari-culture initiatives in managed reefs; restocking and protection of coral reefs within the managed areas; replanting of commercial tree species in the upper reaches of watersheds to reduce run-off and sedimentation loads of draining waterways; and crop diversification and alternative farming techniques.
<b>Total cost of proposal: (APEC funding + self-funding):</b> USD 1,320,000	<b>Total amount being sought from APEC (USD):</b> 120,000  <b>By category:</b> Travel: 20,000      Labor costs: 40, 000 Hosting: 12,000      Publication & distribution: 0      Other: 60,000 <i>(See Guidebook on APEC Projects, Ch. 9 to ensure all proposed costs are allowable.)</i>

**Project Overseer Information and Declaration:**

**Name:** Mr. John Kasu

**Title:** Managing Director

**Organization:** National Fisheries Authority

**Postal address:** P. O Box 2016, Port Moresby, National Capital District

**Tel:** +6753090444

**E-mail:** jkasu@fisheries.gov.pg

As Project Overseer and on behalf of the above said Organization, I declare that this submission was prepared in accordance with the Guidebook on APEC Projects and any ensuing project will comply with said Guidebook. Failure to do so may result in the BMC denying or revoking funding and/or project approval. I understand that any funds approved are granted on the basis of the information in the document's budget table, in the case of any inconsistencies within the document.

\_\_\_\_\_  
 Name of Project Overseer

Date: 23 February, 2015

## Project Synopsis

1. **Relevance – Benefits to region:** What problem does the project seek to address? What is the relevance of the project? Does it have sustained benefits to more than one economy?

Many people in Papua New Guinea and other APEC member economies are today vulnerable to the vicissitudes of the natural environment. PNG as an island state, its coastal communities are under threat to the impact of climate change. This has created three major problems within PNG; firstly sea level rise, sinking Islands and increasing water salinity. Internally, deforestation has contributed to the excessive carbon emissions, over exploitation of natural resource pollution and land use waste disposal as PNG works towards industrialization. Consequently, Climate Change impacts and together with the growing population has compromised and reduced their abilities to cope with food security and freshwater supplies. Coral reefs are also being affected by bleaching, drowning and acidification that are linked to climate change. As part of a Strategic approach to "Building Sustainable and Resilient Communities" a priority of APEC 2015, the PNG government sees that it is the utmost priority area to be addressed. The project will basically be comprised of mangrove rehabilitation; coral reef monitoring and re-stocking; aquaculture and mari-culture farming and fish processing; coconut extraction for feed production to supply inland fish farms; sago planting and processing; bamboo planting, and market facilities. This project will be undertaken in the pilot province, and there on replicated rollout programs will be undertaken in the other designated coastal provinces.

**Relevance – Rank:** Which Rank in the annual *APEC Funding Criteria* does this project fall under? Briefly explain why. Is it also linked to other Ranks? If so, briefly explain which/how.

This project addresses the following Rank One priority: "Mainstreaming ocean-related issues for economic growth, including blue economy, conservation and sustainable development of coastal and marine resources." An understanding of the economic value of green infrastructure in coastal ecosystems will support economic growth in various sectors such as tourism sustainable development, and resilience in the face of natural disasters throughout the region.

2. **Objectives:** Describe the 2-3 key objectives of the project. (e.g. ensure workshop participants will be able to...; to create a framework...; to develop recommendations...; to build support...; to revise strategies...; to create an action plan;...to increase knowledge in; to build capacity in... etc.)

The underlying objectives of this project stand as: 1) To provide coastal protection, nutrient protection and nutrient filtering in marine environments. 2) To enhance habitat for fish and other marine organisms and fishing grounds and 3) To enhance food security initiatives.

3. **Alignment – APEC:** Describe specific APEC priorities, goals, strategies, work plans and statements that the project supports, and explain how the project will contribute to their achievement.

This project is a Strategic Approach in response to APEC's 2015 priority of 'Building Sustainable and Resilient Communities, fostering SMEs Participation in Regional and Global Economy and Investment in Human Capital Development on Climate Change issues and Food Security.

**Alignment – Forum:** Briefly explain how the project is aligned with your forum's work plan / strategic plan.

The project will contribute towards the implementation of the APEC Food Security Road Map Towards 2020 (2014 PPFS Towards 2020); commitment to strengthening APEC agricultural science and technology innovation and cooperation with a view to facilitating trade related agricultural products and promoting sustainable agricultural development; encourage the use of agricultural science and technology research in a market-oriented manner to improve food safety and security in the region; and advance efforts to utilize the application of effective science and technology and ICT approaches in disaster preparedness, risk reduction, response and post-disaster recovery and cooperation in search and rescue. These shall also be used as a strategy for Emergency preparedness particularly the vulnerable island states including commitment to improving the resilience of supply chains in APEC Economies 2015 during disaster relief operations, encourage additional emergency response mechanisms to increase resiliency of APEC's energy infrastructure to natural disasters and climate change; progress work to identify new technologies to improve a collective response to disasters and emergencies including those affecting SMEs and Global Value Chains and progress work under the Trade Recovery Programme, a trade recovery communications mechanism.

4. **Methodology:** How do you plan to implement the project? In this section, briefly address the following:

**Work plan:** Project timelines, dates of key activities and deliverable outputs.

Firstly is the process of consultation with all relevant stakeholders to determine critical knowledge gaps of climate impacts and food security related issues from the 14 Maritime Provinces in PNG. A vulnerability assessment will also be undertaken depending on the findings from the baseline survey. From the assessments, the project shall be pilot on three sites recommended. This will include hatchery of mangroves, corals and sago and can be piloted as an existing and ongoing project after completion when considered successfully. The basic activities include; Phase 1 (Gap Analysis): Estimated start date January 2016; estimated completion by May 2016; Phase 2 (Valuation Study and dissemination of report): Estimated start date June 2016; estimated completion by October 2016; and Phase 3 (implementation of Pilot) November 2016

**Beneficiaries:** The proposed selection criteria for participants, beneficiary profiles (e.g. workshop participants, end users, policy makers, researchers/analysts, gender) and how they will be engaged.

The direct beneficiaries of the project would be the coastal and vulnerable island states of the APEC Member Economies which the pilot project can be replicated to APEC member economies are linked by the Pacific Ocean and the region is vulnerable to natural disasters. Fish buyers, fish consumers, fish wholesalers and processors would also derive significant benefits from the opportunity to build the capacity of preserving and conserving its aquatic marine resources. The sequential replication of the project will basically benefit the rural population in the country, creating food security, economic benefits and improved social and living standards. Project results will be directed to policy makers, coastal resource managers, disaster response officials, and other leaders in economies with coastal communities, who will gain improved metrics to quantify the economic importance of green infrastructure in coastal areas, which can inform the development of economically robust disaster risk reduction and response and resiliency strategies for coastal areas and inform other decisions related to management of coastal ecosystems. PNG's APEC trading economies in the region such as Singapore, PR of China, Hong Kong, Chinese Taipei, Malaysia, Australia will benefit from this project through the sustainable management and usage of inshore and sedentary fisheries resources such as those involved in the trade of beche-de-mer, live reef food fish, reef and pelagic species, seaweed, trochus and other inshore tradable resources.

**Evaluation:** Potential indicators developed to measure progress, project outcomes and impacts/successes. Where possible provide indicators which could assess impacts on women.

Indicators of success, impacts and outcomes shall be assessed including; the identification of gaps in current knowledge about the value of coastal ecosystems and impacts of climate change by way of vulnerability assessments; the completion of a report which provides economies with an understanding of the value of coastal ecosystem resources to the resilience of their economy; the illustration or use of the report in economy level or regional policy decision making processes and investment decisions; and possibly other success indicators to be determined in the course of the project.

**Linkages:** Information on other APEC and non-APEC stakeholders and how they will be engaged. If and how this proposal builds on (but does not duplicate) the work of other projects. How will this activity promote cross fora collaboration?

The OFWG will share project outcomes with other APEC sub-fora and officials, with policy makers in their respective capitals, and with external partners such as donor agencies. The Asian Development Bank and the World Bank have taken lead to pilot the project with some member economies on coastal resilience and coastal ecosystem conservation – this study will provide information that will allow them to evaluate the economic value and potential impact of investments in the conservation and sustainable management of coastal ecosystems. This proposal does not duplicate existing work in other APEC sub-fora. This project will combine coastal assessment capabilities used for previous APEC projects, disaster risk reduction and response and coastal resiliency assessment capability utilized by the APEC Emergency Preparedness Working Group (EPWG), and the economic expertise of outside consultants and APEC officials. This activity will promote cross-fora collaboration with the EPWG on the evaluation of disaster risk reduction and response and coastal resilience. The study in this project can also aid in understanding coastal ecosystem values to the tourism industry, and this note was shared with Tourism Working Group and supported by Australia, Malaysia, PNG and Thailand, with no objections raised. It will also allow for collaboration with APEC groups that look at the infrastructure and existence value for tourism that coastal ecosystems protect in the event of a disaster, including transportation infrastructure (Transportation Working Group), power production facilities (Energy Working Group), telecommunications and information infrastructure (Telecommunications and Information Working Group), and coastal tourism infrastructure (Tourism Working Group).



**Asia-Pacific  
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**2015/SOM2/OFWG/012**  
Agenda Item: VII B

**Practice on Eco-aquaculture - Development of  
Circulating Aquaculture Model**

Purpose: Information  
Submitted by: China



**5<sup>th</sup> Oceans and Fisheries Working Group Meeting**  
**Boracay, Philippines**  
**10-12 May 2015**

## Practice on Coastal Eco-aquaculture — Development of Circulating Aquaculture Model

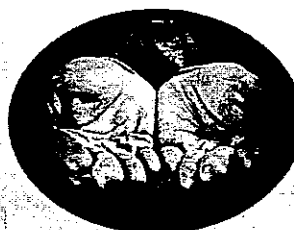
Shaobo CHEN, Ph.D., Professor

Email: chenshaobo@hotmail.com

**Zhejiang Mariculture Research Institute  
(ZMRI)**

### Background

- More than 800 million people in the world continue to suffer from chronic malnourishment.(FAO,2014)
- Where the global population is expected to grow by another 2 billion to reach 9.6 billion people by 2050 – more than 40% of the population live in coastal areas. (FAO, 2014).
- We must meet the huge challenge of feeding everybody on our planet!



- Fish and fishery products play a critical role in global food security and nutritional needs of people in developing and developed economies.

UTILIZATION <sup>1</sup> \ yr	2007	2008	2009	2010	2011	2012
Human consumption	117.3	120.9	123.7	128.2	131.2	136.2
Non-food uses	23.4	22.2	22.1	19.9	24.5	21.7
Population ( <i>billions</i> )	6.7	6.8	6.8	6.9	7.0	7.1
Per capita food fish supply ( <i>kg</i> )	17.6	17.9	18.1	18.5	18.7	19.2

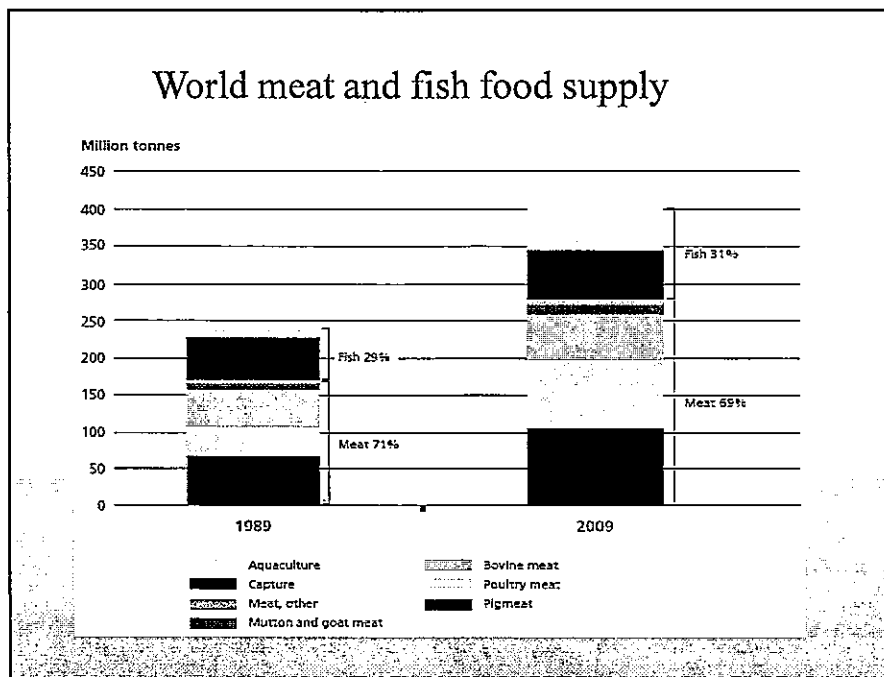
Note: Excluding aquatic plants. Totals may not match due to rounding.  
 \* Data in this section for 2012 are provisional estimates.

(FAO,2014)

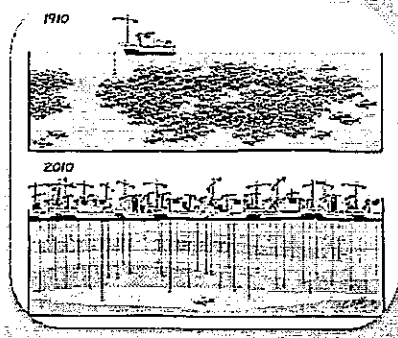
**Marine organisms are one of the most important items in the human diet, provide 16.6 % or more of the daily protein needs for ~3 billion people.**

**In many societies around the world, fish are a major source of nutrients. They are also the main source of omega-3 fatty acids essential for brain development.**

**Marine organisms are the most traded international food commodity. The global commercial trade exceeds the value of coffee, rubber, cocoa, tea, tobacco and rice markets all combined!!**



## A global shortage of fish has been developing since the 1980s



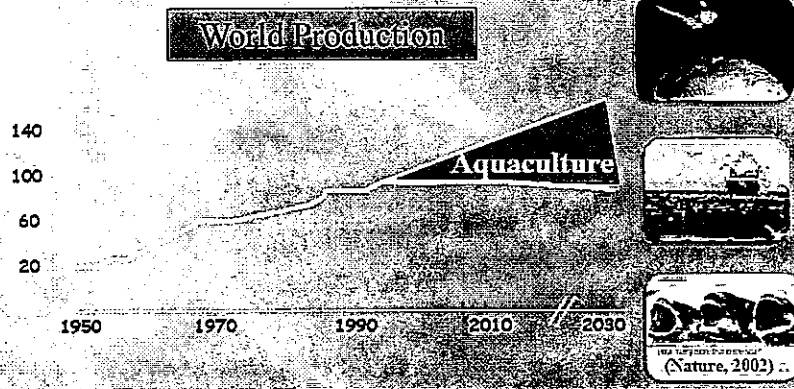
Demand for fish is constantly increasing due to:

- World population growth
- Increased market for fish and seafood (as a high quality protein, healthy food rich in omega-3 fatty acids and minerals)
- Rapid growth of East Asian economies

(FAO 2010)



- World fisheries have reached a plateau at around 90 M tons and remained steady since the beginning of the 1980s.
- Fisheries are unable to keep up with the increasing demand for fish and seafood.
- Additional 60 M tons of marine and freshwater organisms need to be produced by 2030



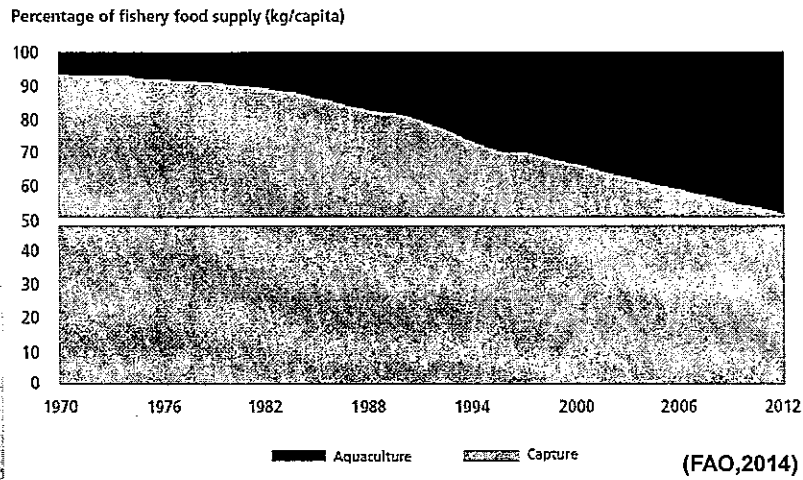
**Aquaculture is the most promising way to fulfill the gap  
very important in food security**

Today, freshwater aquaculture is the most important form of fish production, but because of the uncertain supply of freshwater and limited suitable land areas, mariculture will most likely become the most important source in the future.

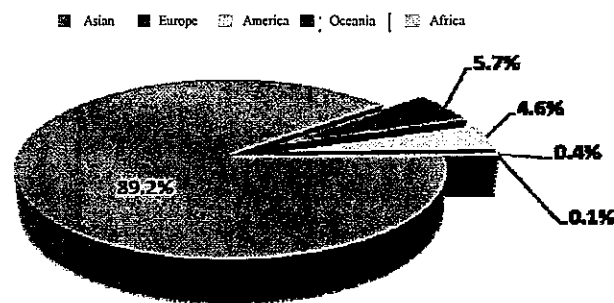


The future challenge is to learn to "culture the oceans" in an "ecological approach" while moving a major part of the seafood production to lower trophic levels (FAO, 2006)

### Relative contribution of aquaculture and capture fisheries to food fish consumption



### China is the most influential economy with regard to possible change in fisheries and aquaculture policy

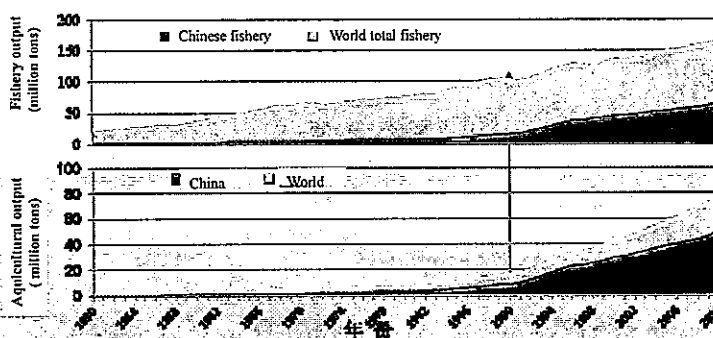


Among these, the aquacultural output in China own 62% of the world total.

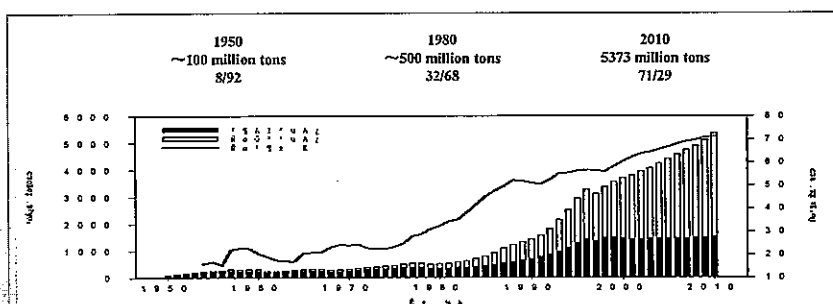
□ Since reform and opening up from 1979, the fisheries and aquaculture in China have been developing rapidly.

After 1990, China become the biggest fishery and aquaculture economy .

The total output of fishery, aquaculture in China and world



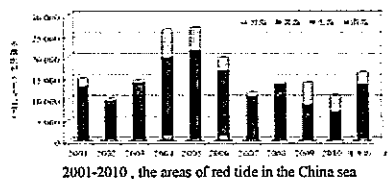
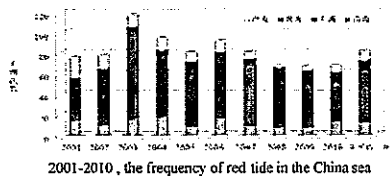
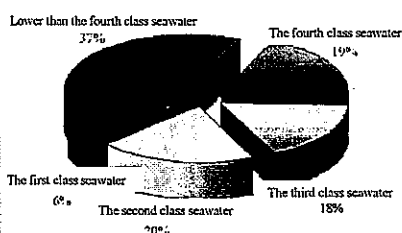
□ In 2011, the total fishery output of China is 5.603 million tons, accounting for 36% of the world total ; The total aquaculture output is 4.023 million tons , taking up 72% of the total fishery output of China, 26% of the world total fishery output, and 63% of the world total aquaculture output. China is the only one economy whose aquaculture output is beyond fishery output.



## II. The problem in aquaculture

### 1. The worsening of aquacultural water environment

Zhejiang marine environmental bulletin in 2013 shows: the sea area lower than the fourth level of seawater quality standards (for ports) in Zhejiang is 16564 km<sup>2</sup>, accounting for 37.0% of total area. The frequency and area of red tide in East China sea are the highest, influencing the aquaculture production.



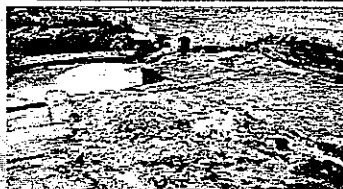
## II. The problem in aquaculture

### 2. The emission of untreated aquaculture sewage aggravates the seawater eutrophication

“Global Environment Outlook Year Book 2006” reported that a shrimp could absorb about 22% nitrogen of its feeds, and the rest would release to the water. There also was a research, suggesting that the utilization rate of nitrogen and phosphorus only take up 10% and 7%, the rest release into environment (Funge-Smith, 1996).

The utilization rate of nitrogen in shellfishes and fishes were lower than 40% (Zhibing Jiang, 2006)

In Baltic Sea, the inorganic nitrogen and phosphorus produced by shellfishes aquaculture were beyond land output (Schramm, 1996).



## II. The problem in aquaculture

### 3. Aquatic diseases

High flux water-change cultivation mode increases the risk of the spread of pathogen. For example, more than 11 virus were found in prawn pools, and many marine zooplanktons are the disseminator and carriers of virus. WSBV and TSV make the greatest impacts, and the death risk is higher than 90%. Using antibiotics in aquaculture also causes food safety issues.)

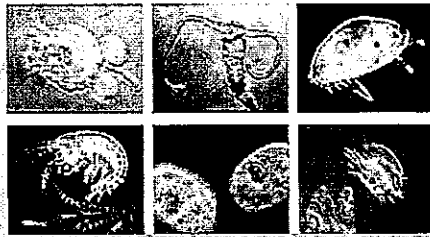
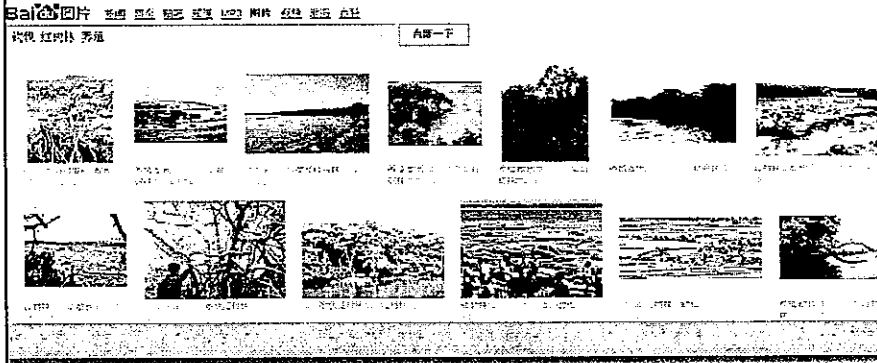


Figure1. The prawns getting leukoderma

## II. The problem in aquaculture

### 4. Lost of coastal wetlands

Wetland is known as the kidney of the earth, such as mangrove wetlands, has been decreasing with the development of shrimp farming in China, Thailand, etc.. 38% of the reduction in global mangrove is probably caused by shrimp aquaculture. (Global Environment Outlook Year Book 2006)

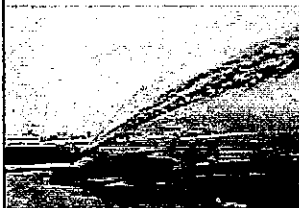


## II. The problem in aquaculture

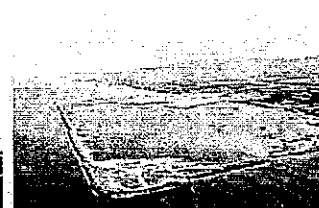
### 5. Reclamation causes the reduction of offshore aquaculture space

The economical benefit of developing aquaculture is lower than industry, and the development of coastal industry is further compressing the aquaculture spaces ..

blowing sand reclamation



reclamation



## II. Problem in aquaculture

### 6. Problems in extensive aquaculture mode

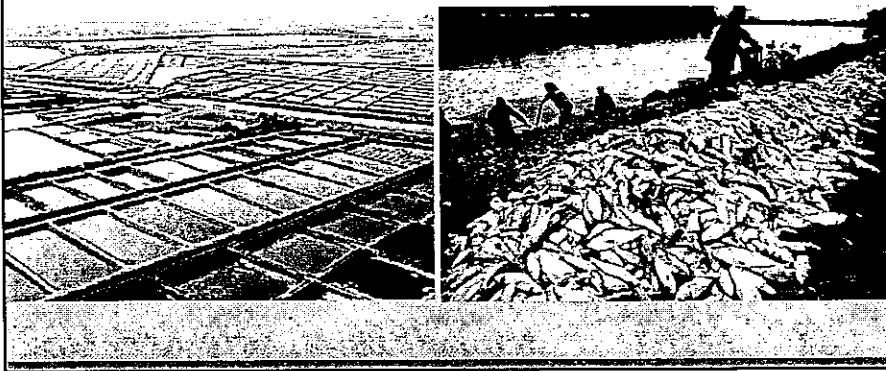
This mode usually causes multiple environmental and economic problems, e.g., marine pollution, aggravation of eutrophication, aquatic diseases, and low economic benefits, etc.



## II. Problem in aquaculture

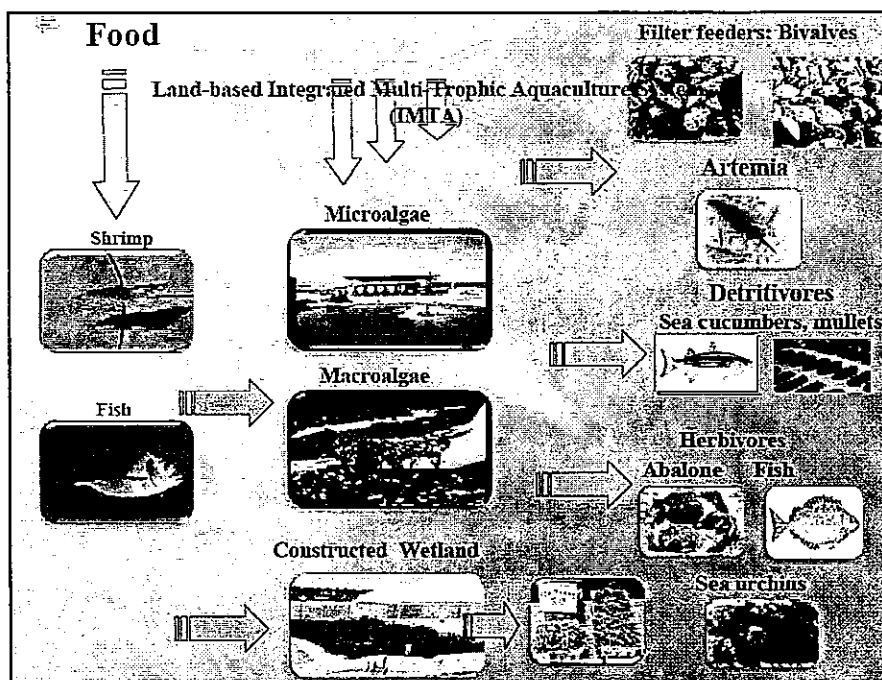
### 7. Problems in existing intensive cultivation mode

The intensive cultivation mode also exists some problems, such as high cost on changing water with high flux for maintaining a clean aquaculture environment, , eutrophication, diseases and production safety.



How to improve it ?



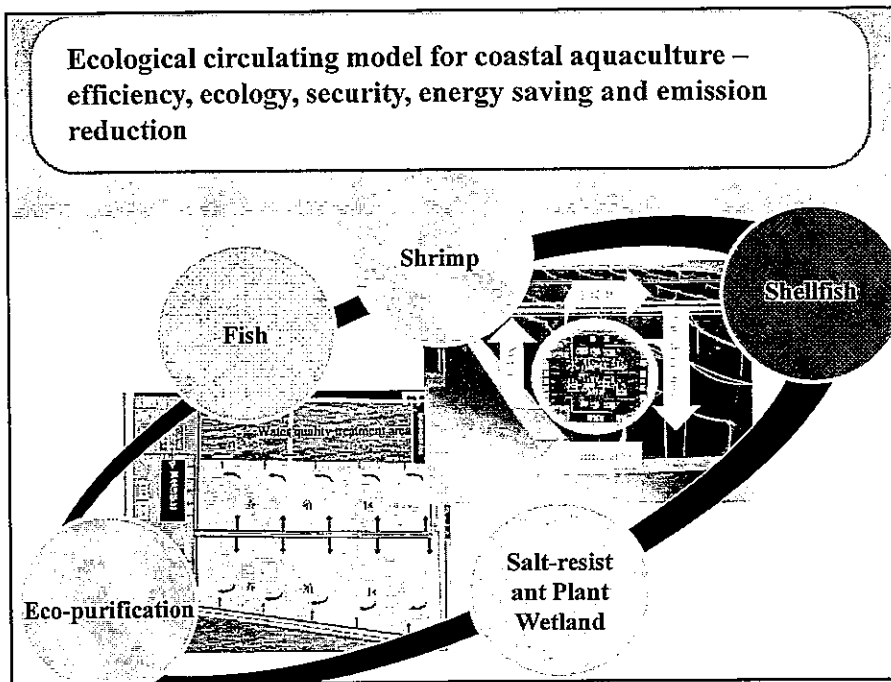
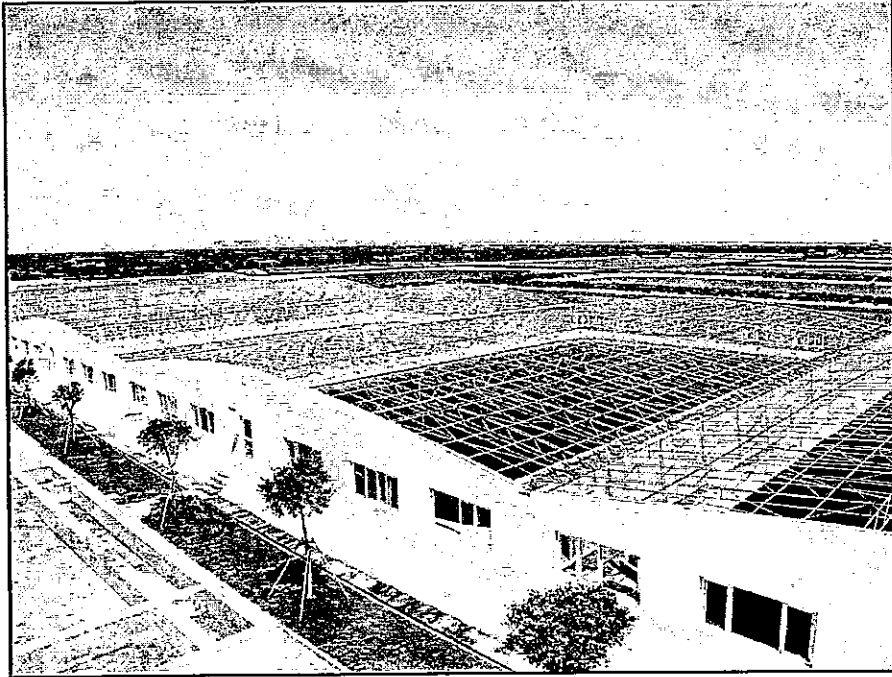


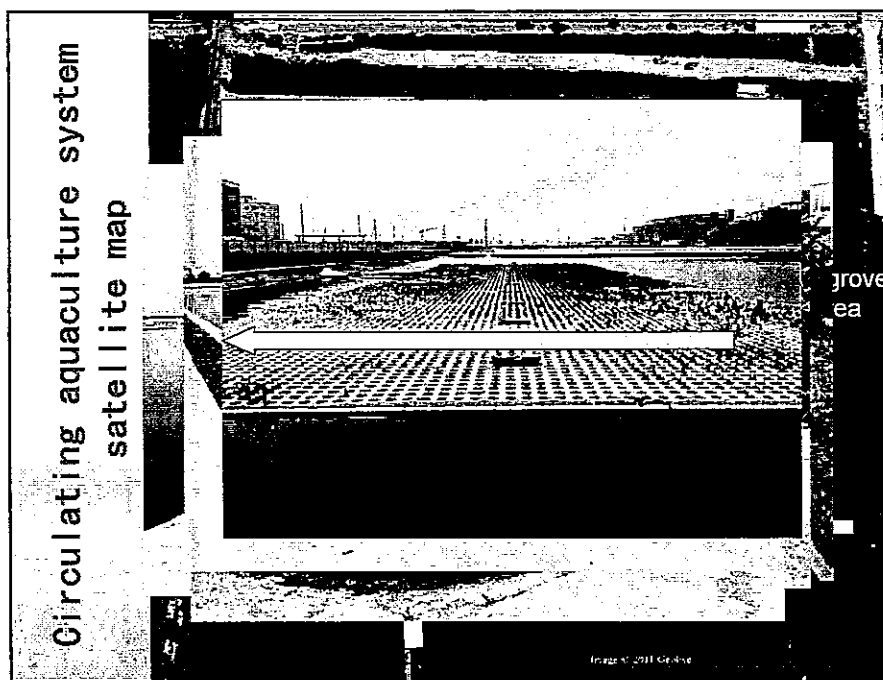
### III. The Practice of Ecological Coastal Aquaculture in China

In recent years, Chinese government has begun to guide the coastal aquaculture from the traditional extensive and intensive model to ecological model. Many scientific institutes and local governments have practiced the ecological aquaculture model adapting to local conditions, and have made remarkable achievements.

The ecological circulating aquaculture system developed by Zhejiang Mariculture Research Institute(ZMRI) is successful and good for extension.

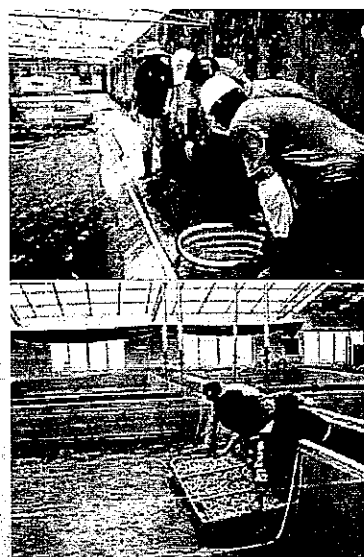




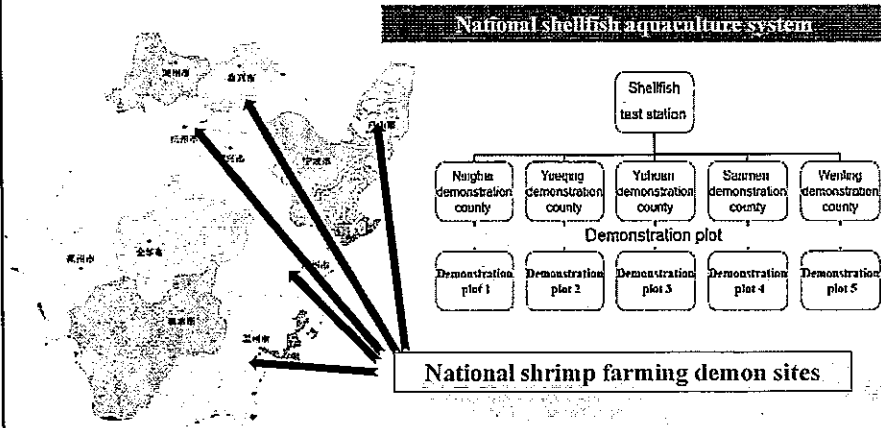


### System (18.4 ha) output and efficiency in 2013

- Prawns produced: 49.8 t,  
Shellfish produced : 15.1 t  
Shellfish larva produced: 8.1 billions  
spats
- Gross profit: 5.6621 million RMB  
0.3075 million RMB/ha.  
Net profit: 0.225 million RMB/ ha.



### Eco-aquaculture demonstration and scaling up



- Two national and one provincial aquaculture promotion systems - "specialists + fishing technicians + local farmers".
- Planning to scale up to more than 200 ha.
- Currently, this project trained 550 practitioners, practiced in 70 ha.



Technical training



The workshop on shrimp farming



On-site technical guidance

### **Benefits of the circulating model**

1. Energy conservation.
2. Low emission - comparing to the intensive cultivation mode, it reduces the aquaculture sewage more than 80%.
3. Safety - avoiding marine pollution, reducing the spread of pathogens.
5. High yield - net income per hectare is more than 225000 RMB, whereas traditional cultivation mode is 90000 RMB.

- Extension: 550 farmers trained  
70 ha.

- Cooperation with experts from other institutions
- Improving and optimizing

- Can make contribution in sustainable fisheries, eco-friendly aquaculture, food security,...

- Can serve as a platform for exchange with counterparts in other APEC economies

**Thank you for your attention!**





**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/013**  
Agenda Item: III A

## **Economy Report: China – Progress on Ocean- Related Issues**

Purpose: Information  
Submitted by: China



**5<sup>th</sup> Oceans and Fisheries Working Group Meeting**  
**Boracay, Philippines**  
**10-12 May 2015**

## China Report - Progress on Ocean-related Issues

Since the second half of 2014, China has been making unremitting efforts to implement the instructions of Xiamen Declaration, mainly focused on the four priorities of 4<sup>th</sup> APEC Ocean Ministerial Meeting (AOMM4): 1) Coastal and marine ecosystem conservation and disaster resilience; 2) The role of the ocean on food security and food-related trade; 3) Marine Science, Technology and Innovation and 4) blue economy, the main achievements are summarized below:

### 1. Coastal and marine ecosystem conservation and disaster resilience

In 2014, State Oceanic Administration (SOA) conducted monitoring on marine ecological environment, the pollution sources, marine function zone, marine environmental disasters and etc. 8,700 oceanic monitor spots laid for the monitoring, which obtained more than 2 million data. It showed that the ecosystem condition of marine protected areas has been remained roughly stable and the environment quality in marine aquaculture zones and tourist zones was good in general.

The major marine disasters attacked China are storm surge, sea wave, sea-ice and red tide, whilst green tide, bank corruption, seawater intrusion, soil salinization and saltwater intrusion occur to varying degrees. Both the direct economic loss and death toll caused by marine disasters are lower than the average of recent decade. In order to build comprehensive capacity of disaster reduction, SOA has developed demonstration areas of comprehensive marine disaster reduction in Shouguang of Shandong Province, Wenzhou of Zhejiang Province, Lianjiang of Fujian Province and Daya Bay of Guangzhou Province.

### 2. The role of the ocean on food security and food-related trade

To ensure the sustainability and health of marine fisheries resources, China persists in the strategy of coordinated development of continental sea, open sea and pelagic fishery, and promoting rational distribution. Also, actively bettering industry structure of pelagic fishery, changing operations from single fishing activities to capture, processing and marketing. Jan 1st, 2015, the Circular of the Ministry of Agriculture on Implementing the System of the Minimum Mesh Size for Marine Fishing nets and Gears and Catalog for Banned Fishing Gears came into force. During last 4 years, 7 national protection areas of water plants and animals, 244 national protection areas of fisheries genetic resources have been built. Meanwhile, China promotes the construction of fishery-related engineering to put the eco-compensation mechanisms in place, and settled 5.531 billion RMB eco-compensation payments in total. The scope of breeding and releasing has been expanded constantly, with 34.34 billion fries released in 2014.

In order to maintain food security and to build up Granary at Sea, Shandong Province issued Implementation Opinions on Promoting Granary at Sea, stating the goal "10 million ton total production, with protein equivalent to 20 billion kilograms of grain. While in Zhejiang province, a series of undertakings has been organized to restore and revive Zhejiang Fishing Ground, aiming at recover the resources to the level of the 1980s. Fujian Province has taken marine ecosystem and fisheries resources protection as long-term measures, conducting reproduction and releasing projects, combating IUU fishing while promoting the sustainable development of marine fisheries economy.



### 3. Marine Science, Technology and Innovation

The year of 2014 was vital for transformation to innovation-driven marine technology. SOA steadily advanced relevant work of strengthening the ocean by science and technology. 8 cities including Guangzhou Zhanjiang, Xiamen, Zhoushan, Qingdao, Yantai, Weihai, Tianjian have been affirmed as national marine high-tech pilot bases, under the joint efforts by SOA and the National Development and Reform Commission. Qingdao, Guangzhou and Xiamen have been approved to be national marine S&T demonstration bases; “Digital Ocean” project and ocean satellites have been entirely taken into national development strategy. China has been engaged in marine investigation and completed the compilation of Guiding Opinions on Enhancing Marine Investigation, started to revise Measures of Ocean Standardization and Regulation on Ocean Metrology, drafted framework of 13th five-year-plan of quality supervision of ocean standards and metrology and a research report of marine S&T innovation overall strategic plan is currently being compiled.

### 4. Blue economy

All levels of marine administrative departments are carrying out the national strategic plan of establishing 21<sup>st</sup> Century Maritime Silk Road. The upgrading and transformation of marine industry has seen in good momentum and marine economy kept developing stably with 5993.6 billion gross ocean production, and 2432.5 billion added value of marine industries. According to estimates, 35.54 million people are employed for ocean related jobs in 2014.

SOA is making efforts to accelerate the construction of marine ecological civilization demonstration areas, boost the transformation of development mode of marine economy, improving the capacity of marine resources exploitation, environmental protection and integrated management, in order to promote the harmonious, sustainable and healthy social-economic development of coastal areas.

The vision of “Road and Belt” initiated by China links countries along the route and thus they will benefit from cooperation on blue economy through the projects such as economic demonstration zones, port-vicinity industrial parks, marine science-technology parks and marine talents training bases. Authorized by National Development and Reform Commission, Ministry of Commerce and Ministry of Foreign Affairs, Vision and Action Plan of Promoting Silk Road Economic Belt and 21 Maritime Silk Road was published to support Fujian in building the core area of 21 Century Maritime Silk Road, promote marine economic development demonstration zone in Zhejiang Province, blue economy demonstration zone in Fujian Strait, and constructing of Zhoushan islands new district, to further the openness of Hainan international tourist’s island and enhance the construction of port facilities of coastal cities such as Shanghai Tianjin, Ningbo-Zhoushan, Guangzhou, Shenzhen, Zhanjiang, Qingdao, Yantai, Dalian, Fuzhou, Quanzhou, Haikou, Sanya and intensify international airports in Shanghai and Guangzhou as transportation hubs.





**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/014**  
Agenda Item: IV B

## **Integrated Coastal Management in East Asia**

Purpose: Information  
Submitted by: PEMSEA



**APEC**  
PHILIPPINES  
2 0 1 5

**5<sup>th</sup> Oceans and Fisheries Working Group Meeting**  
**Boracay, Philippines**  
**10-12 May 2015**



Partnerships in  
Environmental Management  
for the Seas of East Asia

**Integrated Coastal Management in East Asia**  
**Asia-Pacific Economic Cooperation**  
**5th Meeting of the Ocean and Fisheries Working Group (OFWG)**  
May 10, 2015  
Crown Regency Resort and Convention Centre, Station 2, Boracay Island, Philippines

Ryan Whisnant  
Head of Professional Services  
PEMSEA



Partnerships in Environmental Management  
for the Seas of East Asia

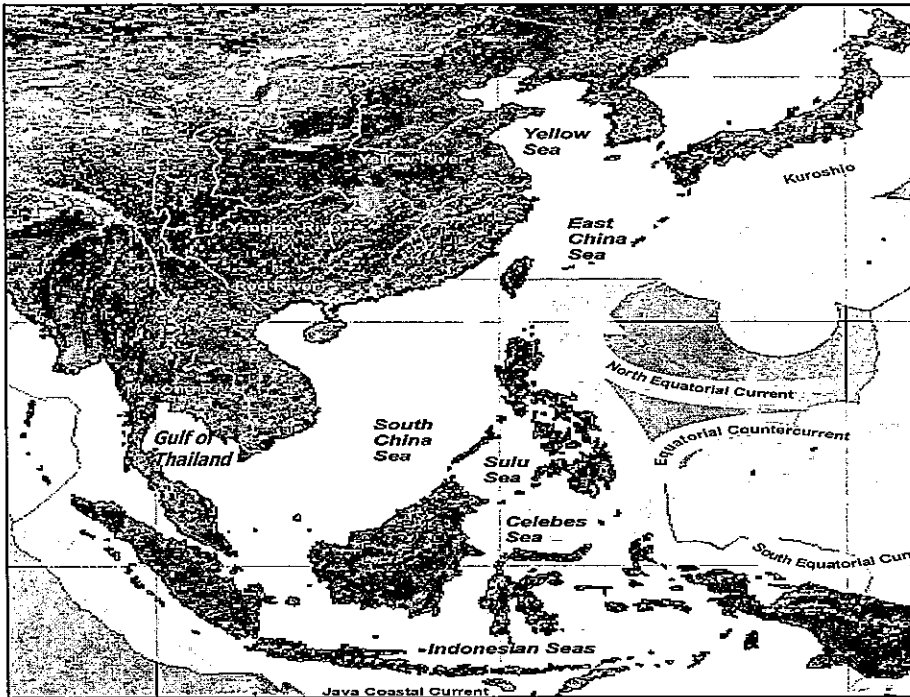
## PEMSEA'S Mission

Fostering and sustaining healthy and resilient coasts and oceans, communities and economies across the Seas of East Asia through integrated management solutions and partnerships



Partnerships in Environmental Management  
for the Seas of East Asia

[www.pemsea.org](http://www.pemsea.org) 2



## PEMSEA's Evolution

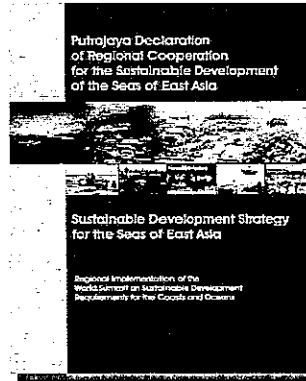
- 1993 - PEMSEA start-up; focus on marine pollution prevention and management; ICM demonstration (Xiamen, PR China; Batangas Bay, Philippines)
- 2003 -14 countries adopt the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)
- 2006 -11 countries agree to establish PEMSEA as a self-sustaining regional partnership mechanism for SDS-SEA implementation
- 2009 -PEMSEA's International Legal Personality recognized by 8 countries, including Philippines, the host country
- 2012 -Headquarters Agreement signed by PEMSEA and the Department of Foreign Affairs of the Philippines

## Sustainable Development Strategy for the Seas of East Asia

- Regional declaration of commitment to implement a shared vision, adopted by 14 countries
- Harmonizes global and regional agreements including UNCLOS, Agenda 21, WSSD, MDG, CBD, ICCO, The Future We Want, etc.
- Supports sustainable development for economic prosperity and social well-being while safeguarding ecological values

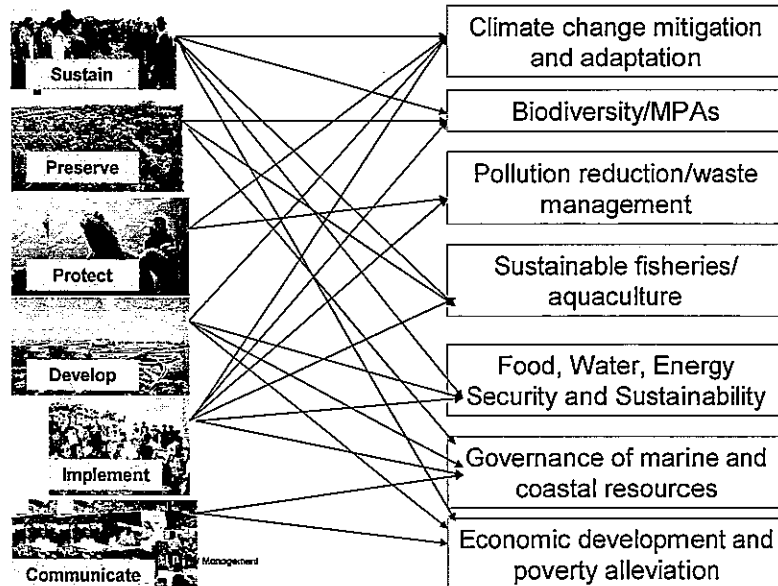
### Objectives:

1. Promotion of sustainable development of coastal and marine areas
2. Integrated coastal management (ICM) as an effective management framework
3. Partnerships in sustainable financing and environmental investments

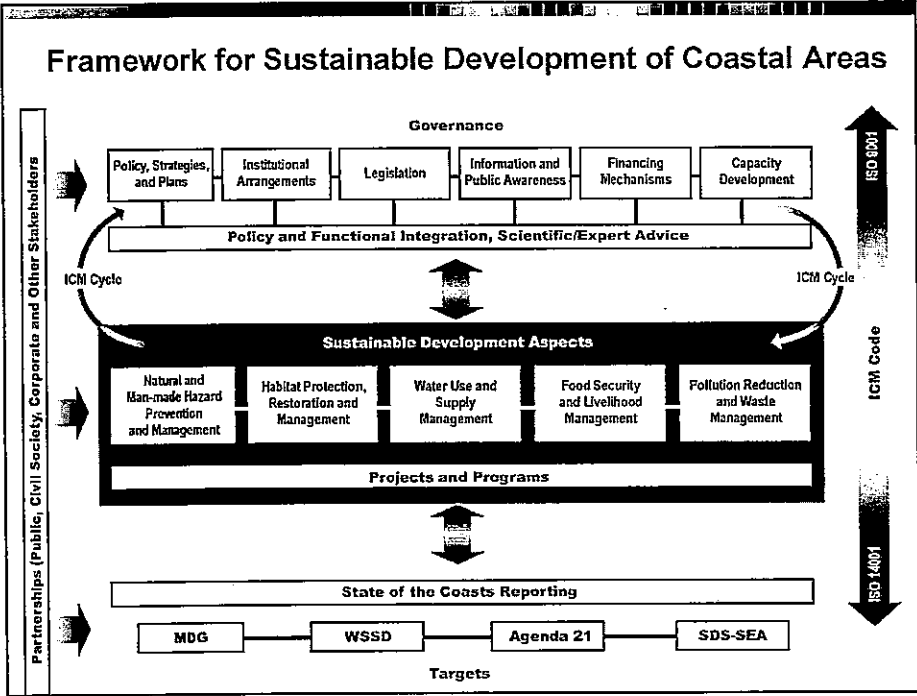
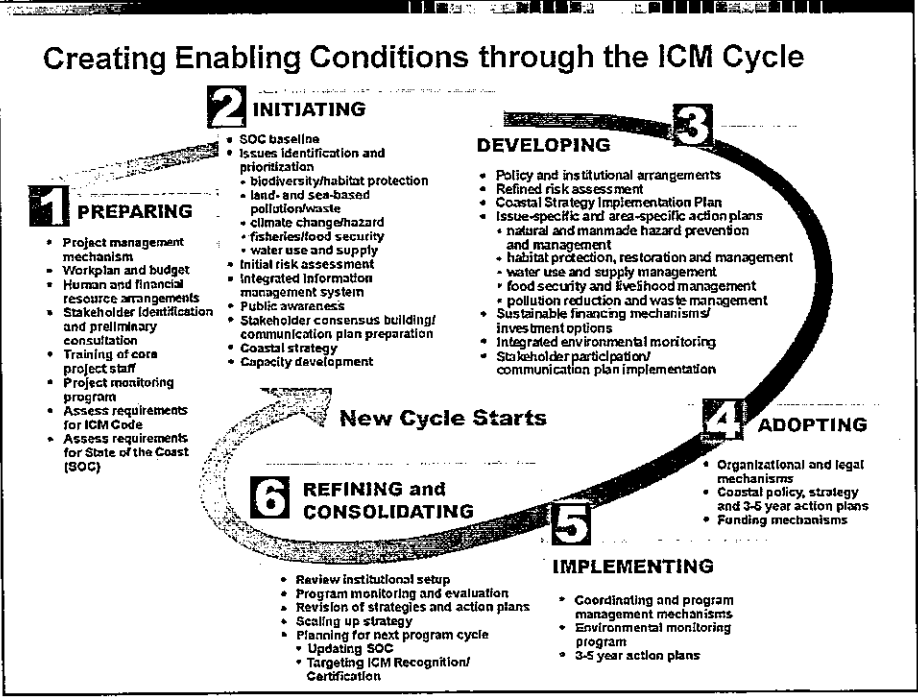


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## SDS-SEA vision, mission and action programs are essential to the region's greatest challenges



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## ICM in Bataan, Philippines

- Effort to reduce multiple resource-use conflicts and harmonize economic development and environmental sustainability

- Habitat and biodiversity conservation and management initiatives have led to the planting of 45 hectares of mangroves

- Annual cleanup of roughly 156 km of coastline (83%) of the province

- Establishment of bird and fish sanctuaries and deployment of 600 units of artificial reefs by members of the Bataan Coastal Care Foundation (BCCF)



## Public-Private Partnership supporting ICM

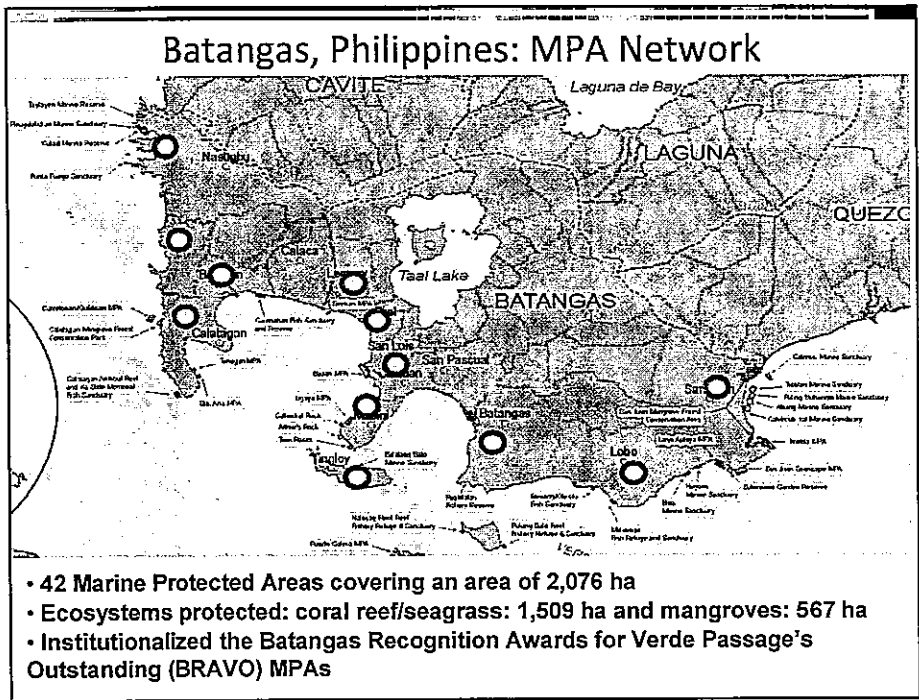
“The BCCF aims to act as a catalyst and provide counterpart funding for the Bataan Integrated Coastal Management Program to build better coastal governance, explore ways for a dynamic & sustainable public-private partnerships in environmental management, increase awareness, and promote community participation in coastal resources management.”



Bataan Coastal Care Foundation, Inc.

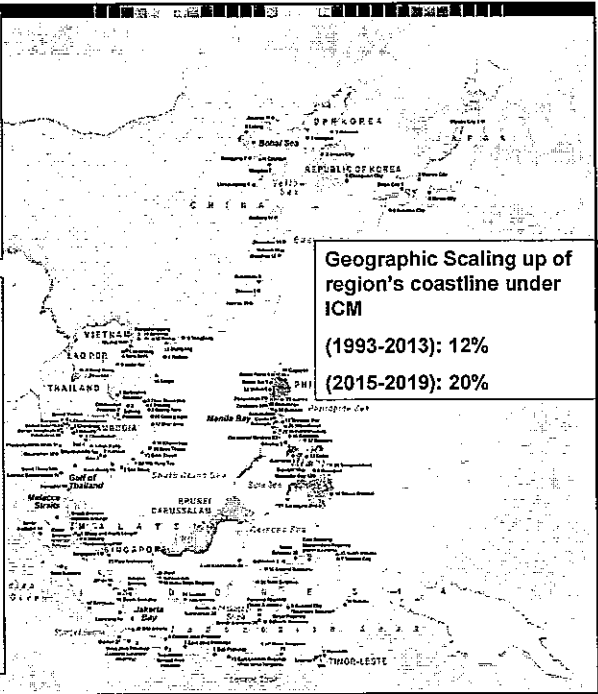






**1993:**  
 2 ICM sites (2 countries)  
 Total coastline: 286 km  
 Total population: 2.9 million  
 Watershed area: 3,026 km<sup>2</sup>  
 Focus: marine pollution prevention and management

**2013:**  
 35 ICM sites (12 countries)  
 Total coastline: 27,588 km  
 Total population: 146.8 million  
 Watershed area: 331,546 km<sup>2</sup>  
 Focus: coastal and ocean governance, habitat restoration and management/MPAs, climate change adaptation/disaster risk reduction, sustainable fisheries, alternative livelihoods, integrated river basin and coastal area management



## Functional Scaling Up of ICM Programs: Protecting and enhancing ecosystem services for biodiversity and fisheries (2015-2019)

- ▣ Biodiversity and fisheries priority areas (kBAAs)
- ▣ Policy and program development and implementation
- ▣ Strengthening management effectiveness of MPAs and MPA networks through ICM
- ▣ MSP, EAFM, etc.
- ▣ Alternative/supplemental livelihoods
- ▣ Socio-economic benefits assessment
- ▣ Financing mechanisms (blue carbon)



## Functional Scaling Up of ICM Programs: Climate Change and Disaster Risk Reduction and Management (2015-2019)

- ▣ Risk and vulnerability assessment
- ▣ Hazard mapping
- ▣ Macro-scale land- and sea-use zoning
- ▣ Sustainable coastal development planning (hard and soft engineering solutions)
- ▣ Socio-economic assessment and adaptation strategies
- ▣ Disaster preparedness and response plan
- ▣ Early warning systems
- ▣ Designation of safe areas/routes safety
- ▣ Post-event recovery



Table 5. Areas around Manila Bay to be affected by 1 m and 2 m SLR.

Area	Area Affected (1m SLR) (Ha)	Area Affected (2m SLR) (Ha)	Percentage	Area Affected (2m SLR) (Ha)	Percentage
Metro Manila	32,363,71333	5,379,69631	9.22	7,861,65944	15.23
Caluya	45,352,87218	1,623,65189	2.65	2,701,21703	4.79
Euboean	67,561,40549	22,691,40637	33.55	27,567,81012	41.35
Panapa	143,961,5744	33,115,33977	20.92	41,564,57421	28.89
Basin	282,928,4712	37,629,71232	13.34	51,651,153	17.88

## Functional Scaling Up of ICM Programs: Water supply, pollution reduction and waste management in priority watersheds and coastal areas (2015-2019)

- Ecosystem management framework for trans-jurisdictional environmental issues in priority watersheds and coastal areas
- Upstream-downstream management interventions
- TAPL and socio-economic impacts and benefits
- Nutrient management (point and non-point sources)
- Good policies and practices in investment and financing



## Functional Scaling up of ICM Programs: Building a Blue Economy through ICM (2015-2019)

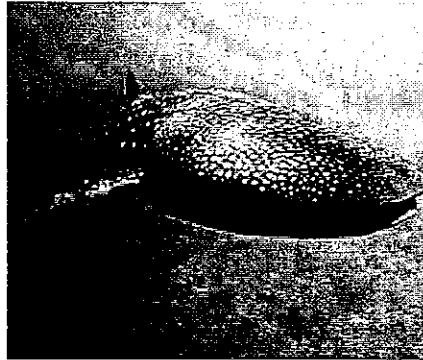
Investible Opportunities at ICM sites:

- sustainable fisheries/aquaculture
- sustainable tourism
- biodiversity conservation/biotechnology
- integrated river basin and coastal area management
- pollution reduction/waste management
- water supply and conservation
- renewable energy/energy conservation/resource utilization



## Challenges to Building a Blue Economy

- Lack of working examples blue economy development, demonstration and benefits derived
- Skills and know-how are limited considering the scope, coverage and potential targets at the local level where the changes need to take place



## PEMSEA Services

PEMSEA delivers integrated solutions to its partners and customers through a set of service offerings designed to support the needs of governments, companies and other organizations operating in the coastal and marine environment

### *Advisory and Project Services*

PEMSEA provides strategic planning, policy development and project services tailored for coasts and oceans

- Environmental Management
- Marine Scientific Services
- Food Security and Livelihood Management
- Pollution Reduction and Waste Management
- Water Use and Supply Management
- Natural and Man-made Hazard Prevention and Management
- Habitat Protection, Restoration and Management

## PEMSEA Services

### *Knowledge Services*

Comprehensive set of knowledge products and capacity development programs focused on integrated coastal management (ICM) and port safety, health and environmental management (PSHEM)

- Extensive collection of coastal and ocean governance publications
- Best practices, codes and guidelines for governance, management and State of Coasts reporting
- National and regional training workshops on a variety of topics including
  - Integrated coastal management
  - Coastal-use zoning
  - Marine spatial planning
  - Vulnerability/risk assessment
  - Ecosystem service valuation
  - Ecosystem approach to fisheries management
  - Integrated river basin and coastal area management
- Internships, fellowships, training-of-trainers and study tour programs

## PEMSEA Services

### *Certification Services*

PEMSEA offers two certification systems for organizations looking to institute a recognized standard in coastal management, along with a professional certification for ICM practitioners

- Port safety, health and environmental management (PSHEM) system certification
- Integrated coastal management (ICM) system certification
- Integrated coastal management (ICM) professional certification

### *Facilitation and Secretariat Services*

PEMSEA's experience convening and developing partnerships extends into a set of Facilitation and Secretariat Services

- Expert staff conducts workshops, seminars and round tables at high-impact events like the East Asian Seas Congress and Xiamen World Ocean Week

## PEMSEA's Regional Network

### PEMSEA Network of Local Governments (PNLG)

- Network of 39 local governments from across East Asia
- Designed to enhance the capacity of local governments to plan, develop and manage their coastal and marine resources for sustainable use
- Promotes the use and benefits of ICM and facilitates links to technical institutions, companies and investors for scaling up sustainable development



### East Asian Seas Sustainable Business Network

- Network of companies focused on building a Blue Economy through sustainable use of coasts and oceans
- Practical forum for business leaders to engage in dialogue with peers and link to scientific and management best practice, in alignment with ocean policy development in the region



## PEMSEA's Regional Network

PEMSEA's network includes 20 nongovernmental organizations working together to support implementation of the SDS-SEA

- ASEAN Centre for Biodiversity
- Coastal Management Center
- Conservation International Philippines
- International Environmental Management of Enclosed Coastal Seas Center
- International Ocean Institute
- Intergovernmental Oceanographic Commission - Subcommission for the Western Pacific
- International Union for Conservation of Nature - Asia Regional Office
- Korea Environment Institute
- Korea Maritime Institute
- Korea Marine Environment Management Corporation
- Korea Institute of Ocean Science and Technology
- Northwest Pacific Action Plan
- Ocean Policy and Research Foundation
- Oil Spill Response
- Plymouth Marine Laboratory
- Swedish Environmental Secretariat for Asia
- UNDP/GEF Small Grants Programme
- UNEP Global Programme of Action
- UNDP/GEF Yellow Sea LME Project

## PEMSEA's Regional Network

Over its 20-year history, PEMSEA has developed a broad network of experts across the region, providing a deep pool of knowledge and practical experience in deploying integrated coastal management

### Regional Centers of Excellence

- Centre for Marine Environmental Research and Innovative Technology (MERIT), Hong Kong
- University of the Philippines Marine Science Institute (UPMSI)

### ICM Learning Centers

- Royal University of Phnom Penh
- Coastal and Ocean Management Institute (COMI), Xiamen University
- Center for Coastal and Marine Resource Studies, Bogor Agricultural University
- Xavier University
- De La Salle University
- University of the Philippines, Los Baños
- University of Danang
- Kim Il Sung University

## East Asian Seas Congress 2015

November 16-21, Danang, Vietnam

•Triennial event for oceans and coasts. Past Congresses have drawn well over 1000 participants including national and local government officials, policymakers, scientists, NGOs, donor agencies, companies, investors and academia.

•Provides an intellectual marketplace and ocean-based forum for knowledge sharing, collaboration and partnership building.

•Includes Ministerial Forum, International Conference, Environmental Exhibition, Youth Forum, Field Visits and sessions covering *Coastal and Ocean Governance, Blue Economy, Public-Private Partnership, Coastal Ecosystem Valuation, Marine Spatial Planning, and more.*

For more information, visit [eascongress.pemsea.org](http://eascongress.pemsea.org)

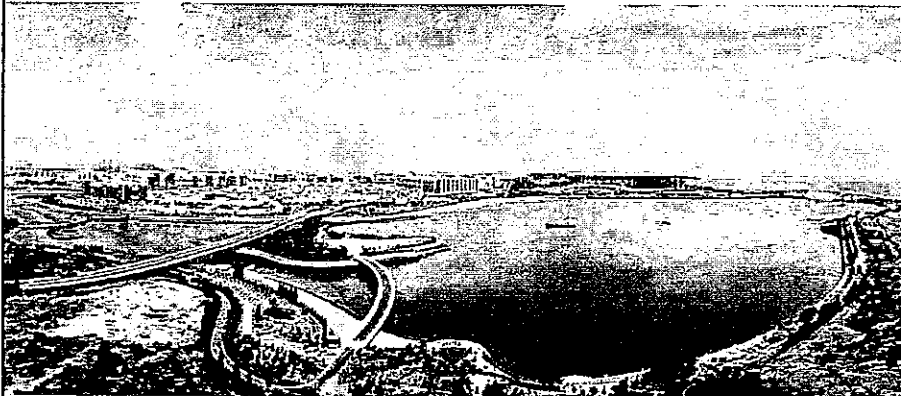


## Areas of Potential Collaboration with APEC WG

- Organization and conduct of APEC/PEMSEA workshop/knowledge sharing event on the application of ICM for sustainable oceans and fisheries management
- Preparation and dissemination of knowledge products (case studies; good practices; code; guidelines; learning materials) for sustainable fisheries through ICM
- Establishment of 'blue economy' focused ICM demonstration/learning sites among local governments across APEC economies
- Networking among EAS and APEC local governments

## Questions?

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**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/015**  
Agenda Item: IX B


## **Building a Blue Economy Through ICM**

Purpose: Information  
Submitted by: PEMSEA



**APEC**  
PHILIPPINES  
2 0 1 5

**5<sup>th</sup> Oceans and Fisheries Working Group Meeting**  
**Boracay, Philippines**  
**10-12 May 2015**





Partnership in  
Environmental Management  
for the Seas of East Asia

## Building a Blue Economy through ICM

Asia-Pacific Economic Cooperation  
5th Meeting of the Ocean and Fisheries Working Group (OFWG)  
May 11, 2015  
Crown Regency Resort and Convention Centre, Station 2, Boracay Island, Philippines


Ryan Whisnant  
Head of Professional Services  
PEMSEA



Partnership in Environmental Management  
for the Seas of East Asia

## Abundance of Marine Ecosystem Services in East Asia

- Food from wild-catch fisheries and aquaculture
- Energy sources from offshore oil, wind and waves
- Trade through shipping and ports
- Weather regulation and protection from natural hazards (e.g., storms and floods)
- Shoreline stabilization and erosion control
- Carbon sequestration by mangroves, sea grass beds and salt marshes
- Regulating and processing nutrients and waste in the environment
- Formation of sand, soil and other sediments
- Pharmaceutical and other biotechnology products
- Tourism, recreation and spiritual value



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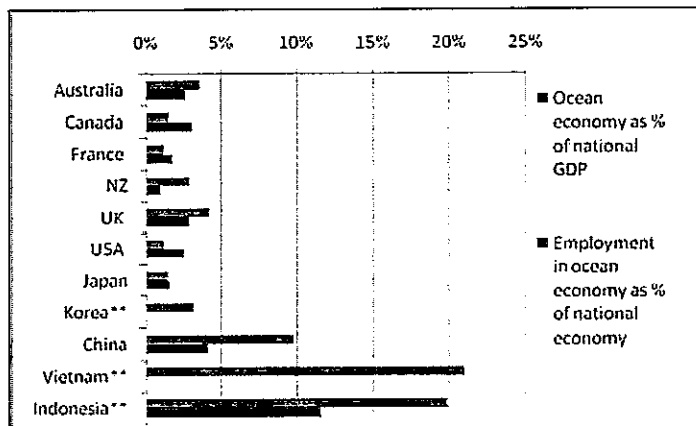
[www.pemsea.org](http://www.pemsea.org) 2

### East Asia's Strong Connection to the Blue Economy

- The coastline of East Asia spans 234,000km, home to more than 1 billion people.
- Of the world's 28 mega-cities (pop. > than 10 million), nine are located on the coasts of East Asia, along with another dozen cities with more than 5 million residents.
- Home to over one third of all coral reefs and mangroves and the highest levels of biodiversity for coral reef fish, mollusks, mangroves and sea grass species.
- Top region for seafood exports, with China, Thailand and Vietnam as the three leading seafood exporting countries.
- Asia's demand for energy is expected to increase 40 percent by 2022, which, according to the International Energy Agency (IEA) could result in investment of up to \$10 trillion in the energy sector over the next 10 years.
- Five out of the top six shipping economies in the world—China, Korea, Hong Kong, Singapore and Malaysia—are in East Asia, along with 9 of the 10 busiest container ports (by volume).
- In 2013, Asia accounted for 46.5% of all global manufacturing output, half of this from China. The ASEAN region accounts for 7% of global exports, making it the fourth-largest exporting region in the world.
- Foreign visitors to East Asia spent USD334billion in 2014, with 80% of all tourism taking place in coastal areas.



### East Asia's Strong Connection to the Blue Economy



Economic Contribution of the Marine Economy (Tropical Coasts, July 2009)



## Towards an Understanding of Blue Economy

•A handful of international organizations (APEC, UNDP, FAO) and governments like China and Indonesia have been working to develop and define the Blue Economy concept. The OFWG has made important contributions in moving Blue Economy forward.

•At the Fourth Ministerial Forum on the Sustainable Development Strategy for the Seas of East Asia in 2012, Ministers from 10 countries including Cambodia, PR China, Indonesia, Japan, Lao PDR, the Philippines, RO Korea, Singapore, Timor-Leste, and Viet Nam signed the Changwon Declaration, entitled, "Toward an Ocean-based Blue Economy: Moving Ahead with the Sustainable Development Strategy for the Seas of East Asia".

•Growing interest within the private sector, e.g., 2015 Economist World Ocean Summit themed "Blue economy; blue growth".

•Despite the growing interest in Blue Economy, it remains a new and relatively poorly defined concept, particularly for the private sector.



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## Research Report: Blue Economy for Business in East Asia

**The concept of "Blue Economy" has gained popularity, but a clear definition and its application have not been established, particularly for the private sector**

- PEMSEA is developing a research report to learn more about sustainable development of coasts and oceans by the private sector and the role of Blue Economy for business in East Asia
- PEMSEA is seeking companies engaged in activities, operations or investments in coastal and marine areas in East Asia to participate in a research study through a brief interview
- Questions the report seeks to answer:
  - What challenges are companies facing in sustainable development of coasts and oceans?
  - Where are companies finding opportunities in the blue economy?
  - How can government and business work together to facilitate Blue Economy growth?



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## Sectors of the Blue Economy

- Renewable Energy
- Oil & Gas
- Ports, Shipping & Marine Transport
- Tourism, Resorts & Coastal Development
- Fishing & Aquaculture
- Manufacturing & Chemicals
- Agriculture
- Maritime Financial
- Undersea Infrastructure
- Marine Technology & Environmental Services
- Undersea Mining
- Biotechnology



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## East Asian Seas Sustainable Business Network

**The EAS-SBN is an action-oriented, influential community of forward-thinking companies and investors operating in the East Asian region and focused on sustainable development and building a blue economy through the protection, rehabilitation, conservation and sustainable use of oceans and coasts**

- Open to companies and socially responsible investors with coast- and ocean-based operations and interests in East Asia
- Companies join for strategic value, not just philanthropy or PR
- Invitation-only, for companies demonstrating a commitment to environmental and social performance
- Representatives are senior leaders with oversight for their company's environmental and social performance and strategy
- Members enjoy benefits including an annual forum, updates on issues relevant to business in the region, webinars with experts, online member center for networking, working groups and customized and discounted PEMSEA Services



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## World Bank Regional Knowledge Management Project

**World Bank-funded project for Scaling Up Partnership Investments for Sustainable Development of the Large Marine Ecosystems of East Asia and their Coasts**

- Promote sustainable development and improve livelihoods of local populations by reducing pollution and promoting sustainable marine fisheries, ICM and ecosystem based management
- Developing a platform for enhancing the delivery of on-the-ground activities and supporting capacity-building through targeted knowledge management products and services
- Piloting with 6 World Bank projects in China, Philippines, Indonesia and Vietnam
  - Guangdong Agricultural Pollution Control Project
  - Philippine Rural Development Project (PRDP)
  - Philippines Climate Change Adaptation Project (PhilCCAP)
  - Coral Reef Rehabilitation and Management Program - Coral Triangle Initiative (COREMAP-CTI)
  - Coastal Resources for Sustainable Development (CRSD)
  - Capturing Coral Reef & Related Ecosystem Services (CCRES)



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## Scaling Up Investment through Knowledge Management

**Facilitate investment in Blue Economy and integrated coastal management (ICM) through the use of specific knowledge products and services.**

- Broad range of sub-projects / activities / enterprises that require or could scale with input of investment capital
  - Ecotourism, sustainable fisheries, pollution control technology, etc.
- Pilot initially targeting potential investments emerging from World Bank projects; eventually will include enterprises emerging directly from local gov't, nat'l gov't, private entrepreneurs, development agencies, etc. from across East Asia
- Covers a range of investors (e.g., donors, impact investors, development banks) and investment mechanisms (e.g., grants, equity investment, loans)
- Investment component design based on extensive research of current investment landscape in East Asia and interviews of over 20 investment experts
- Platform should not reinvent or compete with existing services, but should complement these by addressing gaps to help broker investment
- Biggest gap identified is not a shortage of investment capital, but a difficulty finding investable projects
- Platform will focus heavily on helping projects become more investment-ready



Partnership in Sustainable Management  
for the Seas of East Asia

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**SEA Knowledge Bank**

**Welcome to the SEA Knowledge Bank**

The State of East Asia Knowledge Bank is an integral component of an advisory, online portfolio with online access to documents of projects, and links with the State of the Coast Recovery System, and a hub of investment opportunities.

The SEA Knowledge Bank is developed under the project on *Scaling Up Investment in Sustainable Development of LDCs of East Asia and Central & South Asia* (Sustainable Development of LDCs of East Asia and Central & South Asia) of the World Bank Group, Environment & Public Works Sector, implemented by the SEA team since 2014.

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4 AUGUST 2014

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UN WORLD BANK GROUP  
A East Asia Knowledge Bank Project implemented by PEMSEA (2014-2016)

11

## Features for Scaling up Investments

The SEA Knowledge Bank will include two sections for scaling up investments, designed for **Investment Preparation** and showcasing **Investment Opportunities**

### *Investment Preparation*

1. **Understand** the benefits of ICM projects
2. **Discover** ICM investment gaps in the local area (e.g., rapid assessment)
3. **Develop** effective ICM policies and programs within the local government
4. **Improve** local capacity to receive investment (e.g., investment-readiness assessment)
5. **Prepare** bankable ICM projects (e.g., upload investment-ready projects)

### *Investment Opportunities*

1. **Know** the investment landscape in a particular country
2. **Find** investment-ready projects proposed by local governments and other organizations
3. **Connect** with project developers and other investors (e.g., online, investment forums)
4. **Measure** the impact of your investment

## Other Upcoming Blue Economy Initiatives

- **PEMSEA is planning a second study tailored for government**
  - Exploring definitions and methodologies for assessing blue economy across countries in East Asia
  - Researching the contribution of ecosystems and economic activity in coastal and marine areas to national economies in countries of the region
  - Identifying activities or sectors that have growth potential, investment opportunities and emerging markets
  - Highlighting policies and incentives to promote and facilitate investments in Blue Economy projects
- **East Asian Seas Congress 2015**
  - November 16-21, Danang, Vietnam
  - Workshop Sessions and Side Events covering:
    - Maritime Sector Contributions to a Blue Economy for the Seas of East Asia
    - Application of Knowledge Management for Scaling up Investments and Partnerships
    - Policies and Good Practices in Public-Private Partnership
    - Partnership Round Table for Investments in ICM
    - Measuring Contributions of Blue Economy to National GDP

## Areas of Potential Collaboration with APEC OFWG

- Building a Sustainable Business Network for the Seas of East Asia
- Scaling up Blue Economy investments in East Asia through SEAKnowledgeBank.net
- Researching the contribution of the economic activities in coastal and marine areas as well as ocean and coastal ecosystems to national economies in countries of the region
- Highlighting policies and incentives to promote and facilitate investments in Blue Economy projects
- Development and demonstration of a pilot-scale Blue Economy fund, providing incentives and recognition to local governments and their private sector partners to implement ICM and Blue Economy initiatives



## Questions?

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Department of Environmental Management  
for the State of Pennsylvania

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**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/016**  
Agenda Item: III A

## **Economy Report – United States**

Purpose: Information  
Submitted by: United States



**APEC**  
PHILIPPINES  
2 0 1 5

**5<sup>th</sup> Oceans and Fisheries Working Group Meeting**  
**Boracay, Philippines**  
**10-12 May 2015**

**United States of America  
Economy Report  
5th APEC OFWG Meeting  
May 10-12, Boracay, Philippines**

*Updates since January 2015*

**Illegal, Unreported, and Unregulated (IUU) Task Force Update**

On March 15, 2015, the Presidential Task Force on Illegal, Unreported, and Unregulated (IUU) Fishing and Seafood Fraud, co-chaired by the Departments of Commerce and State, released its action plan. This plan articulates the aggressive steps that federal agencies will take both domestically and internationally to implement the recommendations the Task Force made in December 2014.

The plan identifies actions that will strengthen enforcement, create and expand partnerships with state and local governments, industry, and non-governmental organizations, and create a risk-based traceability program to track seafood from harvest to entry into U.S. commerce. The plan also highlights ways in which the United States will work with our foreign partners to strengthen international governance, enhance cooperation, and build capacity to combat IUU fishing and seafood fraud. This includes the Administration's work to secure historic and enforceable environmental provisions in the Trans-Pacific Partnership, a regional trade agreement that includes countries that together account for approximately one-quarter of global marine catch and global seafood exports.

Learn more about the action plan here:

[http://www.nmfs.noaa.gov/ia/iuu/noaa\\_taskforce\\_report\\_final.pdf](http://www.nmfs.noaa.gov/ia/iuu/noaa_taskforce_report_final.pdf)

In addition, the United States is seeking public input now through June 8 via in-person and web seminars, on the principles to be used in determining fish species "at risk" of these illegal activities. The draft principles list will be used to develop a draft list of species for a risk-based seafood traceability program. Recommended principles will need to be measurable, have a reasonable amount of existing data to assess, and be applicable to domestic and/or international fisheries. More information can be found here: <http://www.nmfs.noaa.gov/ia/iuu/taskforce.html>.

**U.S. Domestic Fisheries Reach Fewest Overfished and Stocks with Overfishing**

The 2014 Status of U.S. Fisheries report to Congress was recently released. The number of domestic fish stocks listed as overfished or subject to overfishing has dropped to an all-time low since 1997, when NOAA began tracking stock status. We recognize the progress still needed to ensure sustainable fisheries of all stocks, however the reduction in overfishing and overfished stocks illustrates the effectiveness of science-based management.

To read the full 2014 Status of U.S. Fisheries report, find fish stock status information, and learn more about U.S. fisheries management, go to the NOAA Fisheries website:  
[http://www.nmfs.noaa.gov/sfa/news/2015/status\\_of\\_stocks\\_2014.html](http://www.nmfs.noaa.gov/sfa/news/2015/status_of_stocks_2014.html).

### **Expansion of Two National Marine Sanctuaries Announced**

The Cordell Bank National Marine Sanctuary, located 42 miles north of San Francisco, will be expanded from 529 square miles to 1,286 square miles. The Gulf of the Farallones National Marine Sanctuary will be expanded from 1,282 square miles to 3,295 square miles of ocean and coastal waters.

The expansion is based on years of public comment and research by NOAA and its scientific partners that identified the nutrient-rich upwelling zone originating off Point Arena and flowing south into the original sanctuaries as one of the most productive in North America.

Cordell Bank and Gulf of Farallones national marine sanctuaries represent globally significant, extraordinarily diverse, and productive marine ecosystems that encompass areas as varied as estuarine wetlands, rocky intertidal habitat, open-ocean and shallow marine banks. They include areas of major upwelling where nutrients come to the surface and support a vast array of sea life including 25 endangered or threatened species, 36 marine mammal species, including blue, gray and humpback whales, harbor seals, elephant seals, Pacific white-sided dolphins, and one of the southernmost U.S. populations of Steller sea lions; over a quarter million breeding seabirds; and one of the most significant white shark populations on the planet.

### **Coastal Resilience Study Released**

A new NOAA study, published in *Environmental Science and Policy*, notes that the resilience of U.S. coastal communities to storms, flooding, erosion and other threats can be strengthened when they are protected by natural infrastructure such as marshes, reefs, and beaches, or with hybrid approaches, such as a “living shoreline” — a combination of natural habitat and built infrastructure. Analysis included assessing reports and peer-reviewed studies on the strengths and weaknesses of using built infrastructure, such as seawalls or dikes, natural infrastructure, or approaches which combine both. The study focuses on how these approaches help coastal communities reduce their risk of flooding and erosion, as well as additional benefits, and the tradeoffs when decision makers choose one type over another. Although specific to the United States, these findings can be informative or beneficial to international partners examining the possibility of using natural infrastructure for disaster risk reduction in their own communities. More on the study can be found here: <http://www.noaanews.noaa.gov/stories2015/20150429-noaa-study-finds-marshes-reefs-beaches-can-enhance-coastal-resilience.html>.





**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/017rev1**

**Agenda Item: X B**

## **Concept Note on Draft Action Plan for HLPD-FSBE Three Priorities**

**Purpose: Consideration  
Submitted by: Philippines**



**APEC  
PHILIPPINES  
2 0 1 5**

**5<sup>th</sup> Oceans and Fisheries Working Group Meeting  
Boracay, Philippines  
10-12 May 2015**

**APEC 2015**

**CONCEPT NOTE ON  
DRAFT ACTION PLAN FOR HLPD-FSBE THREE PRIORITIES  
(SUBMITTED FOR VETTING AND DISCUSSION)**

**Submitted by the Philippines (DENR-DA BFAR Joint Hosting)**

**I. Overview/Background**

APEC recognizes that food security and the development of the Blue Economy are key drivers of economic growth and sustainable development in the region. As relatively new topics, there is a need to better focus and coordinate APEC's work through, inter alia, the preparation and adoption by consensus of an APEC Action Plan for the High Level Policy Dialogue on Food Security and Blue Economy (HLPD-FSBE).

One way of achieving food security in the coastal and marine environment is to combat illegal, unregulated and unreported (IUU) fishing and improve the biodiversity of all support ecosystems for the fisheries such as the mangroves, seagrass beds, corals reefs, plankton and the soft bottom communities. A well-maintained ecosystem provides more ecological goods and better ecological services. Finally, the development of the Blue Economy is important in the context of APEC-OFWG's common understanding of the Blue Economy as an approach to advance sustainable management and conservation of ocean and coastal resources and ecosystems and sustainable development, in order to foster economic growth.

Recognizing the Ministerial Declarations and outputs from the Oceans Ministerial Meetings (OMM) and Food Security Ministerial Meetings (FSMM) over the years, the draft Food Security and Blue Economy Action Plan focuses efforts on collaborated and concerted actions in the following three priority areas:

1. Combat illegal, unreported and unregulated fishing (IUUF) for sustainability of food supply and trade;
2. Stop the decline of biodiversity of coastal and marine ecosystems in the APEC region; and,
3. Advance the concept of Blue Economy cooperation across APEC fora, as an approach to advance sustainable management and conservation of ocean and coastal resources and ecosystems and sustainable development, in order to foster economic growth.

**II. Objectives**

The objective of this concept note is to seek consensus from member economies on this draft of action plan to combat IUU fishing, arrest decline of biodiversity in coastal and marine



ecosystems and to advance blue economy in the APEC region. The outcome of this action plan is to contribute to global efforts in conserving and managing fisheries resources, improve biodiversity of coastal and marine ecosystems which can lead to sustainability in consumption and production and achieve food security, alleviate poverty as well as improve the resilience of ecosystems against effects of climate change.

### III. Tasks /Proposed Activities

Discussion and vetting for additional inputs to support the proposed Action Plan for HLPD-FSBE.

#### **PRIORITY 1: COMBAT ILLEGAL, UNREPORTED AND UNREGULATED FISHING (IUUF) FOR SUSTAINABILITY OF FOOD SUPPLY AND TRADE**

The issue of illegal, unreported and unregulated fishing (IUUF) in the APEC region poses serious threats not only to the biodiversity of marine resources that support fisheries but also to food security and local livelihoods and brings negative effects to the region's economic development. Dedicated efforts to strengthen conservation, management and rebuilding of fishery stocks and resources to ensure its long-term sustainability is of fundamental priority.

1. Establish a framework for cooperation among APEC economies and other relevant regional and international organizations towards collaborative efforts to develop and establish internal mechanisms within each economy to combat IUUF consistent with international laws and commitments that will (1) facilitate and strengthen the cooperation among member economies to effectively implement the monitoring, control and surveillance (MCS) of fishing activities from its commencement, through the point of landing up to the final destination; and (2) promote the development and adoption of properly designed tools for monitoring and assessment of catches for the management of fish stocks.
2. Develop environmentally sustainable business model; appropriate incentive systems (e.g., for the development and adoption of selective gear/capture technologies for legal-sized target species and quota systems); programs to rebuild fish stocks; private public partnerships; and mechanisms to support supplemental livelihood/small scale enterprises consistent with the APEC-OFWG common understanding of Blue Economy.
3. Conduct and actively pursue social marketing and education campaigns to build and enhance constituencies and champions to combat IUUF.
4. Promote the ratification, entry into force, and implementation of the Food and Agriculture Organization Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing.

**PRIORITY 2: STOP THE DECLINE OF BIODIVERSITY IN COASTAL AND MARINE ECOSYSTEMS IN THE APEC REGION.**

Stopping the decline of biodiversity in the marine and coastal areas in the APEC region will enhance the common efforts towards achieving the Aichi Biodiversity targets and goals for sustainable ocean development. Priority 2 will address the drivers and pressures adversely affecting the biodiversity of coastal and marine ecosystems in order to improve their resilience and achieve sustainability to provide ecological goods and services.

1. Establish an APEC-wide framework of cooperation adopting the best practices, including the Coral Triangle Initiative<sup>1</sup> and relevant initiatives of the Convention of Biological Diversity<sup>2</sup> with a view to manage food sources as entire food system from crops to fisheries to achieve food security and poverty alleviation, while preserving ecological integrity of coastal and marine ecosystems.
2. Create environmentally sustainable financing models, incentive systems, private public partnerships, social marketing and education campaigns to sustain efforts for the conservation and enhancement of biodiversity for coastal and marine ecosystems.
3. Develop and adopt ecosystem-based approaches (EBA) and climate-responsive and adaptive technologies within the APEC region to improve the resiliency of marine and coastal ecosystems that will maintain and enhance ecological goods and services as part of disaster risk reduction measures and support sustainable livelihoods.

**PRIORITY 3: ADVANCE BLUE ECONOMY COOPERATION ACROSS APEC FORA, AS AN APPROACH TO ADVANCE SUSTAINABLE MANAGEMENT AND CONSERVATION OF OCEAN AND COASTAL RESOURCES AND ECOSYSTEMS AND SUSTAINABLE DEVELOPMENT, IN ORDER TO FOSTER ECONOMIC GROWTH**

1. Develop and promote the use of green, environmentally sustainable consumption and production (SCP) business models consistent with the concept of Blue Economy to ensure food security in the APEC region.
2. Develop, support and provide incentive systems for Blue Economy, climate-responsive and adaptive enterprises, and diverse livelihood strategies that reduce hazards associated with climate change and enhance the resiliency of coastal ecosystems.

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<sup>1</sup>such as building on existing networks that facilitate regional learning exchanges; enhance capacity and expertise; formulate metric key indicators for monitoring and evaluation (M&E); and develop knowledge management and communication strategies;

<sup>2</sup> implementation of integrated science-based management of watersheds, rivers, coasts, networks of MPAs, seascapes, and Ecologically or Biologically Significant Areas (EBSA)

3. Pursue collaborative activities to help build and enhance adaptive capacities and resilience of communities, institutions, and coastal and other ecosystems.
  
4. Establish working partnerships and networks among APEC economies as well as with international and regional bodies, and non-government organizations (NGOs) in order to jointly implement regional and national activities pursuing Sustainable Consumption and Production in the development of a Blue Economy within the APEC Region.

#### **Monitoring Progress and Reporting**

Member Economies will develop and adopt a framework for an APEC-wide reporting mechanism which will include key targets and indicators against which progress of the implementation of the APEC Action Plan for HLPD-BFSE can be monitored. While it will be for each Member Economy to decide the most appropriate key targets and indicators for its activities, the HLPD may wish to consider common and collective key targets and indicators for the three priorities of the Action Plan. Further discussions on the reporting mechanism will be held at both the Oceans and Fisheries Working Group (OFWG) and Policy Partnership on Food Security (PPFS).

#### **IV. Timeline**

<b>Date</b>	<b>Task</b>
OFWG5, 2015 (May 10-12, 2015)	Discuss and vet the draft action plan for HLPD-FSBE to obtain consensus from APEC economies
Intercessional, (June to August) 2015	Workshops for finalizing action plan for HLPD-FSBE
HLPD-FSBE, October 4-6, 2015	Formulation of inputs to Leader's Declaration
2016-2017	Disseminate, implement and monitor and evaluate outcome of action plan

#### **V. [Optional section on 'Funding'] to follow**





**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/018**

Agenda Item: II C

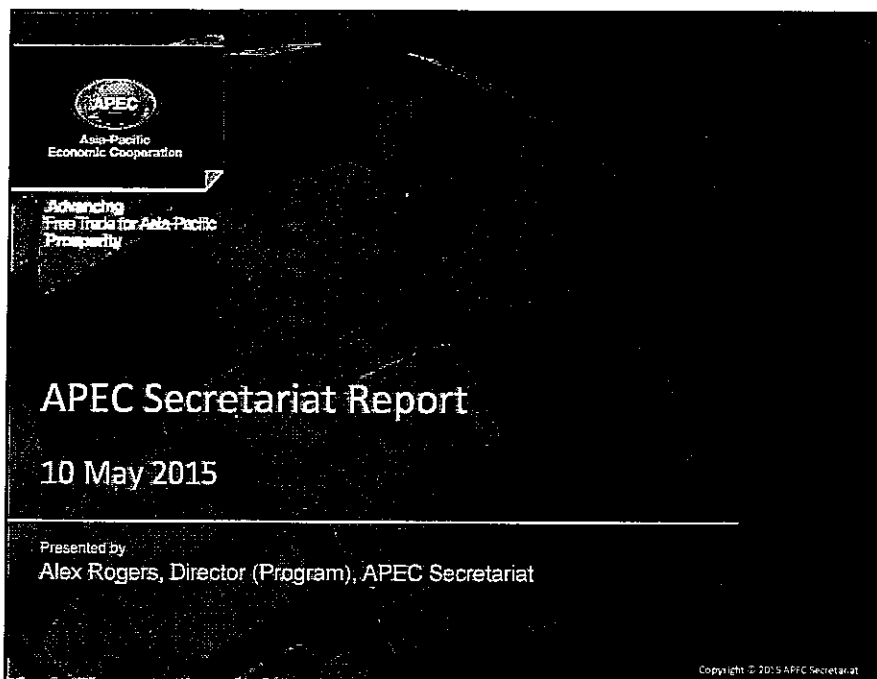
## **APEC Secretariat Report**

Purpose: Information  
Submitted by: APEC Secretariat



**APEC**  
PHILIPPINES  
2 0 1 5

**5<sup>th</sup> Oceans and Fisheries Working Group Meeting  
Boracay, Philippines  
10-12 May 2015**



The image shows the cover of an APEC Secretariat Report. At the top left is the APEC logo with the text "Asia-Pacific Economic Cooperation". Below it is the slogan "Advancing Free Trade for Asia-Pacific Prosperity". The main title "APEC Secretariat Report" is prominently displayed in the center, with the date "10 May 2015" below it. At the bottom, it says "Presented by Alex Rogers, Director (Program), APEC Secretariat". A small copyright notice "Copyright © 2015 APEC Secretariat" is visible in the bottom right corner.

APEC  
Asia-Pacific  
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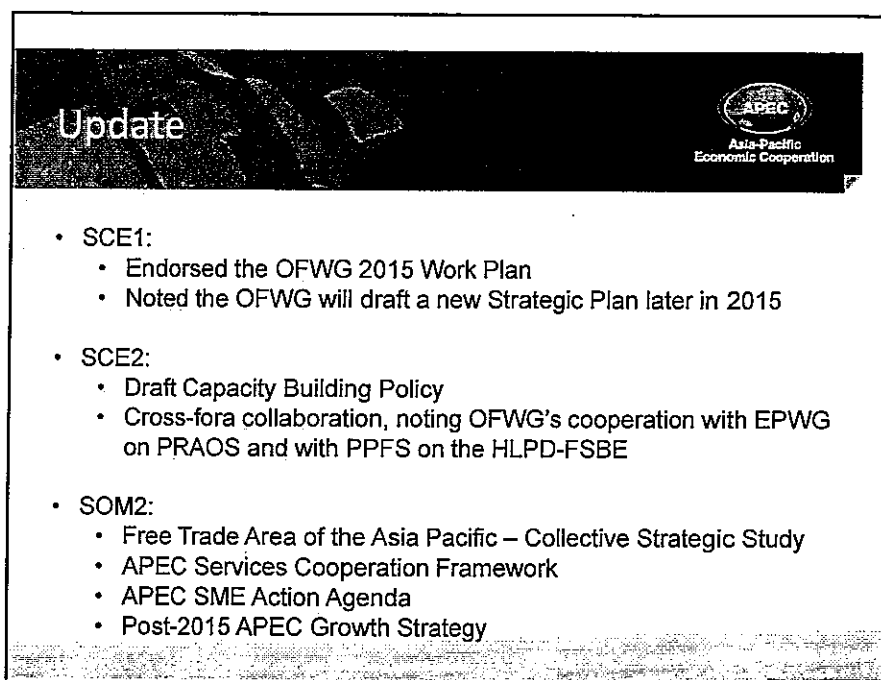
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**APEC Secretariat Report**

10 May 2015

Presented by  
Alex Rogers, Director (Program), APEC Secretariat

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The image shows a slide titled "Update" with the APEC logo in the top right corner. The slide contains a bulleted list of updates under three categories: SCE1, SCE2, and SOM2.

Update

APEC  
Asia-Pacific  
Economic Cooperation

- SCE1:
  - Endorsed the OFWG 2015 Work Plan
  - Noted the OFWG will draft a new Strategic Plan later in 2015
- SCE2:
  - Draft Capacity Building Policy
  - Cross-fora collaboration, noting OFWG's cooperation with EPWG on PRAOS and with PPFS on the HLPD-FSBE
- SOM2:
  - Free Trade Area of the Asia Pacific – Collective Strategic Study
  - APEC Services Cooperation Framework
  - APEC SME Action Agenda
  - Post-2015 APEC Growth Strategy



**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/019**  
Agenda Item: IV C c

## **APEC Project Updates**

Purpose: Information  
Submitted by: APEC Secretariat



**5<sup>th</sup> Oceans and Fisheries Working Group Meeting**  
**Boracay, Philippines**  
**10-12 May 2015**



Asia-Pacific  
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# APEC Projects Update

10 May 2015

Presented by  
Alex Rogers, Director (Program), APEC Secretariat

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## Update



Asia-Pacific  
Economic Cooperation

- OFWG endorsed three (3) Concept Notes for Session 1 2015
- All were high quality
- None received funding, despite rank 1 status
- #1 OFWG note from Peru was closest
- 112 notes in total were submitted from across APEC, with 42 funded – but only 17 of those from general funds
- Committee scores evidenced a preference to projects on SME issues



## Update (continued)



- For the OFWG's 3 concept notes, self-funding remains an option
- If not self-funded, endorsement will lapse
- Session 2 concept note deadline is 1 July 2015
- Session 2 is the last project funding round this year
- Competitive funding environment will continue

**PROJECTS OVERVIEW:**  
**Session 2, 2015: Funds Available**


Project Fund	Session 2, 2015 (US \$)	To Note:
General Project Account (GPA)	\$975,000	<ul style="list-style-type: none"> <li>• Figures are estimates as of 21 April 2015</li> <li>• Updated estimates for Session 2, 2015 will be confirmed by mid June 2015 and will fluctuate based on contributions received, funds dispersed and monies returned;</li> <li>• Figures and availability for 2015 will also be available on the APEC website</li> <li>• All Figures are in USD</li> </ul>
Trade & Investment Liberalization and Facilitation Account (TILF)	\$400,000	
APEC Support Fund (ASF) General Fund	\$691,000	
<b>ASF Sub-funds</b>		
(i) Human Security	\$220,000	
(ii) Health & Emergency Preparedness	\$137,000	
(iii) Energy Efficiency	\$3,195,000	
(iv) ANSSR	\$524,000	
(v) Supply Chain Connectivity	\$1,215,000	
<b>Total GPA+TILF+ASF</b>	<b>\$7,357,000</b>	

## Relevant S1 projects

- CTI 7 – Promoting the Participation of SMEs in Textile and Apparel Global Value Chains (Viet Nam)
- CTI 3 – Promoting SMEs Integration into Global Value Chains in IT/Electronics (Korea)
- SCSC 3 – Preparing Trainers to Deliver Sustainable Education to Prevent Emerging Animal Diseases and Food Safety Concerns Threatening Aquaculture Development (United States and Viet Nam)
- PPSTI SF – Building Regional Ocean and Land Observation Systems to Safeguard APEC Resources and Communities (will be shared with OFWG and EPWG during SOM2)

## PROJECT RESOURCES

### Forms & resources on website

Home | Groups | News | Projects | Publications | Working Papers | Events | Press | About Us

View all of Home > Projects > Forms and Resources

Project Updates and Resources

Project Guidelines

Forms for Applicants

Resources for Applicants

Forms and Resources for Projects in Implementation

Contact Us & Resources

## PROJECT RESOURCES

### Further assistance



#### Further assistance on projects can be found:

- Through the APEC Secretariat: your Program Director or the PMU: <http://www.apec.org/ContactUs.aspx?t=Secretariat>  
PMU Program Director, Andrew R Lloyd: [arl14@apec.org](mailto:arl14@apec.org)
- In the *Guidebook on APEC Projects and Proposal Development Materials*:  
<http://www.apec.org/Projects/Forms-and-Resources.aspx>
- On the *AIMP Project Database* site:  
[http://member.aimp.apec.org/pdb\\_sites/default.aspx](http://member.aimp.apec.org/pdb_sites/default.aspx)
- Through your BMC or fora delegate





**Asia-Pacific  
Economic Cooperation**

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**2015/SOM2/OFWG/020**  
Agenda Item: II C

## **APEC Report on Key Developments - Jan to May 2015**

Purpose: Information  
Submitted by: APEC Secretariat



**5<sup>th</sup> Oceans and Fisheries Working Group Meeting**  
**Boracay, Philippines**  
**10-12 May 2015**

## CONTENTS

1. APEC 2015 Priorities (2)
  
2. Key Outcomes of Senior Officials and Committee Meetings (2)
  - 2.1 Second Senior Officials' Meeting
  - 2.2 Committee of Trade and Investment (CTI)
  - 2.3 Economic Committee (EC)
  - 2.4 Budget and Management Committee (BMC)
  - 2.5 APEC Business Advisory Council (ABAC)
  
3. Developments within the Secretariat and Policy Support Unit (5)
  - 3.1 Key Staff Movements and Appointments
  - 3.2 Project Management Unit (PMU)
  - 3.3 Policy Support Unit (PSU)
  - 3.4 Communications and Public Affairs
  - 3.5 US-APEC Technical Assistance to Advance Regional Integration (US-ATAARI)

## 1. APEC 2015 PRIORITIES

In 2015, APEC's theme is *"Building Inclusive Economies, Building a Better World"*. The priority areas will focus on inclusive growth through:

- enhancing the regional economic integration agenda;
- fostering SME's participation in regional and global markets;
- investing in human capital development; and
- building sustainable and resilient communities.

## 2. KEY OUTCOMES OF SENIOR OFFICIALS AND COMMITTEE MEETINGS

### **2.1 First Senior Officials' Meeting, 6-7 February 2013, Clark, Philippines**

First Senior Officials Meeting (SOM) addressed the following priorities:

- Promoting APEC 2015 Priorities
- Implementing the Beijing Mandate
- Next Steps for the post 2015 APEC Growth Strategy.

### **2.2 Committee on Trade and Investment (CTI)**

The CTI met in Clark, the Philippines from 3-4 February 2015 and discussed the Committee's priorities and work program for 2015. The CTI priorities and work program are aligned with the 2015 APEC priorities, and include the following:

- Support for Multilateral Trading System
- Advancing Regional Economic Integration
- Strengthening Comprehensive Connectivity and Infrastructure Development
- Expanding Regulatory Cooperation and Advancing Regulatory Convergence
- Promoting Innovative Development
- Economic Reform and Growth.

The highlights of the meeting were:

- WTO: Discussed and agreed to coordinate a standalone statement for MRT in May to Supporting the Multilateral Trading System based on the proposal by Canada (Document 2015/SOM1/CTI/039). Discussed and agreed that Senior Officials will urge member economies to notify the WTO of their acceptance of the Trade Facilitation Agreement;
- FTAAP: Agreed on establishing a Task Force comprising of all 21 member economies to undertake the *Collective Strategic Study on Issues Related to the Realization of the FTAAP*, and on the Working Paper on the *Collective Strategic Study on Issues Related to the Realization of the FTAAP*.
- Progress on the Second Regional Economic Integration Capacity Building Needs Initiative (CBNI 2).
- RTAs/FTAs information sharing: Agreed to conduct CTI-level trade policy dialogues at SOM2, and SOM level trade policy dialogue at SOM3.
- Global Value Chains Blue Print: Agreed on work plans for the 6 work streams, including streams related to promoting SMEs' participation in the GVCs and enhancing resiliency of GVCs.
- Implementation of tariff reduction 54 Environmental Goods: Technical discussions on product coverage were conducted through the CTI Friends of Chair on Environmental

- Goods based on the "Draft Implementation Reference Guide". Agreed that detailed implementation plans be submitted by economies ahead of MRT.
- Services: Progress on the development of an action plan on manufacturing related services. Discussion on the development of an action plan on trade liberalization and facilitation of environmental services.
  - Supply chain performance: Members were invited to participate in projects under the APEC supply chain connectivity fund. Progress was noted on related initiatives including pilot projects on Global Data Standards and the Ad-hoc joint working group for APEC Model E-port Network.
  - Cross-cutting issues: Update on projects such as SMEs' integration to the GVCs, study on infrastructure investment, peer review and capacity building to advance cross-sectoral issues on physical connectivity.

The CTI will next meet in Boracay, the Philippines from 15-16 May 2015.

### **2.3 Economic Committee (EC)**

The first EC meeting, held in Clark, the Philippines, in February, 2015 included two policy dialogues 1) State of the Regional Economy and its Policy Implications; and 2) Improving the Quality of Public Service.

Australia presented on the outcomes of the ANSSR workshop held on 2 February 2015, and reported an emerging view that while the five pillars of ANSSR were still relevant, they could be streamlined and reduced in number. The EC agreed that Australia would circulate a short paper intersessionally on next steps for ANSSR.

The U.S. proposed a process for taking forward the Ease of Doing Business program post-2015. The EC agreed that economies would review and discuss the process intersessionally, with the aim of endorsing a "roadmap" for recommendation to Ministers.

The Philippines identified objectives for the upcoming Structural Reform Ministerial Meeting: 1) to review progress made on ANSSR since 2010; 2) to set the direction for post-2015 structural reform. The Philippines also notified the EC that it would hold a one-day meeting of EC representatives on the margins of SOM2 to discuss the SRMM. The EC also agreed that the Competition Policy and Law Group and the Competition Policy FOTC will be combined.

The EC agreed that a new FOTC on Strengthening Economic and Legal Infrastructure would be created on a two-year trial basis, with HKC as the convenor. EC members considered a draft framework for development of the 2015 AEPR topic, Structural Reform and Innovation.

On the margins of the second EC meeting, two workshops were held:

- Progress under APEC New Strategy for Structural Reform and Future Direction of APEC's Structural Reform Agenda; and
- UNCITRAL Instruments and the Ease of Doing Business Initiative.

In addition, a joint EC-GOS-PECC Meeting on Regulatory Reform and Services was also held on the margins.

### **2.4 SOM Steering Committee on ECOTECH (SCE)**

The SOM Steering Committee on ECOTECH (SCE) met in Clark, Philippines on 5 February 2015. At the meeting, the SCE commenced discussion on a capacity building policy that aims to provide clear direction and guidance on the implementation of capacity building activities in APEC.

The SCE agreed on its 2015 work plan and took a number of decisions on the sub-fora administration, including the following:

- extending the mandate of the TFI Steering Council until 2017;
- forming review groups to help improve sub-fora' strategic plans;
- amending the Fora Report template to reflect the revised ECOTECH Medium-term Priorities;



- approving PPWE's request to hold two meetings per year.

SCE took note of the APEC Secretariat Executive Director's report on the Alignment of SCE Fora Work Plans with APEC's Overall Vision and Objectives, and the submission of twelve work plans of twelve sub-fora which were approved by SCE-COW held on 4 February 2015.

### **2.5 Budget and Management Committee (BMC)**

The BMC held its first meeting of 2015 on 3 February, the outcomes of which were set out in the BMC Chair's Report to SOM1. The key matters included:

- Agreed on an aspirational target for voluntary contributions among member economies to untied APEC project funding, and to transfer a portion of reserve from the Secretariat Account to the General Project Account;
- Noted four new sub-funds to be established under the APEC Support Fund in 2015; and
- Approved a new edition (10) of the Guidebook on APEC Projects, which incorporates recent changes to project systems and processes, including caps on the amount of funding available for each TILF and ASF General project.

BMC agreed to a request from SCE to incorporate their Capacity Building Guidelines into APEC Project Materials. They also accepted the invitation from the Chair of SCE to participate in the development of an APEC Capacity Building Policy.

The next BMC meeting will be held in the margins of SOM3 in Cebu, Philippines.

### **2.6 APEC Business Advisory Council (ABAC)**

#### **Second ABAC Meeting (Mexico City, Mexico, 20-23 April 2015)**

During its second meeting of the year, ABAC members were briefed by Undersecretary Adrian Cristobal, the Philippine APEC Senior Official, on the outcomes of the First APEC Senior Officials' Meeting (SOM I). The ABAC Chair, Ms Doris Ho, reviewed the work program for 2015, as well as on the SME Summit to be held in Manila, Philippines on 17 November 2015.

As a main outcome, ABAC Members finalized a letter to be sent to APEC Ministers Responsible for Trade (MRT). Additionally, ABAC members discussed a proposed work program to carry the ABAC study on FTAAP, as well as a proposal for a new strategy on communications and advocacy.

ABAC has held so far, two out of four meetings programmed for this year:

First ABAC Meeting	27 - 30 January 2015	Hong Kong, China
Second ABAC Meeting	20 - 23 April 2015	Mexico City, Mexico
Third ABAC Meeting	10 - 13 August 2015	Melbourne, Australia
Fourth ABAC Meeting	13 – 16 November 2015	Manila, Philippines

APEC-CEO Summit will be held on the 16-18 November, and the ABAC Dialogue with Leaders will take place on 18 November in Manila.

More information on ABAC can be found at: <http://www.apec.org/Groups/Other-Groups/APEC-Business-Advisory-Council.aspx>.

### 3. DEVELOPMENTS WITHIN THE SECRETARIAT AND POLICY SUPPORT UNIT

#### 3.1 Key Staff Movements and Appointments

##### Departures – since February 2015

Name	Designation	Economy
Mr Jaehoon Jeong	Director (Information Technology)	Korea
Mr Andrew O'Sullivan	Director (Program)	Australia
Mr Peter Logan	Online Communications Manager	-
Ms Dai Yuwen	Analyst	-

##### Arrivals – since February 2015

Name	Designation	Economy
Penelope Howarth	Director (Program)	Australia

#### 3.2 Project Management Unit (PMU)

The first project session for 2015 commenced on 27 February. A total of 112 concept notes were received. BMC has to date approved 25 concept notes to progress to the project approval stage. BMC will approve further concept notes once they have been assessed by principal decision makers.

##### Concept Note Prioritization and Ranking

With BMC approval, a full pilot of a new system to prioritize concept notes was implemented during Project Session 1, 2015. Based on an assessment of the pilot, including member feedback, BMC will decide inter-sessionally before Project Session 2 whether and how the new scoring system will continue.

##### Multi Year Projects

The outcomes of a mid-term review of the multi-year project (MYP) pilot was considered at BMC 1. BMC decided that, once the MYP pilot projects are completed they should be evaluated for effectiveness before a decision is made whether to continue with MYPs into the future. The evaluation is scheduled to occur at the end of 2016

#### 3.3 Policy Support Unit (PSU)

The PSU Annual Report 2014, complete with the audited financial accounts, is published in April 2015. The PSU's deliverables in the first quarter of the year consist of (1) a policy brief on SME internationalization and measurement; (2) an issues paper on services, manufacturing and productivity; (3) a synthesis report of value chain resilience in the Asia Pacific; and (4) 2014 update on IFAP implementation.

The following deliverables are expected by the second quarter:

- For CTI, a study on Promoting Products which Contribute to Sustainable and Inclusive Growth through Rural Development and Poverty Alleviation.
- For EC, the report on APEC Economic Trends Analysis
- For MRT, the report on Key Trends and Developments Relating to Trade and Investment Measures and Their Impact on the APEC Region
- For PPWE, the APEC Women and the Economy Dashboard

To view the latest PSU monthly work program, please go to: <http://www.apec.org/About-Us/Policy-Support-Unit/PSU-Research-Focus>.

### **3.4 Communications and Public Affairs**

The Communications and Public Affairs Unit (CPAU) continues to execute the APEC's Strategic Communications Plan 2014-2016.

In February, the APEC Secretariat engaged a contractor to develop and implement a social media strategy and plan, including editorial content and campaigns, in order to significantly increase APEC's social media presence. Progress is also being made on plans to build communications capacity for host economies.

#### **News Releases and Media**

Between 1 January 2015 and 1 May, 15 news releases were published, 4 media advisories were distributed and 20 interviews with media organizations were completed for APEC officials, 16 of which were done by the Executive Director.

#### **APEC Secretariat Outreach with Leaders, Ministers and Officials (rolling initiative)**

Four current and former Leaders participated in Secretariat outreach, including print and video interviews and news releases between 1 January and 1 May 2015. Video interviews were also conducted with the APEC SCCP Chair on trade facilitation and Dr Mari Pangestu, former Trade Minister of Indonesia

#### **Thematic Outreach Campaigns**

To build greater awareness and understanding of work on the APEC 2015 agenda, new outreach campaigns have been developed and implemented on women's economic empowerment, and the 2015 ASPIRE Prize theme of climate change resilience. The campaigns consist of a series of news releases, social media output, video interviews and outreach events throughout the year.

#### **Speeches**

Between 1 January and 1 May 2015, Dr Alan Bollard delivered 14 speeches at events, including APEC, OECD and ASEAN meetings.

#### **APEC Bulletin Articles**

Between 1 January and 5 May 2015, five in-depth APEC Bulletin have been issued on a monthly basis highlighting APEC success stories and concrete benefits.

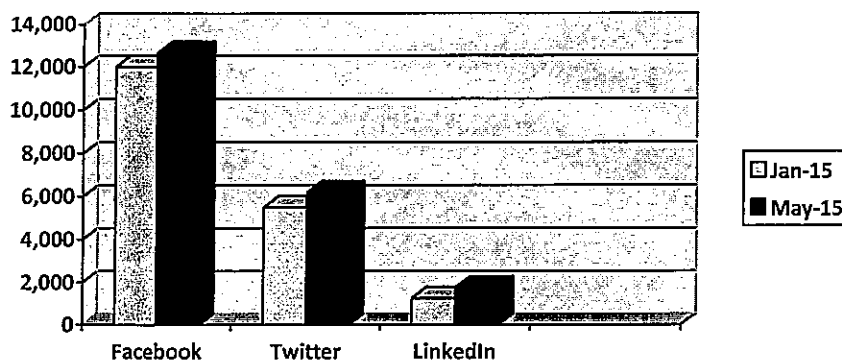
<b>Feature Article</b>	<b>Month</b>	<b>Forum</b>
Skills Training Boosts Livelihoods in the Asia-Pacific (Published in Manila Bulletin)	January 2015	HRD
50 Leading Companies for Women in the Asia-Pacific (Published in Manila Bulletin)	February 2015	PPWE
Bringing Telecom Innovations to Market Faster	March 2015	TELMIN
Helping Farmers Adapt to Climate Change (pending)	April/May 2015	ATCWG

#### **Social Media and Infographics**

From 1 January and 5 May 2015, CPAU created the following infographics for use in social media, brochures, the website and presentations:

- APEC in Charts (completed)
- Interactive APEC Environmental Infographic (almost completed)
- Interactive APEC Connectivity Blueprint (almost completed)

APEC's social media has been increasing steadily since 1 January 2015.



CPAU provided support for members and stakeholders:

- Supported host media and communications arrangements for SOM1, TELMIN, PPWE meeting (ongoing), High Level Policy Dialogue on Human Capacity Building (on-going) and SOM2/MRT (on-going).
- Facilitated media interviews for ABAC1 in Hong Kong, China
- Processed a total of 55 publications from all working groups and PSU.
- CPAU continues to work with the Host Economy to manage operations of the Host Documentation Centers for all SOM and related meetings.
- CPAU is planning to hold communications capacity building workshops in Peru in June and the Philippines in May.

**3.5 US-APEC Technical Assistance to Advance Regional Integration (US-ATAARI)**

US-ATAARI works closely with the APEC Secretariat to implement a range of activities designed to strengthen the APEC Secretariat as a customer-driven institution. From January 2015, US-ATAARI's activities include:

- Organized host year capacity building program for Papua New Guinea (April), which focused on issues related to the APEC Economic Committee, in coordination with the PSU, Australia and New Zealand; planning additional host year capacity building programs in Peru (June) and Viet Nam (August) in coordination with the PSU and CPAU.
- Planning is underway to organize the APEC Secretariat's annual retreat in July, which will focus on examining APEC's CORE values through a multicultural lens.