



# SEAFDEC

## NEWSLETTER

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### EDITORIAL

During the first quarter of 2014, SEAFDEC continued to enhance cooperation with regional and international organizations and agencies. Specifically, the collaborative arrangement between FRA of Japan and SEAFDEC to establish a Scientific and Technical Cooperation was extended for another five (5) years from 2014 to 2019. The renewed partnership assured SEAFDEC of the continued assistance from the FRA as the leading agency in fisheries R&D in achieving the goals of SEAFDEC and contributing to the integration of the ASEAN Economic Community by 2015.

SEAFDEC also organized program review and development meetings such as the 4<sup>th</sup> SEAFDEC Program Review for JTF Projects and the annual review of the SEAFDEC-Sweden project. The Special Meeting of the SEAFDEC National Coordinators for Identification of Prioritized Issues for Future Regional Program Formulation was also convened to discuss the priority

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### Scientific and technical cooperation between SEAFDEC and FRA renewed

The Signing Ceremony of the Renewed Memorandum of Understanding (MOU) between the Fisheries Research Agency (FRA) of Japan and SEAFDEC for Scientific & Technical Cooperation was held at the Boon Indrabarya Building in the Faculty of Fisheries of Kasetsart University, Bangkok, Thailand on 23 January 2014. The initial five-year MOU between SEAFDEC

and FRA to establish a “Scientific and Technical Cooperation” was first signed in 2004, and was extended for another five years starting 2009. Since the initiated 10-year cooperation ended on 21 January 2014 and considering that both organizations intend to continue the terms of cooperation, the arrangement

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*Signing of the renewed MOU between FRA and SEAFDEC*

### Dr. Shibuno: AQD's new Deputy Chief

Fifty-six year old Dr. Takuro Shibuno started his two-year term as AQD's Deputy Chief on 1 April 2014. A scientist from the Fisheries Research Agency (Japan) - National Research Institute of Aquaculture (FRA-NRIA), Dr. Shibuno is an expert in ecology of reef fishes and conservation ecology of coral and rocky reefs. Prior to his secondment at AQD, he headed NRIA's coastal ecosystem group and worked on: (1) changes in biodiversity of artificial reefs; and (2) impact of ocean acidification on early development of the economically valuable gastropod *Turbo cornutus*. Dr. Shibuno has published scientific articles in the Journal of Fish Biology, Marine



*Dr. Takuro Shibuno, the new AQD Deputy Chief*

Biology, Fisheries Science, Coastal Marine Science, Crustacean Research, among others. He has also served as head of NRIA's project management division for four years. ☒

## EDITORIAL

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issues to be considered in formulating regional SEAFDEC programs in the coming years. In addition, the Regional Technical Meeting on Information Gathering of Eel Resources and Aquaculture Production in Southeast Asia was also organized to compile information on the status of eel resources in the Southeast Asian countries. This meeting also aimed to develop a strategic program to understand the status and trend of eel fisheries and aquaculture as well as strengthen regional cooperation on eel R&D in the region.

This quarter also saw the strengthened capability of SEAFDEC and the Member Countries in terms of human resource development. Firstly, SEAFDEC receives the services of Dr. Takuro Shibuno as the new Deputy Chief of the Aquaculture Department; while the new set of RFPN members were also assigned at the SEAFDEC Secretariat. The RFPN members play an active role in sustaining the coordination and communication between SEAFDEC and the Member Countries. After completing their mission with SEAFDEC, the RFPN members are expected to continue their role in promoting responsible and sustainable fisheries development in their respective countries.

SEAFDEC has also sustained its efforts in providing several capacity building sessions for stakeholders to strengthen their capabilities in adjusting to the changing times in fisheries, disseminating its packaged technologies and information to the Member Countries through training, as well as providing the platform for exchanging information and experiences on the sustainable development and management of the region's fisheries. ☒

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## Exceeds expectations: new course on information dissemination

For 16 staff of Department of Agriculture – National Fisheries Research & Development Institute (DA-NFRDI), the 9-day training on “Capacity building on information dissemination and data management” organized by SEAFDEC/AQD on 10-18 March 2014 exceeded their expectations. This was the overall consensus during the integration workshop on the last day where feedback was offered and discussed. The course was organized by AQD based on an agreement signed on 18 February 2014 between AQD and NFRDI, to assist NFRDI in realizing its plans to put up a science documentation section within its program monitoring & evaluation division. For this purpose, NFRDI would

tap its own research officers & assistants, information officers & programmers who comprised the trainees. The course primarily covered the skill set required for science writers like news writing, design & layout, photography, website & social network mechanics; and accessing published information found in library databases, among others.

With AQD providing training mainly on aquaculture technologies, this is the first time that a non-technical course was offered. The course for NFRDI was not the first session though, since the first was conducted for SEAFDEC information officers in December 2011. ☒



## SEAFDEC In-house Seminar on Issues Requiring Increased Attention: Work in Fisheries

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the region by protecting their rights, and increasing awareness of relevant organizations including SEAFDEC on the importance of these people in light of the ASEAN Community Integration by 2015. Furthermore, the increasing challenge to attract additional workers/labor force to the fishing industry to meet labor requirements was also addressed, considering that this is not only a national concern but also a regional issue. Looking towards the future, the seminar saw the obvious connection and links between fisheries practices in the Southeast Asian countries, and the need to facilitate and improve the movement of fishery products within the region. Since the complexity of the fishing industry (catches, landings, processing and trade) in the region remains an interesting issue to follow-on

and monitor in terms of sustainability, transparency and traceability of fisheries products, therefore, the need to sustain sufficient number of workers indicates the strong links being given to “good labor practices” and the increased attention on the status of migratory workforce.

While preparing for the future, SEAFDEC indicated its commitment not only for the fishing industry of Thailand but also for the whole region. During the discussion, the possibility of organizing a regional consultation between ILO and SEAFDEC was indicated in order to explore the experiences of countries in the region in the application of rules and regulations that incorporate labor aspects into their respective laws relevant to fisheries. ☒



## Scientific and technical cooperation between SEAFDEC and FRA renewed

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was therefore extended for another five years from 2014 to 2019 through a formal signing ceremony which was graced by the presence of the FRA President, Dr. Toshihiko Matsusato and SEAFDEC Secretary-General, Dr. Chumnarn Pongsri.

The collaborative arrangement between FRA and SEAFDEC is aimed at developing scientific and technical cooperation in various fields of mutual interest; exchanging of information and expertise; and conducting detailed discussions between SEAFDEC and FRA on matters practical to both organizations. The previous 10-year collaborative arrangement from 2004 to 2014 covered relevant activities conducted by the three SEAFDEC Departments, such as with AQD for the research on diagnosis and preventive measures for the koi herpes virus (KHV) and on the reproductive biology and seed production of the Napoleon wrasse; with TD for the projects on

safety at sea and energy saving for small fishing boats and methodologies for tuna identification at tuna canneries, as well as the involvement of TD staff in research cruise and stock assessment activities of FRA; and with MFRDMD on artificial reefs for fishery resources enhancement. FRA has also been recognized as one of the organizations that provided technical assistance and inputs during the ASEAN-SEAFDEC Conference “Fish for the People Towards 2020” organized by SEAFDEC in Bangkok, Thailand in June 2011.

The Signing Ceremony was capped by a Mini-Symposium on the 10-year



*Mini-Symposium on 10-year Achievements and Prospects for Future SEAFDEC-FRA Cooperation*

Achievements and Prospects for Future SEAFDEC-FRA Cooperation where the discussions focused on technical cooperation issues, specifically with respect to the: (1) performance and achievements of the arrangement during the past 10 years; and (2) technical problems and interests of the two organizations under the arrangement. Six resource persons from FRA and SEAFDEC presented the achievements of the 10-year arrangement as well as prospects for future activities. ☒

## Zamboanga lawmaker invites AQD seaweed/grouper experts

AQD researcher Ms. Ma. Rovilla Luhan and scientist Dr. Evelyn Grace Ayson gave lectures on seaweed and marine fish culture, respectively, at the “Agar-agar farming, lapu-lapu culture and hatchery forum and consultation” organized by Hon. Congressman Victor Yu of Zamboanga (southwestern Philippines) from 7 to 8 February 2014 in Pagadian City. Forty-nine farmers and LGU officials from Pagadian and the municipalities of Labangan and Tukuran in Zamboanga del Sur attended the forum. From the discussion at the

forum, it appears that the farmers are constrained by two main problems: (1) outbreaks of ice-ice disease and lack of good quality seaweed planting materials; and (2) low supply of grouper fingerlings. Congressman Yu immediately addressed these, saying that his district will establish a seaweed tissue culture laboratory and later, a multi-species marine fish hatchery. As an initial step, he sent four lady trainees to AQD to join the “Seaweeds farming” course (19 March to 1 April) organized by AQD at its Iloilo station. ☒



*Zamboanga fish farmers listen to the inputs provided by AQD experts*

## Palawan students trained at AQD

Twenty-four BS Fisheries students and two instructors from the Western Philippines University (WPU) in Palawan finished their 5-day internship on 1 February 2014 at AQD's Iloilo station. They were given lectures on the culture of marine fish and abalone and practical sessions on hatchery operations of these commodities. A demo on using the transmission electron & scanning electron microscopes was also provided.

WPU requested AQD for this type of arrangement instead of the regular on-the-job training (OJT, usually done during the summer break) since the school's new curriculum does not have an OJT program. The instructors who attended this internship plan to propose to their school to adopt this type of arrangement for the succeeding batches of fisheries students. ☒

# DEPARTMENTAL ACTIVITIES

## SEAFDEC In-house Seminar on Issues Requiring Increased Attention: Work in Fisheries

In an effort to provide an introduction and updated information on the status of safety and labor standards for various types of fishing operations, and to enhance the understanding of SEAFDEC staff on possible roles of SEAFDEC in cooperating with relevant agencies on improving safety in fishing activities, fisheries labor and working conditions in the fishing industry, SEAFDEC convened the first of the series of “In-house Seminar on Work in Fisheries: Working Conditions, Employment and Migratory Labor”. With funding support from the SEAFDEC-Sweden Project, the seminar was held on 12 February 2014 at Maruay Garden Hotel, Bangkok, Thailand, to discuss the roles and responses of responsible agencies on this issue including that of SEAFDEC, as well as those of the Department of Fisheries (DOF) of Thailand and the International Labour Organization (ILO) in Thailand.



*Participants in the In-house Seminar on Work in Fisheries*

The In-house Seminar was attended by SEAFDEC officials and staff led by the Secretary-General Dr. Chumnarn Pongsri and Senior Advisor Dr. Magnus Torell. Members of the Regional Fisheries Policy Network (RFPN), as well as DOF officers. The seminar availed of the services of four invited resource speakers, namely: Dr. Waraporn Prompoj, Senior Expert on International Fisheries Affairs from DOF, Thailand; Mr. Max Tunon, Senior Project Coordinator from ILO,

Thailand; Mr. Sutee Rajruchithong, Head of Ship Division from SEAFDEC Training Department (TD); and Mr. Kongpathai Saraphaivanich, Information and Communications Technology Section Head from TD.

Focus of the discussion was on the movement of people engaged in fisheries and the efforts to support the fisheries workers and migratory workforce in

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## Begin with the end in mind: Training for MFRDMD staff on RBM approach for project development and management

After a series of training sessions on Project Development and Management using Result-based Management (RBM) Approach for SEAFDEC/TD and Secretariat, it was the turn for MFRDMD staff to undergo the same training. Organized at the MFRDMD premises in Kuala Terengganu, Malaysia on 18-20 February 2014, the training was attended by 16 participants (9 participants from MFRDMD, 2 from the Department

of Fisheries Malaysia, and 5 from the Fisheries Research Institute Malaysia). The training had 4 facilitators-cum-commentators from the SEAFDEC Secretariat, and Ms. Virgilia T. Sulit also from the SEAFDEC Secretariat, serving as a lecturer. During the training, the participants were grouped into three teams, each comprising participants with different levels of knowledge, skills and experiences.



The training was aimed at providing a forum for target participants to enhance their knowledge on project planning, monitoring and evaluation using the RBM approach. After the training, the teams presented three project documents prepared by themselves. After the presentations, the three teams received good comments from 2 commentators from the SEAFDEC-Sweden Project, Ms. Jenny Nord and Dr. Magnus Torell. The participants were specifically commended for having improved their skills based on the pre-training and post-training evaluation, and for embracing the RBM concept which they are becoming more capable of applying in their respective areas of work.





## SEAFDEC organizes the 4<sup>th</sup> Meeting of JTF Program Review and special meeting of SEAFDEC National Coordinators

The 4<sup>th</sup> Meeting of SEAFDEC Program Review for Japanese Trust Fund (JTF) Projects was organized on 25 February 2014 in Bangkok, Thailand. The Meeting assessed the JTF activities with more focus on JTF-V. Three invited external evaluators, namely Dr. Oopatham Pawaputanon Na Mahasarakam, Prof. Junichiro Okamoto and Dr. Rolando R. Platon, together with the SEAFDEC National Coordinators also as program evaluators provided range of comments for the improvement of future JTF projects to meet the requirements of Member Countries. In this connection, SEAFDEC was asked to disseminate its publications and other relevant technical results that emanate from its projects to the Member Countries to enable the countries to adopt the results in their respective fisheries development activities.



*Participants of the 4<sup>th</sup> Meeting of SEAFDEC JTF Program Review*

In addition, the special meeting of the SEAFDEC National Coordinators for Identification of Prioritized Issues for Future Regional Program Formulation was convened on 26 February 2014 in Bangkok, Thailand back-to-back with the 4<sup>th</sup> JTF Review Meeting to follow-up on the task assigned by the SEAFDEC Council during its Special Meeting held

in October 2013. Attended by all National Coordinators, the meeting discussed and agreed on priority issues to be considered in formulating regional SEAFDEC programs in the coming years. The outputs from the discussion would be submitted for consideration of the 46<sup>th</sup> Meeting of the SEAFDEC Council in April 2014 in Singapore. ☒

## SEAFDEC boosts the capabilities of young minds in fisheries development and management

SEAFDEC welcomed new blood at its Secretariat Office in Bangkok, Thailand who could provide new ideas and energy, and be developed into next generation of leaders in fisheries. Started in early 2000s, the Working Group on Regional Fisheries Policy (WGRFP) was established as an avenue for SEAFDEC to support the capabilities of young minds in fisheries development and management. The WGRFP was converted in 2006 into the Regional Fisheries Policy Network (RFPN) with expanded role of assisting SEAFDEC in the development of regional priority and policy issues through their participation in the implementation of regional programs.

For 2014, eight young fisheries officers with variety of specializations and skills have been dispatched from the Member Countries to comprise the RFPN team. An extremely active role has been played by the RFPN members in sustaining the coordination and communication between SEAFDEC and their respective countries. With respect to strengthening



*(From left to right) Ms. Leakhena Chin (Cambodia), Ms. Indri Yani Zaini (Indonesia), Mr. Chainuek Phakhounthong (Lao PDR), Ms. Hemalatha Raja Sekaran (Malaysia), Dr. Myo Min Hlaing (Myanmar), Mr. Efren Hilario (Philippines), and Mr. Nguyen The Hoang (Vietnam). Besides, Ms. Nichaphat Dissayaphong (Thailand) will also join the group starting July 2014.*

their capacity, academic writing and project management training course is being organized for the RFPN members, bringing about practical effectiveness of their short stint with SEAFDEC, enhancing their knowledge and skills, as well as gaining better understanding of urgent fisheries issues on a regional and global scale. After completing their assignment in SEAFDEC, the

RFPN members are expected to keep running their networking group and to continue playing the important role of promoting responsible and sustainable fisheries development in their respective countries.

In addition, the short-term assignment of Ms. Jenny Nord, who previously

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## Kenyans trained on seaweeds and aquafeeds

The specialized training courses on “Seaweed farming” and “Aquafeed formulation and preparation” were organized simultaneously by AQD from 19 March to 1 April 2014 with funding from the WorldBank through the Kenya Coastal Development Project.

The “seaweed course” included lectures on seaweed industry status, biology & taxonomy of seaweeds, nursery & grow-out culture, among others. There were also practical activities such as preparation of culture materials & media, production of micropagules, land-based nursery culture, planting of seaweeds, and preservation & identification of seaweeds. Although organized mainly for two staff of the Kenya Marine Fisheries Research Institute (KMFRI), two more trainees joined from Singapore and Philippines. Mr. James Anyango of KMFRI said that they have gained a lot of technical knowledge, both theoretical



*Kenyans practicing preservation and identification techniques of seaweeds*

and practical. The “aquafeed course” had lectures on nutrient requirements, feed formulation, feeding habits & behavior, apparent digestibility measurement, and economics of feeding, among others. There were also practical sessions on feed preparation, evaluation of formulated diets through a feeding experiment, and proximate analysis of feeds.

On behalf of his co-trainees from Kenya, Singapore and Philippines, Mr. Agwata Ototo, also of KMFRI, expressed appreciation to AQD for meeting their training expectations. *“I am very grateful for the experience that I have here; we wanted a training that will transform the academic knowledge that we have into practice and indeed we achieved it here. When we go home, I am sure that we can apply what we have learned in the actual production of feeds”*, he said. ☒



*Participants observing seaweed culture at a seaweed farm*

## AQD joins conferences in Vietnam and Japan

At the 2013 Asia-Pacific Aquaculture Conference organized by the World Aquaculture Society in Ho Chi Minh City, Vietnam from 10 to 13 December 2013, two AQD staff presented papers. AQD scientist Dr. Eleanor Tendencia talked about her study on “Management strategies employed by small-scale shrimp farmers in the Philippines in coping with economic crises due to shrimp diseases”. AQD technical assistant Mr. Eliseo Coniza, on the other hand, discussed his paper on the “Effect of liming on pond soil biota”. Dr. Tendencia’s participation was funded by the Department of Science and Technology (DOST-Philippines) and the Japanese Trust Fund, while Mr. Coniza was supported by AQD’s staff development program.

At the Philippine Studies Conference in Japan held in Kyoto from 28 February to 1 March 2014, AQD scientist Dr. Nerissa Salayo presented the preliminary results of her study on “Economics of stock enhancement in New Washington, Aklan, Philippines: baseline information for coastal area capability development”. The study which started in 2012 is a collaborative undertaking of the Research Institute for Humanity and Nature (RIHN) and AQD. The Conference was organized by the Center for Southeast Asian Studies in Kyoto University. ☒

## AQD and Hokkaido University: a continuing partnership

The “International seminar on environmental-friendly aquaculture and stock enhancement in Southeast Asia” was organized on 3 December 2013 by SEAFDEC/AQD and Hokkaido



University, Japan. At the seminar, four papers (3 of AQD and 1 of Hokkaido University) were presented. The topics included: (1) fatty acid profiles in abalone fed artificial diets supplemented with different enrichment products; (2) identification of bacterial species in biofilm on settlement plates for abalone larvae; (3) genetic studies on species identification & population structure of seahorse for stock enhancement; and (4) the various achievements in abalone and seahorse studies by the Japan Society for the Promotion of Science – Asia-Africa

Science Platform (JSPS-AASP) program. The partnership of AQD and Hokkaido University will continue as Prof. Yasuaki Takagi of Hokkaido University presented three more programs that AQD staff can participate in, including the JSPS-DOST bilateral program, Asia-Africa Science Platform program, and RONPAKU (dissertation, Ph.D.) program.

*“Try to be aggressive!”* AQD Chief Dr. Felix Ayson advised AQD’s young technical assistants whom he hopes to become bonafide AQD scientists in the future. ☒



## TD focuses “responsible fishing” for National Children’s Day”

Foreseeing the importance of fisheries to Thailand and its future generations, TD availed the opportunity on 11 January 2014 National Children’s Day to stage an exhibition on marine capture fisheries that focused on responsible fishing. Despite the dramatic changes in consumer’s behaviors in the past decades, the staples of fish and rice in the Asian diet have been unfailingly featured in Thai dishes.

At the Golden Jubilee Agriculture Museum, Pathum Thani Province, TD in collaboration with the Fish Marketing Organization (FMO) of Thailand brought out on display a booth filled with posters and pamphlets on responsible fishing and sea turtle conservation. More than 3,500 children showed up at the booth where they asked questions and obtained information materials of their interest.

Fisheries knowledge and information were also expressed in a display at the Navy Dockyard at Pomprachunlajomklao in Samut Prakan Province on the same



day for the same purpose. Some 3,000 children showed up, expressing their curiosity and interest in these fishing gadgets; they were fully satisfied by the information and knowledge received from the attendant TD personnel.

The National Children’s Day in Thailand is traditionally organized on the second Saturday of the year. It largely receives a widespread attention by the public, especially most government organizations, especially the Prime Minister and the military that staged their impressive shows for the benefit of the children as a contribution to the future of the nation.



## SEAFDEC boosts the capabilities of young minds in fisheries development and management

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worked at the Swedish Fisheries Agency in Sweden, with SEAFDEC enhanced the team of young minds. Aside from her experience in the fields of enforcement, fisheries economics and policy negotiation at the EU level, she also worked for three years at the European Commission as a fisheries scientist. Currently working at SEAFDEC Secretariat, she is responsible for the results monitoring of the SEAFDEC-Sweden Project on Fisheries and Habitat Management, Climate Change and Social Well-being in Southeast Asia, which covers the period from 2013 to 2017. “Assessing whether invested means have contributed to achieving the goals is crucial for any project”, Ms. Jenny Nord also extends advice and technical support to SEAFDEC by sharing her experiences from dialogue and decision making



Ms. Jenny Nord, Result Monitoring Expert at SEAFDEC Secretariat

processes within the European Union as a source of reference to the requirements of individual countries in the region. The relevance of sub-regional perspective on fisheries and habitat management is crucial with respect to the perspective of the establishment of the ASEAN Community by 2015 and beyond.



## AQD conducts mangrove course for POs, LGUs and NGOs

“The training has taught us to be more confident and has given us the right technical knowledge on how to plant mangroves the right way, in which we will be able to save money, time and manpower”, said Ms. Brenda Grafil, an agricultural technologist of Gen. MacArthur, a town in eastern Samar, Philippines. Ms. Grafil together with 19 other participants completed the four-day “Mangrove conservation, management and rehabilitation” course on 14 March 2014. The participants were from people’s organizations (POs), Eastern Samar local government units (LGUs) and non-government organizations (NGOs). The course had lectures on mangrove biology and ecology, taxonomy, and community structures with corresponding fieldwork held in Ajuy, Iloilo and Ibajay, Aklan of the Philippines.



Participants in a mangrove area at the environmental rehabilitation project

The training was part of the environmental rehabilitation project which focuses on marine protected areas and mangroves being done by the Foundation for the Philippine Environment. It was carried out in collaboration with the Zoological Society of London - Philippines and AQD.



# SPECIAL REPORT

## Management of Small Pelagic Fishery Resources in the South China Sea and Andaman Sea Areas

By Raja Bidin Raja Hassan, SEAFDEC/MFRDMD

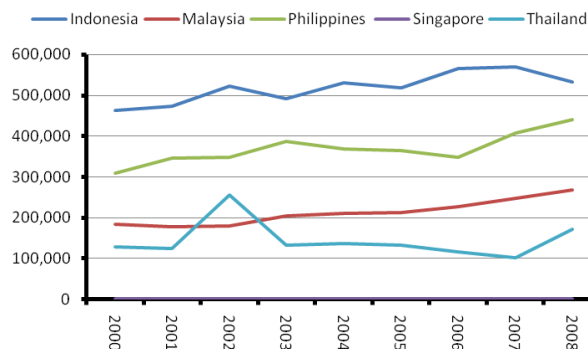


### Introduction

Fishes could be grouped into two broad categories: those that live at or associated with the seafloor known as the demersal group of fish, and those that live mainly in the water column above the seafloor which are the pelagic group of fish. Pelagic fishes, particularly the small pelagics are important elements of the ecosystems in relation to their trophic linkages (Sherman, 2008), which give them special significance when it comes to identifying the marine ecosystem (Skjoldal and Misund, 2008). Fast-swimming and schooling, pelagic fishes generally eat whatever prey is available in terms of size, catchability and abundance. The broad range of prey for pelagic fish includes zooplankton, squid as well as other pelagic fish, even the younger stages of their own kin. In addition to being eaten by other pelagic fish, small pelagics are also eaten by a wide range of predators in the marine and coastal ecosystems. Among the important small pelagic species are from the groups of herrings, anchovies and sardines (Clupeiformes), and mackerels and scads (Perciformes).

In the Southeast Asian region, two important families of small pelagic fish are the family of mackerels, tunas and bonitos (Scombridae), and the family of jacks, pompanos and scads (Carangidae). Scads and mackerels are the two most important small pelagic fishes which contribute to more than 39% of the small pelagic or 10% of the total capture production in 2008. However, production data shows fluctuating increment trends for the past ten years until 2008 in the five countries with available data (**Fig. 1**). The production of small pelagics is more significant in Malaysia, Brunei Darussalam and the Philippines as shown in Table 1. Among the five countries, Indonesia and the Philippines lead the highest volume of

landings in terms of quantity (MT) followed by Malaysia and Thailand. The production in Singapore is negligible.



**Fig. 1:** Production trends of scads and mackerels (MT) in selected Southeast Asian countries (2000-2008)

### Distribution of Scads and Mackerels by Ecosystem

In 2008, scads were found to be more dominant in the South China Sea, contributing up to 25% to the total small pelagic production or 7% of the fish total production. As for mackerels, it contributed about 15% to the total small pelagic production or 4% of the fish total production. On the other hand, mackerels was more dominant in the Eastern Indian Ocean contributing more than 26% to the total landings of the small pelagic as compared to only 12% contribution by the scads. A comparison of the production of Indonesia, Malaysia and Thailand showed that scads have been predominantly caught in the South China Sea rather than in the Eastern Indian Ocean except for Thailand. However, mackerels which are less dominant in the South China Sea of Indonesia and Malaysia were found to be more dominant in the Gulf of Thailand than in the Andaman Sea of Thailand. This indicates that species dominance in the Gulf of Thailand may be different than that of the other parts of the South China Sea.

It is interesting to observe the status of scads and mackerels in the EEZs of Thailand and Malaysia in the Eastern Indian Ocean and in the South China Sea. The fish stocks in these adjacent EEZs of the two countries are most likely shared. Therefore, an over-exploitation of stocks in one of the EEZs may be replenished by the recruitment of those species that originates in the other country. But over-exploitation in both EEZs of the same stocks could lead to stock decline or even collapse.



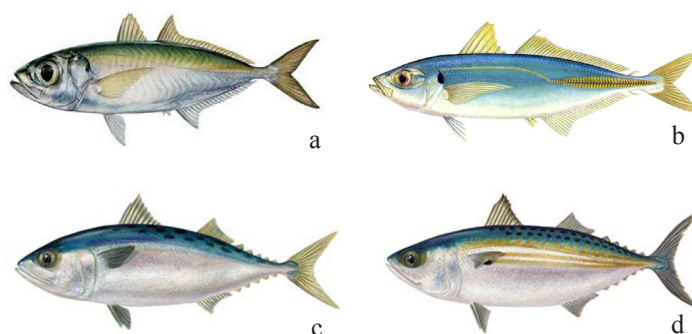
Table 1: Contribution of scads and mackerels to the total catch and to the total small pelagic fish production in the South China Sea and Eastern Indian Ocean in 2008 (Source: SEAFDEC)

Area	Country	Total Landings (MT)	Total Pelagic Production (MT)	Total Round Scad Production (MT)	Total Indian Mackerel Production (MT)
South China Sea	Brunei Darussalam	2,346	879	258	147
	Cambodia	84,550	0	0	0
	Indonesia	3,286,260	994,075	266,787	157,076
	Malaysia	721,934	228,507	59,457	30,724
	Philippines	2,367,017	1,020,151	297,892	142,258
	Singapore	1,598	112	43	0
	Thailand	940,088	274,785	3,731	44,196
	Vietnam	1,718,900	0	0	0
	<b>Total</b>	<b>9,122,693</b>	<b>2,518,509</b>	<b>628,168</b>	<b>374,401</b>
Andaman Sea	Indonesia	1,768,223	595,834	60,580	109,211
	Malaysia	672,597	236,107	37,492	139,597
	Myanmar	1,679,010	0	0	0
	Philippines	20,563	0	0	0
	Singapore	25	25	0	0
	Thailand	704,711	188,873	22,514	15,214
	Vietnam	227,700	0	0	0
	<b>Total</b>	<b>5,072,829</b>	<b>1,020,839</b>	<b>120,586</b>	<b>264,022</b>

## Status and Trends of Mackerel and Scad Production

Mackerel stocks are exploited by three main fisheries: purse seine, trawl and drift/gill net fisheries. The fishing grounds of purse seiners and trawlers are more offshore than the drift/gill netters. This requires analysis of landing data by species since distribution of the species might be different in these fishing grounds. Results of a study by MFRDMD showed that the Indian mackerel (*Rastrelliger kanagurta*) made up about 25% of the total catch of purse seines in the South China Sea off Malaysia, while the short mackerel (*Rastrelliger brachysoma*) only contributed about 2% (Raja Bidin and Ku Kassim, 2007). In the Andaman Sea, purse seines using FADs and light purse seine are catching more quantities of the Indian mackerel, while the short mackerels are caught mainly by Thai purse seines. However, trawlers using high opening trawl nets mainly catch the short mackerels.

An analysis of the ten-year fishery statistical data provided yearly in the published SEAFDEC Statistical Bulletin for Southeast Asia was able to show the trends of landings by group of fish: scads and mackerels. However, the trends could only be interpreted as describing the status of the fish stock



Some common small pelagic fishes of the region: a) Bigeye scad (*Selar crumenophthalmus*); b) Round scad (*Decapterus maruadsi*); c) Short mackerel (*Rastrelliger brachysoma*); and d) Indian mackerel (*Rastrelliger kanagurta*)

if it was done at species level. As fish distribution is more by ecosystem rather than by national boundary, stock assessment is required for the whole South China Sea or Andaman Sea, the two main ecosystems of the region. In order to pursue this, all Member Countries in the region should provide the required data at the level that could be used to describe the status of the fish stock. This information will help to promote a better management, particularly for shared stocks in the region.

## SEAFDEC Initiatives

Started by SEAFDEC/MFRDMD in 2013, the “Comparative Studies for Management of Purse Seine Fisheries in the Southeast Asian Region” is one of the new projects under the Japanese Trust Fund which would be completed by 2017. The project involves compilation and comparison of annual and/or monthly CPUE where data from the region are available during the last three decades, comparison of TAC systems in the world, genetic study of a commercially-important pelagic species, and charting of management strategies for sustainable purse seine fisheries in the Southeast Asian region. Since catch-effort statistics are available in Malaysia and Thailand while CPUE is an indirect measurement of abundance of a target species in fisheries, MFRDMD will make its first attempt to examine the trend of resource level using CPUE during the last three decades. At the same time, MFRDMD will review and compare the TAC systems in the world to examine which TAC system is applicable for management of small pelagic fishery in the region. Moreover, a genetic study would be conducted to understand the extent of admixture of target species between South China Sea and Andaman Sea and/or within South China Sea for small pelagic fishery management. At the end of the project, MFRDMD will review available information including stock levels and together with the Member Countries, will examine management strategies applicable for sustainable purse seine fisheries in the region.



# REGIONAL PROGRAMS

## IWRESA: Does resource enhancement work?

Yes, it does, and efforts made by Japan are probably the best examples in Asia and the Pacific. This was one of the presentations at the IWRESA 2014 or the “International Workshop on Resource Enhancement and Sustainable Aquaculture” held on 5-7 March 2014 in Iloilo City. Organized by AQD with funding from the Japanese Trust Fund, IWRESA was attended by 172 academicians & researchers, government extensionists, the private sector, and representatives from SEAFDEC Member Countries and featured 42 oral presentations and 15 poster papers.

Japan targets 80 species for sea ranching and resource enhancement with local governments (or prefectures) playing major roles in the implementation. Chum salmon and scallop have the best recovery rate (2-3%) where around 1.7 billion fry were released and 50-70 million salmon returned every year. Japan’s success may be attributed to major advances in stock enhancement technologies (*i.e.* tagging, genetic mapping, numerical modeling

techniques); solid policy framework; and risk mitigation protocols. For other countries in various stages of implementing resource enhancement programs, the best lessons from IWRESA presentations and discussions are probably: (1) on-site hatcheries may work best as these can ensure the use of local breeders for local waters; and (2) improving stock management and human governance to ensure that resource enhancement benefits both communities and the environment. AQD’s own efforts in resource enhancement is being focused on seahorse *Hippocampus*, tropical abalone *Haliotis*, mudcrab *Scylla*, and sandfish *Holothuria*. Release strategies are still being studied.



## Standard measurement of fishing vessels training in Vietnam

The SEAFDEC Training Department (TD) organized an “On-site Training Course on Standard Measurement of Fishing Vessels” from 17 to 21 March 2014 in Binh Thuan Province, Vietnam with support from the Japanese Trust Fund, aiming to build the capacity of thirty officers to apply standard vessels measurement in collecting information such as breadth, depth, length and the overall dimensions of the vessels in order to be converted to gross tonnage (G.T.) measurement. Supported by the Japanese Trust Fund, the training was based on the international convention measurement system, which includes items on: (1) simple method for standard measurement of fishing vessels 24 meters in length and over; (2) dimension and definitions used for measurement based on the international convention

measurement system; (3) simple gross tonnage calculation; and (4) utilization of measuring tool and practical technology to support vessels measurement. Moreover, sample survey of fishing vessels was also conducted in Phan Thiet fishing boat dockyard as a practice for the trainees.



Technical officers practicing fishing vessel measurement at a dockyard in Vietnam

## Capacity building on CBFM for Malaysian officers



SEAFDEC/TD, in collaboration with the Department of Fisheries Malaysia organized an on-site training course on “Facilitating Fisheries Information Gathering Through Introduction of Community-based Fisheries Management” on 14-16 January 2014 in Kuala Lumpur, Malaysia with support from the Japanese Trust Fund. Twenty-five fishery officers responsible for fishery information attended the training course. The trainees were guided to analyze the existing information from several pilot projects and to design fishery management plans relevant to specific local conditions. The strategy for using local fisherman groups to collect and analyze the fishery data was highlighted during the course.



## On-site training courses on energy optimization and safety at sea

SEAFDEC/TD organized two on-site training sessions on “Optimizing Energy and Safety at Sea for Fishing Vessels” on 28-30 January and 24-28 March 2014 in Semarang, Indonesia and Cebu, Philippines, respectively with support from the Japanese Trust Fund. In all, 20 trainees from the central and local governments including fishing boat owners, skippers in each country participated. The participants were familiarized with the basic and applicable knowledge on energy saving technology and safety at sea. By training on-site, incorporation of the ideal technologies and fishing practices into the local fishing conditions could be made more

(Continued on Page 11)



## Cambodia and Vietnam Joint Working Team Meeting for Fisheries Management

With support from the SEAFDEC-Sweden Project, SEAFDEC organized the “First Technical Meeting of the Joint Working Team for Fisheries Management between Cambodia and Vietnam” at Phu Quoc Island, Kien Giang Province, from 5 to 7 March 2014. Co-hosted by the Government of Vietnam through its Directorate of Fisheries and SEAFDEC through the Sweden-supported project on Fisheries and Habitat Management, Climate Change, and Social Well-being in Southeast Asia, the Meeting aimed to discuss and finalize the zero draft Memorandum of Agreement (MOA) including the plan of activities drafted during the initial discussion meeting held in Bangkok in December 2013. The Meeting was attended by officers with important roles in the central and provincial levels in fisheries agencies of Cambodia and Vietnam, resource persons from two local institutions, namely: the Coastal Resources Institute-ASIA (CORIN-Asia) of Cambodia and the Institute of Oceanography of Vietnam, SEAFDEC officials, concerned members of the Regional Fisheries Policy Network based at SEAFDEC Secretariat, and representatives from the Department of Livestock and Fisheries of Lao PDR as observers.

For the finalization of the MOA, each country presented and discussed the status of their respective fisheries resources, country reviews based on the components of the MOA including legal frameworks, management measures of trans-boundary species and marine capture fisheries, including combating IUU and destructive fishing. During the discussion, the Meeting emphasized on the importance of available scientific data in the concerned countries on common species, such as management plans for mackerel as well as other important species. However, since information should be based on and presented in a similar format, SEAFDEC was asked to provide technical inputs for both countries to develop the said format.

The Meeting also agreed to convene the next meeting in Cambodia 6 months after this Meeting, the exact date and venue of which would be confirmed later. Initially, the agenda of the next meeting could focus on the components of the MOA, namely: (1) legal framework; (2) trans-boundary species; and (3) marine capture fisheries, as well as the steps that are needed to follow-up/finalize the prioritized work plan



*Group discussion on the importance of scientific data on common aquatic species*

(based on the output of this March 2014 Meeting). Nevertheless, prior to the next meeting, some activities should be undertaken in order that the results could be used as inputs for the next meeting, *i.e.* establishment of working groups to harmonize the template and formats for data collection and presentations; compilation of available data and information, together with additional surveys including information on breeding areas of mackerel; and awareness-raising on laws and regulations, including organization of workshops/training events on legal frameworks of Cambodia (Kep, Kampot, Sihanoukville) and Vietnam (Ha Tien, Phu Quoc, Kien Luong). ☒

### On-site training courses on energy optimization and safety at sea (Continued from Page 10)

easily. Fuel measuring equipment was used to verify greater fuel efficiency of the new energy saving method compared to the traditional one. To conclude the training, a mini-workshop was organized to discuss the application of the novel knowledge and follow-up activities at the national and local levels. ☒



### ASEAN regional workshop on support officer system for CBFM

The ASEAN Regional Workshop for Enhancement of National Support Officer System to Improvement of the Community-based Fisheries Management and Fisheries Community was organized by SEAFDEC/TD from 11 to 13 March 2014 in Vientiane, Lao PDR with support from the Japanese Trust Fund, aiming to review national support activities for fisheries community. This workshop had 45 participants from SEAFDEC Member Countries, resource persons and invited experts from relevant international organization in the region. The outputs from the Workshop included: (1) key factors for successful implementation of capacity building for fisheries community through



*Participants learning the concept of CBFM*

support officer system to facilitate the establishment of community-based fisheries management; and (2) way forward in improving capacity building for fisheries community by support officer system and activities in each country. ☒

## ASEAN regional workshop on community-based coastal and inland resources management

SEAFDEC/TD in collaboration with the Fisheries Administration of Cambodia organized ASEAN Regional Workshop for Facilitation Community-based Resources Management (CBRM) in Coastal and Inland Fisheries from 18 to



21 February 2014 in Phnom Penh, with support from the ASEAN Foundation and Japanese Trust Fund. Fifty participants from SEAFDEC Member Countries comprising government officers, fishers groups, representatives from international organizations in the region participated in this Workshop. The outputs from the Workshop are: (1) way forward for the promotion of CBRM in each country; and (2) key factors for successful implementation of CBRM for coastal and inland fisheries in collaboration with community fishery groups. ✕

## On-site training and workshop on offshore and high sea fisheries

Two On-site Training and Workshop on Offshore and High Sea Fisheries Management and Reducing IUU Fishing Activities were organized by the SEAFDEC Training Department (TD) on 4-6 February and 4-6 March 2014 in Perlis State, Malaysia and Yangon, Myanmar, respectively with support from the Japanese Trust Fund. The training and workshop aimed to enhance capacity building on resource management framework and its implementation for offshore and high sea fisheries, and increase knowledge for developing offshore and high sea resource management through international and



regional activities and countermeasures for combating IUU fishing. Dynamic group discussion was also conducted on the topics of interest of each country. The current situation, problems and the way to mitigate such problems were outlined as outputs of the discussion. ✕

## Resumed Session of the Technical Consultation on International Guidelines on Securing Sustainable Small-scale Fisheries

SEAFDEC Secretary-General, Dr. Chumnarn Pongsri, accompanied by Dr. Yuttana Theparoonrat, Head of Coastal and Small Scale-Fisheries Management Division and Dr. Somboon Siriraksophon, Policy and Program Coordinator, attended the Resumed Session of the Technical Consultation on International Guidelines on Securing Sustainable Small-scale Fisheries at FAO/Rome, Italy on 3-7 February 2014. The Session continued negotiations on the draft “Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication”. It is expected that upon the endorsement of the Guidelines by the



*Small-group side-event discussion among Civil Society Organizations*  
Thirty-first Session of FAO Committee on Fisheries this year, SEAFDEC would consult with its Member Countries on the need for regionalizing the Guidelines to be applicable/implementable by the countries. ✕

## SEAFDEC-Sweden Project: Where to go from here?

It has been a year since the signing of the cooperation agreement between SEAFDEC and then Swedish International Development Cooperation Agency (Sida) for the five-year SEAFDEC-Sweden collaborative project on “Fisheries and Habitat Management, Climate Change and Social Well-being in Southeast Asia”. The project aims to promote responsible utilization of marine resources, social well-being, and address issues related to fisheries management in the region. In order to assess how far the project has gone and determine how far it would go, its first annual review meeting was convened at the SEAFDEC Secretariat on 12 March 2014. The review meeting was attended by Mr. Göran Haag of the Embassy of Sweden in Bangkok, Mr. Peter Fundgård from the Swedish Agency for Marine and Water Management (SwAM), and SEAFDEC officers led by SEAFDEC Secretary-General Dr. Chumnarn Pongsri. Members of the Regional Fisheries Policy Network (RFPN) based at SEAFDEC Secretariat also attended the Meeting.

The SEAFDEC-Sweden project focuses on the target areas of sub-regional cooperation with the countries bordering the Andaman Sea, Gulf of Thailand, Sulu-Sulawesi Sea and the Mekong River Basin. During the discussion, the Meeting was informed that the project had established and built cooperation with international non-government organizations under sub-contracts or arrangements in order to facilitate local capacity building, strengthen local organizations, improve livelihood opportunities, alleviate poverty, and restore important habitats. Specifically, the project had also established three (3) field-level work sub-contracts, with CORIN-Asia in Cambodia, Learning Institute of Cambodia, and the Prince of Songkla University (PSU) in Hat Yai, Thailand. Other contracts for field activities will be forged soon in line with the objectives and purpose of the

*(Continued on Page 15)*



## SEAFDEC participates in the 25<sup>th</sup> Session of APCAS

The Government of the Lao PDR hosted the 25<sup>th</sup> Session of the Asia and Pacific Commission on Agricultural Statistics (APCAS) convened by the Food and Agriculture Organization of the United Nations (FAO) in Vientiane, Lao PDR from 18 to 21 February 2014. Representing SEAFDEC, Ms. Saivason Klinsukhon attended the session which had 87 delegates from APCAS Member Countries, and representatives from international/regional organizations.

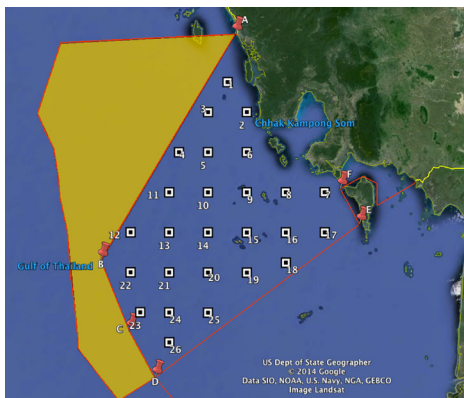
The Session was organized to follow-up the current status of food agricultural statistics; identify problems on issues in collection of data particularly non-response to the annual statistics questionnaires; and update on the progress of the Regional Action Plan for the Global Strategy to Improve Agricultural and Rural Statistics in the Asia and the Pacific Region. For fisheries issues, the Commission emphasized on the development of guidelines and methodologies to integrate

fisheries and aquaculture into censuses to improve regular fisheries and aquaculture data; and encourage the Member Countries and regional organizations to strengthen partnerships and collaboration on international product classifications. The framework for integrating data from existing and new sources including census, regular surveys, administrative records and case studies was proposed to the Commission for consideration.



## Collaborative arrangements by SEAFDEC for joint research between FiA of Cambodia and NFU of Japan in Cambodian Waters from 2014-2016.

With reference to the MOU between SEAFDEC and the NFU which was signed in May 2005 and endorsed by the SEAFDEC Council at its 37<sup>th</sup> Meeting, NFU would assist the SEAFDEC Member Countries in conducting fisheries resources survey, considering that NFU annually conducts navigation training, fishing experiments and research programs using its training/research vessels, namely the R.V. Tenyo Maru and R.V. Koyo Maru in the international waters while also visiting the Southeast Asian countries every year. The main purpose of the NFU activity is to enhance the knowledge of their students not only in terms of the technical aspects, but also giving them opportunities to learn the Southeast Asian culture and traditions. To make full utilization of the training/research vessels of NFU under the said MOU with SEAFDEC, the “Collaborative Research Program between the NFU and SEAFDEC Member Countries” agreed since 2006 still remains in effect until the present. Through such arrangement, joint research activities have been conducted in five countries, namely: Malaysia (once using the R.V. Tenyo Maru), Brunei Darussalam (once using the R.V. Tenyo Maru), Thailand (once using the R.V. Tenyo Maru), Vietnam (3 times using the R.V. Tenyo Maru and the R.V. Koyo Maru), and



*Survey stations and area for Koyo-maru cruise of the National Fisheries University in 2014.*

the Philippines (3 times using R.V. Koyo Maru). Such joint collaborative research activities were conducted based on the specific needs proposed by the respective countries and considered by NFU. While the collaborative joint research program with BFAR/Philippines using the R.V. Koyo Maru was recently completed in November 2013, the FiA of Cambodia expressed its interest to conduct collaborative research program using the R.V. Koyo Maru in the Cambodian waters. In response to such interest, SEAFDEC Secretariat proposed to conduct the fisheries resources and oceanographic survey in Cambodian waters under this collaborative arrangement. It is expected that the first survey would start in November of 2014.



## Consultation on the development of the NPOA-IUU for Cambodia

To support the development of the National Plan of Action to Prevent, Deter and Eliminate the IUU Fishing for Cambodia, SEAFDEC Senior Advisor Dr. Magnus Torell, and Program and Policy Coordinator Dr. Somboon Siriraksophon were invited by the Fisheries Administration to Cambodia on 20-21 March 2014. It is expected that in the process of developing the NPOA-IUU, several extensive consultations with relevant stakeholders would be conducted including national and sub-regional government agencies, departments, fishing industry representatives and national and international non-government organizations concerned on the conservation and sustainable management of fisheries resources. Based on the initial discussion among relevant FiA officers, Dr. U. Schmidt and SEAFDEC, it was suggested that the development of the NPOA-IUU could be made in parallel with development of the NPOA to manage Cambodia's fishing capacity (NPOA-Capacity). Noting that a well defined/implemented NPOA-Capacity would be a prerequisite for effective NPOA-IUU, it was recommended that Cambodia's NPOA-IUU should cover three areas: (1) inland fisheries; (2) marine fisheries in the EEZ; and (3) marine fisheries by vessels under the Cambodian flag in the international waters. The meeting also developed the list of actions to be taken by FiA and other supporting regional/international organizations such as FAO and SEAFDEC.




# FUTURE ACTIVITIES

Date	Venue	Title	Organizer
2014			
5-7 May	Bangkok, Thailand	Regional Workshop on REBYC-II CTI Work Planning: 2014-2015	TD
5-9 May	Binangonan, Philippines	Training Course on Freshwater Prawn Hatchery and Grow-out Operations	AQD
7-27 May	Iloilo, Philippines	Training Course on Abalone Hatchery and Grow-out Operations	AQD
8-9 May	Pattaya, Thailand	Consultative Meeting of AADCP II Project: Establishment of the ASEAN Good Aquaculture Practices (GAqP)	AADCP II Project
13-15 May	Fujian Province, China	Regional Consultative Workshop on Capacity Assessment for the Implementation of New CITES Listings of Sharks and Manta Rays	FAO
14-15 May	Penang, Malaysia	Sub-regional Technical Meeting on Effective Fisheries Management Between Malaysia and Thailand	Secretariat
14-16 May	Manado, Indonesia	World Ocean Business Forum and World Coral Reef Conference	MMAF, Indonesia
20-21 May	Bangkok, Thailand	Regional Workshop on the Interaction between Environmental Sustainability and Human Rights-Based Approach	Embassy of Sweden
21-23 May	Bangkok, Thailand	13 <sup>th</sup> INFOFISH World Tuna Trade Conference & Exhibition	INFOFISH
25-30 May	Paris, France	82 <sup>nd</sup> General Session of the World Assembly of Delegates of the OIE	OIE
27-28 May	Phuket, Thailand	Sub-regional Consultative Meeting on the Collaborative Fisheries Management Around the North Andaman Sea/Myeik Archipelago	Secretariat
27-28 May	Sarawak, Malaysia	Sub-regional Technical Working Group Meeting of SEAFDEC Joint Program for Tuna Research in Sulu-Sulawesi Seas	TD
27 May-18 June	Iloilo, Philippines	Training Course on Mud Crab Hatchery, Nursery & Grow-out Operations	AQD
1-5 June	Sri Lanka	18 <sup>th</sup> Session of the Indian Ocean Tuna Commission (IOTC)	IOTC
2-6 June	Binangonan, Philippines	Training Course on Tilapia Hatchery and Grow-out Operations	AQD
9-13 June	FAO HQ, Italy	31 <sup>st</sup> Session of Committee on Fisheries (COFI)	FAO
13 June	FAO HQ, Italy	5 <sup>th</sup> Session of the Regional Secretariat Network (RSN)	FAO
18-20 June	Krabi, Thailand	1 <sup>st</sup> Meeting of the Core Expert Group for the Regional Cooperation for Sustainable Utilization of Neritic Tunas in Southeast Asia	Secretariat
18 June-25 July	Iloilo, Philippines	Training Course on Marine Fish Hatchery	AQD
21-22 June	Bandung, Indonesia	International Conference of Aquaculture Indonesia 2014 (ICAI 2014)	Indonesia
19-21 June	Hyderabad, India	APFIC Regional Consultative Forum	APFIC
23-25 June	Hyderabad, India	33 <sup>rd</sup> Session of the Asia-Pacific Fishery Commission	APFIC
23-24 June	Malaysia	6 <sup>th</sup> Meeting of the ASEAN Fisheries Consultative Forum (AFCF)	ASEAN
25-27 June	Malaysia	22 <sup>nd</sup> Meeting of the ASEAN Sectoral Working Group on Fisheries (ASWGFi)	ASEAN
11-15 August	Binangonan, Philippines	Training Course on Tilapia Hatchery and Grow-out Operations	AQD
2-4 September	Palembang, Indonesia	4 <sup>th</sup> International Conference on Southeast Asian Inland Waters	Indonesia
8-12 September	Binangonan, Philippines	Training Course on Freshwater Prawn Hatchery and Grow-out Operations	AQD
8 Sep-22 Feb 15	Internet	Distance Learning Course: Basic Principles of Health Management in Aquaculture	AQD
21-25 September	Merida, Mexico	2 <sup>nd</sup> World Small-scale Fisheries Congress (2WSFC)	TBTI++
23-25 September	Kota Kinabalu, Malaysia	Regional Technical Consultation on Guidelines on Preventing the IUU Fish and Fishery Products to Supply Chain	MFRDMD




## SEAFDEC-Sweden Project: Where to go from here?

(Continued from Page 12)

collaborative project. In developing the contracts, the importance of fisheries administrations at national focal institutions in participating SEAFDEC Member Countries is recognized, considering the role that the officers could play for the successful cooperation in addressing relevant issues in fisheries management. Specifically for the 1<sup>st</sup> year of the project implementation, eight (8) important events were organized, mainly consultations and round-table meetings with concerned SEAFDEC Member Countries for the initial arrangements of the proposed bilateral cooperation, such as for Thailand-Cambodia and Cambodia-Vietnam. Finally, the Meeting agreed that the project should be sustained for the benefit of coastal/rural fishing communities in the region. Although the bilateral cooperations as well as the field activities have just been initiated, the Meeting endorsed the future plan of activities for the project. 

## SEAFDEC initiates the compilation of information on eel resources in Southeast Asia

(Continued from Page 16)

Countries and coordination in carrying out the task of compiling technical information from various R&D on eel species; and (2) for the countries to continue providing updated information on their respective countries' eel resources. The Meeting also suggested that the proposed meeting of the eel experts shall discuss issues, especially on the status of eel production (from capture fisheries and aquaculture) and marketing of eel species. Such Meeting should be organized before the CITES CoP17 and could avail of eel experts from Japan as resource persons. Furthermore, the Meeting also endorsed the proposed SEAFDEC collaborative project on the Conservation, Management and Sustainable Utilization of Eel Resources in the Southeast Asian Region from 2014 to 2016 with possible funding from the Japanese Trust Fund. The project is expected to come up with information on the distribution and status of eel fisheries in the region; genetic information on eel species for species identification; and trained technical officers to collect taxonomic and biological data on eels. Proposed to be implemented by MFRDMD, AQD and IFRDMD with the latter as the Lead Department, the collaborative project could include four major components, namely: (1) compilation of basic information on eel species in Southeast Asia by IFRDMD and MFRDMD (2014); (2) research on eel biology by MFRDMD (marine) and IFRDMD (freshwater) focusing on *Anguilla bicolor* (2015); (3) development of eel fishery management measures (2015) through the conduct of workshop to be spearheaded by the SEAFDEC Secretariat; and (4) promotion of sustainable aquaculture of eels to be implemented by AQD (2016). Finally, the Meeting agreed that these recommendations will be submitted by SEAFDEC for the consideration of the SEAFDEC Council of Directors. 

### Note for contributors

*The SEAFDEC Newsletter publishes quarterly news on all aspects of fisheries in Southeast Asia. The Editors reserve the right to accept and/or abridge articles based on available space. Anyone wishing to submit an article to the SEAFDEC Newsletter is requested to send it to the Editor in Chief or Editors at the given addresses.*

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## SEAFDEC ADDRESSES

### SECRETARIAT

P.O. Box 1046, Kasetsart Post Office  
Bangkok 10903 Thailand  
Tel: (66-2) 940-6326 Fax: (66-2) 940-6336  
E-mail: [secretariat@seafdec.org](mailto:secretariat@seafdec.org)  
<http://www.seafdec.org>

### TRAINING DEPARTMENT (TD)

P.O. Box 97, Phrasamutchedi  
Samut Prakan 10290 Thailand  
Tel: (66-2) 425-6100 Fax: (66-2) 425-6110 to 11  
E-mail: [td@seafdec.org](mailto:td@seafdec.org)  
<http://www.seafdec.or.th>

### MARINE FISHERIES RESEARCH DEPARTMENT (MFRD)

2 Perahu Road, off Lim Chu Kang Road  
Singapore 718915  
Tel: (65) 6790-7973 Fax: (65) 6861-3196  
E-mail: [ava\\_mfrd@ava.go.sg](mailto:ava_mfrd@ava.go.sg)  
<http://www.seafdec.org>

### AQUACULTURE DEPARTMENT (AQD)

**Main Office:** Tigbauan, 5021 Iloilo, Philippines  
Tel: (63-33) 511-9170, 511-9171  
Fax: (63-33) 511-9709, 511-9174  
**Manila Office:** Rm 102 G/F  
Philippine Social Science Center (PSSC)  
Commonwealth Avenue, Diliman  
Quezon City 1101 Philippines  
E-mail: [aqdchief@seafdec.org.ph](mailto:aqdchief@seafdec.org.ph)  
<http://www.seafdec.org>

### MARINE FISHERY RESOURCES DEVELOPMENT AND MANAGEMENT DEPARTMENT (MFRDMD)

Taman Perikanan Chendering  
21080 Kuala Terengganu, Malaysia  
Tel: +(60-9) 617 5940, 617 1543, 617 7867  
Fax: +(60-9) 617 5136, 617 4042  
E-mail: [mfrdmd@seafdec.org.my](mailto:mfrdmd@seafdec.org.my)  
<http://www.seafdec.org.my>

### Advisory Board:

Chumnarn Pongsri,  
*Secretary-General, TD Chief, and  
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## SEAFDEC initiates the compilation of information on eel resources in Southeast Asia

On 27 February 2014, SEAFDEC organized the 1<sup>st</sup> Regional Technical Meeting on Information Gathering of Eel Resources and Aquaculture Production in Southeast Asia in Bangkok, Thailand. The Meeting was attended by the SEAFDEC National Coordinators of its Member Countries together with their delegations, as well as the Secretary-General, Deputy Secretary-General and senior officials of SEAFDEC. The Meeting was also attended by resource persons from the Fisheries Agency of Japan, Dr. Takato Maki; Philippine Bureau of Fisheries and Aquatic Resources (BFAR) Region II, Mr. Venchito Villarao; Research Center of Inland Fisheries of Indonesia, Dr. Budi Iskandar Prisantoso; Phang-nga Coastal Fisheries Research and Development Center, Mr. Suparp Pripanapong; and from SEAFDEC Aquaculture Department, Dr. Felix G. Ayson.

The Meeting was aimed at



(Left) Dr. Takato Maki, sitting in the middle, as resource person from the Fisheries Agency of Japan; and (Right) Mr. Suparp Pripanapong, resource person from Thailand

compiling information related to eel resources from the wild and status of aquaculture in the Southeast Asian countries; building awareness on the environmental standpoint of eel fisheries and aquaculture in the region; developing a strategic program to understand the status and trends of eel fisheries and aquaculture; and strengthening regional cooperation on eel R&D in Southeast Asia. Recommendations from the one-day Meeting included: (1)

compilation of the List of Eel Experts in Southeast Asia to enable SEAFDEC to convene the Experts Meeting as soon as possible preferably at the premises of the newly-established SEAFDEC Inland Fishery Resources Development and Management Department (IFRDMD) in Palembang, Indonesia as well as for the eel experts to initiate networking with concerned agencies in the Member

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## AQD assesses its 2013 JTF-funded studies

*“Go ahead and continue; the Philippine and Japanese governments will support you”*, said over-all Japanese Trust Fund (JTF) Manager and SEAFDEC Deputy Secretary-General Mr. Hajime Kawamura during the 2013 annual progress meeting of the programs under the ASEAN-SEAFDEC Fisheries Consultative Group mechanism funded by the JTF. The panel of evaluators who reviewed the progress of 28 studies included Dr. Yukio Maeno of Japan International Research Center for Agricultural Sciences, Dr. Zubaida Basiao of the University of the Philippines (UP) Diliman, Dr. Carlos Baylon of UP Visayas and Dr. Joselito Somga of the DA-Bureau of Fisheries and Aquatic Resources.

The JTF regional program at AQD on the Promotion of Sustainable Aquaculture and Resource Enhancement in Southeast Asia comprised the following four projects with several studies: (1) sustainable aquaculture (selective

breeding of mud crab, tiger shrimp and giant freshwater prawn; hatchery techniques for pompano and spotted scat; development of efficient and low pollution feeds); (2) resource enhancement of threatened and over-exploited species (monitoring of wild sandfish stock and managing released abalone stocks within Sagay Marine Reserve in Molocaboc, Negros Occidental; stock enhancement of seahorse, Napoleon wrasse and mud crabs; adaptive measures for coral replenishment); (3) fish health (identifying the fish health status and needs in Cambodia, Lao PDR, Myanmar and Philippines; molecular diagnosis and prevention of viruses; establishment of an immunization regimen and novel prophylactic & therapeutic methods for the prevention of bacterial and viral infections; evaluation of carriers for practical delivery of vaccines to crustaceans; parasitic and shell diseases of abalone in the Philippines); and (4) food safety (assessing the withdrawal period of antibiotics: oxytetracycline and



oxolinic acid in grouper; surveillance of chemical contaminants in aquaculture products and feeds; investigation of the situation of antibiotics/chemical usage and regulations in aquaculture).

As this is the last year of JTF's fifth cycle of programs, Mr. Kawamura advised AQD to prepare specific plans based on the evaluation of the entire JTF-V activities which was done in Bangkok, Thailand on 25-26 February 2014. The new proposals will cover the sixth cycle which will run from 2015 to 2019.

