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INSIDE THIS ISSUE

- SEAFDEC joins the 12th Meeting of the ASEAN Expert Group on CITES 2
- Strengthening cooperation through the Network of Regional Fisheries Policy Members' Moving Together 3
- IFRDMD organizes In-house Training on Co-management in Inland Fisheries 4
- AQD joins 1st National Bangus Congress 5
- Special Report: Transboundary Diseases and EMS/AHND 7
- Regional Technical Consultation on EMS and Other Transboundary Diseases 10
- SEAFDEC convenes the Experts Workshop on Fishway Design 12
- SEAFDEC holds Regional Forum to Discuss Issues on Labor in Fisheries 16

Stakeholders' Consultation on Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fisheries Products convened



Participants from SEAFDEC and Stakeholders attending the Meeting

SEAFDEC with support from the Japanese Trust Fund and SEAFDEC-Sweden Project organized the Stakeholders' Consultation on Regional Cooperation in Sustainable Fisheries Development towards the ASEAN Economic Community: Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fisheries Products in Bangkok, Thailand on 1-2 March 2016.

Fisheries Products" organized on 3-4 March 2016.

Aimed to review the fisheries situation and the emerging issues related to IUU fishing and competitiveness of ASEAN fish and fisheries products that hinder the suitable development of fisheries in the region, the 2-day Consultation came up with recommendations on the practical steps to be taken towards combating IUU Fishing and enhancing the competitiveness of the region's fish and fisheries products.

Back-to-back with the Stakeholders' Consultation on Regional Cooperation in Sustainable Fisheries Development towards the ASEAN Economic Community Meeting, SEAFDEC organized the Meeting of Drafting Committee on Regional Cooperation in Sustainable Fisheries Development Towards the ASEAN Economic Community: Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products.

The Meeting was aimed at developing the draft Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products based on the results and recommendations of the Stakeholders' Consultation.

The adopted recommendations would serve as basis for formulating the draft "Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and

The drafting Committee adopted the First Draft of Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU fishing and Enhancing

EDITORIAL

Immediately after the whole world welcomed 2016, *Dr. Kom Silapajarn* as the new SEAFDEC Secretary-General officially took over the reins of leadership of SEAFDEC. *Dr. Kom Silapajarn* is the 12th Secretary-General of SEAFDEC and Chief of SEAFDEC Training Department. Upon assuming his position, *Dr. Kom* started familiarizing himself with the operations of the SEAFDEC Departments. He has already visited the Philippine-based SEAFDEC Aquaculture Department and would soon visit MFRDMD in Malaysia, IFRDMD in Indonesia and the Singapore-based MFRD.

The beginning of the first quarter of 2016 has seen many events that mainly focused on addressing the concerns on sustainability of fisheries in the region, *e.g.* on the need to combat IUU fishing. These include the conduct of the Stakeholders' Consultation on Regional Cooperation in Sustainable Fisheries Development towards the ASEAN Economic Community followed by the Meeting of Drafting Committee on Regional Cooperation in Sustainable Fisheries Development towards the ASEAN Economic Community. Both events were supported by the Japanese Trust Fund and SEAFDEC-Sweden Project. These fora paved the way for the development of the first draft

(Continued on Page 2)

(Continued on Page 2)

EDITORIAL

(Continued from Page 1)

of the Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing Competitiveness of ASEAN Fish and Fishery Products, which would be submitted to the SEAFDEC Council at its 48th Meeting in early April 2016. Prior to these two events, SEAFDEC with support from the SEAFDEC-Sweden Project convened its first Regional Technical Consultation on Labor Aspects within the Fishing Industry where issues on labor in the fisheries sector including recruitment and treatment of migrant fisheries labor were addressed.

In an effort to address CITES-related issues, SEAFDEC continues to improve the compilation of sharks and rays statistics at species level using pilot landing centers in several Southeast Asian countries. Sharks and rays are among the most endangered species and several species of sharks and rays have been listed in the CITES Appendices for protection and conservation. Furthermore, recognizing that studying fish stocks is fundamental not only for fisheries management but also for endangered species management, SEAFDEC conducted during the first quarter, Regional Training sessions on Larval Fish Identification up to the family level and on Fish Stock Assessment starting with some neritic tunas. It is expected that such training sessions could help the countries in the region in determining the status of economically-important fish stocks in their respective waters.

Other significant regional events organized by SEAFDEC during the quarter included the Regional Technical Consultation on EMS/AHPND and other Transboundary Diseases. Supported by the Japanese Trust Fund, the Consultation aimed to improve the region's aquatic animal health management. Meanwhile, the Experts Workshop in Fishway Design with funding support from ACIAR examined the model of an experimental fishway constructed by SEAFDEC Training Department. The initial fishway model is now being improved and would be tried on various freshwater fish species.

As a continuing program of SEAFDEC, the Regional Fisheries Policy Network (RFPN) received during the quarter, the new batch of RFPN members coming from eight SEAFDEC Member Countries. Assigned at the SEAFDEC Secretariat from January until December 2016, the RFPN members play the major role of promoting fisheries development in Southeast Asian region.



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Stakeholders' Consultation on Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fisheries Products convened

(Continued from Page 1)

the Competitiveness of ASEAN Fish and Fishery Products. The First Draft of the "Joint Declaration" would be submitted to the SEAFDEC Council and subsequently to the ASEAN through the ASEAN Sectoral Working Group on Fisheries (ASWGF_i) for consideration and endorsement.

Once the Draft Joint declaration is considered and endorsed by the SEAFDEC Council and ASWGF_i, it would be raised during the High-level Consultation on 3 August 2016 for adoption by the SOM-level officials of the ASEAN-SEAFDEC Member Countries.



Atty. Analiza A. Vitug (center), the Drafting Committee from the Philippines served as Chair of the Drafting Committee Meeting

SEAFDEC joins the 12th Meeting of the ASEAN Experts Group/AEG on CITES



Participants of the ASEAN Experts Group on CITES Meeting

SEAFDEC was represented by the Assistant Policy and Program Coordinator, Dr. Worawit Wanchana during the Twelfth Meeting of the ASEAN Experts Group on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (AEG-CITES). Held from 24 to 25 March 2016 in Siem Reap, Cambodia, the Meeting which was attended by representatives from the ASEAN Member States, the ASEAN Secretariat,

and relevant regional organizations including SEAFDEC, underlined the need for ASEAN to ensure sustainable forest management and conservation of wild flora and fauna under the CITES Convention.

The Meeting provided a good opportunity for SEAFDEC to provide information on the current regional

(Continued on Page 3)

SEAFDEC joins the Twelfth Meeting of the ASEAN Experts Group on CITES

(Continued from Page 2)

initiatives to improve sharks conservation and management in Southeast Asia, as well as the continued efforts of SEAFDEC and the Southeast Asian countries to monitor the issues concerning commercially exploited aquatic species that are at risk of being included under the CITES Appendices. It was also an opportune time

for SEAFDEC to inform the Meeting on the timeframe for developing the common position of AMSs on CITES listing of aquatic species intended for submission to the SEAFDEC Council for consideration, and for subsequent endorsement by SOM-AMAF prior to CITES-COP 17 in September-October 2016. ✦

Strengthening Cooperation through the Network of Regional Fisheries Policy Members' Moving Together

Over the years, fisheries officers from the ASEAN Member States enhance their cooperation through the Regional Fisheries Policy Network (RFPN) stationed at the SEAFDEC Secretariat in Bangkok, Thailand. The RFPN members work together in carrying out their roles of promoting fisheries development in the Southeast Asian region. For 2016, eight (8) RFPN members from Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Viet Nam, would be playing active role in assisting SEAFDEC through technical support in the development of regional fisheries

priority inputs and policy issues. They would also be able to enhance their capabilities and knowledge on fisheries development and management in the regional context.

During their term, the RFPN members would also have the opportunities to learn and gain knowledge to better understand emerging fisheries related issues that confront the region. This could be achieved through their active participation in SEAFDEC programs and other relevant regional dialogues. ✦



2016 RFPN Members (from left to right) Dr. Saw Mya Linn (Myanmar), Ms. Phongsavanh Sengsomphou (Lao PDR), Ms. Natedow Wisesso (Thailand), Ms. Annie Nunis Billy (Malaysia), Ms. Nguyen Huong Tra (Viet Nam), Mr. Marlon B. Alejandro (Philippines), Mr. Heng Samay (Cambodia), and Mr. Reynaldy Indra Syahputra (Indonesia)

SEAFDEC was represented at the Second ASEAN Conference on Biodiversity (ACB2016)



SEAFDEC Representative Dr. Somboon Siriraksophon presenting a paper on *Regional Cooperation for Sustainable Utilization of Neritic Tunas in Southeast Asia*

On 16 February 2016, Dr. Somboon Siriraksophon, Policy and Program Coordinator, SEAFDEC and Ms. Pattaratjit Kaewnuratchadasorn, SEAFDEC-Sweden Project Manager attended the Second ASEAN Conference on Biodiversity (ACB2016). With the theme “Biodiversity for Sustainable Development,” ACB2016 was organized by the ASEAN Centre for Biodiversity (ACB), in cooperation with the ASEAN Member States, the ASEAN Secretariat and partner organizations, from 15 to 19 February 2016 in Bangkok and hosted by the Royal Thai Government.

ACB2016 aims to provide a forum for exchanging perspectives on initiatives that address biodiversity issues in the region. The steps forward in advancing the ASEAN biodiversity agenda within the context of the “Aichi Targets” and the newly adopted global mandate on the 2030 Agenda for Sustainable Development were discussed.

During the panel discussion, the importance of conserving the biodiversity and marine and coastal ecosystem and those critical habitats and how to utilize the resource towards sustainability were highlighted. The engagement of the private sector and stakeholders was forged to make them understand and support the efforts toward sustainability of fisheries and biodiversity ✦

DEPARTMENTAL ACTIVITIES

TD joins the National Children's Day



Children entering TD Booth at the Children's Day exhibition

Training Department in collaboration with the Fish Marketing Organization (FMO) and Navy organized the 2016 National Children's Day at Pathumthani Provincial Cooperative Office and at the Prachunlajomklao Navy Dockyard,

Samut Prakan Province. The event brought out on display posters and pamphlets on responsible fishing and sea turtle conservation. More than 7,000 children showed up at the TD Booth where they asked questions and obtained informational materials of their interest.

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



AQD and Korean University establish Internship Program Agreement



Global DCF Director Dr. Sang-go Lee and AQD Chief Dr. Felix Ayson during the agreement signing

AQD and Pukyong National University's Agency of Global Development and Cooperation for Fisheries (Global DCF) in Korea, represented by AQD Chief *Dr. Felix Ayson* and Global DCF Director *Dr. Sang-go Lee*, respectively, signed an agreement to promote international understanding and to enhance education and professional opportunities for students last 12 January at AQD's Manila Office in Quezon City, Philippines.

The agreement states that AQD will seek to provide on-the-job training to the interns selected by Global DCF in light of the correspondent duties, according to their specific academic curriculum and qualifications. Global DCF sent four interns *Mr. Giwoong Lee, Ms. Seon Have Lee, Ms. Young Ju Lee* and *Ms. Yejin Kim* to AQD. They were assigned, in rotation, to AQD's Big Hatchery, Mud Crab Hatchery, Marine Fish Hatchery, Central Analytical Laboratory and Phycology Laboratory from 4 January to 12 February 2016.



IFRDMD organizes In-House Training on Co-Management in Inland Fisheries



IFRDMD Staff at the in-house training course on co-management on inland fisheries

Inland fisheries is an important component of the economies of many countries in the region. It creates employment and income, and serves as source of food supply. This contribution is particularly important in poverty alleviation, food security and nutritional well-being of many rural communities, particularly in developing countries, as well as the low income food deficit countries. In order to address the important issue pertaining to the sustainability of freshwater fish resources, the SEAFDEC Inland Fishery Resources Development and Management Department organized the "In-House Training of Co-

Management in Inland Fisheries" on 26-28 January 2016 at IFRDMD Office in Palembang. Supported by the Japanese Trust Fund, the training had *Prof Endi Setiadi Kartamihardja*, Senior Researcher from the Ministry of Marine Affairs and Fisheries, Republic of Indonesia, as Resource Person who gave lectures during the training which was attended by researchers from IFRDMD.

The training was aimed at learning and discussing co-management and rights-based fisheries management applicable to inland fisheries. The training consisted of five topics, *i.e.* (1) recent status of co-management in Indonesia; (2) food security and alleviation; (3) data/information collection on inland fisheries; (4) priority issues of inland fisheries; and (5) impacts of water barrier construction on inland fisheries. Moreover, the training gave good opportunity for IFRDMD staff to get variety of knowledge and ideas to address inland fisheries issues.



AQD welcomes new SEAFDEC Secretary-General



AQD staff with SEAFDEC Secretary-General Dr. Kom Silapajarn

The new SEAFDEC Secretary-General *Dr. Kom Silapajarn* visited AQD last 25-26 February to familiarize himself with the department programs, facilities, and personnel.

Dr. Kom succeeded *Dr. Chumnarn Pongsri* who completed his six-year term as SEAFDEC Secretary-General last September 30. Prior to his nomination, *Dr. Kom* served as Director of the Coastal Fisheries Research and Development Division, Department of Fisheries (DOF) Thailand. Travelling with *Dr. Kom* was *Ms. Nualanong Tongdee*, Information Program Coordinator of SEAFDEC.

AQD Chief *Dr. Felix Ayson* toured *Dr. Kom* and *Ms. Nualanong* around

Dumangas Brackishwater Station, Igang Marine Station, and Tigbauan Main Station, and introduced them to the study leaders and heads of various offices.

“It has been 33 years since the last time I came here at AQD. I was here in 1983 to attend a training course on brackishwater pond culture,” said *Dr. Kom* during his speech to AQD staff. He expressed his gratitude to AQD for all the help and support when he was still a young researcher.

Dr. Kom shared that he was impressed with the facilities that AQD has especially the Igang Marine Station. “IMS is the most beautiful research station I have ever seen,” he said.

Dr. Kom also appreciated the efforts of AQD in organizing the Regional Technical Consultation on EMS/AHPND last 22-24 February. He said that it is important to address the issues concerning aquatic animal health management especially since it affects all SEAFDEC Member Countries.

Moreover, *Dr. Kom* reminded everyone about the 50th anniversary celebration of SEAFDEC next year and said he is looking forward to the involvement of AQD during the occasion.

In response, *Dr. Ayson* revealed that as part of SEAFDEC’s anniversary, AQD is planning to come up with a directory of training alumni in 2017. He explained that this book will show the contribution of AQD in the aspect of human resources capability development for aquaculture.

Dr. Ayson also looked forward to having *Dr. Kom* in AQD’s activities in the future. “For sure this will not be the last time we will see *Dr. Kom*. I hope he will be able to come back here this July for AQD’s anniversary celebration,” he added. ❖

AQD joins 1st National Bangus Congress



Mayor Hernan Biron, Sr. of Barotac Nuevo, Iloilo, Philippines and wife Dr. Diana Biron visit the AQD booth

Over 1500 participants from different parts of the Philippines gathered to attend the National Fisheries Industry Summit and 1st Bangus Congress organized by Philippine Milkfish Industry Group Inc.

(PHILMIG) and the Bureau of Fisheries and Aquatic Resources (BFAR) at the Philippine Trade Training Center, Pasay City, Philippines from 3 to 5 February 2016.

AQD Associate Scientist *Dr. Nerissa Salayo* and Scientist *Dr. Relicardo Coloso* presented their research on “Integrated Multi-trophic Aquaculture” and “Milkfish Nutrition Management”, respectively. AQD also made its information and technologies available to the participants in a trade exhibition that happened simultaneously with the congress.

The three-day congress started with the National Fisheries Industry Summit

where the Comprehensive National Fisheries Industry Development Plan for 2016 to 2020 was presented to the stakeholders. Technical sessions with experts and sharing of success stories from the industry and views from third-party observers followed.

The event was spearheaded by the Philippine Department of Agriculture Secretary *Proceso Alcala* and BFAR National Director *Atty. Asis Perez* and was graced by other government officials including *Senator Loren Legarda*, Chairman of the Senate Committee on Climate Change and *Senator Cynthia Villar*, Chairman of the Senate Committee on Food and Agriculture. ❖

Malaysian and Thai Partnership Working Team Meeting



Participants of the working team giving suggestions during the meeting

The Working Team Meeting on the Result Discussion of Baseline Survey on Monitoring and Control of Fishing Effort and Landing in the Western Gulf of Thailand is an activity of the project “Strengthen Malaysia and Thai Partnership in Support of Joint Fisheries Planning and Management in the Western Gulf of Thailand” which was convened from 1 to 2 March 2016 at SEAFDEC Marine Fishery Resources Development and Management Department (MFRDMD)

in Kuala Terengganu, Malaysia. The Meeting was participated by the working team from Thailand, Malaysia, TD and MFRDMD, designated under the project. The Meeting came up with recommendations and suggestions for planning and development of activities to improve management of fishing effort and monitoring of landing in Malaysia and Thailand Sub-region, and draft report of the baseline survey. ☒

AQD conducts Fish Health Training in Myanmar



Participants of the training course on fish health management

Eleven fish health officers of the Department of Fisheries-Myanmar participated in the training course on Health Management of Bacterial and Parasitic Diseases of Freshwater Fish Species organized by AQD with funding support from the Government of Japan Trust Fund (GOJ-TF). The training was held in Yangon, Myanmar from 18 to 21 January.

During the training, AQD resource persons *Dr. Rolando Pakingking Jr.* and *Ms. Gregoria Pagador* talked about updates on major diseases and health management of tilapia and shrimp, as well as parasitic diseases of freshwater fishes. There were also practical sessions on detection of bacterial fish pathogens and fish necropsy for parasite identification and bacterial isolation.

This course is part of AQD’s project under the GOJ-TF program, which aims to educate or familiarize fish health personnel on serious fish diseases confronting important aquatic species in the region, particularly those notifiable to the OIE (World Organization for Animal Health). ☒

Palau State officials visit AQD



Visitors at the hatchery facilities of AQD Main Station

Thirteen officials and staff from Ngatpang and Ngarchelong States of Palau toured AQD facilities on 17-18 March 2016.

The visitors’ first stop was at AQD’s Tigbauan Main Station where they met with AQD officials and visited the hatchery facilities for marine fish, tilapia, sandfish, abalone, and mud crab. They also dropped by AQD’s feed mill plant before touring the research facilities of Dumangas Brackishwater Station.

On the second day, the Palauan visitors went to see the facilities at Igang Marine Station in Nueva Valencia, Guimaras, Philippines. ☒



(Above) Visitors at Dumangas Station and (Below) Visitors at Igang Marine Station facilities



AQD joins eel survey in Indonesia and Myanmar



Participants from AQD and SEAFDEC Departments visit eel fisheries and farming facilities

AQD participated in the surveys of eel fisheries and farming practices in Indonesia and Myanmar which were organized by the SEAFDEC Inland Fisheries Resources Development and Management Department (IFRDMD) last 18-21 January and 6-10 February, respectively.

These activities are part of the project on “Enhancement of Sustainability of

Catadromous Eel Resources in Southeast Asia” which IFRDMD is implementing with funding from the Government of Japan Trust Fund. IFRDMD has conducted earlier surveys in the Philippines and in Indonesia. A similar survey is also being planned for coastal areas of Thailand and Myanmar facing the Andaman Sea.

The SEAFDEC Program Committee has recommended that SEAFDEC should

undertake a survey of the status of tropical eel resources in the region as a requisite for the formulation of strategies and plans for sustainable management and utilization of such resources. Results of the surveys will be presented in a workshop that will be organized by IFRDMD in April. A review of other R&D initiatives on eels will also be discussed in the workshop.

The Indonesia survey team included *Dr. Budi Iskandar Prisantoso* (Chief), *Dr. Satoshi Honda* (Deputy Chief), *Dr. Dina Muthmainnah* and *Ms. Ni Komang Suryati* of IFRDMD; and *Dr. Takuro Shibuno* (Deputy Chief), *Dr. Evelyn Grace Ayson* and *Dr. Mae Catacutan* of AQD.

For the Myanmar survey, the team was composed of *Dr. Satoshi Honda* (Deputy Chief), *Ms. Ni Komang Suryati* and *Mr. Freddy Supriyadi* of IFRDMD; *Dr. Taweekiet Amornpiyakrit* (Senior Policy and Program Officer) of SEAFDEC Secretariat and *Dr. Evelyn Grace Ayson* of AQD. ❖

GOJ-TF new cycle commences successfully at AQD



The external evaluators and participants during the Annual Progress Meeting

The 2015 Annual Progress Meeting of the AQD Programs under the ASEAN-SEAFDEC Consultative Group Mechanism Funded by the Government of Japan-Trust (GOJ-TF) was held on 29 January at AQD’s Tigbauan Main Station. The meeting reviewed the projects implemented in 2015 and discussed the proposed research activities for the period 2015-2019. The external evaluators were *Dr. Koh-ichiro Mori*

of the National Research Institute of Aquaculture, Fisheries Research Agency of Japan, *Dr. Zubaida Basiao* of the University of the Philippines-Diliman, and *Dr. Carlos Baylon* of the University of the Philippines-Visayas.

The evaluators collectively noted the important role of fish farmers and local government units for the continuity of the project. They emphasized the need for AQD to have a clear road map on how these two major players may be involved in the research activities. They also suggested that AQD should take a holistic approach in the conduct of its training courses to have more impact on the communities.

Discussions during the meeting focused on the 12 activities under two new programs funded by GOJ-TF: (1) reinforcement & optimization of

fish health management & its effective dissemination in the Southeast Asian region, and (2) environment-friendly, sustainable utilization & management of fisheries & aquaculture resources.

“We will always be thankful for the support that the Japanese Government is giving to AQD,” said AQD Chief *Dr. Felix Ayson*. He also added that AQD was able to continue the capacity building of the people working in the aquaculture sector and extend on-site trainings to member countries through the help of the GOJ-TF.

Dr. Takuro Shibuno, AQD Trust Fund Manager and Deputy Chief, expressed his gratitude to all AQD staff who supported the GOJ-TF programs. He also acknowledged the efforts of the evaluators for giving valuable comments on the GOJ-TF activities. ❖

SPECIAL REPORT

Transboundary Diseases and Early Mortality Syndrome (EMS) or Acute Hepatopancreatic Necrosis Disease (AHPND)

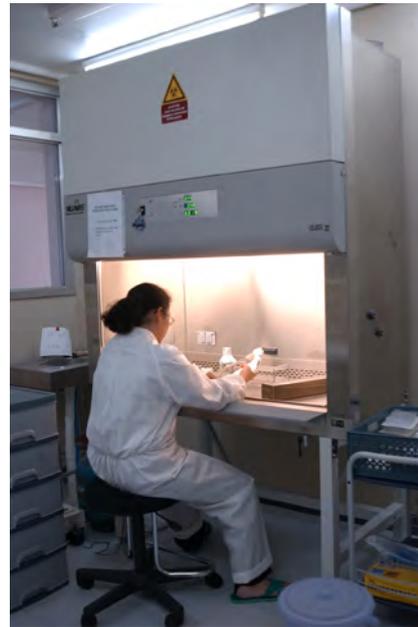
By SEAFDEC Aquaculture Department

Disease outbreaks remain a crucial obstacle to the growth of the aquaculture industry. Shrimp culture has been particularly affected since the White Spot Syndrome Virus plagued farms worldwide in the 1990s. Since then, other epidemic viral diseases have cost the industry an estimated 15 billion USD in the past 15 years and affecting about a million people in Southeast Asia alone who depend on shrimp culture for their livelihood.

Particularly challenging is the spread of these pathogens across international borders, carried by infected stocks. More recently, the Acute Hepatopancreatic Necrosis Disease (AHPND) has been the subject of attention since it has caused serious drops of up to 20% in worldwide shrimp production. The disease first appeared in China in 2009 but has since been also reported in SEAFDEC member countries: Cambodia, Malaysia, Philippines, Thailand, and Viet Nam.

AHPND pathogens were identified in 2013 to be certain strains of *Vibrio parahaemolyticus* which has so far infected *Penaeus monodon* and *Litopenaeus vannamei* farms. Causing massive shrimp mortality in the first 35-45 days from stocking of ponds, AHPND was formerly referred to as the Early Mortality Syndrome (EMS). However, other pathogens and environmental factors also cause early mortality which farmers sometimes mistake to be AHPND.

The issue has prompted AQD and the Philippine Bureau of Fisheries and Aquatic Resources to convene last February the "Regional Technical Consultation (RTC) on EMS/AHPND and other Transboundary Diseases for Aquatic Animal Health Management." The meeting formulated the following regional policy recommendations as shown in Box 1. ☒



The diagnostic facilities at AQD



*Giant tiger prawn, *Penaeus monodon* at farm*



Box 1: Issues and Gaps identified during the RTC, and corresponding Regional Policy Recommendations

Issue/Gaps	Regional Policy Recommendations
Legislative and policy frameworks	<ul style="list-style-type: none"> • Development of a national Strategy and Policy Framework • Member Countries should work to harmonize legislation and regulations related to aquatic animal health management including legislation for trans-boundary movement of live aquatic animals
Strategy for prevention, control, and biosecurity	<ul style="list-style-type: none"> • Compliance with good aquaculture practices to maintain optimal environmental conditions during the culture period <ul style="list-style-type: none"> - Establishment of an effective prevention system against AHPND and other diseases - Conduct of marker-assisted selective breeding of AHPND resistant shrimps - Development of vaccine against AHPND - Use of immunoglobulin Y as feed additive - Conduct study on nano-bubble technology - Use of central drain system - Use of phage therapy • Development and implementation of Guidelines on Health Management and Good Practices to Prevent AHPND and other trans-boundary diseases • Strict implementation of reporting system to relevant authorities and/or competent authorities at country, regional and international levels through the development of <ul style="list-style-type: none"> - Early warning system - Monitoring system - Information for regular reports, annual report • Emergency preparedness and contingency plan: should be a responsibility of competent authorities • Funds should be made available to carry out activities as joint endeavors of the private and public sectors
Detecting the EMS/AHPND disease	<ul style="list-style-type: none"> • Use of diagnostic methods following the OIE guidelines • Development of tool kits • Ensuring the availability and capacity of laboratory services, either public or private
Cooperation among relevant stakeholders	<p>Strengthening cooperation arrangements among the following:</p> <ul style="list-style-type: none"> • ASEAN Member States (AMSs) and international/regional organizations such as OIE, FAO, NACA and SEAFDEC • ASEAN Network of Aquatic Animal Health Centres (ANAAHC) in: <ul style="list-style-type: none"> - Assessing the status and finding ways on how the network could assist in implementing its activities - Identifying the centers to be involved in ANAAHC per country - Mobilizing all aquatic animal health centers • Strengthening of public-private cooperation at national levels • Enhancing cooperation among shrimp industries in the ASEAN Region
Capacity building program	<ul style="list-style-type: none"> • To include technology transfer from one AMS to another AMS
Awareness building	<ul style="list-style-type: none"> • Enhancing the awareness of farmers and relevant stakeholders on R&D activities in transboundary diseases (especially on management and control)

REGIONAL PROGRAMS

Regional Technical Consultation on EMS and other Transboundary Diseases



Participants in the ASEAN Regional Technical Consultation on EMS/AHPND and other Transboundary Diseases for Improved Aquatic Animal Health Management in Southeast Asia

Early Mortality Syndrome (EMS) also known as Acute Hepatopancreatic Necrosis Disease (AHPND) and other Transboundary Diseases” were the topics of the ASEAN Regional Technical Consultation organized by AQD and the Philippine Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR) organized from 22 to 24 February in Makati City, Philippines.

The regional consultation was funded by the Government of Japan through



(From left to right), AQD Chief Dr. Felix Ayson, Embassy of Japan First Secretary (Agriculture) Mr. Kenji Terada, SEAFDEC Secretary General Dr. Kom Silapajarn and DA Undersecretary and BFAR Director Atty. Asis Perez

the ASEAN Secretariat (Japan-ASEAN Integration Fund). The purpose of the meeting was to take stock of the status of EMS/AHPND and other transboundary diseases affecting shrimps in Southeast Asia. It also aimed to define research and policy directions to improve aquatic animal health and ensure sustainability of aquaculture operations.

It was attended by over 60 delegates from the ASEAN and SEAFDEC member countries, regional and international organizations (Food and Agriculture Organization, Network of Aquaculture Centres in Asia-Pacific, and Office International des Epizooties) and the private sector.

During the opening ceremony, SEAFDEC Secretary General *Dr. Kom Silapajarn* stressed the need for effective surveillance measures to alert the countries of any disease occurrence. He added that an existing ASEAN mechanism which could be utilized for this purpose is the ASEAN Network of Aquatic Animal Health Centres, based in Thailand.

The technical session began with a review of the status of EMS/AHPND and other emerging diseases in farmed

shrimps in ASEAN Member States and Japan. The highlight of the meeting was a workshop where participants, in a plenary session, identified priority research areas for collaboration and formulated interventions and recommendations to address the important issues that were raised during the earlier technical sessions.

The important interventions and recommendations emphasized by the participants during the discussions included effective border control, biosecurity capacity of countries to prevent the entry of pathogens, compliance with good aquaculture practices, emergency preparedness, contingency planning, and sharing of information and experiences among countries affected and not affected by the disease.

The consultation ended with a renewed commitment of the ASEAN Member States, regional and international organizations, and other partners in the region to enhance collaborative efforts and strengthen partnerships in addressing issues on aquatic animal health, particularly on present and emerging transboundary diseases.



SEAFDEC holds the National Workshop on Validation of Sharks and Rays Landing Data in Yangon, Myanmar



Participants during the Workshop on Validation of Sharks and Rays Landing Data

The National Workshop on Validation of Sharks and Rays Landing Data was organized by TD and MFRDMD in Yangon, Myanmar from 9 to 11 February 2016. Attended by local enumerators in selected sharks/rays landing sites in Myanmar, namely: Mawlamyine and Yangon, the workshop was part of the SEAFDEC Sharks Project which carries out a 1-year Data Collection since July 2015. The specific objective of the

workshop was to validate sharks and rays data collected in selected landing sites by the local enumerators. Summary of the progress of data collection was also reported during the workshop. Regionalized format for sharks/rays data record and analysis was agreed among the project participating countries, namely: Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, and Viet Nam



The Experts Meeting on PSM in the Region



Participants from SEAFDEC Member Countries

Training Department in collaboration with SEAFDEC Secretariat organized the Experts Meeting on Regional Cooperation to Support the Implementation of Port State Measures in Southeast Asian Region from 2 to 4 February 2016 in Bangkok, Thailand. Forty two participants representing the SEAFDEC Member Countries, SEAFDEC Departments, FAO, USAID and relevant agencies participated in the Meeting. The Meeting came up with: 1) identified issues for harmonization to support the implementation of PSM in the region and 2) concept proposal on regional cooperation to support the implementation of Port State Measures to be addressed by the SEAFDEC Council and high-level authorities under the ASEAN mechanism.



TD joins workshop on improving small-scale fisheries and aquaculture data collection



Resource person from Thailand presenting a paper during the workshop

A fishery governance and management system scientist of the Training Department (TD) participated in the Regional Workshop Towards Improving Small-Scale Fisheries and Aquaculture Data Collection from 7 to 8 March 2016 in Jakarta, Indonesia which was organized by FAO in collaboration with

Global Strategy Asia-Pacific Office and the Ministry of Marine Affairs and Fisheries, Indonesia. The workshop aimed to introduce the concept behind the “Guidelines to Enhance Fisheries and Aquaculture Statistics through a Census Framework” and to promote its use to enhance countries’ knowledge of

fisheries and aquaculture, in particular the role of small-scale fisheries activities. The workshop came up with recommendations that screening questions on fishing activities would be added to “The Census of Population” to facilitate conduct of follow up household fisheries surveys. It can be used as basis of establishing Master Sampling Frame for small-scale fisheries for further development of routine data collection.



Participants during the Data Collection Workshop

SEAFDEC convenes the Experts Workshop on Fishway Design



Participants of the Workshop on Fishway Design

SEAFDEC convened the “Experts Workshop on Fishway Design Principles to Enhance Sustainability of Inland Fishery in the Southeast Asian Region” on 6-10 March 2016 in Thailand and Lao PDR, with financial support from the Australian Centre for International Agricultural Research (ACIAR). Attended by regional and international experts, officers and experts of the Department of Fisheries and the Royal Irrigation Department of Thailand as well as the SEAFDEC Secretary-General, and concerned officers of SEAFDEC Secretariat, Training Department (TD), and Inland Fishery Resources Development and Management Department (IFRDMD), the Workshop

was aimed at obtaining information from experts on their works related to fishways, as well as their recommendations on the design and construction of experimental fishways undertaken by TD with support from ACIAR.

Pre-workshop excursion was arranged for the participants to visit the fish passage at Sui Reservoir in Cham Phone District, and fish friendly floodgates in Huay Papak, Huay Kae and Huay Phin in Xayburi District, Savanakheth Province in Lao PDR. The participants also observed the fishway facilities at the Thoranit-naruemit Watergate and Na Koo Watergate in Nakhon Phanom

Province, and Suraswadi Watergate in Sakon Nakhon Province in Thailand. This was followed by the workshop session, where knowledge and views among the experts on fishways based on biological, ecological, hydrological and engineering points of view, were shared. In addition, the principles and criteria to be considered in designing experimental fishways were also discussed. The Workshop subsequently considered the model of an experimental fishway constructed by TD, which was initially designed for low-head weirs targeting fingerling size cyprinids that require longitudinal migration. With recommendations from the experts, TD’s initial fishway model would be improved and used to experiment on various fish species and come up with relevant data and information on fish biology and behavior that could be used to improve the model. It was also suggested that field experiment could also be considered in the future to verify the use of the fishway model in facilitating upstream migration of fish across cross-river obstacles. Furthermore, the Workshop also recommended the establishment of an e-group for fishway experts as starting point to facilitate sharing of information on their works in relation to fishways in the future.



SEAFDEC shares the Regional Initiatives toward Combating IUU Fishing at the 5th GFETW



SEAFDEC representative at the GFETW Workshop

Mr. Hajime Kawamura, deputy Secretary-General of SEAFDEC and Dr. Somboon Siriraksophon, Policy and Program Coordinator attended the Fifth Global Fisheries Enforcement Training Workshop (5th GFETW) which focused on ‘Collective regional and

global efforts in combating IUU fishing using effective MCS management tools including enforcement powers to protect the sustainability and cultural and economic viability of all fish stocks. The training workshop was co-hosted by the International MCS Network and the Ministry for Primary Industries, New Zealand in Auckland on 7–11 March 2016. The workshop discussed case studies of international and regional cooperation, MCS partnerships, sponsorships and technical assistance, including government – nongovernment arrangements; successfully introduced cost effective MCS tools, new MCS technologies and methodologies; and

developed MCS Capability and Capacity Building Activities. SEAFDEC took the opportunity to share the ASEAN-SEAFDEC initiatives focusing on the Regional Cooperation towards combating IUU fishing in the Southeast Asian Region. Delegations from ASEAN Member States, namely; Cambodia, Indonesia, Malaysia, Philippines, Thailand and Vietnam also joined the workshop.



TD represents SEAFDEC at APFIC Regional Consultative Forum Meeting



Participants of the APFIC Regional Consultative Forum Meeting

Two representatives from SEAFDEC Training Department (TD) participated in the Sixth APFIC Regional Consultative Forum Meeting on “Promoting blue growth in fisheries and aquaculture in the Asia-Pacific” from 8 to 10 February 2016 in Colombo, Sri Lanka which was organized by APFIC, FAO and Ministry of Fisheries and Aquatic Resources Development, Sri Lanka. During the Meeting, TD made three presentations:

1) REBYC-II CTI: The Way Forward for Trawl Fisheries Management in Southeast Asia and Coral Triangle Region; 2) Regional Initiatives on Combating Illegal, Unreported and Unregulated (IUU) Fishing in Southeast Asia; and 3) Optimizing Energy Use in Fisheries in Southeast Asian Region: Fishing Vessel Energy Audits. ☒

The 1st Regional Training Workshop on Larval Fish Identification and Fish Early-life History Science



Trainees during the Workshop on Larval Fish Identification

SEAFDEC Training Department in collaboration with SEAFDEC-Sweden Project organized “The 1st Regional Training Workshop on Larval Fish Identification and Fish Early-Life History Science” from 1 to 13 February 2016 at the TD premises in Samut Prakan. Fifteen young fishery researchers/biologists from fisheries agencies of four participating countries, namely Cambodia, Myanmar, Thailand and Viet Nam participated in this training workshop. Basic knowledge on the process of conducting larval fish surveys and practical experience on larval fish identification up to family level was provided during the course. ☒

The Regional Training Course on Basic Stock Assessment



Participants of the training course brainstorming the idea of stock assessment

SEAFDEC Training Department (TD) in collaboration with the SEAFDEC Marine Fishery Resources Development and Management Department (MFRDMD) and SEAFDEC-Sweden Project organized the Regional Training Course on Stock Assessment (First Level) from 29 January to 5 February 2016 at

Rayong Province, Thailand and (Second Level) from 12 to 26 March 2016 at Training Department. Twenty trainees of each level were from countries around the Gulf of Thailand including Myanmar and took the responsibility of studying the fisheries stocks, *i.e.* anchovy, Indo-Pacific mackerel, tuna and etc. In first level, basic knowledge of fisheries biology was imparted to trainees as well as capacity building on data collection, biostatistics sampling techniques, and fishery biology related with stock assessment. The second level was designed to provide knowledge on various stock assessment models. The practical sessions made use of countries’ data that collected after finishing the second level. Trainees report their results of assessment to the instructors at the end of each practice model. ☒



Participants practicing the stock assessment model

FUTURE ACTIVITIES

Date	Venue	Title	Organizer(s)
2016			
2-30 April	Indian Ocean	Deployment of Tsunami Warning System in the Indian Ocean (M.V. SEAFDEC)	TD
4-8 April	Nha Trang, Viet Nam	48 th SEAFDEC Council Meeting	Secretariat
17-25 April	Kuala Terengganu, Malaysia	Special Training/Workshop on Stock Assessments of Longtail tuna and Kawakawa in the Southeast Asian Region	MFRDMD & Secretariat
18-22 April	Philippines	Training Course on Carp Hatchery & Grow-out Operations	AOD
18-22 April	Rome, Italy	Technical Consultation on Voluntary Guidelines for Catch Documentation Scheme	FAO
19-20 April	Penang, Malaysia	Expert Consultation on the Impact of CITES Listing of Sharks and Ray Species in the South and Southeast Asia Region	FAO
22 April - 6 May	Philippines	Training Course on Sandfish (<i>Holothuria scabra</i>) Seed Production, Nursery and Management	AOD
27-29 April	Palembang, Indonesia	1 st Workshop on Enhancement of Sustainability of Catadromous Eel Resources in South East Asia	IFRDMD
28 April	Bangkok, Thailand	SEAFDEC-Sweden Project Annual Review Meeting	SEAFDEC-Sweden Project
9-13 May	Sri Lanka	The Eighth GEF Biennial International Waters Conference (IWC8)	GEF
9-13 May	Philippines	Training Course on Freshwater Prawn Hatchery & Grow-out Operations	AOD
9-30 May	Philippines	Training Course on Mud Crab Hatchery and Nursery Operations	AOD
10-11 May	Bangkok, Thailand	Swedish Embassy's Annual Regional Workshop	Swedish Embassy
11-31 May	Philippines	Training Course on Abalone Hatchery and Grow-out	AOD
11 May - 1 June	Philippines	Training Course on Mud Crab Nursery & Grow-out Operations	AOD
16-17 May	Thailand	Expert Meeting on Assessment of the Proposed Listing Commercially Exploited Aquatic Species to the CITES Appendix	Secretariat & TD
16-19 May	Malaysia	Regional Technical Consultation on Enhancing Coastal Community Resilience for Sustainable Livelihood and Coastal Resources Management	MFRDMD
16-20 May	Philippines	Training Course on Freshwater Prawn Hatchery & Grow-out Operations	AOD
19-20 May	Thailand	Regional Consultation for Development of the Common Position on the Proposed Listing Commercially Exploited Aquatic Species to the CITES Appendix	Secretariat
19-20 May	Indonesia	2 nd Bali Tuna Conference and 5 th International Coastal Tuna Business Forum	MMAF, Indonesia
22-27 May	Paris, France	84 th General Session of the World Assembly of Delegates of the OIE	OIE
23-25 May	Bangkok, Thailand	14 th INFOFISH World Tuna Trade Conference and Exhibition	INFOFISH
23-27 May	Thailand	Training of Trainers on Essential Ecosystem Approach to Fisheries Management for Thailand	SEAFDEC-Sweden Project
23-27 May	Vung Tau, Viet Nam	National Training on Elasmobranch Taxonomy	Viet Nam, MFRDMD and Secretariat
30-31 May	Philippines	8 th Meeting of the ASEAN Fisheries Consultative Forum (AFCF)	ASEAN Secretariat
1-3 June	Philippines	24 th Meeting of the ASEAN Sectoral Working Group on Fisheries (ASWGF)	ASEAN Secretariat
7-9 June	Thailand	Regional Technical Consultation on Development of Regional Guidelines for Small-Scale Fisheries in the Southeast Asian Region	Secretariat
8 June	Thailand	Forth REBYC-II CTI Project Steering Committee Meeting 2016	REBYC-II CTI
9-10 June	Thailand	REBYC-II CTI Project Lesson Learnt Workshop	REBYC-II CTI
13-22 June	Philippines	Training Course on Mud Crab Nursery & Grow-out Operations	AOD
13 Jun - 19 Jul	Philippines	Training Course on Marine Fish Hatchery	AOD
20-25 June	Cambodia	E-EAFM Training for Cambodia	SEAFDEC-Sweden Project
24-26 June	Bac Lieu, Viet Nam	VietShrimp International Fair 2016	Viet Name

AQD staff attend lecture on genomics



Participants of the Genomics Lecture

AQD's senior technical assistants *Ms. Joana Joy Huervana* and *Ms. Rema Sibonga* together with research assistant *Ms. Loina Henzel Delgado* attended the lecture on "Introduction to Next Generation Sequencing Data Analysis" organized by the Philippine Genome Center – Core Facility for Bioinformatics (PGC-CFB) at the University of the Philippines-Diliman's (UPD) Marine Science Institute on 22 February 2016.

The lecture focused on the concepts and tools of DNA sequence analysis and the role of bioinformatics in genome-wide association studies.

Discussed during the lecture were basic concepts of molecular biology and genetics that underlie genomics and their applications, as well as characteristics of genomic data that account for the challenges associated with next generation sequencing (NGS) analysis.

NGS gives more data using less time and with lesser cost compared to other sequencing technologies. Its applications include whole genome sequencing, targeted sequencing, metagenomic sequencing, and RNA sequencing which are used in different studies in agriculture, health, and biodiversity.

During the lecture, different softwares and tools used in NGS analysis methods were also introduced to the attendees.

According to UPD's College of Statistics *Professor Dr. Joselito Magadia*, "researchers should not just rely on their statisticians - the statistical tools can do all the work but you still have to be responsible for learning the concept behind."



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.

Information in this Newsletter may be quoted only if reference is made to SEAFDEC.

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SEAFDEC holds regional forum to discuss issues on labor in fisheries



Dr. Wimol Jantrarotai, Director-General of Thailand's Department of Fisheries and current Chairperson of the SEAFDEC Council welcomed the participants to the Consultation

SEAFDEC with support from the SEAFDEC-Sweden Project convened the "First Regional Technical Consultation (RTC) on Labor Aspects within the Fishing Industry in the ASEAN Region" on 25-27 February 2016 in Bangkok, Thailand, to provide a regional forum for countries to discuss the issues on labor in the fisheries sector and the way forward in addressing such issues. The RTC was officiated by the Director-General of the Department of Fisheries of Thailand *Dr. Wimol Jantrarotai* who is also the current Chairperson of the SEAFDEC Council, as the Guest of Honor together with the Deputy Secretary-General of SEAFDEC *Mr. Hajime Kawamura*. The RTC was attended by representatives from agencies responsible for fisheries of the ASEAN-SEAFDEC Member Countries; representatives from Departments of Labor (of some countries); resource persons and representatives from international, regional organizations and private sectors.

Considering the importance of enhancing the competitiveness of the ASEAN fish and fishery products, the SEAFDEC Council during its 47th Meeting in 2015 requested that issues on labor in fisheries should be discussed among the Member Countries at the regional level. In response to the emerging international requirements and the recommendations of the Council, SEAFDEC convened the aforesaid RTC for countries in the region to be kept updated on international

agreements/requirements in relation to labor in fisheries, and to discuss with other countries in the region on the current legal provisions and implementation guidelines of respective countries including recruitment and treatment of migrant labor. As an output, the RTC came up with recommendations on the required interventions (*e.g.* by SEAFDEC and others) with regards to the rights and working conditions of people engaged in the fisheries sector including those of migrant workers (domestic and foreign), to secure their decent working conditions in the spirit of the ASEAN Community.

Specifically, the RTC identified four key points that should be addressed and implemented to secure good and fair working conditions of fishworkers in the region. These are: (1) employment practices and working conditions (living conditions) at sea and in processing plants, which should build upon standards/instruments and national legal frameworks and conduct of awareness building for such laws and regulations including appropriate pre-departure training programs, allowing workers to organize labor unions/associations at national and regional levels; (2) combat illegal (IUU) fishing by improving registration/licensing of vessels, gear and people, and improving the recording of catches; (3) migration policy of the sending and receiving countries by establishing an MOU or bilateral agreements as well as improving the ability of countries to

implement such MOUs and agreements; and (4) combat human trafficking by reinforcing policies, strengthening of inter-ministerial coordination and surveillance with the involvement of the private sector, trade unions, CSOs, etc.

In addition, the RTC suggested that inter-ministerial cooperation and an integrated and comprehensive approach in implementing international instruments especially the ILO Convention 188 and relevant instruments should be strengthened at national level. The RTC also suggested that ASEAN Member States (AMSs) should develop regulations or policies on labor in the fisheries sector based on the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers. In this connection, the RTC recommended that the ASEAN Guidelines on Implementation of Labor Standards for Fisheries Sector should be developed in line with international standards with the involvement of relevant stakeholders through broader social dialogues in order to strengthen the roles and obligations of "receiving" countries, "sending" countries and the commitments by "ASEAN" as indicated in the "ASEAN Declaration." SEAFDEC in collaboration with the AMSs would continue to work on these aspects and submit the recommendations to the SEAFDEC Council and ASWGFi for consideration and endorsement.



Participants discussing labor issues in the fisheries sector during the Consultation