



SEAFDEC NEWSLETTER

VOLUME 31 NUMBER 2 April-June 2008

BANGKOK, THAILAND, ISSN 0857 - 233X

40th SEAFDEC Council Meeting convened in Bali



At the invitation of the Minister of Marine Affairs and Fisheries of Indonesia, the 40th Meeting of the Council of SEAFDEC was held in Bali from 7 to 10 April 2008. The Inaugural Ceremony was presided over by Prof. Dr. Widi Agoes Pratikto, Secretary-General of the Ministry of Marine Affairs and Fisheries of Indonesia. Prof. Pratikto expressed his appreciation to SEAFDEC for the implementation of several activities to ensure sustainable fisheries in the region. While highlighting the accomplishments of SEAFDEC in promoting responsible fisheries, he emphasized the need for regional

cooperation to further combat IUU fishing in order to achieve sustainable fisheries. He also acknowledged the efforts of SEAFDEC in addressing international fisheries related issues, and identified some other important issues, e.g. climate change and its impact on fisheries and aquaculture, which SEAFDEC could also consider exploring the possibility of providing assistance to the Member Countries.

During the Meeting, the Council discussed various issues that are important to the development of sustainable fisheries in Southeast Asian region. The highlighted issues include: the efforts and achievements of SEAFDEC in the implementation of responsible fisheries, particularly in promoting the adoption of the Code of Conduct for Responsible Fisheries (CCRF) in the region; the establishment of the Regional Advisory Committee for Fisheries Management in Southeast Asia as a subsidiary body to the SEAFDEC Council; the involvement of SEAFDEC in the Regional Plan of Action (RPOA) to Promote Responsible

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Dr. Widi Agoes Pratikto (leftmost) with SEAFDEC Alternate Council Director for Indonesia Dr. Made Nurdjana (middle) and SEAFDEC Secretary-General Dr. Siri Ekmaharaj (right)

SEAFDEC discusses issues on small-scale fisheries

Like tropical fisheries in the other parts of the world, fisheries in Southeast Asia is generally characterized by multi-species, multi-gear and dominated by small-scale components, and providing significant contribution to local food security, sustainable livelihoods and poverty alleviation. Despite its importance, issues of small-scale fisheries have been addressed at the international only in the recent years. In order to prepare the readiness of the ASEAN-SEAFDEC Member Countries for the forthcoming global Conference on Small-Scale Fisheries to be organized by FAO in Bangkok in October 2008, SEAFDEC organized the SEAFDEC Regional Technical Consultation (RTC) on Small-Scale Fisheries in Southeast Asia in Bangkok, Thailand from 29 April to 2 May 2008.

The RTC was participated in by representatives from Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand and Vietnam, as well as representatives from the ASEAN Secretariat, FAO/RAP, and Mekong

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The ASEAN-SEAFDEC countries participating in the RTC

EDITORIAL

During the past few years, SEAFDEC has put a lot of emphasis in addressing the issues of poverty alleviation and food security for people in the region. In this quarter, SEAFDEC continues the momentum by organizing a consultation on small-scale fisheries, considering that the sector has been recognized to contribute to local economy and food security of the region to a great extent. The consultation has successfully concluded with the coordinated position in the promotion of small-scale fisheries in the region which is envisaged to help ensure the sustainable development of the sector.

SEAFDEC also continues to undertake several initiatives relevant to management of fishery resources in both coastal and offshore areas. TD successfully organized the training course on coastal fisheries management, and collaborated with FAO to organize a workshop on the assessment and management of offshore resources. In addition, SEAFDEC also put forward activities on combating IUU fishing in collaboration with the RPOA-IUU initiated by Australia and Indonesia and adopted by some of the SEAFDEC members, by organizing an expert meeting on fishing vessel registration. The workshop came up with the recommendations that are expected to contribute to improving vessel registration systems of the countries in the region. Also in support of fisheries management, several HRD activities with clear linkage to fisheries management particularly in the aspect of enhancing the collection of fisheries information were also conducted.



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AQD researcher wins award

Ms. Eleonor Tendencia, a fish health scientist from AQD and a PhD candidate of Aquaculture and Fisheries at Wageningen University (The Netherlands), won the prestigious Dr. Elvira O. Tan Memorial Award for Best Published Paper in Aquaculture in 2008. The award is given by the Philippine Department of Science and Technology for Ms. Tendencia's paper on "Polyculture of green mussels, brown mussels and oysters with shrimp to control the luminous bacterial disease in



a simulated culture system" which was published in the peer-reviewed journal "Aquaculture", Volume 272, pages 188-191.



German student conducts thesis at AQD

Ms. Karin Isabela Kühn conducted her Master's degree thesis at AQD from February to April 2008. She is a student of Agricultural Biology at Hohenheim University, Stuttgart, Germany. She compared the growth performance and survival of the giant freshwater prawn in cages relying solely on natural food and those fed with commercially formulated feeds. She also conducted digestibility studies of commercial feeds in prawns using titanium dioxide as digestibility marker. Her work at AQD was supervised by AQD scientist Dr. Ma.



Lourdes Aralar while her supervisors in Germany are Prof. Dr. Klaus Becker and Dr. Ulfert Focken.



AQD FishWorld joins deep sea survey-expedition

AQD FishWorld curator Dr. Teodora Bagarinao joined an expedition dubbed LUMIWAN 2008 that surveyed deep-sea benthic fauna of the South China Sea. The expedition team, aboard the research vessel MV DA-BFAR left Manila on March 22 and made it back April 2

after going to 68 sampling stations off Mindoro and Palawan. The expedition was conducted by the Museum National d'Histoire Naturelle of Paris, the Smithsonian Institution of Washington DC, DA-BFAR, and the University of San Carlos, Cebu City, Philippines. Other than Dr. Bagarinao, museum scientists from France, USA, New Caledonia, Taiwan, Russia, Singapore, and WorldFish were also on-board.



Sorting of catch at the deck of the research vessel MV DA-BFAR

40th SEAFDEC Council Meeting convened in Bali

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Fishing Practices including Combating Illegal, Unreported and Unregulated (IUU) Fishing by providing advice to the RPOA Coordination Committee; strengthening cooperation with ASEAN through the formalization of the ASEAN-SEAFDEC Strategic Partnership (ASSP); the establishment of common positions on emerging international fisheries related issues to safeguard the region's fisheries interests; and the new Regional Framework for Fishery Statistics of Southeast Asia focusing on the minimum requirements for the improved collection and compilation of fishery statistics.

Since 1998, SEAFDEC has implemented several activities with support from the Japanese Trust Fund (JTF), of which the accomplishments have been summarized and published through a Booklet, also launched during this Council Meeting. The continued

support from the JTF Program has boosted the sustainable development of fisheries in the ASEAN region. The activities and achievements of SEAFDEC including those supported by the JTF have proved to contribute to the sustainable development of fisheries in the region.

In the year 2007, SEAFDEC also received the Margarita Lizárraga Medal Award for the biennium 2006-2007 from FAO for promoting the implementation of the CCRF in the Southeast Asian region. As SEAFDEC marked the 40th anniversary of its establishment in December 2007, and with 40 years behind and having amassed a wealth of expertise and technologies in all aspects of fisheries, the Council expects SEAFDEC to focus its sight on the future. On this note, the Council and the Member Countries were assured that SEAFDEC will not to rest on its laurels nor hang its anchors as it will continue to sail towards further achieving responsible fisheries development in the region.



SEAFDEC discusses issues on small-scale fisheries

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River Commission. The RTC started with statements made by the Member Countries on the importance, problems and existing national policies relevant to small-scale fisheries. Following the presentation, the Member Countries discussed and agreed with the regional coordinated position on small-scale fisheries, which is envisaged to be

used as a framework and direction for sustainable management and promotion of small-scale fisheries in the region.

In addition to the preparation for the Small-Scale fisheries Global Conference, the RTC also took the opportunity to discuss the detailed activities under the project on "Promotion of Rights-based Fisheries through Co-management Approach for Small-scale Fisheries in the Southeast Asian Region's to be implemented by SEAFDEC in 2008.



AQD exhibits on food security

The Philippines is known as the fiesta islands, and AQD joined three exhibitions which have been timed to coincide with town festivals. In each activity, AQD showcased aquaculture technologies that can improve livelihood for food security. The Bicol Trade Fair held April 13-19 was organized by the Metro Naga Chamber of Commerce and Industry and the City Government of Naga. It introduced the Bicolanos and their visitors to trade and investment opportunities in the province.

The Sinigayan Agri-Fair was from March 14-17 in Sagay City. Among the guests who visited AQD's booth were Department of Agriculture Secretary Arthur Yap and Congressional Representative Julio Ledesma IV with his wife-actress Assunta de Rossi.

The Semana sang Iloilo (or Iloilo Week) Agri-Fair was held April 8-11 at the Capitol Grounds in Iloilo City. AQD also joined the one-town-one-product trade fair organized by the Rizal Provincial Government in Taytay, Rizal that ran from 12-15 June in a shopping mall.



AQD joins agri-fairs in the Philippines to get in touch with stakeholders: in Bicol, in Negros, and in Iloilo

DEPARTMENTAL ACTIVITIES

Integrated coastal resources management

As a continuing activity of TD under the Integrated Coastal Resources Management Project in Langkawi, Malaysia and Sihanoukville, Cambodia, TD staff monitored the progress of the activities of the Women's Group, Mud Crab Culture Group, Blood Cackle Fishers Group, Fish Cage Culture and Crab Bank Group in Sihanoukville, Cambodia from 31 March to 3 April and from 17 to 20 June 2008. In addition, TD also invited the expert from JICA to provide information and give advice on mud crab culture techniques to the

Mud Crab Culture Group. From 2 to 5 June 2008, the TD staff also monitored the activities and followed up with the Women's Group and Crab Bank Group in Langkawi, Malaysia. During such period, the Women's Group has developed a new fish product which has been distributed to the market. On the other hand, while the number of crab released was not recorded in the past, in the next operations of the Crab Bank Group, the crab releasing data were already recorded and sent to DOF in Langkawi every month. ☒



TD staff joining the meeting of cage culture group in Sihanoukville, Cambodia

Industrial Training for University & College Students

MFRDMD received 10 undergraduate students from various local universities who underwent their Industrial Training Program at this institute. The first group which had their attachment from 4 May to 26 June 2008 was from University Malaysia Terengganu (UMT) and Universiti Industri Selangor (UNISEL). Another group, trained from 18 May to 11 July 2008 was from the University Malaysia Sarawak (UNIMAS), National University of Malaysia (UKM) and University Technology MARA (UiTM), Perlis.

These students are currently undergoing various BSc Courses especially in Marine Biology, Biotechnology and Marine Technology. They have to undergo their practical training programs under the supervision of MFRDMD Research Officers. They were also assigned to the specific research program which was conducted by the respective officers. The main objective of the Industrial Training Program is to expose them to real time working experiences and to enhance their basic knowledge during their attachment to office work. ☒

TD strengthens experience of university students

TD conducted a short-term training course for University students from 21 – 30 April 2008. The short-term training course "Study on area and livelihood of fisherman around estuary" had 40 students in various fishery fields from 7 Universities in Thailand participating. The training course, which focused on estuary ecosystem, fishing gear around estuary areas, fishing villages around the estuary areas, surveys, etc., also included presentations/discussion sessions and shipboard training. Moreover, study trips related to mangrove conservation and reforestation also formed part

of the training course. As envisaged, the students after the training would gain knowledge and strengthen their

experience in fisheries preparing them for their job and career development in the future. ☒



University students visiting a natural shrimp farm

Awareness building in fisheries and resource conservation for young generation

TD collaborated with the Department of Fisheries of Thailand in organizing the Workshop on Fisheries and Resource Conservation for Young Generation (Yuwapramong) at TD on 8-10 April 2008. About 60 representative students from 6 high schools in Bangkok, Samutprakan, Samutsongkram, and Samutsakon Provinces attended the workshop, which focused on fisheries and resources conservation including awareness building for the young generation. The training/workshop was intended to develop the young participants to become leaders and ambassadors for the transfer of information about fisheries and resource conservation to the other

students in their respective schools. The participants gained knowledge from the lectures as well as the study trip conducted to a fishing village, where they also interviewed the fishermen

regarding their livelihood. Moreover, releasing of fish fingerlings and crablets for resource enhancement and mangrove re-forestation for conservation were also part of the activities of the workshop.



A young student releasing crablets to mangrove areas

AQD holds six training courses

AQD has scheduled practically all of its international training courses in the second quarter of the year, incidentally coinciding with the onset of the breeding season of most tropical fish species. Six courses have been organized and completed.

The first one, "Grouper hatchery training course for the Philippines", was held from 7 to 25 April at AQD's main station and in a private grouper hatchery in Iloilo. The course was a collaboration among NACA, ACIAR and AQD. Fifteen Filipinos attended, coming from the Panay provinces, Palawan, Zamboanga, and Tawi-tawi.

conducted 5-9 May with six participants, from the United Arab Emirates and the Philippines.

The fourth was the international training course on "Abalone hatchery and grow-out" held 7-27 May. The nine participants came from Indonesia, Malaysia, Myanmar, Oman, and the Philippines.

The fifth course was on "Marine fish hatchery" organized from 20 May to 25 June with nine trainees from France, Myanmar, Vietnam, Saudi Arabia, and Philippines.

The sixth training course was on "Crab seed production" that opened on 10 June (until 1 July). Four attended, from Myanmar, the USA and Philippines.



The second one, "Training course on mangrove ecology, taxonomy and community structure" that run from 30 April to 4 May, was conducted by AQD in collaboration with RESCOPAR, a mainly Wageningen University-funded program. Twenty-five attended, with trainees coming from Indonesia, Vietnam and the Philippines.

The third course was on "Seaweeds (Kappaphycus) farming" which was

Trainees at AQD get in action - left: the grouper course; below (from left to right) mangrove practicals, raising abalone larvae, and planting seaweeds



TD representative in trawl workshop

SEAFDEC/TD was represented in two Regional Workshops on Trawl Fishery. The first was the Regional Workshop on Fish Trawling Management in Kish Island, the Republic of Iran, 15-17 April 2008, organized by Iran Fisheries Organization in association with Food and Agriculture Organization of the United Nations (FAO). This Workshop was attended by representatives from different districts of Iran as well as from regional and international organizations in Iran, Kuwait, Oman, Qatar, Saudi Arabia and UAE, FAO and SEAFDEC. The workshop activities included discussions, sea trials and experiments. TD's Mr. Bundit Chokesanguan provided technical advice on responsible trawl fishing and practices, and trawl selective devices including their installation and uses. He also gave two presentations on trawl fisheries in Southeast Asia and SEAFDEC initiatives on TEDs and JTEDs in the region. He also provided information on the GEF/UNEP/FAO Project: Phase II which is inviting new participating countries in the Persian Gulf region. Information on research and tailor-made training course at SEAFDEC Training Department was also presented as a means to extend technical support to non-member countries outside the Southeast Asian region.

Moreover, Mr. Bundit also participated in the FAO Tropical Shrimp Trawling Project National Coordinators Meeting and the ICES-FAO/FTFB Working Group Meeting in Torshavn, Faroe Islands, 19-25 April 2008. Although set

up in 1983, the ICES Working Group on Fishing Technology and Fish Behavior (WGFTFB) was given its mandate only in 2002 when the FAO joined ICES and co-sponsored the WGFTFB. The directive of the WGFTFB is to initiate and review the investigations conducted by scientists and technologists concerned with all aspects of the design, planning and testing of fishing gears used in abundance estimation, selective fishing gears used in by-catch and discard reduction, and environmentally benign fishing gears and methods used to reduce the impact on bottom habitats and other non-target ecosystem components, including behavioral, statistical and capture topics.

In the FAO Tropical Shrimp Trawling Project National Coordinators Meeting, Mr. Bundit who is a member of the NCs presented the REBYC activities undertaken by SEAFDEC, especially, its technical assistance for JTEDs development, experiments and demonstrations in Indonesia, the Philippines and other countries and also the formulation of REBYC Phase II in Southeast Asia. At the ICES-FAO/FTFB Working Group Plenary meeting, he also presented a summary report on the REBYC I activities in Southeast Asian Region and joined the Species Separation for Demersal Trawl group discussion. In addition, he also discussed and sought confirmation from FAO for the proposal to organize the ICES-FAO/FTFB Working Group meeting in Bangkok in 2010 in order to give FAO sufficient time to work with the ICES Council for the preparation of the meeting. ☒



Mr. Bundit (third from right, first row) participated in the Regional Workshop on Fish Trawling Management in Iran

AQD and fisherfolk explore the concept of resource management

Under its regional stock enhancement program (socioeconomics component), AQD organized information and planning seminars with and for the program's target community (Brgy. Molocaboc) in Sagay, Negros Occidental in west central Philippines.

The first topic was on the biology of abalone and giant clam to prompt better appreciation of marine resources; this was conducted on 13 March and attended by 39 fishers, gleaners, local government officers, Bantay Dagat personnel (local sea patrol) and Sagay Marine Reserve (SMR) staff. The second topic was on ecotourism, conducted on 13 May and attended by 47 people. The third, a Participatory Action Plan Development, was on 14 May with 41 people in attendance. This activity came up with a community resource map, priority list of problems and corresponding solutions relevant to Sagay fisheries and the collaborative stock enhancement initiatives among AQD, SMR and the local government. The stock enhancement program is funded by the GOJ Trust Fund. ☒



The community meeting to work out an action plan, with the women of Molocaboc very attentive

Newly released publications on aquaculture

Abalone culture is a 2-page 3-fold flyer summarizing the abalone grow-out technology for sea cages that has been developed by AQD.

Abalone hatchery is a 31-page manual detailing the biology, site selection, design of facilities, natural food culture, broodstock management, spawning, primary and intermediate nurseries, transport and profitability of the donkey's ear abalone *Haliotis asinina* hatchery.

Grow-out culture of the Asian catfish, a 29-page manual, discusses site selection, rearing systems, disease management, and profitability of farming *Clarias macrocephalus*.

Breeding and seed production of the Asian catfish, a 28-page manual, offers step-by-step procedures from breeding to nursing *Clarias macrocephalus*. Health management and financial analyses are also included.

Biology and hatchery of mudcrabs is a 47-page second revision of a 2003 manual, bringing up-to-date knowledge on the biology and hatchery practices of mudcrab (*Scylla*) species.

Research output of the Fisheries Sector Program, in CD format, contains

two volumes of the FSP report; the second volume seeing publication for the first time. In all, 66 research papers on aquaculture and fisheries are included in the CD package, likewise a small booklet of abstracts in hardcopy. AQD and DA-Bureau of Agricultural Research co-produces this CD.

Compendium of aquaculture technologies, in DVD format, contains the technology descriptions and profiles of at least 11 technologies developed by AQD in the past 35 years with notations on their financial analysis, technology adoptors, and the research behind these technologies (list of milestones, award-winning papers, and bibliographies of the papers in science journals that led to the technologies). The compendium includes the hatchery and/or grow-out of abalone, mudcrab, tiger shrimp, grouper, milkfish, seabass, bighead carp, catfish, tilapia, freshwater prawn and seaweeds. Since the DVD commemorates 35 years of research, technology demonstration, training and information dissemination, it holds a special section on past and present AQD Chiefs, their visions and their term reports. A fishfarmer's reading resource carry all the videos and publications ever produced by AQD, and these may be viewed full-length in the DVD. ☒

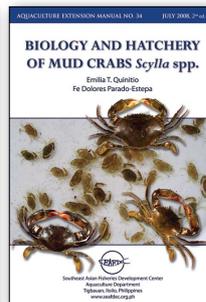
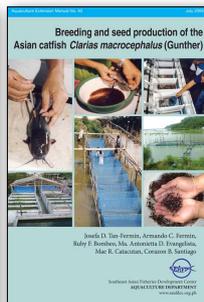
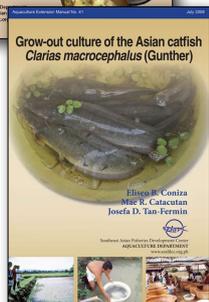
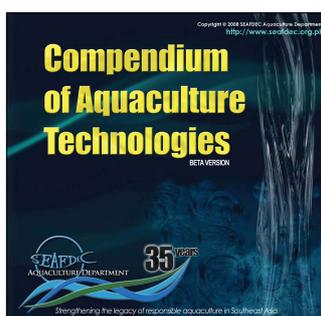
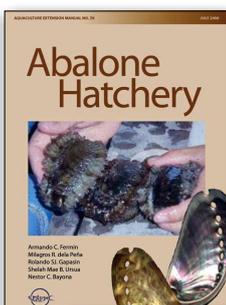
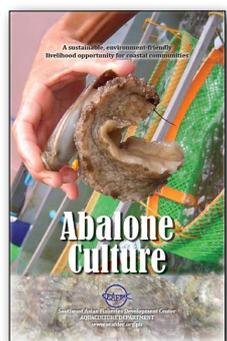
Regional Workshop on Assessment and Management of the Offshore Resources in South and Southeast Asia



SEAFDEC and FAO jointly organized the Workshop on the Assessment and Management of the Offshore Resources in South and Southeast Asia from 17 to 19 June 2008 in Bangkok, Thailand aimed at reviewing and synthesizing the existing information on the status of offshore resources in South and Southeast Asia, and evaluating the feasibility of developing new fishing activities targeting such resources.

The Workshop was participated in by representatives from SEAFDEC Member Countries, four South Asian countries, namely India, Maldives, Pakistan and Sri Lanka, and resource persons from INFOFISH, ICSF and IOTC. Through the workshop process, the relevant data, literature and reports related to offshore demersal and pelagic resources, including those related to sustainable exploitation, technical and economic aspects of development, have been compiled and analyzed.

It was noted that all countries in South and Southeast Asia have existing policies to promote and further expand their fishing activities offshore. Some countries have set up policy to reduce fishing pressure from the overexploited inshore areas by expanding to offshore areas. The workshop therefore concluded with the 3 areas for consideration: 1) improving information, 2) challenges of the offshore fishery in this region, and 3) improving fisheries management. ☒



SPECIAL REPORT



Shrimp farmers in the Philippines go for the Pacific white shrimp

Thirty-eight (38) grow-out farms and seven (7) hatcheries might not seem a lot, but their very existence signals the Philippine entry into white shrimp *Litopenaeus vannamei* aquaculture.

Speaking during the 6th Philippine Shrimp Congress held 28-30 May 2008 in Bacolod City, south of the Philippine capital of Manila, experts from the United States, Thailand, Vietnam, India, Taiwan and France have agreed on how to ensure success in white shrimp culture.

Their advices are three-fold, based on their experiences, and are applicable to shrimp farmers in SEAFDEC member-countries:



SEAFDEC/AQD Chief Dr. Joebert Toledo opens the session on biosecurity and nutrition

(1) **The use of specific-pathogen free (SPF) or specific-pathogen resistant (SPR) broodstock and “high-health” fry.** Importations of SPF or SPR broodstock will only be from certified or government-approved sources. At the moment, only 10 facilities in the U.S.A. are accredited, all pre-cleared or certified by the Oceanic Institute or the United States Marine Shrimp Farming Program Consortium. On the other hand, hatcheries producing “high-health” fry from these imported broodstock would have to seek accreditation from the government. Accreditation is contingent upon water treatment (incoming and effluent water), physical isolation, aeration, and sanitation & disinfection facilities and practices.

(2) **The use of best management practices (BMPs) in grow-out farms** which means:

- provision of settling & treatment ponds, filtration system & reservoirs
- the use of probiotics (several products are commercially available and usually made-up of *Bacillus* spp.)
- installation of biosecurity measures, including tire bath at farm entrance, footbath & hand disinfection at the pond entrance, nets & high-density polyethylene liners as crab fence, bird scaring devices, individual paraphernalia for each pond, and hygiene facilities for farm personnel
- continuous monitoring of shrimp stock for disease symptoms. Institutions like AQD have disease diagnostic laboratories where shrimp farmers can send shrimp samples
- accomplishment of the certification to operate grow-out farms from the government prior to their operation

(3) The marketing of the right size of shrimp demanded by consumers, and compliance by producers, processors & exporters to regulations on food safety (e.g. HACCP), traceability, environmental and social components (e.g. fair trade)

The road to white shrimp in the Philippines has been long and paved with controversies. Prior to January 2007, the government banned the importation of *L. vannamei* (it is not native to the country) amidst fears of exotic disease agents that would ride on the white shrimp.

White shrimp culture in other countries is not problem-free. It has been hit by viruses -- i.e., white spot syndrome virus (WSSV), taura syndrome virus, yellowhead virus, gill-associated virus, infectious hypodermal & hematopoietic necrosis virus, and infectious myonecrosis virus – and bacteria (necrotizing hepatopancreatitis).

But the private sector, through the Fisheries and Aquaculture Board, lobbied for the lifting of the ban because shrimp farmers found tiger shrimp (*Penaeus monodon*) culture extremely difficult, as they have been forced to live with WSSV among other diseases. Some losses have been devastating.

It's too early for the Philippines to appear on the white shrimp radar. The biggest producing countries are Thailand, China, Indonesia, Vietnam, India, Ecuador and Brazil. Since white shrimp was first introduced to Asia from Ecuador in 2000, production has jumped 1,000% to nearly 1.6 million metric tons in 2005. In contrast, tiger shrimp only increased 15% in the same period. Shrimp production is now dominated by white shrimp (78%) and most (74%) are produced in Asia.

The need for research and development

Speaking at the Shrimp Congress, Philippine Senator Edgardo J. Angara called for an intensified research and development (R&D) effort to help boost the country's shrimp industry.

“Following the collapse of shrimp farming in the last decade due to the unsustainable practices and diseases, we realize now more than ever the need to beef up efforts at developing technologies and practices that will ensure the sustainability of the industry. I believe that potential problems in the shrimp industry can be prevented and by strengthening our R&D efforts,” said Angara, who also chairs the Philippine Senate Committee on Agriculture and Food.

He added, “Traditional farming methods no longer suffice. An export-oriented industry such as this requires more technology-intensive practices. Therefore, we must provide massive training and skills development for local shrimp growers and fishers, as well as their children. We will improve farming productivity if we are able to adopt modern technology and produce competent technical manpower.”

Angara also sees four major solutions in achieving long-term viability and productivity of the Philippine shrimp industry, enumerating among others: the need to tap existing pond resources, introduction of cost-effective and environment-friendly farming practices, adoption of a sound biosecurity program and to genetically improve shrimp species especially the tiger shrimp.

“If we strengthen research and development in the country, shrimp industry's output and productivity will definitely improve as investment in R&D has the highest economic return of all economic activities,” he said.

The Shrimp Congress was organized by PHILSHRIMP Inc. with the support of DA-BFAR, DOST, SEAFDEC Aquaculture Department, Negros Prawn Producers & Marketing Cooperative Inc, and the World Aquaculture Society.

The industry sponsors are Cruz Aqua / Epicore / Kona, Merck, Hoc-Po Feeds, Santeh Feeds, Schering-Plough, Spectrum International, Inve, BNH Marketing, Cargill, Feedmix, Novus, B-Meg, Yama Water Inc, CP, Bayer Animal Health / Genereach, Biostadt, and 2Go-Aboitiz. ☒



(from left to right) Honorable Senator Edgardo Angara (Philippines) expresses support to the shrimp industry and expounds on the need for research; AQD Scientist Dr. Celia Pitogo presents her study on disease surveillance in Southeast Asia; and visitors to the AQD booth leaf through publications on aquaculture

REGIONAL PROGRAMS

Training on deep sea fishery resources

The Training Workshop on the Deep Sea Fishery Resources Exploration on the continental slopes in Southeast Asian Waters was jointly organized by Bureau of Fisheries and Aquatic Resource (BFAR) and SEAFDEC Training Department, from 11 to 25 May 2008 onboard the research vessel M/V DA-BFAR along the Lingayen Gulf in the Philippines. The workshop was attended by researchers and specialists in the field/area of deep sea taxonomy and fish identification from the SEAFDEC Member Countries, an expert from the Tokyo University of Marine Science and Technology, and researchers from SEAFDEC/TD and MFRDMD. The workshop aimed to explore and document the important species of the deep sea fishery resources and investigate the topographic features on the continental slope of the Lingayen Gulf for bottom trawl fishery.

A total of 15 fishing operations were conducted using the beam trawl, otter-board trawl, and deep sea traps. The samples collected from the sampling gears were brought to the laboratories for fine sorting (according to family and species level) recording and photography. Sixty six families of deep sea fishes,

54 crustacean species, 8 families of cephalopod, and 35 families of shelled mollusks were identified during the workshop. The workshop also noted the potentially commercial species which were grouped under Congridae and Macrouridae, and deep sea shrimp belonging to family Pandalidae. ❖



Participants analyzing the collected fish samples from fishing operations

TD organizes training course on Set-Net fishing

The Regional Training Course on Set-Net Fishing Technology for Sustainable Coastal Fisheries Management was organized by SEAFDEC/TD from 8 to 22 April 2008 to disseminate the set-net fishing technology to the ASEAN region. Eleven (11) participants from Brunei

Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, Philippine, Thailand and Vietnam participated in the training course, which focused on the transfer of the set-net fishing technology as a tool for sustainable coastal fisheries management. One week of lecture and

practical sessions at TD in Samut Prakan Province, guided the participants on the concept and main activities of a Set-Net Project, including set net fishing technology. Another one week was devoted to field observation and hands-on practice of the Set-Net operation at Rayong Province, including observation of the green mussel and fish cage culture at the Sriracha coastal mariculture area in Chonburi Province. A “Choko-ami” type of Japanese shallow water net, the Set-Net was introduced in the training course from its construction until the actual installation. The knowledge and experiences gained by the participants through this training would certainly enable them to develop and apply the set net fishing gear in a cooperative fisheries management system in coastal small-scale fisheries in their respective countries. ❖



Training participants observed the Set net operation

Expert Meeting on Fishing Vessel Registration

Overcapacity has been addressed as one of the major problems in the fisheries sector in many countries, including those in the Southeast Asian region. Thus, the ASEAN-SEAFDEC Member Countries and fisheries-related organizations in the region have emphasized the importance of the management of fishing capacity for many years; and identify the improvement and/or establishment of system for registration of small/large scale fishing boats as the key element to achieve sustainable development and

management of marine/inland capture fisheries.

In order to facilitate the process of improving vessel registration and promote dialogue between relevant institutions in the region and added to the work plan of the initiative, from 30 June to 2 July 2008, SEAFDEC with support from the Swedish International Development Cooperation Agency (Sida) organized the "Expert Meeting on Fishing Vessel Registration" in Phuket, Thailand. The meeting aimed to review the existing registration systems in the region (large and small scale), to discuss problems and benefits linked to existing systems, to follow



The Expert Meeting on Fishing Vessel Registration

up on the requirements for vessel registration for fisheries management in respective countries.

The Meeting was participated in by experts in fisheries regulation; experts from Maritime Authority Agencies of Brunei Darussalam, Cambodia, Indonesia, Malaysia, Thailand and Vietnam; representative from Australia, Papua New Guinea, and Timor-Leste; expert from International Maritime Organization (IMO); and the IT expert from the Swedish Board of Fisheries (SBF).

After the discussions, the Meeting concluded with the current situation, common issues, and constraints faced by respective countries; and identified the possible solutions and recommendations in response to the problems, as well as the recommendations for further improving the vessel registration system in the region. ✖

AQD Chief Dr. Joebert Toledo reappointed for second term

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grouper, snapper, seabass, rabbitfish, and seaweeds. AQD makes its aquaculture technologies suitable to small-scale, medium-scale or big-scale investors in freshwater and brackishwater culture and in mariculture.

The legacy of scientific research. AQD technologies are backed by scientific research, by peer-reviewed papers in science journals. With AQD's nearly 900 papers, more than 100 have been cited for best research.

The legacy of skilled manpower or skilled womanpower for Southeast Asia. Since 1975, AQD has trained more than 7,000 people from more than 20 countries. Most trainees have gone on to positions of responsibility in their home countries, and attribute their aquaculture skills to AQD.

The legacy of fishfarmer-friendly materials and information dissemination to support technology transfer. AQD also endeavors to write and publish how-to manuals and books that fishfarmers and other stakeholders can use as field references. Most of AQD's recent materials are also available through the website www.seafdec.org.ph, including the library collection which comprises the best collection of aquaculture materials in Southeast Asia.

The legacy of responsible aquaculture and fisheries. The SEAFDEC family including the four Departments in the Philippines, Thailand, Singapore and Malaysia, has regionalized the CCRF. SEAFDEC endeavors to have the regional guidelines adopted by stakeholders of the aquaculture and fisheries industries.

Dr. Toledo articulated two more legacies that he wants AQD to offer to the industry. The legacy of a systematic

and institutionalized technology transfer mechanism backed by scientific research. Results of AQD's technology demonstration programs, i.e. the institutional capacity development for sustainable aquaculture program, and the ABOT Negosyo or Agree-build-operate-transfer Aquabusiness, would be expanded to cover all the member-countries of SEAFDEC.

The legacy of publishing research findings in science journals as the prime movers for technology development and innovation. This ensures that AQD's research will continue to be available to SEAFDEC member-countries in perpetuity.

Dr. Toledo also paid tribute to the past AQD staff and past AQD Chiefs, the Government of the Philippines and Government of Japan, and other funding and collaborative partners. ✖

Wind energy for reduced fishing operation costs

TD promoted the result of its research on wind energy for fishing operation by demonstrating and organizing a training course on Sailing Fishing Boat for Small Scale Fishery in collaboration with the Department of Fisheries, Thailand from 3 to 5 June 2008 at Nakonsrithammarat Province. The main objective of the training was to promote the utilization of wind energy

to reduce fishing costs. Thirty fishermen from Nakonsrithammarat Province participated and joined the practice of sailing boat control. Moreover, TD distributed sails to fishermen who participated in the training course for them to experiment on the use of boat sails in their fishing operations. Wind energy is a means to reduce the cost of fuel in fishing operations. ☒



TD staff demonstrating sailing control to participants

Promotion and training course on JTEDS

TD promoted and organized the JTEDs training course for 20 Thai fishery officers and fishermen on 20 June 2008, with support from the Thai Government. Aimed to provide knowledge and create awareness building on responsible fishing and on the promotion and demonstration on JTEDs to target groups, the training program was divided into lectures and practice at sea. The lectures consisted of topics on responsible fishing and how to use JTEDs with trawl fishery including the benefits of JTEDs through enhanced fishery resources. Practical session and experiment on the use of JTEDs with trawl net were held at Trat Province, where the participants were expected to understand the mechanism and effectivity of JTEDs and their importance and benefits to the fishery resources. ☒

SEAFDEC Participation in the 6th ASEAN Expert Group on CITES

Mr. Hideki Tsubata, Deputy Secretary-General and Ms. Rujarek Bumrasarinpai, Policy and Program Officer from the Secretariat, represented SEAFDEC in the 6th Meeting of ASEAN Expert Group on CITES (AEG-CITES) held in Chonburi, Thailand, from 21 to 22 May 2008 organized by the Department of National Park, Wildlife and Plant Conservation of the Royal Government of Thailand, in collaboration with the ASEAN Secretariat. The Meeting was attended by delegates from ASEAN Member Countries, CITES Secretariat,

observers from the private sector and civil society organizations (CSOs). The Meeting was organized to update and discuss the status of the work progress among the ASEAN expert group on CITES under the ASEAN framework after the CoP14 of CITES held in June 2007.

Taking the opportunity to attend the meeting as an observer, Mr. Hideki Tsubata made a statement regarding the ASEAN common position on conservation and management of



SEAFDEC poster exhibition at the 6th AEG-CITES

commercially-exploited species under CITES as well as regional initiatives and activities in conserving and managing endangered aquatic species. Besides participating in the meeting session, SEAFDEC Secretariat with the Training Department also exhibited posters promoting regional policy and related activities towards sustainable utilization of aquatic resources in ASEAN region, as well as distributed relevant publications to promote the organization's visibility. ☒



The AEG-CITES participants

Advance larval fish training course at TD

SEAFDEC/TD in collaboration with the UNEP/GEF/SCS organized the Regional Training Workshop on Larval Fish Identification and Fish Early Life History Science (Advance Course) from 26 May to 15 June 2008 at the SEAFDEC Training Department in Samut Prakan, Thailand. The Regional Training Workshop aimed to provide the participants with practical experiences on fish identification. After their participation in the training program, the participants should be in a position to apply the knowledge learned and the capacity to identify fish larvae in their respective countries.

Eighteen fish larval researchers from Cambodia, Indonesia, Malaysia, the Philippines, Thailand and Vietnam who attended in the 1st training workshop in 2007 attended the Advance Course. In the advance workshop, the participants who learned the basic larval fish identification including sampling technique from the

first workshop, were provided with advanced lessons and skills on fish larvae identification to the genus/species level and illustration of the fish larvae using camera lucida using their own samples under the close guidance of the resource persons, namely: Dr. Yoshinobu Konishi, Fishery Biologist, Seikai National Fisheries Research Institute, Nagasaki, Japan; Mr. Rangsan Chayakul, Consultant of Department of Fisheries, Thailand; Dr. Chongkolnee Chamchang Senior Fishery Biologist of Department of Fisheries, Thailand; and Assistant Professor Teerapong Duangdee from the Department of Marine Science, Faculty of Fisheries, Kasetsart University, Bangkok, Thailand.

The guide book “Early Stages of Marine Fishes in Southeast Asian Region”, which was drafted as an outcome of the workshop, was scheduled for publication in December 2008. The resource persons will serve as

co-authors while all participants and some SEAFDEC/TD staff serve as contributors. Fish larvae illustration and photo of participants will also be presented in the guide book which can be used as reference for future fish larvae studies in the Southeast Asian Region. In addition, the fish larvae network of the Southeast Asian Region was established for exchanging knowledge and information on fish larvae via <http://td.seafdec.org/courses/fish%20larvae/index.php>. ❖



Participants separating species of fish larvae in the laboratory

Training course for fishery managers

TD organized the ten-day Training Course on Coastal Fisheries Management for Fishery Managers from 6 to 15 May 2008 at the Training Department (TD) in Samut Prakan Province, Thailand. The training had 15 participants from SEAFDEC member and non-member countries such as Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Vietnam, and Oman. A representative from WWF Malaysia

also participated in the training course, which had two components: lectures (approximately one week) and field trips (one week). During the lectures information on the situation of coastal fisheries management in the ASEAN and related fishery management activities implemented by SEAFDEC in the Member Countries were presented and discussed. The concepts and characteristics of coastal resources and management options including rights-

based and co-management approaches for the management of coastal fishing communities, were also illustrated. The first week lectures gave opportunities to the participants to develop their knowledge on coastal fisheries management before going on the field trips. Moreover, the first week was also a good opportunity for the participants to exchange experiences and views, and to become familiar with each other before working hard in the field. Related pilot projects implemented by the DOF of Thailand and SEAFDEC were the target areas for the field trips. Research on several management issues were also discussed by the project officers, local institution representatives and the fishermen. At the end of the course, coastal fishery management planning activities based on the knowledge the participants gained from the lectures and field trips, were prepared by the participants and presented during the culminating activities of the Training Course. ❖



Participants visiting and observing the crab bank in Chumphon Province

FUTURE ACTIVITIES

Date	Venue	Title	Organizer
2008			
1 Jul -15 Aug	Kuala Terengganu, Malaysia	Malaysian Technical Cooperation Programme (MTCP) Training Program: Fisheries Resource Management Course 2008	MFRDMD
3-5 July	Bangkok, Thailand	ASEAN-SEAFDEC Regional Technical Consultation on Human Resources Development for Poverty Alleviation	Secretariat
4-16 July	Samut Prakan, Thailand	Training Course on Coastal Fisheries Management and Extension Methodology for Thai Fishery Officers	TD
14-16 July	Kuala Terengganu, Malaysia	Malaysian National Fisheries Symposium (NaFIS 2008)	MFRDMD
15-16 July	Bangkok, Thailand	Regional Consultation Meeting on the Emerging Regional Fishery Policy Issues	Secretariat
15-19 July	Kuala Terengganu, Malaysia	Training on the Taxonomy and Biology of Sharks and Rays	MFRDMD
22-24 July	Samut Prakan, Thailand	Regional Workshop on the Implication of Indicators Using for Coastal Fisheries Management in ASEAN Region	TD
22-25 July	Nha Trang, Vietnam	Conference of the International Institute of Fisheries Economics and Trade (IIFET)	IIFET
28-31 July	Bangkok, Thailand	Regional Workshop for Streamlined Reporting of Fishery Statistics in Southeast Asia	Secretariat
29 Jul-14 Dec	Distance Learning	Distance Learning on Principles of Health Management in Aquaculture (AquaHealth Online)	AQD
5-7 August	Chiang Mai, Thailand	29 th Special Senior Officials Meeting of the Meeting of the ASEAN Ministers on Agriculture and Forestry (SOM-AMAF)	ASEAN
6-10 August	Manado, Indonesia	2 nd Regional Consultative Forum Meeting of the Asia-Pacific Fishery Commission (APFIC)	APFIC
11-13 August	Manado, Indonesia	30 th Session of the Asia-Pacific Fishery Commission (APFIC)	APFIC
12-15 August	Philippines	AQD Strategic Planning Workshop	AQD
18-23 August	Chiang Mai, Thailand	Regional HRD Workshop on Identification of Potentials and Problem Areas for Promotion of "FOVOP" in the ASEAN Region	Secretariat
1-5 September	Philippines	AQD In-house R&D Review and Planning	AQD
1-15 September	Lao PDR	2 nd Joint Regional Training on Community-Based Freshwater Aquaculture for Remote Rural Areas of Southeast Asia	Secretariat
2-4 September	Manila, Philippines	End-of-Activity Workshop on Good Manufacturing Practices for Pre-Processing Establishment: QA systems for Small and Medium-Sized Fish Processing Establishments in ASEAN Member Countries	MFRD
6-10 October	Puerto Varas, Chile	4 th Session of FAO Sub-Committee on Aquaculture	FAO
13-17 October	Bangkok, Thailand	International Conference on Securing Sustainable Small-scale Fisheries: Bring together responsible fisheries and social development	FAO
19-22 October	Qingdao, China	Coastal Zone Asia Pacific Conference (CZAP2008)	CZAP
20-24 October	Yokohama, Japan	5 th World Fisheries Congress	World Fisheries Congress
20-24 October	Hanoi, Vietnam	Senior Officials Meeting of the Meeting of the ASEAN Ministers on Agriculture and Forestry (SOM-AMAF)	ASEAN
22-24 October	Singapore	End-of-Activity Seminar for the Program on Chemical and Drug Residues in Fish and Fish Products in Southeast Asia	MFRD
30 Oct-1 Nov	Singapore	9 th Meeting of SEAFDEC Information Staff Exchange Program (ISEP)	Secretariat&MFRD
3-5 November	Singapore	31 st Meeting of SEAFDEC Program Committee	SEAFDEC
6-7 November	Singapore	11 th Meeting of Fisheries Consultative Group (FCG) for the ASEAN-SEAFDEC Strategic Partnership (ASSP) Program	SEAFDEC

National Fisheries Symposium (NaFIS 2008)

The fifth National Fisheries Symposium, with the theme of "Fish For Wealth Creation", is scheduled to be conducted at Kuala Terengganu from 14-16 July 2008. This symposium is jointly organised by DoF Malaysia, University Malaysia Terengganu (UMT), the Terengganu State government. NaFIS 2008 is aimed at providing a mechanism for the dissemination of information, in particular on R&D in fisheries and success stories of fisheries entrepreneurs. This symposium will also provide a platform for the exchange of ideas pertaining to fishery issues in Malaysia. "Fish For Wealth Creation" is chosen as a theme to promote the transformation of Malaysian fisheries into a modern and dynamic sector and able to provide business opportunities. In this context wealth also encompasses health. Thus this symposium will cover a very broad spectrum of fishery-related topics including the health of fish and the human health as well as the health of ecosystems. 

Small-Scale Fisheries Conference Securing Sustainable Small-Scale Fisheries: Bringing together responsible and social development 13-17 October 2008, Bangkok, Thailand

Small-scale fisheries have the potential to significantly contribute to sustainable development, in particular with respect to such key issues as poverty reduction, food and livelihood security, balanced nutrition, wealth creation, foreign exchange earnings and coastal-rural development. Although the important role of small-scale fisheries has received growing attention in national, regional and international fora, there are, however, a number of significant impediments to small-scale fisheries realising their full potential. Small-scale fishers often face precarious and vulnerable living and working conditions.

The Conference will have a broad scope allowing for the discussion of a wide range of issues including, *inter alia*, wider social and economic development and human rights issues, governance, fisheries policy processes and systems, fisheries management approaches and market access aspects and means of increasing post harvest benefits. A special focus of the conference, however, will be on the issue of securing access and user rights by small-scale fishers, indigenous peoples, and fishing communities to coastal and fishery resources that sustain their livelihoods.

In addition to the main conference program, comprising plenary sessions and concurrent working group sessions, post-conference tour would also be arranged (optional) to provide first-hand experience of the small-scale fisheries situation in Thailand. For further information about the Conference, visit www.4ssf.org. 

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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AQD Chief Dr. Joebert Toledo reappointed for second term



Dr. Joebert Toledo, reappointed as Chief of SEAFDEC Aquaculture Department

Upon the recommendation of the Philippine President Honorable Gloria Arroyo, the SEAFDEC Council reappointed AQD Chief Dr. Joebert Toledo for a second two-year term, beginning April 2008.

In an interview, Dr. Toledo said he is cognizant of the trust placed upon him by SEAFDEC's highest policy-making body and by stakeholders. He spoke of the legacy that AQD has bequeath the aquaculture industry in the region, and that he plans to build on this legacy:

The legacy of tiger shrimp and milkfish, the two pioneering commodities in aquaculture. AQD practically built the tiger shrimp industry to become a sunshine industry in the '70s and '80s, and also aided its partial recovery in the mid-'90s through the mangrove-friendly shrimp culture technologies developed and verified in the region.

With milkfish, AQD began a national breeding program in 1981, and is now supporting hatcheries that have recently mushroomed as backyard operations in the country.

The legacy of diversified aquaculture. Through scientific research, AQD developed new technologies on hatchery and grow-out for abalone, mudcrab, freshwater prawn, bighead carp, tilapia,

(Continued on Page 11)

SEAFDEC participates 16th ASWGFi Meeting

SEAFDEC Secretary-General, Dr. Siri Ekmaharaj and Senior officials of SEAFDEC participated in the 16th Meeting of the ASEAN Sectoral Working Group on Fisheries (ASWGFi) in Bangkok on 21-23 May 2008, and reported on a number of important milestones in the ASEAN-SEAFDEC cooperation to tackle the challenges that have impacts on the development and management of the region's fisheries sector as well as on the initiatives of SEAFDEC in reaching out to the ASEAN region to address such challenges. Specifically, the Report of the 10th Meeting of the ASEAN-SEAFDEC Fisheries Consultative Group (FCG) in November 2007, to be referred to later as the Fisheries Consultative Group of the ASEAN-SEAFDEC Strategic Partnership (FCG/ASSP), was adopted where the ASWGFi expressed appreciation to SEAFDEC for providing the necessary technical assistance in the implementation of the projects, and the Japanese Trust Fund for providing funding support to several projects. The Report outlined the progress of the ASEAN-SEAFDEC fisheries collaborative programs as well as the policy considerations on important fisheries issues related to the collaborative programs.

The ASWGFi also supported the decision of the 40th Meeting of the SEAFDEC Council in April 2008 to further enhance the ASSP cooperation in: (a) formulating and establishing an ASEAN regional fisheries management mechanism; (b) developing common position/stands on international issues that will have impact on fisheries development in the ASEAN region; (c) assisting ASEAN in the integration of the fisheries sector (i.e. ASEAN Roadmap); and (d) continuing and expanding the existing collaborative projects/activities under the ASSP-FCG mechanism that will enhance capacity building, information collection and exchange, and provide support for important fisheries policy issues. SEAFDEC was also requested by ASWGFi to assist in the setting up of an

ASSP portal website so that information about ASSP including its programs and achievements could be widely circulated to support the sustainable development of fisheries in the region.

The initiatives undertaken by SEAFDEC were also considered and endorsed during the ASWGFi Meeting, including the establishment of a new Framework for Fishery Statistics of Southeast Asia as a reference to improve national fishery statistics in the region and as basis for compiling the fishery statistics of Southeast Asia; the SEAFDEC regional training on community-based aquaculture for rural development where the concept of village and school fish ponds could serve as possible approach for community-based aquaculture for rural development; the Promotion of "One Village, One Fisheries Products" System to Improve the Livelihood for the Fisheries Communities in ASEAN Region to focus on women's groups as the target beneficiaries; as well as the recommendations of the ASEAN-SEAFDEC Regional Workshop on Implementing the ASEAN Roadmap for Integration of Fisheries Sector on 16-18 January 2008 in Bangkok, to form an ad-hoc working group on ASEAN Roadmap for Integration of the Fisheries Sector, and the conduct of the Regional Technical Consultation on Small-scale Fisheries on 29 April-2 May 2008 in Bangkok to come up with the common and coordinated position for the promotion of small-scale fisheries in the region to be submitted to the Global Conference on Securing Sustainable Small-scale Fisheries: Bringing Together Responsible Fisheries and Social Development on 13-17 October 2008 in Bangkok. Moreover, in responding to the concern on impacts of climate change to the fisheries sector, the ASWGFi requested Indonesia with assistance from SEAFDEC and the ASEAN Secretariat to formulate a project proposal aimed at raising awareness on the issue for further discussion at the next Meeting of FCG/ASSP.

