

# SEAFDEC AQD Matters

Newsletter of the SEAFDEC Aquaculture Department, Tigbauan, Iloilo, Philippines



The participants, resource speakers, and DOF staff & officers during the closing ceremony held at the DOF office in Yangon, Myanmar



AQD scientist Dr. Emilia Quintito (2nd from right) demonstrates removal of spent female crab, collection, and counting of newly-hatched zoeae

## AQD holds on-site training in Myanmar and Lao PDR

SEAFDEC/AQD organized two training activities to further expand the knowledge of fisheries extension officers. The first training was the *International training course on mud crab culture* held from 26 September to 01 October in Chaung Thar, Myanmar

in collaboration with its Department of Fisheries (DOF). The second training was the *On-site basic training on freshwater fish health management* conducted from 11-14 October at Namxouang Aquaculture Development Center, Department of Livestock and Fisheries (NADC/DLF) in Lao PDR. Both activities were funded by the Government of Japan Trust Fund.

In Myanmar, six participants (Brunei, Thailand, Cambodia, Myanmar) and 11 observers

mainly from Myanmar attended the said activity. AQD scientist Dr. Emilia Quintito and Training & Information Division Head Mr. Renato Agbayani conducted some series of lectures which include: (1) biology of mud crab; (2) basic principles and procedures for managing mature crabs, rearing of zoea to crab instar stage, nursery and grow-out culture in ponds and pens in mangroves; (3) fattening and soft shell crab farming; (4) economic feasibility of the various culture systems; (5) basic concepts of sustainable aquaculture; (6) principles of sustainable aquaculture; and (7) economic analysis. Meanwhile, AQD technical assistant Ms. Joana Joy de la Cruz-Huervana assisted the participants during their practical sessions. AQD Deputy Chief Dr. Teruo Azuma graced the closing ceremony.



PHOTO COURTESY OF RV PAKINGKING, JR

(Above) AQD's Ms. Gregoria Pagador, Dr. Rolando Pakingking Jr, and Dr. Edgar Amar (1st, 2nd & 3rd from left) give the various laboratory supplies as donations from the GOJ to the officers of Lao PDR's Department of Livestock and Fisheries. (Right) The participants dissect freshwater fish for parasite detection.



In Lao PDR, AQD scientist Dr. Rolando Pakingking Jr and AQD researcher Ms. Gregoria Pagador carried out lectures and practical activities to ten participants and ten observers from the staff of DLF and other private farms. The training aimed to provide the participants with theoretical and practical knowledge on (1) signs and epizootologies of economically-important

freshwater fish diseases; (2) evaluation of fish epizooties; (3) submission of diseased fish samples for diagnosis; and (4) basic laboratory skills for detection of viral, bacterial and parasitic pathogens. A close observation on the zoonotic parasites on different freshwater fish was likewise done on 15-16 October in Vientiane, Lao PDR. Additionally, AQD scientist

Dr. Edgar Amar conducted a survey at Namxouang to determine the state of fish health management in small-holder aquaculture farms. The activity was part of AQD and GOJ's project in accelerating fish health management awareness and capacity building in Southeast Asia.

## AQD reinforces mud crab project in Timor-Leste

Being one of the least-developed countries in the world, Timor-Leste has a 40% population living below poverty line and an economy relying on government and international donor assistance. To help address this issue, SEAFDEC/AQD and the Agricultural Cooperative Development International / Volunteers in Overseas Cooperative Assistance (ACDI/VOCA), a nonprofit international development organization based in United States, have put together a mud crab and fish cultivation project in Timor-Leste through AQD's Agree-build-

operate-transfer (ABOT) program.

The project focuses on mud crab (*Scylla serrata*) production as a source of additional income and an opportunity for females to take part in aquaculture business and proper utilization of mangrove areas along the coastal communities in Timor-Leste. AQD scientist Dr. Emilia Quintio visited Timor-Leste on 21 August-3 September to discuss the project with the Chief of Party of the mud crab/fish cultivation project, Mr. Robert Rosengren, and to assess the proposed sites

for the mud crab fattening in pens and cages; grow-out; and hatchery. Dr. Quintio also gave lectures which were participated by 13 staff from ACDI/VOCA and Ministry of Agriculture and Fisheries (MAF). Biology of mud crab; collection and transport; hatchery design; broodstock and larval rearing; nursery; pond preparation; grow-out; fattening; aquasilviculture; and diseases were among the topics discussed. Practical sessions were also held and were attended by more than 20 participants from MAF and members of the community & producer's group.



Above: Dr. Emilia Quintio (in pink shirt) discusses with the participants the various mud crab culture systems. (Right) The participants try to construct their own mud crab cage

PHOTO COURTESY OF ET QUINTIO

## AQD helps analyze problems on exploited aquatic species

AQD Chief Dr. Joebert Toledo and Deputy Chief Dr. Teruo Azuma together with other representatives from SEAFDEC Departments (TD, MFRD, and MFRDMD) convened during the *Regional technical consultation on improvement*

of technical issues related to selected commercially-exploited aquatic species on 18-20 October, in Bangkok, Thailand.

Organized by SEAFDEC Secretariat, the assembly consolidated the technical problems and developed a policy for promoting

conservation of the selected commercially-exploited aquatic species. The output will be submitted to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to let them know of the concerns of SEAFDEC member countries.

## AQD joins regional scoping workshop

AQD Chief Dr. Joebert Toledo attended the *FAO/SPC regional scoping workshop: Development of a Pacific aquaculture regional cooperative programme* organized by the Food and Agriculture Organization (FAO) and Secretariat of the Pacific Community (SPC) held 11-14 October in Fiji.

The workshop aimed to evaluate the needs and line up a coordinating strategy for all major regional & international agencies and other relevant stakeholders working on aquaculture development in the region. Discussions on the current



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With Dr. Joebert Toledo (2nd from left) is the Director-General of NACA Dr. Ambekar Eknath (3rd from left) and one of the representatives from WorldFish (leftmost)

status of aquaculture in the region, emerging issues & opportunities, and potential regional aquaculture development framework

and programme for Pacific island countries and territories were also conducted.

## PTAC meets in Manila

The Management committee of SEAFDEC/AQD and senior representatives of Philippine government institutions (Bureau of Fisheries and Aquatic Resources, Bureau of Agricultural Research, Department of Foreign Affairs, and University of the Philippines Visayas) met on 5 October in Quezon City for the *21st Meeting of the Philippine*

*Technical Administrative Committee (PTAC)* for SEAFDEC. The meeting was convened to (1) review the status of accomplishments of AQD in 2011 (R&D programs and administration & finance) and plans for 2012 and; (2) discuss the pressing issues that concern the operations of AQD.

The Committee also recommended some follow-up

actions and these include the early preparation of AQD's budget proposal for 2013 and evaluation of AQD's training program to assess its effectiveness in terms of knowledge and skills transfer to stakeholder. Likewise, AQD was requested to consolidate the status of AQD's R&D on various commodities and to provide a roadmap for clarity of directions until 2016. On the new thematic programs, a revised strategic plan document will be published to detail the yearly target of accomplishment until 2016.

- B Acosta

AQD Chief Dr. Joebert Toledo (center) with SEAFDEC national coordinator for the Philippines & Department of Agriculture-Bureau of Fisheries & Aquatic Resources capture fisheries head Dr. Jonathan Dickson (left), and UP Visayas College of Fisheries and Ocean Sciences Dean Dr. Carlos Baylon (right)



PHOTO COURTESY OF JD TOLEDO

## AQD provides training on good aquaculture practices

AQD in collaboration with the South East Asia Fish for Justice Network (SEAFISH), held a *Capacity-building on good aquaculture practices* on 11-15 October in Tigbauan, Iloilo.



PHOTO COURTESY OF CR CADIZ

AQD senior technical assistant Mr. Nestor Bayona shows the abalone broodstock to the staff of Tambuyog and members of SEAFISH

SEAFISH is a regional formation of 17 civil society organizations with members from Indonesia, Vietnam, Cambodia, Thailand, Malaysia, Myanmar and the Philippines that help promote community-based coastal resource management (CBCRM) and encourage socially responsible, environmentally sound, and economically viable aquaculture systems.

The activity was attended by 19 participants from the members of SEAFISH and staff of TAMBUYOG Development Center (the network's regional

coordinator and secretariat). The activity aimed to provide SEAFISH members with better understanding on the science of aquaculture and its socio-economic & environmental impacts.



One of the participants monitors the larval condition of the shrimp

## AQD joins...

### ...Agrilink

AQD joined this year's *Agrilink 2011*, the Philippines' largest agricultural trade expo staged on 6-8 October at the World Trade Center in Pasay City. AQD's Binangonan Freshwater Station staff Dr. Ma Lourdes Aralar, Engr. Emiliano Aralar, Dr. Ma Rowena Eguia, Ms. Alma Patricio, Mr. Nestor de la Cruz,

Ms. Nia Santos, Dr. Frolan Aya, Ms. Vivian Jatulan; and Manila Office staff Ms. Grace Garcia, Mr. Edison Pineda, and Mr. Emerson Rivera took turn in manning the booth selling AQD publications and providing free technical consultation. This year's event highlighted farm integration as key to sustainable development.



PHOTO COURTESY OF MLC ARALAR

Dr. Minda Guerrero (2nd from left) and Dr. Rafael Guerrero of the Aquatic Biosystems (2nd from right) visit the AQD booth

### ...and Fishcon

SEAFDEC/AQD joins the entire nation in celebrating this year's *Fish conservation week* held from 16 to 22 October with the theme, *Karagatan pagyamanin, isda paramihin, buong*

*mundo pasiglahin* at the PCA compound in Diliman, Quezon City.

AQD's Binangonan Freshwater Station and AQD's Manila Office staff represented AQD during the opening program held on 17 October.



Mr. Edison Pineda of AQD's Manila Office (seated left) attends to one of the clients at the booth

## Research seminar



**Dr. Mae Catacutan**, A/QD scientist presented on 20 October her study on the *Digestibility and effective level of meat and bone meal in practical formulated diet for milkfish, Chanos chanos Forsskal reared in freshwater and seawater.*

In her study, the level of meat and bone meal (MBM) was determined in both freshwater (FW) and seawater (SW) culture conditions for the possibility of good growth and survival through four feeding experiments. Results showed that survival rates of milkfish

did not have a difference in all levels of MBM in FW and SW. Dr. Catacutan also said that milkfish was able to consume dietary level of MBM at 30% in FW and at 22.5% in SW based on growth efficiencies, survival data, and histology of tissues examined.



**Dr. Rosario Monsalud** of the University of the Philippines Los Baños talked about the *Long-term ex-situ conservation and quality control of microbial resources for sustainable utilization* on 19 October.

should be properly preserved and all activities (including laboratory facilities and training of the staff) should be done according to the rules of good laboratory practice. Some factors must also be considered in selecting the method to use such as: (1) requirement of the user; (2) number and types of

organisms to be preserved; (3) available facilities; (4) cost of materials; (5) labor involved; (6) desired level of stability; (7) longevity required; (8) value of cultures and; (9) supply and transportation of cultures.



**Dr. Masashi Kodama** of the National Research Institute of Fisheries Science, Fisheries Research Agency, Japan presented on 13 October his study on the *Nitrogen dynamics in shrimp pond and environmental improvement ability of sandfish.*

Results showed that sandfish have a potential to clean the sediment with detritus and reduce the organic load of shrimp in pond. However, Dr. Kodama noted that the cleaning of water and sediment by sandfish is not effective in full scale pond

based on the feeding trial conducted in shrimp pond. The nitrogen dynamics of the feeding trial in the shrimp pond was computed through a simple mathematical model and the variations of biomass & nutrient budgets were likewise observed.



**Dr. Avigdor Abelson** of the Tel-Aviv University in Israel talked about the *Coral reef restoration: The unbearable lightness of a fast gallop on a smooth wrong way* on 4 October.

Abelson mentioned that coral-reef gardening or the transplantation of coral fragments into barren reef areas is the most reported coral reef restoration approach at present. He also highlighted some potential drawbacks of

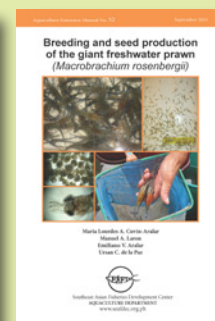
coral-reef gardening which includes reduced growth rates of transplanted corals, reduced fecundity of transplants due to stress, and loss of colonies from donor areas.

## Hot off the press: A/QD publications on aquahealth and prawn

A/QD released two new publications: (1) a textbook on *Health management in aquaculture, 2nd edition* and (2) an aquaculture extension manual on the *Breeding and seed production of the giant freshwater prawn.*

Edited by Dr. Gilda Lio-Po and Dr. Yasuo Inui, the textbook on aquahealth features A/QD's scientific findings on major diseases of cultured fish and crustaceans, as well as prevention and control methods, and diagnostic techniques; whereas, in the freshwater prawn manual, practical seed production systems for *M. rosenbergii*, from biology to culture management, are discussed by authors Dr. Ma Lourdes Aralar, Mr. Manuel Laron, Engr. Emiliano Aralar and Mr. Ursan de la Paz.

These publications are sold at A/QD's Bookstore. For orders, please call (63 33) 511 9172, fax (63 33) 511 8709; or email [bookstore@seafdec.org.ph](mailto:bookstore@seafdec.org.ph).



## Youth science clubs visit AQD

Around a thousand pupils, teachers, and facilitators from the Philippine Society of Youth Science Clubs (PSYSC) Inc. visited SEAFDEC/AQD on 26 October. PSYSC is a national federation of science clubs that encourages the youth's interests and consciousness in science, technology, and environment. They are in Iloilo to hold their 18th National Children's Science Interactive Workshop from 24-27 October. And, as part of their promotion of R&D, they visited FishWorld to be shown discoveries that have impact on the (aquatic) environment.

FishWorld is AQD's

museum-aquarium-visitor center that offers summer internships and carry out annual sci-art competitions among elementary and high schools. It has about 100 marine (including sea turtles) and freshwater species on exhibit; a shell room with skeletons of mollusks, corals, echinoderms, and crustaceans; and a gallery with various sea-inspired artifacts and artwork.

The club members also toured AQD's integrated milkfish broodstock & hatchery facility which showcases transferrable aquaculture technologies to fishfarmers.



The PSYC organizers vividly watching the behaviour of the animals in the aquaria



The visitors have fun while feeding the turtles

## FSES celebrates halloween



PHOTO COURTESY OF JHL RAMOS

Wearing their most scary costumes, the staff of AQD's Farming Systems and Ecology Section (FSES) gathered on 25 October to have a simple yet fun celebration of the Halloween. The party was held at AQD's D-6 staff house.



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