

SEAFDEC AQUACULTURE DEPARTMENT

AQD Matters

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

SEAFDEC Council convenes in Malaysia

by B Acosta

AQD received high praises for achievements in 2010, particularly on building the capacity in ASEAN member countries on various aspects of aquaculture, during the 43rd Council meeting held 4-8 April 2011 in Malacca, Malaysia. The council also commended AQD for extending information on human resources development (HRD) in aquaculture and fish disease surveillance system to Myanmar.

The progress and plans of SEAFDEC programs and the status of the important fisheries issues in the region were reviewed by the Council which, likewise, underscored the achievements in organizing the ASEAN-SEAFDEC Conference on Fisheries, scheduled on 13-17 June

2011 in Bangkok, Thailand. Correspondingly, amendments to the Draft Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 were made.

Discussions on collaborative activities between SEAFDEC and other regional/international organizations, as well as with non-member governments, transpired. In addition, issues for the future operations of SEAFDEC that would require budgetary allocation were prioritized. Moreover, the Council suggested that the following be considered in SEAFDEC's future work:

- Strengthening of regional collaboration on fish disease in the region
- Capacity building in freshwater fisheries and aquaculture in cooperation with Mekong River Commission
- Intensification of efforts in transferring mud crab seed technology to Myanmar
- Ensuring that AQD's program on Food Safety of Aquaculture Products in

Southeast Asia complement the activities of the ASEAN program under the ASEAN Working Group on Fisheries (ASWGF) framework particularly on development of guidelines for the use of chemicals on aquaculture

- Enhancement of regional human resources activities (e.g., training, study visit, and joint research among member countries in aquaculture and related activities)
 - Giving high priority to issues on adaptation and mitigation measures of climate change and its effects on fisheries and aquaculture
 - Support for the member countries in the implementation of the FAO Technical Guidelines on Aquaculture Certification
- AQD Chief, Dr. JD Toledo; Deputy Chief, Dr. T Azuma; Administration and Finance Head, Ms. RL Valencia; and Special Departmental Coordinator, Ms. B Acosta were present. Among the other participants were the Council Directors and their representatives from 11 SEAFDEC member countries and officials of the SEAFDEC Secretariat and Departments, and international and regional organizations

The next Council meeting will be held sometime in 2012 and will be hosted by the Government of Myanmar.



SEAFDEC Secretary General, Dr. Chumnarn Pongsri (center) with delegates from AQD - AQD Chief, Dr. JD Toledo (third from left); AQD Deputy Chief, Dr. Teruo Azuma (second from left); and Special Departmental Coordinator, Ms. Belen Acosta (leftmost); and from the Philippines - BFAR Assistant Director & Alternate Council Director of SEAFDEC Mr. Gil Adora, (second from right) and BFAR Capture Fisheries Division & SEAFDEC National Coordinator for the Philippines Mr. Jonathan Dickson, Head, (rightmost)



AQD Chief, Dr. JD Toledo (fourth from left) with other SEAFDEC delegates during the discussion session of the Council meeting

AQD participates in 9AFAP

On 21-25 April 2011, the 9th Asian fisheries and aquaculture forum (9AFAP) held in Shanghai Ocean University, Shanghai, China marked new milestones for AQD. The forum, with theme *Better science, Better fish, Better life*, aimed to share information & promote collaboration among aquaculture & fisheries scientists, policy makers, and stakeholders from all over the world; and to ensure food security & food safety through sustainable practices.

AQD accepts achievements and appointments

During the Asian Fisheries Society (AFS) general assembly on 22 April, AQD Chief Dr. Joebert Toledo was elected as one of the 13 members of the 10th AFS Council. Furthermore, Dr. Ida Siason, now immediate past President of AFS, announced the appointment of AQD Socioeconomics Head Dr. Nerissa Salayo as the Coordinator of the Asian Fisheries Social Science Research Network.

In another landmark achievement, AQD retiree Dr. Clarissa Marte was given the Merit Award in recognition of her invaluable contribution to the relocation of the AFS Headquarters from Manila, Philippines to UPM, Malaysia. AQD Research Head Dr. Evelyn Grace de Jesus-Ayson and AQD Scientist Dr. Felix Ayson also attended the AFS council meeting.



Dr. Nerissa Salayo (2nd from left) receives the plaque of recognition on behalf of AQD retiree Dr. Clarissa Marte.

AQD presents four papers

As part of the international forum, the 4th International symposium on stock enhancement and sea ranching highlights the need to understand the consequences of large-scale releases of cultured fishes and invertebrates to wild populations and ecosystem function; and to come up with viable and responsible approaches amidst the changing environment and global economy. Under the symposium's theme: Developing optimal release strategies, AQD Scientist Dr. Ma. Juniemie Hazel Leбата-Ramos presented her paper on *Establishing release strategies for stock enhancement of hatchery-reared abalone *Haliotis asinina**. Presenting on another theme, Governance and socio-economics of release programs, was Dr. Nerissa Salayo with her paper, *Regulating catch-size to support abalone stock enhancement initiatives: experiences in Sagay City, Philippines*.

Meanwhile, under the 9AFAP's session on aquatic animal nutrition and feeding, AQD Demonstration & Packaging Head Ms. Jocelyn Ladja gave a presentation on her work entitled *Nursery culture of the siganid *Siganus guttatus* Bloch in brackishwater pond using supplemental feed of artificial diet*. In addition, AQD Scientist Ms. Eleanor Tendencia presented her paper, *Comparison of the biophysico-chemical properties of the water and soil of environments, with and without mangroves, receiving *Penaeus monodon* farm effluents* for the session on Integrated Aquaculture and Aquatic Resource Management.



(L-R) Fellow participants Dr. Marie Antonette Junio-Meñez of UP-Marine Science Institute, Dr. Ruth Gamboa of UP Manila, Dr. Juliana Baylon of UP Visayas, AQD Research Head Dr. Evelyn Grace de Jesus-Ayson, and AQD Scientist Dr. Juniemie Leбата-Ramos during the closing ceremony

22nd NACA Governing Council meets in India

This year, the Government of India hosted the 22nd NACA Governing Council Meeting that was held in Cochi, Kerala, India from 9-11 May. The meeting was attended by representatives from member governments, regional lead centers,



AQD Chief Dr. JD Toledo (standing fourth from right) together with the participants of this year's 22nd meeting of the NACA Governing Council.

and international partner organizations.

AQD Chief Dr. Joebert Toledo presented the activities of SEAFDEC, particularly the conduct of Regional Technical Consultation on sustainable aquaculture (RTC-A) in Southeast Asia to work out the needs of governments and their people for sustainable

AQD wins award

AQD's associate researcher Mr. Joseph Leopoldo Laranja Jr won second place for his work *Effects of dietary L-tryptophan on the agonistic behavior, growth, and survival of juvenile mud crab Scylla serrata* in the search for Best Research Award for Young Scientist (BRAYS), agricultural science research category, given by MERCK Inc. Philippines in cooperation with the Department of Science and Technology. His co-authors are Dr. Emilia Quinitio, Dr. Mae Catacutan, and Dr. Relicardo Coloso. The awarding ceremony took place 13 May at the Diamond Hotel, Manila.



Mr. JL Laranja (center) receives his award and cash prize from MERCK Inc. Philippines

fisheries and aquaculture. He also discussed that a shift from commodity-based approach to a thematic overture on research and development will be

adopted by SEAFDEC/AQD based on the result of the RTC-A.

AQD trains Maldives nationals

Three citizens from Maldives completed AQD's short-term *Training course and study tour on aquaculture* from 24-30 May. The participants, Ms. Mariyam Ibrahim Didi, Mr. Satheesh Moosa, and Ms. Aishath

Shirana attended lectures on mariculture technologies; seed production & hatchery of sandfish, abalone and seahorse; nursery and grow-out of abalone, sandfish, and marine fine; stock enhancement; microbiological analysis; health management; nutrition & food safety; disease detection; and physico-chemical evaluation. A tour to AQD's Dumangas Brackishwater and Igang

Marine stations and facilities was also conducted to observe the technology verification & demonstration projects, and the mariculture practices & methods respectively. They also went to a private tilapia farm in Leganes and University of the Philippines' Brackishwater Aquaculture Center.



Above: The trainees (4th & 5th from left) pose after receiving their certificates together with AQD Research Division Head Dr. EG Ayson (3rd from left), UPV's Ms. Rose Mueda (3rd from right) and other AQD staff (L-R): Mr. Caryl Genzola, Mr. Rodrigo Lacierda, Ms. Margarita Arnaiz, and Ms. Luisa Pacino.



The three Maldives nationals, along with another trainee, Mr. Alchris Go (leftmost) pay close attention to Mr. Alex Babol (rightmost) as he shows them the abalone stocked at IMS.

BFAR-RFTC training gets positive response



Ms. April Rose Galono tries to determine the species of sandfish by examining the spicules under the microscope



Marfish trainees (above photo) insert a cannula to the genital opening to sex fish during their practical activity, while the seaweeds group (right photo) works on water and soil quality analyses.

After the success of the first BFAR-RFTC training course, the three succeeding courses turned out as big hits too. From 26 April to 10 May, 21 technical staff of BFAR's Regional training centers (Albay, Aparri, Cebu, Davao, Palawan, Samar, Zamboanga) participated in AQD's *Training of trainers on seaweed (Kappaphycus) farming*. The course topics include principles of sustainable aquaculture; status of seaweed industry; biology & taxonomy of seaweeds; water & soil quality; grow-out culture; food safety in seaweed production & processing; diseases; and economics of seaweed farming.

The third course, *Training of trainers on seed production and grow-out of sandfish*



(*Holothuria scabra*), was conducted on 4-17 May and attended by 19 BFAR-RFTC participants and four individuals from the private sector in the Philippines and Australia. Among the topics discussed include principles on sustainable aquaculture; biology, life history & distribution of sandfish; broodstock collection & management; spawning induction & egg collection; natural food production; larval rearing; management of nursery systems; grow-out culture; business planning & management; water quality parameters; and food safety.

On the other hand, 20 participants from the Philippines and one from Iran have joined the *Training course on marine fish hatchery* from 19 May to 24 June. Topics on concepts and principles on sustainable aquaculture; biology of marine fishes; culture of live food organisms; rotifer production; artemia disinfection/hatching/

enrichment; broodstock management and spawning; larval rearing; nutrition, feed formulation and preparation; hatchery design and construction; health management; fish endocrinology; business planning and management; fish cage design and culture; water quality & monitoring; and food safety were discussed during the training. Field visits to AQD's Dumangas Brackishwater Station, Igang Marine Station, private hatcheries, and fish farms were also organized as part of the activities.

The participants thanked AQD for the very well organized course. They further extended their warmest appreciation to all the resource persons and staff for sharing their knowledge, reassuring them that they will likewise impart the expertise they have learned from the training for the implementation of aquaculture programs in their relevant areas.

AQD collaborates with ZSL

A special training course in *Mangrove conservation, management, and rehabilitation* was organized by AQD in collaboration with the Zoological Society of London (ZSL) from 25 May to 04 June in response to the urgent need for science-based mangrove management and protection. The training course was attended by 26



The participants listen as Dr. Jurgenne Primavera lectures on the ecology of mangroves

coming from the Philippines, Vietnam, and the Federated State of Micronesia.

Among the topics discussed were (1) overview of mangroves & mangroves fisheries; (2) mangrove biology and taxonomy; (3) ecology of mangroves; (4) mangrove mapping; (5) livelihood/utilization and economics of mangroves; (6) mangrove protection and utilization; (7) mangrove nursery; (8) mangrove out planting; (9) organizing communities in mangrove areas; and (10) mangrove governance/Payment for

Ecosystem Services (PES), policies.

The lectures were also accompanied by extensive field work in the various community-based mangrove rehabilitation project areas of ZSL in Panay.

In her message, ZSL's project coordinator Dr. Jurgenne Primavera noted that the training was initiated to develop not only the basic but most especially the applied mangrove technology to correct the many wrong practices on mangrove resource use carried over from years of misguided policies.

AQD chairs LakeCon 2011 technical secretariat

As a cooperating agency, SEAFDEC/AQD carried out technical work for the Second National Congress on Philippine Lakes or LakeCon 2011. Organized by the Philippine Council for

Aquatic & Marine Research (PCAMRD), the event was held 27-29 April 2011 at the Southeast Asian Regional Center for Graduate Study & Research in Agriculture (SEARCA), UP Los Baños, Laguna.

With the theme, *Building on the pillars of integrated lake basin management*, LakeCon 2011 brought together stakeholders, policymakers and the academe to discuss the integrated lake basin management as an approach in attaining a common framework for lake management in the Philippines. AQD Scientist emerita Dr. Jurgenne Primavera presented her paper on *The Great Agusan River Basin: Gaps in R&D for sustainable development*. Meanwhile, participants were toured to Lakes Sampaloc, Pandin, and Yambo which were three of the seven crater lakes in San Pablo City, Laguna.

AQD Scientist Dr. Ma. Lourdes Cuvin-Aralar (rightmost) served as Chair of LakeCon 2011's Technical Secretariat. Also present were (L-R) Laguna Lake Development Authority (LLDA) General Manager Mr. Rodrigo Cabrera, Philippine Council for Aquatic and Marine Research (PCAMRD) Director Mr. Cesario Pagdilao, Senator Juan Miguel Zubiri, Dr. Pablo Ocampo of UPLB, and Dr. Aida Palma of BFAR.



PHOTO COURTESY OF DR. M.L. ARALAR

AQD ties up with DBP

The Development Bank of the Philippines (DBP), along with the Southeast Asian Fisheries Development Center Aquaculture Department (SEAFDEC/AQD), Bureau of Fisheries & Aquatic Resources (BFAR), and other mariculture parks stakeholders, held a consultation meeting in its *Sustainable Mariculture Investment Program (SMIP)* on 3 May at the BFAR Central Office, Quezon City. AQD Chief Dr. Joebert Toledo, together with the Training &

Information Head Mr. Renato Agbayani and SMIP-DBP Program Leader Dr. Clarissa Marte, presented and discussed the project inception report and proposal to BFAR.

The SMIP is funded by DBP through a grant from the Norwegian Agency for Development Cooperation (NORAD) which aims to provide credit and support facilities for the establishment, development, operation and maintenance of mariculture parks as well as support

services and secondary industries in selected mariculture parks in the country.

Prior to the meeting, DBP engaged the services of AQD in association with Taytay sa Kauswagan Incorporated to provide technical assistance and consultancy services through a contract signed on 3 March. The Consultant Team was organized on 21 March, and a scoping workshop was held at the AQD's Igang Marine Station, Guimaras on 6 April.

AQD participates in BFAR-RO2 technology forum

AQD's Research Division Head Dr. Evelyn Grace Ayson and Marine Fish Program Leader Dr. Felix Ayson were invited as resource speakers during the *Technology forum on high value species, climate change and marine mammal stranding response* from 3-4 May in Tuguegarao City, Cagayan. Their lectures covered topics on *Seed production of milkfish and rabbitfishes* and *Pond*

and marine cage grow out of milkfish, grouper, pompano, sea bass, red snapper, and rabbitfishes.

The activity was initiated by the Bureau of Fisheries and Aquatic Resources-Region 2 (BFAR RO2) in collaboration with the Regional Fisheries Training Center-Aparri as part of the observance of the *Farmers and fisherfolk month celebration*.

In addition, Dr. EG Ayson and Dr. FG Ayson visited the municipalities of Aparri, Buguey, and Claveria to (1) assess facilities on ludong breeding studies; (2) visit aquasilviculture site; and (3) assess brackishwater and hatchery facilities for high value marine fish, abalone, and sea cucumber respectively.

Organization and policy orientation

To completely enforce the department's policies and employee benefits, AQD's Human Resources Management Section conducted an *Organization*

and policy orientation from 17 to 18 May 2011 for the staff of Tigbauan Main Station. The orientation covered topics on AQD's mandates, vision, mission and goals;

organizational structure; section/division roles; personnel conduct and discipline; policies on attendance; employees welfare benefits and incentives; and statutory benefits.



The attendees of the organization and policy orientation

Tree planting in Leon

To mitigate the effects of global warming and climate change caused by environmental degradation, AQD joined the *Plant a tree, save mother earth* on 15 May at Bucari, Leon. The undertaking was initiated by the local government unit of Leon as a way of restoring the environment and promoting the greening effect for the future of the next generation.



PHOTO COURTESY OF H SOLLESTA

The AQD group with Training & Information Division Head Mr. Renato Agbayani (3rd from left) participate in the tree growing activity.

AQD Research Seminars



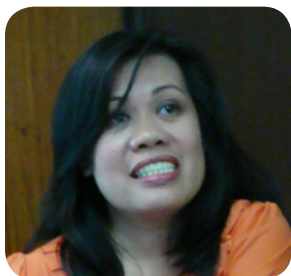
Ms. Jocelyn Ladja, Head of AQD's Demonstration & Packaging section gave a seminar on *Nursery culture of the Siganid Siganus guttatus Bloch in brackishwater pond*.

Ms. Ladja, worked on the development of a nursery technique using different feeding regime by means of artificial

diets.

Results showed that siganid juveniles fed with artificial diets AF1 (37.34% crude protein sourced from 50% animal and 50% plant) and AF2 (39.18% crude protein sourced from 33.3% animal and 66.6% plant) reached the size of >30 grams in 60 days while

seaweed-fed siganids attained the 30 gram weight only after 75 days. Specific growth rate was also best in artificial diets-fed fish. Therefore, siganid juveniles readily accepted artificial diet as supplement feed resulting in better growth than in seaweeds.



Dr. Nerissa Salayo, AQD's Socioeconomics Head, presented her work entitled *Regulating catch-size to support abalone stock enhancement initiatives: Experiences in Sagay City, Philippines*. The study aims to determine a strategy for managing threatened and enhanced stocks of abalone in Sagay Marine Reserve (SMR) in the Philippines.

According to Dr. Salayo, capture of immature and undersized abalones becomes evident when there is low awareness on stock enhancement and life cycle of abalones and other fishery resources.

The socioeconomic component of the stock enhancement of abalone (*Haliotis asinina*) project of SEAFDEC/AQD and the GOJ-TF

demonstrated and implemented strategies for regulating catch-size of abalones to complement on-going experimental release and future stock enhancement initiatives in Carbin Reef. The study demonstrated a framework for building collaboration and stakeholder ownership of regulations within a stock enhancement project.



Dr. Ma. Junemie Hazel Lebata-Ramos, AQD's Farming Systems & Ecology Head, presented her paper on *Establishing release strategies for stock enhancement of hatchery-reared abalone Haliotis asinina*.

Dr. Lebata-Ramos showed that while abalone production

in aquaculture facilities proved successful, AQD aimed to enhance the abalone population in Carbin Reef Sagay Marine Reserve through the release of AQD hatchery-reared (HR) juveniles. Results of the preliminary release trial in 2008 revealed that HR abalone

can survive with their wild conspecifics. Moreover, a second release done in 2010 improved the protocols used in the first release. Results of the second release were more promising than the first with lower acclimation mortality, higher recapture rates, and better survival.



Ms. Eleanor Tendencia of AQD's Fish Health Section gave a seminar on the *Comparison of the biophysico-chemical properties of the water and soil of environments, with and without mangroves, receiving Penaeus monodon farm effluents*.

According to Ms. Tendencia, upon comparing the biophysicochemical properties

of the water and soil of two types of environments receiving *Penaeus monodon* farm effluents (with and without mangroves) she observed: (1) for the two environments, no significant differences were noticed in the nutrient levels, bacterial counts and plankton diversity; (2) for environments without mangroves, ammonia, nitrate, soil pH, and

luminous bacterial counts of both the water and soil samples were higher; and (3) for environments with mangroves, nitrogen fixing bacteria, phosphate solubilizing bacteria, total plankton counts, Shannon-Wiener diversity index, Simpson's dominance index, and species evenness were higher.



Ms. Zenith Gaye Orozco of Ghent University (Belgium) presented on 5 May her study entitled *Effect of dietary cation anion difference (CAD) on energy metabolism of Nile tilapia*.

In her study, 16 tanks stocked with 20 fish each were randomly

assigned to one of the four experimental diets with various CAD levels (four replicates per diet). Results showed that the dietary CAD levels affected the amount of HCl secreted in the fish stomach. She also said that with an increased dietary CAD, the

nutrient digestibility was improved. However, the postprandial blood pH and energy metabolism in tilapia was affected. Furthermore, the growth and performance of tilapia was reduced since high dietary CAD level requires more energy metabolism.



Dr. Rolando Pakingking Jr., AQD Scientist presented on 5 May his study on *Susceptibility of hatchery-reared snubnose pompano Trachinotus blochii to natural betanodavirus infection and their immune responses to the inactivated causative virus*.

According to him, pompano

fry is usually affected by the disease. Clinical signs that can be observed include loss of appetite, lethargy, dark coloration of the skin, and abnormal swimming behavior.

After some series of tests, results showed that betanodavirus was confirmed pathogenic

to pompano juveniles and fry through experimental infections. Furthermore, the vaccine induced considerable increases in levels of neutralizing antibodies and provided protection in pompano fry with betanodavirus.



Prof. Marie Antonette Juinio-Meñez from the University of the Philippines – Marine Science Institute (UP MSI) talked on 11 May about the *Opportunities and challenges for communal sandfish Holothuria scabra sea ranching in the Philippines*.

According to Prof. Meñez, the Philippines is the second largest exporter of trepang (dried sea cucumber). But a declining catch was observed since the

1980's. This is attributed to the lack of fisheries management in the Philippines. Thus, to address this problem, UP MSI initiated the project on communal sea ranching of sandfish. The opportunities seen in communal sea ranching include (1) establishment of viable spawning population; (2) capability building of coastal communities & local government in resources management; (3) strengthening of people or fisher organization; (4) supplemental income to sea ranch

managers; and (5) incentive to scale-up & enhance production.

This project, however, encountered challenges that deal with (1) cost-effective production of juveniles; (2) compatible biophysical & governance requirements during site selection; (3) varied levels of commitment of on-site managers; and (4) relatively long period to realize economic returns.



Dr. Leilanie Osano Suerte, Senior Science Research Specialist of Mines and Geosciences Bureau-6 (Philippines) gave a lecture on 19 May about the *Geologic hazards (landslides, floods and*

earthquakes): How vulnerable is Panay island?

After conducting a geohazard assessment, Dr. Suerte said Panay Island is highly at risk to landslides, floods and earthquakes which may inflict damages to properties,

infrastructures and communities; disruption of services; death; and a lot of unfavorable effects. She also added that disaster preparedness and mitigation measures must be implemented to reduce the negative impacts of geologic hazards in the island.



Ms. Shelah Mae Buen-Ursua, AQD Associate Researcher, talked on 26 May about the *Effects of UV-treated and chlorinated seawater and formalin-treated food organisms on survival and growth of newborn seahorses Hippocampus comes.*

Two experimental set-ups were used to determine the

survival and growth of newborn seahorse. According to her, survival was monitored under three types of rearing water (UV-treated, chlorinated, and sand-filtered seawater) using clean *Artemia* and copepod as food organisms. Results showed that by using UV-treated

water, survival and growth were significantly improved. Survival was also kept higher by formalin treatment of food organism.

Stakeholders thank AQD



AQD wishes to acknowledge the positive feedback it has been receiving from various stakeholders and clients. Mr. Jens Knauer, Senior Aquaculture Research Scientist of Darwin Aquaculture Centre in Australia who attended the training on seed production and grow-out of sandfish, and Mr. Mark Manalo, a 4th year student of Philippine Science High School, graciously thanked AQD for the training and assistance

provided to them. AQD will continue to provide state of the art technologies and services based on its research and development thrusts.

Meanwhile, Dr. Masa Iwanaga, President of Japan International Research Center for Agricultural Sciences (JIRCAS), expressed his heartfelt gratitude to AQD for its monetary donation amounting to US\$330; ¥ 1,050, and PhP 30,090 that would benefit the earthquake and tsunami victims in Japan.

"Last year, I ordered microalgae starters for Navicula sp. from SEAFDEC Iloilo for my research: Algae Oil Extraction from Navicula sp. Using Hexane and Diethyl Ether Solvent Extraction System. By the grace of God, I was sent by my school to Taipei to present this project in the 3rd APEC Future Scientist Conference. You [Ms. Annie Franco] are one of the many people I have to thank for the modest success of last year's study. Aside from helping to process my order for starters and media very quickly, you gave so much of your technical knowledge for the cultivation and harvest phase of the study... I hope you will be involved again with my study this year as I truly believe that algae can be an alternative source of biofuel production."

— Mark Manalo

"Thank you [Mr. Rosenio Pagador] for a great training course and your personal efforts to make everything work out fine. It was a great experience and I will recommend SEAFDEC and their training courses to others."

— Jens Knauer

"Thank you very much for your concern to the affected population of the huge earthquake and the disastrous tsunami in the north-east Japan on 11 March 2011... I greatly appreciate your kindness that is demonstrating true value of international friends."

— Dr. Masa Iwanaga

Newlyweds

Ms. Jeralyn Felera, Chemist assigned at the Laboratory for Advanced Aquaculture Technology (LFAT), married Mr. Mel Vincent Panizales in a civil ceremony on 16 April in Iloilo City



Dr. Frolan Aya, Associate Scientist assigned at the Nutrition & Feed Development Section of BFS, tied the knot with Ms. Connie Fernando on 7 May in Sariaya, Quezon



Ms. Alma Lazartigue, Senior Technical Assistant assigned at the Farming System & Ecology Section at BFS, married Mr. Rommel Patricio on 14 May in Binangonan, Rizal

Ms. Sunshine Bonitillo, Administrative Assistant II assigned at the Human Resources Management Section, and Mr. Erwin Salonga said their "I do's" in civil rites on 30 May in San Miguel, Iloilo



Ms. Jilla Alcalde, Technical assistant assigned at the Natural Food Laboratory, married Mr. Samson Tornalejo on 28 May in Jaro, Iloilo City



Dr. Jon Altamirano, Associate Scientist assigned at the Farming Systems and Ecology Section, tied the knot with Dr. Regina Banaticla on 28 May at Los Baños, Laguna

Team building through sports: Demonstrating a positive team atmosphere, modeling good sportsmanship qualities

PALARO 2011



A demonstration of team spirit, sportsmanship, and willpower sums up AQD's Palaro 2011 festivities. From March 30 to April 1, Team Abalone (red) and Team Sandfish (aqua blue) comprising staff from Tigbauan Main Station, Dumangas Brackishwater Station, & Igang Marine Station engaged in a friendly battle of wits and

brawn. True to its theme, this year's sportsfest added a new twist – team parlor games had greater weight than ball sports to further boost teamwork. Rain or shine, the players actively participated in a variety of games. Team Sandfish was hailed the overall champion.

Meanwhile, Palaro 2011 players from Binangonan Freshwater Station & Manila

Office geared up for men's basketball, darts, table tennis, darts, and parlor games. As a culminating event, the teams went head to head at the Sta. Lucia East Bowling Center last 8 April 2011. After the dust settled, the Abalone team emerged as the overall winner, tallying with the most number of wins. All in all, it was a fun-filled week giving everyone a chance to relax from the daily grind.



Passing of torch by AQD officials, (Above) Chief Dr. JD Toledo and (L-R) Training & information head, Mr. RF Agbayani; Administration & Finance head, Ms. RL Valencia; Research head Dr. EG de Jesus-Ayson & AQD Scientist, Dr. FG Ayson, with son, Enrico; and Deputy Chief, Dr. T Azuma, signified teamwork & athletic spirit during the opening ceremony.



Teams Abalone and Sandfish were all set to play as the morning parade kicked-off Palaro 2011.



PHOTOS BY J ZARATE



(Above) An aerobics day makes a good play -- Teams in their pre-game exercises. (Left) Team Sandfish can surely catch a dragon's tail and defend their own as they snatched the top spot.



Although Team Sandfish fought a good fight (inset) Team Abalone emerged as the cheering champions and bagged the best mascot award.



Everyone seemed to be in a hurry to reach the top. (Clockwise from top-left) Team Abalone easily advanced to the finish line in *Kadang-kadang*; All were fit for the morning marathon; Abalone girls slithered through the hoop; Team Sandfish in an effort to fly high and run fast at the sack race relay



The game Please be careful with my egg put their wits to the test.

Team Abalone manages a strong defense but the Sandfish team held stronger to the ball and won the Chairball game.



PHOTOS BY J ZARATE



Team Sandfish's star player Dr. Teruo Azuma made sure that every spike hits the scoreboard.



(Left) Despite the close fight between the two teams, the powerhouse Sandfish team was declared king of the hoops at TMS. (Right) The BFS and MO men fight for the ball at the basketball game.



PHOTOS BY J ZARATE

Nothing stopped Team Sandfish from running & kicking harder. (Top inset) The Azkals should consider AQD's version of football twist. (Bottom inset) Team Sandfish scored a goal and won the game.





Emotions were high during the Palaro. (Clockwise from right) AQD Chief Dr. JD Toledo signals a halt as Team Abalone crosses the line; The suman tasted so good for Team Sandfish; TID head Mr. RF Agbayani cheered with his might; Team captains Dr. Teruo Azuma (Sandfish) & Dr. JD Toledo (Abalone) received the award for Parlor games where both teams finished as equals.



(Upper photo) Team Abalone devises a careful plan before making a move. (Lower photo) The women of Team Sandfish get serious on the board.



Teams Abalone & Sandfish were eager to do a handshake. (Inset) Coupled with a hug, the kind gesture signaled the end of Palaro 2011.



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Teams Abalone & Sandfish at the Bosay Resort, Antipolo, Rizal where BFS & MO's weeklong celebration of Palaro 2011 kicked-off on 4 April.

The men and women of Team Sandfish were all-smiles as the team was declared the Palaro 2011 Champion.



Palaro 2011 concluded with merry-making and dance fever. The guest band played hits that were certified crowd favorites.



(Above) Mr. Rosenio Pagador (5th from left), Chairman of the AQD Palaro 2011, acknowledged the efforts of his members for the success of the activity



The AQD staff with Dr. Joebert Toledo (5th from right) were all happy celebrating the night's program



In the end, the two teams converged as one. Team AQD has won yet another friendly competition and has achieved team building through sports.