

# SEAFDEC AQD Matters

Newsletter of the SEAFDEC Aquaculture Department (AQD), Tigbauan, Iloilo, Philippines

## AQD participates in the 47th SEAFDEC Council Meeting



PHOTOS COURTESY OF B ACOSTA

Ms. Kaylin Corre, OIC Administration and Finance; Dr. Felix Ayson, Chief; Dr. Takuro Shibuno, Deputy Chief; and Ms. Belen Acosta, Special Departmental Coordinator. Participants of the 47th SEAFDEC Council Meeting during the roundtable discussions

Last 31 March to 3 April 2015, SEAFDEC Council Directors and their respective delegations from 11 countries (Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) and senior officials of SEAFDEC Secretariat and Departments gathered in Chiang Rai, Thailand for the 47th Council Meeting of SEAFDEC. Representatives from the Embassy of Sweden in Thailand, National Oceanic and Atmospheric Administration (NOAA) of USA, United States Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO) and Network of Aquaculture Centres in Asia-Pacific (NACA) also attended. SEAFDEC/AQD was represented by its Chief, Dr. Felix Ayson; Deputy Chief, Dr. Takuro Shibuno, Officer in-Charge, Administration and Finance, Ms. Kaylin Corre and Special Departmental Coordinator, Ms. Belen Acosta.

The Council reviewed the progress and plans of SEAFDEC programs and

the status of important fisheries issues in the region. Also reviewed were the progress made in addressing international fisheries-related issues and various aspects on regional cooperation that promotes sustainable fisheries and aquaculture in ASEAN Member States. Concerning initiatives that involve regional cooperation, the Council took note and endorsed the regional policy recommendations for the Development and Use of Alternative Dietary Ingredients in Aquaculture Feed Formulations, which was presented by the AQD Chief. The list of policy recommendations on feed was an output of the regional technical consultation convened by SEAFDEC/AQD in cooperation with SEAFDEC Secretariat and Government of Myanmar last 9-11 December 2014 in Nay Pyi Taw, Myanmar. Apart from collaborative activities between SEAFDEC and its partners, the participants also discussed the revision of Plans of Operation and Programs of Work of SEAFDEC Departments and Secretariat, the financial aspect and other matters related to the management of the Center.

The other matters taken up during the meeting with relevance to SEAFDEC/AQD work programs, the Council:

- commended AQD and other Departments for the significant accomplishments in 2014, particularly the efforts made in human capacity building through on-site training.
- recommended that AQD strengthen its research studies aimed at developing suitable alternative protein sources for aquaculture feeds and disseminate results that will assist the ASEAN Member States in developing strategies to reduce dependence on fish-based ingredients in aquaculture feed.
- recommended that SEAFDEC give priority to areas of research that are important for the upcoming ASEAN Economic Integration.
- recommended that AQD continue its research on quality seeds for aquaculture, integrated multi-trophic aquaculture (IMTA), and adaptation to impacts of climate change.

- agreed that SEAFDEC Secretariat and Departments will conduct in 2016 the mid-term evaluation to monitor the progress made by the ASEAN Member States in the implementation of the Resolution and Plan of Action for sustainable fisheries, as adopted in 2011 and to re-prioritize the issues and activities
- noted the statement of NACA Director General concerning the planned establishment of MOU between NACA and SEAFDEC/AQD to facilitate the exchange of information on farming of fishes, crustaceans, mollusks, and seaweeds for food, livelihood, equity and sustainable development. He added that such MOU would find the opportunities for these organizations to strengthen the collaboration and coordination on strategic foresights in aquaculture development.

The next Council meeting will be held sometime in 2016 and will be hosted by the Government of Viet Nam. ➤

- B ACOSTA

# AQD Chief on RTC alternative feed ingredients



## Regional policy recommendations and follow-up actions for the development and use of alternative dietary ingredients in aquaculture feed development

Issues	Policy Recommendations
Knowledge and technology	<ul style="list-style-type: none"> <li>• Create a network or regional forum for exchanging and sharing of R&amp;D on feed formulation and feeding efficiency</li> <li>• Provide technical support to improve farmer's knowledge on efficient feed and effective feeding management</li> <li>• Promote cooperation with other regions</li> </ul>
Nutritional profiles of feed ingredients – incomplete information on proximate analysis such as fatty acid	Nutritional profiling of alternative ingredients
Statistics of aquafeed	Assess the capacity of feed milling companies as well as the data on import and export of raw materials for feed ingredients
Raw materials from illegal, unreported, and unregulated (IUU) fishing activity	Impose a system of traceability of raw materials and apply the catch documentation system
Feed formulation and efficiency	R&D on aquafeed quality, formulation and use of alternative dietary ingredients
Use of alternative dietary ingredients to replace fish meal	Promote mass production of high quality alternative ingredients
Supply of feed ingredients	<ul style="list-style-type: none"> <li>• Institute government programs to increase production and centralize supply of feed ingredients in each local government</li> <li>• Establish the local ingredients supplier network</li> </ul>
Enactment of regulations and fishery laws to effectively manage the development of aquafeeds	Impose national aquafeed quality control to ensure that feed milling companies comply with regulations and fishery laws
Center (focal point) of ASEAN programs	<ul style="list-style-type: none"> <li>• AQD to work closely with AMS, research institutions, industry and international or regional organizations.</li> <li>• Create the ASEAN Forum (Program) on Development and Use of Alternative Dietary Ingredients in Aquaculture Feed Development that will include representatives of relevant stakeholders</li> </ul>
Regional Cooperation	<ul style="list-style-type: none"> <li>• Establish the National Action Plan on Development and Use of Alternative Dietary Ingredients in Aquaculture Feed Formulations</li> <li>• Increase awareness on importance of reducing dependence of aquaculture on feed ingredients of marine origin</li> </ul>

The regional policy recommendations on the development and use of alternative dietary ingredients in aquaculture feed formulations was presented by SEAFDEC/AQD Chief, Dr. Felix Ayson, during the 47th Meeting of the Council of SEAFDEC at the Le Meridien, Chiang Rai Resort, Thailand on 31 March to 03 April 2015. As a background, the ASEAN-SEAFDEC Ministers and Senior Officials adopted in 2011 the Resolution and Plan of Action which enjoin the ASEAN Member States (AMS) to:

*improve the efficient use of aquatic feeds by strictly regulating the quality of manufactured feed and feed ingredients and support continued research for developing suitable alternative protein sources that will reduce the dependence on fish meal and other fish-based products.*

- One of the priority areas in the AFCF (ASEAN Fisheries Consultative Forum) work plan (2011-2015) is the 'development of better feeds for sustainable aquaculture.'
- Part of the AFCF work plan under feed development is to bring together the experts and AMS representatives to review R&D efforts on aquaculture feed formulations and define the region's policy directions.

Recently, the Regional Technical Consultation (RTC) on Development and Use of Alternative Dietary Ingredients or Fish Meal Substitutes in Aquaculture Feed Formulations was held in NayPyiTaw, Myanmar, 9-11 December 2014 with support from the Government of Japan thru ASEAN Foundation, SEAFDEC/AQD, SEAFDEC Secretariat, and the Government of Myanmar.

The general objective of the recent RTC is to provide a forum for charting the regional priorities and future directions on aquafeed development, particularly on the use of alternative feed ingredients or substitutes for fish protein and oil, taking into consideration the environmental concerns and consumer demand for safe and high quality farmed aquatic products.

The RTC also aims to (1) review the ASEAN-SEAFDEC member country status, challenges and opportunities associated with the use of alternative dietary ingredients for aquaculture feeds, (2) identify specific advances made in the region with respect to the development and use of alternative ingredients for aquafeeds, and (3) define relevant policy recommendations on the use of alternative ingredients for feed formulations and development.

The meeting then came up with (1) the status report in each country on the utilization of fish by-catch, fish meal, and plant protein sources in commercial aquafeed production, and the feeding practices that improve feed efficiency; (2) updates on technological developments on the use of plants and other alternative feed ingredients as protein sources in aquafeeds and existing policies or initiatives that limit the use of feed ingredients of marine



origin; and (3) a list of key issues, gaps, strategies and recommendations for the three trophic groups, based on feeding habits – herbivores, carnivores and omnivores.

**Next Steps and Immediate Actions**

- Create a network or regional forum for exchanging and sharing of knowledge on research and development for

- aquatic animal nutrition.
- Formulate laws and regulations to encourage feed companies to use plant proteins and oils in aquafeed production.

- Establish the ASEAN Center Program on Development and Use of Alternative Dietary Ingredients in Aquaculture Feed Development. ➤

- FG AYSON

**AQD Chief talks climate change at ICOMSA 2015**



AQD Chief Dr. Ayson during his keynote presentation at ICOMSA 2015 in Kota Kinabalu, Malaysia

**S**EAFDEC/AQD Chief Dr. Felix Ayson delivered one of the keynote presentations during the International Conference on Marine Science and Aquaculture (ICOMSA) held at Kota Kinabalu, Malaysia from 17 to 19 March 2015. With the theme ‘Challenges and Opportunities in Developing Blue Economy,’ Dr. Ayson talked about AQD’s on-going activities to prepare the aquaculture sector on the possible impacts of climate change. The conference also tackled topics on marine biodiversity and ecological fisheries, stock enhancement and sea ranching, ocean policies and governance issues & other topics of relevance. ICOMSA is an annual event on marine science, fisheries and aquaculture organized by the Borneo Marine Research Institute of the Universiti Malaysia Sabah. ➤

**SEAFDEC/AQD and UMS: partners in aquaculture research**

**S**haring the same goals of strengthening and developing aquaculture research, a five-year agreement was signed between SEAFDEC/AQD and Universiti Malaysia Sabah (UMS) on 17 March 2015. The terms includes: (1) collaboration among faculty and staff members for research, symposia, and other academic pursuits; (2) exchange visits by students; (3) joint research activities and (4) exchange of informational materials in education, training and research. The agreement was signed between AQD Chief Dr. Felix Ayson and UMS Vice-Chancellor Prof. Datuk Dr. Mohd. Harun Abdullah. ➤



UMS Vice Chancellor Prof. Datuk Dr. Mohd. Harun Abdullah and AQD Chief Dr. Felix Ayson

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## SEAFDEC/ AQD conducts second soft- shell crab course

Due to the increasing demand for soft-shell crabs in the market, AQD conducted a specialized course on 'soft-shell crab farming' as requested by US-based physician Mr. Virgil Frando, from 16 to 21 March 2015 at AQD's Tigbauan Main Station and Dumangas Brackishwater Station in Iloilo. Together with Mr. Virgil Frando, a medical doctor at Health South Rehabilitation Hospital

in Wichita Falls, Texas, are his brother, businessman Mr. Pedro Frando and first cousin, retired military Mr. Leonardo Grabador – both from Sorsogon. The course aims to provide the participants with technical knowledge and skills in soft-shell crab production and management. The trainees attend lectures ranging from mangrove crab's (mud crab) biology to nursery & hatchery management and from industry overview to economic

evaluation & marketing. The course also includes a series of practical hands-on sessions on installation of net cages, pond preparation, stocking, monitoring of water parameters, feeding and water management and crab sampling. This is the second time for AQD to conduct a course on soft-shell crab farming; the first one was requested by Santeh Feeds Corporation last January. ➤



AQD scientist Dr. Emilia Quinito showing the trainees a miniature version of the soft-shell crab set-up (left). AQD scientist Dr. Fe Estepa and senior technical assistant Mr. Steve Garibay with the three trainees as they identify the gender of the crabs during the practicals on biology & identification of mangrove crabs (mud crabs)

## Updates from our former trainee



Mr. Darrin Seeto at AQD's Igang Marine Station during his practicals on seaweed farming

One of the trainees of our special courses on marine fish, shrimp, and seaweed farming that were simultaneously conducted in September of 2014 was Mr. Darrin Seeto. He attended the seaweed farming component of the course and recently, he gave us an account of how he was able to apply all that he has learned from the course through the following letter:

*Just wanted to give you an update with how things are going for me with seaweed. I have been able to successfully culture Gracilaria in 1.5 hectare pond. I am still working on being able to cultivate the Eucheuma cottonii. I have been having problems with fish eating everything. I am close to being able to fulfill my first order of Gracilaria. I am just waiting for some lab results on the quality of the agar. I am very grateful to you for the assistance you gave to me so that I was able to attend the class on seaweed farming last September."*

*Now that my Gracilaria is growing and I have a potential buyer (just waiting for lab results) and I already have expansion plans. I am looking into going into farming tilapia, with my brother-in-law, in high salinity water. I am hoping you or someone at SEAFDEC might know someone who supplies this type of tilapia that can grow in high salinity water maybe around 23-30ppt. Our farm will be in the Pangasinan area. Again, I am very appreciative of the assistance you have given to me.*

*Thanks,  
Darrin Seeto*



# UPCOMING COURSES

SEAFDEC/AQD is now accepting applicants for the following courses:

## AquaFeed formulation and preparation



Training will be held at Tigbauan Main Station, Iloilo, Philippines from 17 June to 1 July 2015. The course includes lectures and practical sessions on feed formulation, feed preparation & storage, economics of feeding, evaluation of feedstuff & aquafeeds, and feed development & feeding practices among others.

## Sandfish hatchery, nursery operations and management



Training will be held at Tigbauan Main Station, Iloilo, Philippines from October 8 to 22, 2015. The course includes lectures and practical sessions on biology and ecology of sandfish, broodstock preparation for spawning, larval rearing, production of natural food organism, among others.

For more information, please contact:

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# Brian Davy releases sea turtle Brian/na\*



Brian Davy and his wife Tomoko carrying Brian/na back to his/her home

**B**rian Davy and his wife Tomoko visited SEAFDEC/AQD last week to talk official business with the AQD staff and officials on resource mobilization and to identify the strengths and weaknesses of the institution.

Brian Davy was the Program Officer for Asia of the International Development Research Centre when IDRC supported the Milkfish Program at AQD from 1975 until the broodstock and hatchery technology was firmly established around 1990 and the eventual establishment of the National Bangus Breeding Program all over the Philippines. IDRC also

provided scholarships to many AQD research assistants to undertake graduate studies or training in Canada, USA, Japan, Singapore, Thailand and Malaysia. Brian Davy is a dear friend to many retirees and near-retirables at AQD. There is fully 38 years between Brian and me—from when I assisted in the milkfish ecology project, left for Scripps and came back, tried to collect milkfish fry in Sri Lanka, exchanged books and emails, until last week when he visited FishWorld. I felt such nostalgia for the time long past when Brian would visit the Milkfish Lab (where TVDD now sits) and Noli Almendras and me enjoyed lab meals with Dr. Juario,

Ms. Mayet, Dr. Liao, Mr. Kumagai, Mr. Nakajima, Mr. Buri, Dr. Kuo, Dr. Chaudhuri, Dr. Lam, Dr. C.S. Lee, Dr. W. Watanabe and other young Filipinos (i.e., when AQD felt truly international, sigh...)

There was barely time to show Brian and Tomoko the sea turtles at FishWorld. To commemorate Brian's visit, I asked him to release a green sea turtle named Brian/na (2-3 years old, \*sex not clear). Brian/na was caught in the fish trap of Narciso Entusiasmo in Buyuan on 9 April 2015, with plenty of small barnacles on its flippers, neck, and tail. At FishWorld, Brian/na was fed frozen sardines, measured (44 cm in curved carapace length, 43 cm in width), cleaned of all barnacles (took two hours!), and tagged (DENR-PCP # PH0409J). Early Saturday morning, 11 April 2015, Brian Davy carried Brian/na from FishWorld to the AQD beach, in one go across highway traffic. From the water's edge, prodded by Tomoko, Brian/na swam away. I hope I see Brian Davy again, but I hope Brian/na makes it into the open sea and never come back. 🐢

- TU BAGARINAO



PHOTOS COURTESY OF TU BAGARINAO



## Two SEAFDEC/ AQD junior employees share learning experience



Senior technical assistant Mr. Joseph Biñas and AQD Chemist Ms. Jeralyn Panizales during their presentation



**O**n 5 March, SEAFDEC/AQD senior technical assistant Mr. Joseph Biñas shared his experiences during his short-term training in Japan, which took place from 31 August to 12 September 2014. Mr. Biñas visited two laboratories of the Fisheries Research Agency and one private shrimp farm. He had hands-on activities on white spot syndrome virus (WSSV) detection in kuruma shrimp

and spat collection of manila clam.

AQD chemist Ms. Jeralyn Panizales on the other hand, talked about her five-day training on “Radiation Safety -Sealed Sources in Industrial Devices,” held from 8 to 12 September 2014 in Quezon City, Philippines. Ms. Panizales explained that radiation is the energy emitted from a source and travels through some material or through space. Radiation

is classified into two namely the ionizing radiation (e.g. gamma and x-ray) and the non-ionizing radiation (e.g. microwave, radiofrequency, and visible light). Ms. Panizales mentioned that the ionizing radiation can be potentially harmful or beneficial to humans depending on how it is used. She also shared that there are three basic methods to control exposure to radiation: (1) minimize time of exposure to minimize the absorbed dose of radiation, (2) maximize distance from the radiation source to lessen absorbed dose, and (3) incorporate shielding to the radiation source. In summary, radiation can be harmful but if properly used, can also be beneficial. Since it is used to produce energy for heat and electric power, to diagnose and treat diseases, and to sterilize medical instruments and food among others. ☺

## CONGRATULATIONS BATCH 2015!

**Annie Franco**, senior technical assistant, finished Masters in Biology at University of the Philippines-Visayas.

**Karl Vincent Abalajon**, brother of administrative assistant **April Abalajon-Nievales**, finished Medical degree at Iloilo Doctors' College

**Eliseo Coniza Jr.**, son of senior technical assistant **Eliseo Coniza**, finished BS Marketing at University of Negros Occidental - Recoletos

**Gineleen Faigani**, sister of information assistant **Gelyn Faigani**, finished BS Biology at West Visayas State University

**Sean Gregory Genzola**, brother of information assistant **Caryl Genzola** and administrative assistant **Janelli Genzola-Garibay**, finished BS Information Technology at University of Antique as Programmer of the Year

**Pearl Joy Parreñas**, sister of administrative assistant **Patricia Casiano**, finished BS in Cooperatives Management as Parangal's bronze medalist at West Visayas State University

**Kenneth John Coniza**, son of senior technical assistant **Eliseo Coniza**, finished high school at University of Negros Occidental - Recoletos

**Gabrielle Marie Eguia**, daughter of scientist **Dr. Maria Rowena Eguia**, finished high school as 13<sup>th</sup> Honorable Mention, Best in Research and DOST-SEI Merit Scholarship awardee at Rizal National Science High School

**Juliana Rose Pagador**, daughter of senior information assistant **Rosenio Pagador** and researcher **Gregoria Pagador**, finished high school as Salutatorian and Most Outstanding Eagle Award at the University of San Agustin

**Franz Ian Pudadera** and **Florito Pudadera**, sons of **Florito Pudadera Jr.**, finished high school at Nabitasan National High School

**Justine Mae Rivera**, daughter of driver **Emerson Rivera**, finished high school at Child Jesus of Prague

**Wayne Alexis Traya**, son of administrative officer **Eileen Traya**, finished high school as Most Outstanding Researcher of the Year, Best in Math, UPCAT Passer (Diliman, BS Mechanical Engineering) at Iloilo National High School - Special Science Class

**Andrea Rose Franco**, daughter of senior technical assistant **Annie Franco**, finished elementary as Salutatorian with special awards in Math, HELE, Scouting, Dance & Journalism and a 2015 Philippine Science High School Scholar at Kinaadman Elementary School, Inc.

**Nicole Alyana Macainan**, daughter of aide **Ehlrol Macainan**, finished elementary as First Honorable Mention at Igaras Elementary School

**French Bryan Pudadera**, son of **Florito Pudadera Jr.**, finished elementary at Nabitasan Elementary School

**Cyra Mae Tabasa**, daughter of driver **Cyrus Tabasa**, finished elementary as Athlete of the Year at Cagbang Elementary School

**Aaron John Tibudan**, son of financial assistant **Mary Lou Tibudan**, finished elementary with Loyalty and Music awards at Kinaadman Elementary School, Inc.

**Krixian Gabriel Corre**, grandson of administration and finance division head **Kaylin Corre**, finished Kinder II at Kinaadman Elementary School, Inc.

**Evian Audren Jomillo**, son of technician **Sheila Mae Jomillo**, finished Kinder II at Kinaadman Elementary School, Inc.

## New heads of offices



**Dr. Fe Dolores Estepa**  
is now the new Technology  
Verification and Demonstration  
division head



**Dr. Evelyn Grace Ayson**  
is the new Research division  
head



**Dr. Ma. Junemie Hazel Ramos**  
is the new Training and  
Information division head



**Ms. Milagros de la Peña**  
is the new RD's Breeding and  
Seed Production section head

## New Uniforms for AQD staff



**MONDAY**

**TUESDAY**

**WEDNESDAY**

**THURSDAY**

**\*FRIDAY IS FREE-DAY AT  
THE AQD COMMUNITY**

Models are (left-right) senior technical assistant Mr. Nestor Bayona, science research specialist Ms. Angela Denise Bilbao, information assistant Mr. Caryl Vincent Genzola and internal audit head Ms. Charmi Margaret Fernandez



## AQD Matters

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