

# SEAFDEC AQD Matters

In-house newsletter of the SEAFDEC Aquaculture Department, Tigbauan, Iloilo

## AQD begins the push for abalone as it turns 34

34<sup>th</sup>  
Aquaculture Department  
Anniversary

**“P**hilippine and ASEAN aquaculture is where it is now because of technology breakthroughs by SEAFDEC/AQD in almost all aspects of aquaculture from breeding, genetic improvement, fish health, and grow-out technology.”

This was the testimony of SEAFDEC Council Director for the Philippines Mr. Malcolm Sarmiento during AQD's 34th year celebration in July in Tigbauan, Iloilo, Philippines.

Department of Agriculture (DA) Secretary Arthur Yap likewise acknowledged the accomplishments of AQD. “I stand before you in full humility of what SEAFDEC has been able to achieve,” he said.

With more than three decades of research-and-development, AQD has domesticated most of the economically important aquaculture commodities in Southeast Asia.

By closing their life cycles in captivity, meaning the spawn of a wild breeder has been raised and bred



AQD signs the abalone agreement with BFAR in the presence of DA Secretary Arthur Yap (seated, middle), Congressional Representative Hon. Janette Garin (standing, middle), and town mayors Hon. Christine Garin of Guimbal and Hon. James Excel Torres of Tigbauan. To Secretary Yap's right are BFAR Director Malcolm Sarmiento and Undersecretary for Fisheries Livestock Regulations Hon. Jesus Emmanuel Paras; and to his left, AQD Chief Dr. Joebert Toledo and AQD Deputy Chief Dr. Hiroshi Ogata

in captivity until its offspring have become breeders themselves, AQD enabled the aquaculture industry to decrease dependence on wild broodstock and to take off.

The grow-out industries of tiger shrimp, mudcrab, milkfish, grouper, seabass, hybrid catfish (native and African), tilapia, bighead carp, have increased production significantly and the exported ones have earned the country much-needed dollar revenues.

Breeding is not AQD's only forte. It is also an innovative leader in fish health management with its use of biotechnology tools, nutrition and feed development, farming systems, and in aquatic ecology.

### The push for abalone

The tropical abalone *Haliotis asinina* is next to be given national scope, as a P15-million peso National abalone breeding and culture program was unveiled by Secretary Yap, Mr. Sarmiento and AQD Chief Dr. Joebert Toledo during the AQD anniversary day.

The 5-year program is a collaboration between AQD and the Bureau of Fisheries and Aquatic Resources (BFAR) to establish six regional abalone seed-production centers in the Philippines (see **related story on page 10**).

Abalone is raised for the domestic and export markets. The Philippines is a top exporter of frozen abalone to Hong Kong, (next page)



AQD Chief Dr. Joebert Toledo (top), BFAR Director Malcolm Sarmiento (above) and DA Secretary Arthur Yap (right)





which is regarded as Asia's largest abalone market. However, these are mostly harvested from the wild and heavy exploitation is taking its toll. Production has been decreasing in major abalone producing countries including the Philippines. Because of that, there is an estimated shortage of 4,000 to 6,000 tons of abalone in the world market.

**Below:** The AFD Hall was packed with AQD employees, government officials, media, and other guests. **Middle:** A representative from the private sector receives a copy of AQD's new publications from (L-R) Dr. Jurgenne Primavera, Dr. Emilia Quinitio, Dr. Ma. Rowena Eguia, and Dr. Flor Lacanilao. **Bottom:** Devcom's Mila Castañon and Rommel Guarin reintroduce the AQD website.

Photos on this page by IT TENDENCIA



According to Secretary Yap, the abalone production centers are to be established in the provinces of Ilocos Norte, Pangasinan, Iloilo, Cebu, Tawi-tawi, and Sulu. These are expected to generate 100,000 kilograms of abalone annually. This could be worth as much as P56.5 million in the export market.

### Other highlights

In addition to unveiling the abalone national production program, AQD launched five extension manuals and three flyers (see feature on page 14). Furthermore, the revitalized AQD website ([www.seafdec.org.ph](http://www.seafdec.org.ph)) was reintroduced to the public.

To honor the first AQD Chief Dean Domiciano Villaluz, a memorial lecture

entitled "Sustainable Finfish Mariculture in the Philippines: Challenges and Needs" was given by Dr. Gil Jacinto of the University of the Philippines Marine Science Institute.

As AQD moves on towards its 35th year, Dr. Toledo, Department Chief, expressed, "I am gratified that despite the limited financial resources, AQD has continued to be a reliable and effective partner of the government and other stakeholders in responding to the technological needs of the aquaculture industry."

"Lastly, all of AQD's achievements would not have been possible if not for the hardwork, support, and cooperation of the whole SEAFDEC family in the 11 member-countries that comprise the Center," Dr. Toledo added.



Dr. Gil Jacinto delivers his lecture on *Sustainable Milkfish Mariculture in the Philippines - Challenges and Needs* (top and inset). Dr. Jacinto receives a plaque of appreciation from the son of Dean Domiciano Villaluz, Mr. Marianito Villaluz (bottom)



# BFS turns 31; Engr. Aralar new head

**A**QD's Binangonan Freshwater Station turned 31 on July 27, 2007.

The celebration started off with a simple turnover ceremony between former BFS Head Dr. Maria Lourdes Aralar and the newly designated Station Head Engr. Emiliano V. Aralar.

Engr. Aralar has been with AQD since 1982. He is a BS Chemical Engineering graduate from the Adamson

University and has MS Aquaculture units from the Universiti Putra Malaysia.

In the anniversary lunch, culled-out giant freshwater prawns (steamed and sinigang) and Nile tilapia

(broiled) were among the dishes served.

Parlor games, hoop shooting, darts and table tennis, and videoke singing contest highlighted the day's celebration.

- MLC ARALAR



Engr. Aralar receives the symbolic key of the Office of the BFS Head from outgoing Head, Dr. Malou Aralar



Men in drags... cross dressing "machos" just to win the game!



Manny Laron and Mat Yap are partners in table tennis doubles



BFS staff and security guards trying to outscore each other in darts

## Scientists recognized for contributions to AQD

Dr. Clarissa Marte was among the five scientists who were recognized for their invaluable contributions to AQD over the years



**F**ive scientists were recognized during the anniversary program for their valuable contributions to AQD.

**Dr. Flor Lacanilao** was recognized for instituting a research performance evaluation and reward system that encourages publication in primary journals, for being chief of SEAFDEC/AQD for 6 years, and for inspiring researchers in the continuous pursuit of developing science-based technologies for aquaculture.

**Dr. Clarissa Marte** was given recognition for her contribution in the field of marine fish breeding and seed production, shrimp

digestive physiology, and coastal resource management. Her twelve years of service as head of the Research Division was also recognized.

**Ms. Marietta Duray** was recognized for her contribution in the field of fish larval biology and seed production, for sharing her expertise in the training and extension activities, and for her untiring service to the Department for 26 years.

**Dr. Anicia Hurtado** was awarded for having brought honor to AQD by winning the Best Poster Paper Award at the 19<sup>th</sup> International Seaweed Symposium in Kobe, Japan, held last March 23 to April 1 of this year. Her paper was on the *Effects of epiphytes on*

*the growth and carrageenan of Kappaphycus striatum var. sacol on the different stocking densities, days and depths.*

**Dr. Gilda Lio-Po** was recognized for giving prestige to AQD by being chosen as the 2007 Most Outstanding Microbiologist by the Philippine Society for Microbiology. The award was given during the society's 36<sup>th</sup> annual convention and scientific meeting in Malate, Manila, May 7-8.

DA Secretary Arthur Yap, DA Undersecretary Jesus Emmanuel Paras, BFAR Dir. Malcolm Sarmiento, AQD Chief Joebert Toledo, and AQD Deputy Chief Hiroshi Ogata awarded the plaques to the recipients.

## AQD family keeps growing

**W**ith the hiring of three more aquaculture experts to help in the thrusts of the department, we can say the AQD family continues to grow.



**Dr. Clarissa Marte** makes a comeback at AQD as the new Head of the Technology Verification and Commercialization Division.

Dr. Marte was Scientist at AQD before she left and has been the Head of the Research Division for many years. She has conducted researches on the reproductive endocrinology of marine fishes and coastal resource

management. Additionally, she has authored and co-authored over 40 articles in local and international journals.

She acquired her PhD in Zoology from the University of Singapore and her MSc and BSc in Zoology from the University of the Philippines in Diliman where she has also been a professor.

Dr. Marte was Council Director and Treasurer of the

Asian Fisheries Society and is a member of the Asia-Oceania Society of Comparative Endocrinology, International Society for Reef Studies, Philippine Biochemical Society, and the Philippine Association for Marine Science. She has been a member of various government committees concerned with fisheries research and fisheries policy.



**Mr. Hanani Torilla** is the new head of the Dumangas Brackishwater Station.

Prior to joining AQD, Mr. Torilla has been working in BFAR since 1996. There, he was Aquaculturist II and Chief of the Monitoring, Control, and Surveillance Section of the Regional Office VI in Molo.

He obtained his Bachelor of Science in Fisheries (Major in

Marine Fisheries) from the University of the Philippines in Diliman and has attended international training courses in Thailand, Japan, and Canada.

Mr. Torilla has also been Senior Science Research Specialist and Chief of the Environmental Survey Division of the Presidential Management Staff – Seafarming Research and

Development Center (PMS-SRDC) in Dagupan City as well as Developmental Management Officer of the Kilusang Kabuhayan at Kaunalaran (KKK) in Pasig City, Fishery Industry Specialist and OIC-Dean of the Palawan Regional Institute of Fisheries Technology, and Senior Researcher at the College of Fisheries in UP Diliman.



**Ms. Grace Hilomen-Garcia** rejoins AQD as technical coordinator of the Manila Office.

Mrs. Garcia used to be an associate scientist at the Tigbauan Main Station before she left in 2004. She has been with AQD since 1979.

She earned her Master of Science in Fisheries (Major in

Aquaculture) at the University of the Philippines in the Visayas and her Bachelor of Science in Marine Biology from the University of the Philippines in Diliman.

As a researcher, she has been working on the breeding and seed production of seahorses, milkfish breeding and seed production, and sea

bass breeding.

Other studies she has ventured into include the broodstock development and larval rearing of ornamental fishes and resource assessment at Malalison Island.

She has published a number of scientific papers in international journals and has delivered presentations in Japan and Singapore.



## Walk with a friend and talk

Photos by RD DIANALA

**“W**alking is fun, relaxing, and healthy.” This is according to Dr. Relicardo Coloso who led AQD employees in rediscovering the benefits of walking to health and well-being last July 10, 2007 as part of the 34th anniversary activities.

It’s cheap. You only need your feet and shoes, there’s no need to go and pay for a gym.

The secret in reaping benefits from walking is to do it regularly. “Walk 3 times a week, but 6-7 times a week is not too much,” Dr. Coloso revealed.



AQD employees take a leisure walk around the Sports Quadrangle

You can walk outdoors or indoors; in the mall, plaza, or beach. Walk in a nice place so you can smell the flowers, notice the weather, and be attuned to your feelings and thoughts while leisurely talking to your friend.

When walking for exercise, walk towards a target heart rate. You know you’ve reached it when you stop talking with your friend – you’re out of breath. Stay on it for 15 minutes and taper down your speed. Over time, you’d

notice you can walk longer without being out of breath.

Walking consumes around 200 calories per hour for a 70 kg person. That’s like burning the energy from a hamburger or a cup of ice cream.

In an average day in the office, a person makes about 1000 steps. Meanwhile, serious walkers target 10,000 steps a day. As always, drink plenty of water, use proper footwear, perform light stretching exercises beforehand and observe correct posture.

After listening to Dr. Coloso’s talk, the AQD employees walked twice around the sports quadrangle. It took 5 to 7 minutes to make one round and roughly 600 steps.

## Makeover for Pilot Feed Mill packaging



**T**he packaging of the Pilot Feed Mill will soon take on a fresh new look.

Mr. Nelson Golez, a visiting scientist at AQD, won the packaging design contest. His design will adorn the feed mill’s sacks, boxes, and other packaging materials.

Mr. Golez’s intricate design incorporates representations of different species for which the feeds might be intended. This includes tilapia, catfish, ornamental fish, abalone, seabass, freshwater prawn, mudcrab, snapper, milkfish, shrimp, grouper and siganid.

Other winners of the packaging design contest include Mr. Sid Tendencia (2<sup>nd</sup> place) and Mrs. Rieko Ogata (3<sup>rd</sup> place).

The winners were awarded during the 34<sup>th</sup> anniversary program.



Dr. Relicardo Coloso talks about the many benefits of walking

# Aquaculture Week at FishWorld

Photos by JE SALAMIDA

**S**eventeen elementary schools and eight high schools trooped to FishWorld to participate in different contests for this year's Aquaculture Week held last July 23-27.

Kinaadman Elementary School emerged as the best performing elementary school and the Colegio del Sagrado Corazon de Jesus was the best performing high school. Five

contests were held for the elementary level and six for high school.

Aquaculture Week 2007 seeks to build understanding and appreciation among school children and teachers in Panay of the research and development work of SEAFDEC/AQD and the relations between nutrition, the environment, aquaculture and fisheries.

## Bring, Show, and Tell: "Marine invertebrates for food"

Kimberly Jane Novo and Justin Grace Gallego of Colegio del Sagrado Corazon de Jesus bagged first place with their coaches Analyn Miraflores and Wilfredo Torrecampo.

Contestants researched about edible marine invertebrates and identified them by common and scientific names. They then cooked the

invertebrates and reported about the species before an audience.

## Nutrition and Aquaculture Quiz

Noella Therese Moreno of Iloilo Central Elementary School garnered first place, with the help of her coach, Jocelyn Gumarang after besting 32 other contestants in a read-and-answer written exam on nutrition, agriculture, fisheries and aquaculture.

## Write, Draw, and Tell a Fish Story: "The sea is my home"

Louisa Marie Yanza and Noel Vincent Crucero of Molo I Elementary School could really tell a good story together. Each pair of contestants wrote a story about a fish and accompanied it with colorful illustrations. The first place winners were coached by Joera Berte.

## Aquarium Quiz: "Tingnan mo!"

Mary Pauline Kriszl Gupeteo of Kinaadman Elementary School (coach: Joan Po), John Christian Teves of Guimbal Central Elementary School (coach: Azucena Garque), and Raymee Tabobo of Eugenio Torrento Elementary School (coach: Marlyn Temelo) all deserved first place. In answering their set of questions, contestants had one minute to visit each of the eighteen aquaria in FishWorld.

## Aquaculture Workshop for High School Teachers: "From the hatchery to the farm to the market"

After attending a day-long workshop on the

fundamentals of aquaculture, pairs of high school teachers created a 16-page illustrated booklet on aquaculture for use in high schools. Teachers Wilfredo Torrecampo Jr. and Marieta Edquila of Colegio del Sagrado Corazon de Jesus won first place.

## Scientific Illustration: "Nature's design and architecture"

Nicole Fernan Caminian of Colegio de San Jose with Coach Sharon Pahila proved to be the best in scientific illustration in this drawing contest that requires high detail accuracy. Their scientific illustrations will be used for the FishWorld T-shirt.

## Seafood Dish Contest: "Fish from aquafarms: masarap na, healthy pa"

With one farmed seafood entrée, high school student cooks did their best to please the taste buds of AQD judges and other taste testers. The title "Ang Pinakamasarap na Orig!" went to Lester John Tungala of Ramon Avanceña National High School with the help of Coach Ma. Fe Montealto.

Kinaadman Elementary School is best performing elementary school



Colegio del Sagrado Corazon de Jesus is best performing high school

Learning to use taxonomic keys



Aquaculture workshop for high school teachers



# AQUACULTURE WEEK WINNERS

## ELEMENTARY SCHOOLS

<b>Bring, Show, and Tell: "Marine invertebrates for food"</b>			
1 <sup>st</sup>	Kimberly Jane Novo Justin Grace Gallego	Analyn Miraflores Wilfredo Torrecampo	Colegio del Sagrado Corazon de Jesus
2 <sup>nd</sup>	Aishwarya Isabel de la Peña Kristine Joyce Arnaiz	Catherine Capeñanes Ma. Sol Tabilog	Kinaadman ES
3 <sup>rd</sup>	EJ Marie Roga Primi Jun Haresco	Grace Ann Segovia	Iloilo Central ES
<b>Nutrition and Aquaculture Quiz</b>			
1 <sup>st</sup>	Noella Therese Moreno	Jocelyn Gumarang	Iloilo Central ES
2 <sup>nd</sup>	Reyna Fe Quilantang	Adela Gelera	Kaunlaran Learning Center Foundation, Inc.
3 <sup>rd</sup>	Mark Dominic Terre	Tessie Po	Kinaadman ES
3 <sup>rd</sup>	Lester Jane Genanda	Marilyn Sinamban	Colegio de San Jose ES
<b>Write, Draw, and Tell a Fish Story: "The sea is my home"</b>			
1 <sup>st</sup>	Louisa Marie Yanza Noel Vincent Crucero	Joera Berte	Molo I ES
2 <sup>nd</sup>	Aljane Mae Manalo Agustin Gasapo Jr.	Alfonso Mesinas	Kaunlaran Learning Center Foundation, Inc.
3 <sup>rd</sup>	Mary Hope Hojilla Ines Concepcion Tupas	Ofelia Lingaya	Colegio del Sagrado Corazon de Jesus
<b>Aquarium Quiz</b>			
1 <sup>st</sup>	Mary Pauline Kriszl Gupeteo	Joan Po	Kinaadman ES
1 <sup>st</sup>	John Christian Teves	Azucena Garque	Guimbal Central ES
1 <sup>st</sup>	Raymee Tabobo	Marlyn Temelo	Eugenio Torrento ES
2 <sup>nd</sup>	Valerie Ann Tagulalap	Marlyn Temelo	Eugenio Torrento ES
2 <sup>nd</sup>	Raymund Jun Oberes	Elena Oberes	Namocon Elementary School
2 <sup>nd</sup>	Sean Angelo Mueda	Marilyn Novesteros	Kaunlaran Learning Center Foundation, Inc.
2 <sup>nd</sup>	Rey Philip Gallos	Myra Angelie de los Santos	WVSU Integrated Lab School

## HIGH SCHOOLS

<b>High School Teachers Make Aquaculture Booklets: "From the hatchery to the fish farm to the market"</b>		
1 <sup>st</sup>	Wilfredo Torrecampo Jr. Marieta Edquila	Colegio del Sagrado Corazon de Jesus
2 <sup>nd</sup>	Dolores Tabion Armando Guaro	Tubungan National HS
3 <sup>rd</sup>	Edna Casalmir Debbie Natividad	Ramon Avanceña National HS
<b>Scientific Illustration: "Nature's design and architecture"</b>		
1 <sup>st</sup>	Nicole Fernan Caminian	Sharon Pahila Colegio de San Jose
2 <sup>nd</sup>	Cathrina Bagarinao	Laurence Calambro Philippine Science HS
3 <sup>rd</sup>	Lorraine Gallego	Archie Lucio Tabares Tubungan National HS
<b>Seafood Dish Contest: "Fish from aquafarms: masarap na, healthy pa"</b>		
1 <sup>st</sup>	Lester John Tungala	Joera Berte Ramon Avanceña National HS
2 <sup>nd</sup>	Gellie Belle Tubungan	Alfonso Mesinas Colegio del Sagrado Corazon de Jesus.
3 <sup>rd</sup>	Ma. Shannen Cabillo	Elsie Garcia Colegio del Sagrado Corazon de Jesus

Best performing elementary school: **Kinaadman Elementary School**  
Best performing high school: **Colegio del Sagarado Corazon de Jesus**



Bring, show, and tell



Write, draw, and tell a fish story



Seafood dish contest



## AQD and BFAR collaborate on the national breeding and culture of abalone



**T**he Bureau of Fisheries and Aquatic Resources of the Department of Agriculture (DA-BFAR) and SEAFDEC/AQD held a partnership meeting last 16 May 2007 and one of the concerns expressed was the need for assistance from AQD in setting up a hatchery for regional seed production of abalone in the country. In response to this, and recognizing that abalone technologies developed by AQD are now ready for dissemination and adoption



by the Philippine aquaculture industry, SEAFDEC/AQD and BFAR have proposed to establish a National Breeding and Culture Program on Abalone in strategic areas of the country. To pursue this plan, a Memorandum of Agreement has been forged between the two institutions. Signatories to the agreement are AQD Chief Joebert Toledo and BFAR Director Malcolm Sarmiento.

The abalone program has the full support of DA Secretary Arthur Yap who is also witness to the MOA signing.

The 5-year program is expected to: (i) provide tropical breeding and culture technology in suitable regions or provinces in the Philippines; (ii) introduce and demonstrate abalone farming as an alternative means of livelihood



for coastal communities; and (iii) increase production and export earnings from the tropical abalone.

Under the terms of agreement, BFAR will provide funds for the construction and operation of abalone culture and breeding sites. AQD, on its part, will, among other things, provide the necessary technical expertise in the collaborative program. - BACOSTA

## AQD joins global concert for climate protection



**W**ith an estimated 400,000 people in attendance across 130 countries, the Live Earth Party was the largest concert ever held in history.

The gathering of AQD employees at the RD Lobby on the special day of 7/7/07 was one of the more than 10,000 registered events across the globe.

Despite being a Saturday, AQD employees took time to be at AQD's Main Station in Tigbauan, Iloilo to attend the historic event that aims to call attention to the issue of climate change.

In an email to invite AQD employees to the event, Chief Dr. Joebert Toledo said "Let us join the world promote awareness and combat climate crisis."



The Live Earth Party was a 24-hour concert broadcasted worldwide through television, radio, internet and wireless channels across the seven continents.

Through Live Earth, organizer SOS Campaign, hopes to motivate individuals

to change consumer behavior and call on corporations and political leaders to take concrete and sustained steps to address the problem of climate crisis.

If you were not able to attend the event, you can still make your commitment to take action at <http://liveearthpledge.org>.



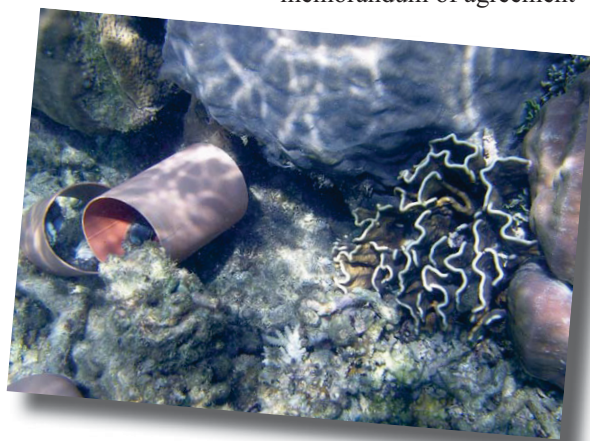
## AQD launches sea-ranching of abalone at Nogas Island

**M**ore than 5000 abalone (*Haliotis asinina*) juveniles were seeded into the Nogas Island Marine Sanctuary last July 24. This is part of a sea-ranching experiment jointly undertaken by SEAFDEC/AQD and the Municipal Government of Anini-y, Antique where the sanctuary is located. Abalone is locally known as lapas or sobra-sobra in Hiligaynon

Mr. Armando Fermin, project leader of AQD's Integrated Mollusk Program, Dr. Hiroshi Ogata, AQD's deputy chief, Municipal Mayor Reynaldo Pollicar, Vice Mayor Amado Rubite, and SB Members Jonathan Diana and Magdalena Cazeñas led the ceremonial releasing of abalone juveniles. It was the first time AQD released abalone into the wild for sea ranching.

The abalone could be partially harvested after about 9 or 10 months. The rest will hopefully become the parents of a healthy abalone population which will thrive in the area for generations to come. "Go forth and multiply," Mr. Fermin said to the abalone as they settled among the corals.

After the release, a memorandum of agreement



The PVC pipes will be removed from the reef after the abalone have crawled out



**Above:** (R-L) Mr. Armando Fermin, Dr. Hiroshi Ogata, Mayor Reynaldo Pollicar, and Vice Mayor Amado Rubite ceremonially release the abalone inside pipes while SB members Jonathan Diana and Magdalena Cazeñas look on. **Below:** on location at the Nogas Island Marine Sanctuary

was signed between the Municipality of Anini-y and AQD. While AQD is responsible for stocking and an information campaign about the benefits of abalone ranching, the local government of Anini-y and their Municipal Fisheries for Aquatic Resource Management Council Systems (MFARMCS) will provide assistance to AQD personnel and protection to the seeded abalone.

"Today is another milestone in the history of our town," said Vice Mayor Rubite during the MOA signing. The abalone seeding "could help our fisherfolk generate income which should mean economic progress in our municipality." In addition, Dr. Ogata revealed that if large enough, abalone in Japan could cost from P1000 to P1500 per piece.



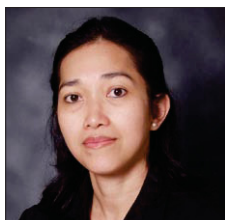
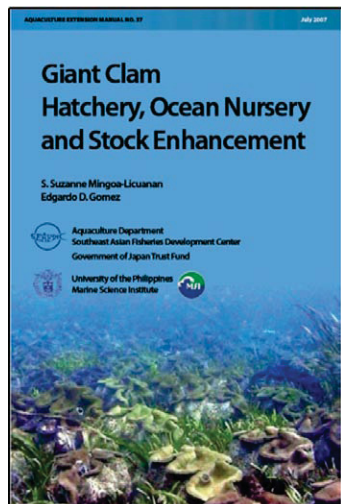
AQD divers and scientists continued to monitor the abalone for two more days after their stocking. According to Dr. Evelyn Grace de Jesus-Ayson, Research Division Head, AQD also plans to stock seahorses in the Sagay Marine Reserve in Negros and abalone at Malalison Island in Northern Antique. She also added that while AQD may have the technical resources to launch a reseeding and sea-ranching program such as this, it is more difficult to organize and educate people about sustainable aquaculture. The cooperation of the community is vital to the success of the project.

## AQD's new publications

Six new books and four new flyers were launched last July 12 as part of the 34<sup>th</sup> anniversary celebrations.

A full-set of the new publications were turned-over to representatives from the academe, LGUs and private sector.

The books are available at the AQD bookstore for affordable prices. Flyers are given away for free



Dr. SS Mingoa-Licuanan



Dr. E Gomez

### AEM 37: Giant clam hatchery, ocean nursery and stock enhancement (SS Mingoa-Licuanan and E Gomez)

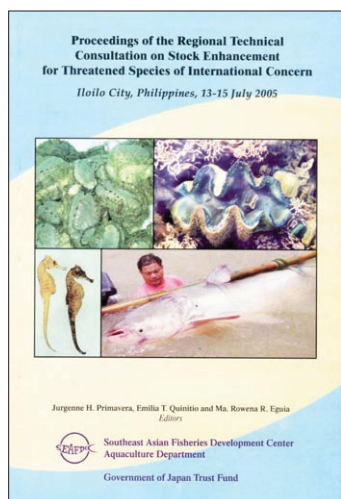
In their message, the authors say they “wrote this manual in response to interest from various sectors, and to address the needs of both technical and lay people.”

“This manual contains information borne out of more than 20 years of experience in making giant clam culture work in a developing country.

Notably, this manual includes a section on *in situ* spawning induction with *ex situ* larval culture. This is a feature that has not been addressed in other giant clam culture manuals.”

“This manual is meant as a guide to the culture of giant clams (*Bivalvia*, Sub-family *Tridacnidae*).”

The book is jointly published by AQD, UP-MSI, and DA-BFAR. It is funded by the Government of Japan Trust Fund.



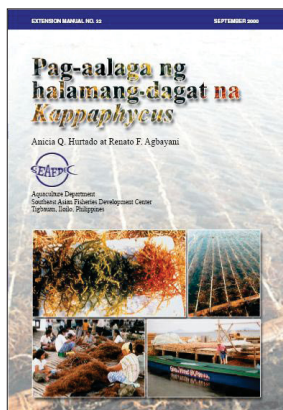
Dr. JH Primavera

### Proceedings of the regional technical consultation on stock enhancement for threatened species of international concern (JH Primavera, ET Qunitio, MRR Eguia eds)

Dr. Primavera was glad she had the chance to speak on the book because it is her last editing assignment before she retired from AQD last February.

She said editing the book was a very good experience for her and her co-editors. Dr. Primavera fondly recalled the difficulty they had with the use of English in some of the papers.

The 149-pages of the book document the proceedings of an expert consultation held at AQD in July 2005. It contains 9 review papers and 7 country papers.



Dr. AQ Hurtado

### AEM 32: Pag-aalaga ng halamang-dagat na *Kappaphycus* (AQ Hurtado and RF Agbayani, translated by MRR Eguia)

The 28-page Filipino manual focuses on the farming techniques of *Kappaphycus* which is the flagship seaweed

commodity of the Philippines. Also included are some aspects of biology, and seaweed products and processing.

Dr. Hurtado hopes the manual could eventually be translated to a Tawi-tawi dialect which is spoken by many seaweed farmers in southwestern Mindanao.





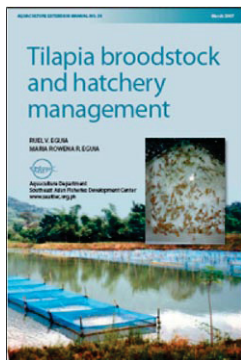
RV Eguia



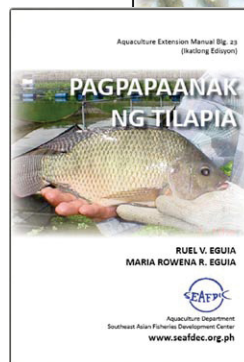
MRR Eguia

Three new tilapia manuals were published with the Eguia couple as authors.

In order to lower the price of the books, they have both generously waived their royalty as authors of the manuals in Filipino.

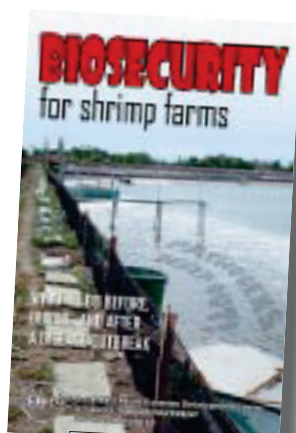


The **AEM 38: Tilapia broodstock and hatchery management** is a 40-page manual which is the result of the refinements to AQD's tilapia hatchery technology.



The second manual, the **AEM 22: Pag-aalaga ng tilapia** is a 46-page publication in Filipino describing the techniques in raising tilapia in concrete tanks, netcages, fishponds, and lake pens. It is the third edition.

Lastly, the **AEM 23: Pagpapaanak ng tilapia** is also a 43-page manual in Filipino. It describes tilapia broodstock management in concrete tanks, netcages, fishponds, and lake pens. It is also in its third edition.

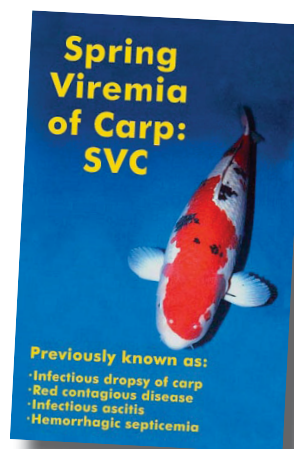


### Biosecurity for shrimp farms

This flyer contains information on what to do before, during, and after a disease outbreak in shrimp farms.

It focuses on preventive biosecurity measures and good management practices.

It is hoped that this flyer will address the lack of standard biosecurity measures in the industry.

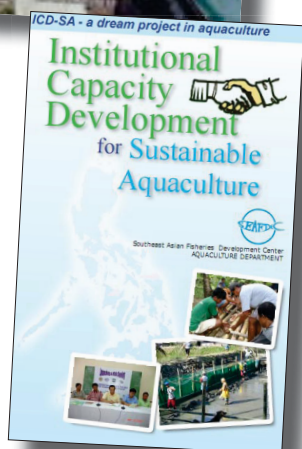


### Spring Viremia of Carp:SVC

This flyer contains information on the detection of the disease, as well as clinical signs of infected fish and tips on SVC prevention.

Dr. Gilda Po who spoke about the flyer thanked Andrew Goodwin of the Aquaculture Fisheries Center at the University of Arkansas who was her partner in its preparation.

This flyer is supported by the Government of Japan Trust Fund.



### Institutional Capacity Development for Sustainable Aquaculture

This flyer encapsulates the concept of AQD's dream project in aquaculture.

It is hoped that the flyer will entice more stakeholders into collaborating with AQD for the generation of livelihood and adoption of scientifically tested and appropriate aquaculture and resource management techniques.



### ABOT Aquanegosyo Technology Forum

The ABOT (Agree-Build-Operate-Transfer) forum will be held on October 16-17, 2007 at the Philippine Social Science Center in Quezon City.

Aiming to reach out to entrepreneurs, it will tackle topics on sustainable aquaculture technologies for viable species, business start-up pointers, and competencies & risk management among others.

## Capiz gives season-long training high marks

Photos by MT CASTAÑOS



Hon. Raymund Locsin,  
Capiz SB member

**“T**his is my first time attending a graduation ceremony where the feedback is not about the food,” says Hon. Raymund Locsin, chair of SP-Capiz’ committee on agriculture and fisheries. He represented the Capiz Provincial Government. “Instead, *gin-dayaw sang trainees kun ano ang gin-tudlo.*”

With that, the first phase of the ICD-SA project-Capiz ended on July 18 in Roxas City.

The season-long course on brackishwater aquaculture was organized for 37 Capizeños who started the course in February. Eventually, after five 2-day sessions, 19, or roughly 50% of them completed the course and were awarded certificates of training. The rest got certificates of attendance.

Overall, the trainees rated the course excellent. Most said they gained 60 to 100% new technical knowledge and all of them said that they are more confident of implementing and promoting brackishwater aquaculture technologies upon returning to their places.

“With the positive feedback,” AQD Chief Dr. JD Toledo said, “we already con-



sider phase 1 a great success.” He pointed out, however, that there had been site-specific problems in the project’s demo farm at the Capiz State University’s Dayao campus in Roxas City. CAPSU is where the trainees had their hands-on classes.

The first mudcrab culture demo run has a low 10% survival because of high salinity and high temperature during the summer months. But with the rainy season, the second run would be much improved. The grouper is more on track, with a specific growth rate of 0.85 or nearly 1% a day. The stock of *Epinephelus fuscoguttatus* could reach the target market-size of 450-500 grams in roughly 4 months.

Dr. Toledo enjoined the trainees to feedback their technology use to AQD while assuring them of AQD’s continuing technical support.

The *Institutional capacity development for sustainable aquaculture* project seeks to transfer appropriate aquaculture technologies and fishery resources management strategies to target beneficiaries. The Capiz component is funded by the Capiz Provincial Government and has three phases. Phase 2 on freshwater culture will be situated in Dumarao, Capiz. Already, plans are underway for a ceremonial reseedling of the dam site with bighead carp after an initial stock assessment. Phase 3 will be on coastal resource management. - MT CASTAÑOS

## Contributions from AQD employees are always welcome!

Please send text separately from your JPEG photos (300 dpi or better). Devcom also uses these materials to update the AQD website and as SEAFDEC Newsletter articles. Having the original text and photos would give us more flexibility

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# Rust Team is Palaro 2007 champion

Photos by IT TENDENCIA  
unless noted otherwise

One point spelled the difference.

After battling it out with the Mint Green Team for three weeks, the Rust Team was finally awarded the trophy and a P3,000 cash prize during the closing ceremonies of Palaro 2007 last July 27. The Rust Team won over the Mint Green Team 107-106.

Until the last day, no one could be totally sure who will emerge as this year's champion.

At first, the Mint Green Team had the comfort of a large lead over the Rust. Then came the bowling events, where the Rust won in both men and women's categories, followed by the track & field games which led to a dramatic

victory for the Rust. They won 5 of 6 race events, narrowly overtaking the points of the Mint Green by one.

Both teams were equally deserving. It's just that in the end, someone has to be proclaimed the winner. Even if it was only by one point.

As for the rest of the Palaro story, the pictures

should do the talking.

Congratulations to both the Rust and Mint Green Teams! It has been a good fight.



It was a race for the points. A very tight one.

## PALARO 2007 SCORE SHEET

GAME		RUST	MINT GREEN
Parlor Games		17	21
Basketball	Men	10	
	Women		10
Chess	Men		2.5
	Women		2.5
Dama			5
Poker			5
Darts			5
Table tennis	Men (single)		5
	Men (double)		5
	Women (single)	5	
	Women (double)		5
	Mixed*	5	
Volleyball	Men		10
	Women	10	
Badminton	Women (single)	5	
	Women (double)	5	
	Men (single)		5
	Men (double)		5
	Mixed		5
Lawn tennis	Men, single		5
	Men, double		5
Billiards		5	
Bowling	Men	10	
	Women	10	
Track and field	100, men	5	
	200, men	5	
	400, men	5	
	100, women		5
	200, women	5	
	300, women	5	
<b>TOTAL</b>		<b>107</b>	<b>106</b>

Palaro 2007 started with the Fun Walk from Tigbauan Plaza to the station in the early morning of July 9



It takes a lot of hardwork to earn the championship, as seen in this tug-of-war photo



In the end, a champion emerges but sportsmanship makes both teams winners







"What counts most is  
 not winning but  
 how I conducted myself in  
 thoughts, words, and deeds  
 and how I played the game"  
 -Oath of Sportsmanship