At the Forefront of Food Security and Employment Generation: A Vision Statement for SEAFDEC/AQD

Joebert D. Toledo, D. Agr.

As a regional treaty organization, the Aquaculture Department of the Southeast Asian Fisheries Development Center (SEAFDEC/AQD) follows the programs and operation guidelines set forth by the SEAFDEC Council of Directors. The AQD Chief efficiently implements the programs approved by the Council to achieve AQD’s three-fold mandate of undertaking research and development (R & D), developing human resources and, promoting information exchange in aquaculture. Since its establishment in 1973, AQD has generated science-based technologies for the breeding and farming of major aquaculture commodities such as milkfish, tiger shrimp, grouper, sea bass, catfish, abalone, seaweeds, tilapia, carp, and mud crab among other species. These technologies are disseminated in the form of publications, training courses, demonstration farms, and collaboration with private entrepreneurs.

The challenge for the next AQD Chief is to develop modalities for the transformation of science-based information into workable, sustainable production technologies to ensure food security and generate employment. Foremost, the Chief should create a synergy of relationship among AQD’s Administration and Finance, Research, Training and Information, and Technology Verification and Commercialization Divisions. AQD’s financial and management operations should be transparent. Scientists and research staff should be involved in training and technology verification projects to further validate their results and, in the process, become aware of relevant problem areas needing further research. Packaged technologies from breeding to the farming of important aquaculture commodities should be widely disseminated in print and electronic media. The accomplishments of scientists should be measured not only by their scientific and technical publications, but also in terms of direct consultancy services to the industry.

With shortfalls regularly hounding its annual operations budget, the next AQD Chief should actively seek external funding sources and encourage collaborative research with academe, local and international research institutions, as well as with private entrepreneurs. AQD’s physical assets, such as laboratories, equipment, experimental animals, hatcheries and holding facilities, should be fully utilized not only for R & D, but also for income-generating activities to augment AQD’s tight budget and to serve the needs of the aquaculture industry. For instance, the potential of the multi-million peso Laboratory for Advanced Aquaculture Technologies or Biotechnology Laboratory in Iloilo, constructed from a grant-in-aid from the Government of Japan to the Philippines, should be fully utilized to address industry problems, such as the propagation of disease-resistant strains of seaweeds and tiger shrimp. In the absence of sufficient funding by AQD, competent scientists may be commissioned on a project basis or on their ability to seek research funds elsewhere.

The relationship of AQD vis-à-vis the academe and the aquaculture industry has suffered in recent years. My vision for a more transparent and direct involvement of AQD’s highly capable researchers in the concerns of the aquaculture industry will be a positive step to a better working relationship. In doing so, the achievement of food security and jobs in the countryside will be within reach.
Research publications of Dr. Joebert D. Toledo and colleagues

Toledo JD, Naret E, Nakagawa H. 2005. Comparison of fatty acid profile between cultured and wild-caught grouper, Epinephelus coioides. Aquaculture Science 53: 127-134.


Husbandry and Health Management of Grouper
Outstanding Monograph 2004
National Academy of Science and Technology in the Philippines

Project Team (Authors)
ER Cruz-Lacierda, CR Lavilla-Pitogo, JD Toledo, N Jumalon-Ogburn, NV Golez


SEAFDEC Council discusses the future

VT Sulit

The 38th Meeting of the SEAFDEC Council of Directors was held in Brunei Darussalam from 18 to 21 April 2006. The Meeting noted the programs implemented by SEAFDEC in 2005 and approved the programs for 2006 as endorsed by the SEAFDEC Program Committee during the 28th Meeting in Bangkok in December 2005. The Council Meeting also noted the report and endorsed the recommendations of the 8th Meeting of the ASEAN-SEAFDEC Fisheries Consultative Group on 17 April 2006.

The Council Meeting held closed-door sessions to discuss the future operations and management of SEAFDEC, given the present financial crisis that SEAFDEC is facing. The Council considered the proposal presented by the SEAFDEC Secretariat, which included four scenarios, summarized in the table at right. The Secretariat proposal seeks (1) full financial support by Host Countries of respective Departments, and (2) minimum regular contribution from all Member Countries.

In response, all ASEAN Member Countries expressed support for SEAFDEC as a regional fisheries development organization and agreed to consider the Secretariat proposal and seek funding from their respective finance ministries for the operation of SEAFDEC. Moreover, Malaysia, the Philippines, and Thailand agreed to continue hosting their respective Departments based on availability of funds. Singapore will support MFRD based on the existing terms and conditions stipulated in the 1996-2001 SEAFDEC Basic Documents.

As for the regular contribution from the Government of Japan, the Council was informed that utmost effort will be made to secure the amount sought by SEAFDEC for 2007. The responsibility to secure the regular contributions from the Government of Japan to SEAFDEC has been shifted from the Ministry of Foreign Affairs to the Fisheries Agency.

The Council supported SEAFDEC’s proposal on Enhancing Technical Cooperation and Arrangements for Non-Traditional Sources of Funds, and asked the Secretariat to formulate an appropriate policy framework that considers:

- priorities and agenda of donor agencies consistent with the mandate, objectives, and priorities of SEAFDEC
- close consultation between the Departments, Member Countries, and the SEAFDEC Secretariat
- inclusion of agency fee and personnel cost in the budgeting

The Council also approved the following proposals that seek to reduce the cost of SEAFDEC operations:

- streamlining of the SEAFDEC annual meetings
- enhancing SEAFDEC visibility by improving SEAFDEC information tools and activities
- adjusting the program of the Working Group on Regional Fisheries Policy
- optimizing the operation and sourcing additional funds for the SEAFDEC training and research vessels
- implementing regional programs in a cost-effective manner
- establishing a long-term improvement plan to include revisioning of the SEAFDEC mandate and streamlining of programs as TD and AQD have already done
- closer partnership with ASEAN in areas of mutual interest

<table>
<thead>
<tr>
<th>Regular contribution</th>
<th>SEAFDEC status</th>
<th>Activities using regular funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than US$ 800,000</td>
<td>SEAFDEC Secretariat and four Departments maintain current organizational structure</td>
<td>Projects under Special 5-Yr Program are maintained; projects adjusted depending on level of funding</td>
</tr>
<tr>
<td>$ 400,000 to 800,000</td>
<td>Most of current SEAFDEC structure is maintained, but some host countries may give up Departments</td>
<td>SEAFDEC programs restructured, with main projects supported through external sources</td>
</tr>
<tr>
<td>$ 150,000 to 400,000</td>
<td>SEAFDEC comprises only the Secretariat with or without Departments</td>
<td>No regular activities; training-research vessels given up</td>
</tr>
<tr>
<td>Below $ 150,000</td>
<td>SEAFDEC is dissolved</td>
<td></td>
</tr>
</tbody>
</table>
AQD brings mud crab farming to India

In recognition of SEAFDEC/AQD’s achievements on mud crab hatchery and nursery, the Rajiv Gandhi Center for Aquaculture (RGCA) invited Dr. Emilia T. Quinitio to help set up a pilot mud crab hatchery in late 2004. She visited the RGCA again from 27 to 31 March 2006 to lecture on all aspects of mud crab farming and to assess the mud crab hatchery and nursery that use AQD technologies.

The RGCA undertakes research and develops hatchery and grow-out technologies for important aquatic species, and disseminates commercially viable technologies to entrepreneurs. The RGCA operates under the Marine Products Export Development Authority (MPEDA) based in Tamil Nadu in southeastern India. India seeks to produce crablets from the hatchery and farmed crabs for both local and export markets.

Two MPEDA technologists, Mohamed Shaji and Srinivasan Pandiarajan, Jr. underwent the one-month training course on mud crab seed production at AQD in 2004. The RGCA achieved a major breakthrough in aquaculture in India in 2005 when its hatchery produced about 100,000 crablets and its ponds produced marketable crabs from hatchery-reared seedstock. In addition, crablets of blue crab *Portunus pelagicus* were also produced by means of the mud crab technology developed at AQD.

JHP, June, and Jon in Miami mangrove meeting

The First International Symposium on Mangroves as Fish Habitats was held 19-21 April 2006 at the University of Miami’s Rosenstiel School of Marine and Atmospheric Science in Virginia Key, Miami, Florida, USA. The symposium allowed scientists and students to share and exchange ideas, approaches, methods, and data on linkages between mangrove forests, other habitats, and their associated fisheries.

Dr. Jurgenne H. Primavera of SEAFDEC/AQD gave one of three keynote papers — *Integration of Aquaculture and Mangroves*. There were 54 oral and 25 poster presentations, including two by AQD researchers. Junemie Lebata presented the paper “Enhancement of fisheries for mud crab *Scylla* spp. in the mangroves of Naisud and Bugtongbato Ilojaya, Aklan, Philippines” which is part of her PhD thesis at the University of Wales Bangor. She conducted the research under the European Commission mud crab project with AQD. Jon Altamirano presented the paper “Declining mangroves and fisheries in Batan Estuary, Panay Island, central Philippines” which is his MSc thesis at the University of Tokyo. Students do make the science world smaller.
**BFS conducts training in ulang farming**

From 17-22 April, the Binangongan Freshwater Station carried out its first training course on the hatchery and grow-out of *ulang* or the freshwater prawn *Macrobrachium rosenbergii* as part of the Integrated Regional Aquaculture Project of the ASEAN-SEAFDEC Special 5-Year Program on Sustainable Fisheries for Food Security in the ASEAN region. The *ulang* industry in the Philippines is not well established, and it was decided that a training course be conducted focused on Filipino farmers and extension workers. The training sought to introduce them to a potentially lucrative aquaculture livelihood, enable them to operate and manage prawn hatcheries and grow-out farms, and help improve the socio-economic condition in the countryside.

The training course had 21 participants from several municipalities in Laguna and Rizal and from Vigan, Antipolo, Camarines Sur, and Bulacan. Two participants were sent by the Couples for Christ Eastern Rizal Chapter and one from the University of Rizal System. The AQD training fees were waived for all participants since the training course was funded by IRAP. The participants only had to seek travel assistance from their respective local government units or organizations.

The training course included several lectures but it was mostly hands-on and participatory. The trainees visited the *ulang* hatchery and grow-out ponds at the ABCDEFI farm in Jalajala and the National Integrated Fisheries Training and Demonstration Center of the Bureau of Fisheries and Aquatic Resources in Dagupan. All the BFS researchers and staff served as resource persons. Dr. Celia Torres from AQD Tigbauan gave a lecture and conducted the practicals in Prawn Health Management. She also gave the inspirational message and awarded the training certificates during the closing ceremony. Then she joined the field trip to NIFTDC Dagupan.

The *ulang* training course became part of the Aquaculture Project under the CFC’s Gawad Kabuhayan Program. A Memorandum of Agreement was signed on 7 Nov 2005 for AQD to assist CFC in skills training and technical support for aquaculture livelihood projects in beneficiary communities and for CFC to help AQD disseminate appropriate aquaculture technologies in communities where CFC chapters operate.

*MRR Eguia*

---

**Dearest Malou and Emil,**

I cannot thank you enough for the most wonderful seminar I have ever attended. Wala akong masabi, sa accommodation, sa pagkain, sa content of the seminar, the expertise of the people who conducted the training, and of course the blend of participants who attended - lahat perfect! Hanggang sa field trip namin sa Dagupan, your team attended to us like mothers looking after their own children na hindi kumakain until every participant has. Again my special thanks to you two, and your team! More power and God Bless!

*Aurelio ‘Boy’ Guinto of CFC*
TID assistants learn about MI

Three junior members of the Training and Information staff attended the Seminar-Workshop on Multiple Intelligences and Beyond: Implications for Educators, Business Executives and Leadership Development, held at the University of the Philippines in the Visayas, Iloilo City, on 4-5 April 2006. Arvee Ledesma, Caryl Genzola, and Jocelyn Fernando took two days off from their respective jobs to learn new ways to communicate and educate the MI way. All three deal with information seekers and students and stand to benefit from a better understanding of human intellectual capacities. AQD paid the training fees.

The seminar was sponsored by the UPV College of Management under the Academic Program Improvement Project and was attended by representatives from the academe, business sector, and government and non-government agencies. The main resource person for the workshop was Mr. Nicanor Perlas, president of the Center for Alternative Development Initiatives, chairman of Lifebank, chairperson of several national civil society networks, consultant to United Nations and other donor agencies, and co-convenor of several global networks. Perlas had won the Outstanding Filipino Award.

The theory of multiple intelligences (MI) basically recognizes that different people have different abilities and strengths—not only the better known verbal-linguistic (word smart) and logical-mathematical (logic smart) in telligence, but also musical (sound smart), kinesthetic (body smart), visual (image smart), intrapersonal (self smart), interpersonal (people smart, naturalistic (nature Smart), and existential intelligence. It is time for educators, business executives, and social leaders to have a new and deeper understanding of the comprehensive human being in order to find effective ways to develop the full human potential and improve society.

The seminar started with lectures and discussion on MI and its implications for education, business, and leadership. We were showed various ways of recognizing, mobilizing, and developing MI. The training used participatory approaches, group processes including dyads, PowerPoint presentations, musical interludes, kinesthetic exercises, cognitive synthesis, breathing exercises, presencing, and other techniques.

The conference began with sessions on Collaboration in Resource Sharing in a Digital Environment. Resource sharing is the best way to reduce information costs and ensure speedy delivery of information. Annabelle Acecera discussed library cooperation in the Visayas and Mindanao. Chutima Sacchanand proposed distance education and training for librarians in cooperation with library schools in the ASEAN region and with Sukhotai Thammathirat Open University in Thailand as the key institution.

Makeswary Periasamy and Mohamed bin Salim discussed the preservation and conservation needs of libraries around Asia especially those damaged by the Indian Ocean tsunami. The National Library of Singapore now has a Preservation, Conservation and Access Project that involves fumigation and selective microfilming, conservation, and digitization of rare and heritage materials.

Parallel sessions were held on the third day. Corazon Nera’s presentation on the professionalization of Filipino librarians was the most well attended. She described the process of qualifying in the librarianship profession, the practice of librarianship, the Philippine Librarianship Act of 1990 and 2003, and the challenges facing the library practitioner. The sessions ended with a general assembly and open forum and awarding of certificates and CDs containing the presentations. The conference was capped with a farewell dinner and cultural show. The fourth day was spent touring the libraries and cultural sites in Metro Manila.

CM Genzola

AQD attends 13th CONSAL Conference

CONSAL is the Congress of Southeast Asian Librarians. It was established in 1970 with the same 10 member countries (except Japan) as SEAFDEC. The congress is held every three years in the member countries in rotation. The Philippines hosted the CONSAL in 1973, 1987, and again on 25-30 March 2006. CONSAL XIII was organized by the Philippine Librarians Association, Inc. and the National Library (lead institutions) and held at EDSA Shangri-la in Mandaluyong. The theme was CONSAL at the Crossroads: Challenges for Greater Regional Cooperation. Thousands of librarians, library administrators, information specialists, archivists, and officials from the ASEAN member countries attended the conference.

The Conference began with sessions on Collaboration in Resource Sharing in a Digital Environment. Resource sharing is the best way to reduce information costs and ensure speedy delivery of information. Annabelle Acecera discussed library cooperation in the Visayas and Mindanao. Chutima Sacchanand proposed distance education and training for librarians in cooperation with library schools in the ASEAN region and with Sukhotai Thammathirat Open University in Thailand as the key institution.

Fresh off the press!!

The 68-page annual report for 2005 documents the AQD programs and projects during the first year following the 2004 streamlining. All AQD employees may have one copy each.

LG Pacino
The Puerto Princesa Subterranean River National Park

Trip and photos by EFC Doyola
A Risso’s dolphin dies from ingested plastic bags

On Sunday, 2 April 2006, FishWorld received a weak stranded dolphin from Municipal Agriculture Officer Pablo Dimaisip of Dumangas. It turned out to be a Risso’s dolphin *Grampus griseus*, 276 cm long, with a badly bruised snout, and dehydrated from the long jeepney ride. Ellen Flor put it in a big hatchery tank but it was unable to swim. Jocelyn and friends tried to feed it and keep it afloat in a harness. Unsuccessfully. The dolphin vomited a greenish liquid intermittently and it died on 6 April. Vicente and Glen removed the internal organs prior to fixation in formalin. They found two trash bags in the stomach. Evidently, the dolphin could not pass the bags out and was unable to process other food. It was sad to find another victim of waste dumping at sea.

T Bagarinao

FishWorld joins WCSP meeting in Palawan

Since its opening in 2000, SEAFDEC FishWorld has had to take care of several endangered marine animals. This special work has been reported in the SEAFDEC and AQD newsletters. Then it came time to make a formal report to the Wildlife Conservation Society of the Philippines (WCSP) and this we did during the 15th Annual Philippine Biodiversity Symposium of the WCSP. FishWorld submitted an abstract listing all the endangered marine animals that have come our way. It was accepted for poster presentation. Sid Tendencia helped us prepare the tarpaulin poster at left.

The WCSP Symposium gathered 117 participants from institutions and conservation organizations around the country and abroad, including the Department of Environment and Natural Resources, Conservation International, Haribon Foundation, and a dozen foreign universities. The symposium theme was Red lists as tool for conservation and planning. The FishWorld list contributed tick marks to maps and tables used for red lists in the making.

After the symposium, I proceeded to seek out some wildlife and wilderness. See photos this issue.

EF Doyola

Risso’s dolphin stranded in Dumangas and brought to AQD, 2 April 2006

Plastic trash bags and seaweeds in the stomach of the Risso’s dolphin
The SEAFDEC Council of Directors, the Secretariat, the Departments, and delegates from the SEAFDEC Member Countries witnessed the launching of the Year of the Turtle 2006 at Meragang Beach in Muara District, Brunei Darussalam on 21 April 2006. Officiated by Awang Haji Jemat bin Haji Ampal, Permanent Secretary of the Ministry of Culture, Youth and Sports of Brunei Darussalam, the launching ceremony was made in conjunction with the 38th Meeting of the SEAFDEC Council and acknowledged the achievements of SEAFDEC in the conservation and management of sea turtles in the region.

In her welcome address, SEAFDEC Council Director for Brunei Darussalam, Dayang Hajah Hasnah binti Ibrahim reported that three species of sea turtles are found in the waters of Brunei Darussalam, namely: the olive ridley *Lepidochelys olivacea*, the green turtle *Chelonia mydas*, and the hawksbill *Eretmochelys imbricata*. The Department of Fisheries of Brunei Darussalam has succeeded in breeding these turtles in captivity. The hatchlings produced were released to the sea during the launching by children from nearby schools.

SEAFDEC Secretary-General Dr. Siri Ekmaharaj reiterated the need for regional cooperation among the SEAFDEC Member Countries in conserving sea turtles because these species have become endangered. Sea turtles are still widely hunted for food (meat and eggs) and shells (for art crafts and souvenir items). Turtles have lost their beach nesting grounds to human settlements. To help protect sea turtles, the SEAFDEC Marine Fishery Resources Development and Management Department based in Malaysia implemented the programs *Conservation and Management of Sea Turtles in Southeast Asia* from 2001 to 2003, and *Stock Enhancement of Sea Turtles* with funding from the Government of Japan Trust Fund. MFRDMD has published books and scientific papers from these programs. Visit the MFRDMD website www.seafdec.org/mfrdmd.

VT Sulit
The Fisheries Consultative Group endorses SEAFDEC programs for 2006-2010

VT Sulit

The 8th Meeting of the ASEAN-SEAFDEC Fisheries Consultative Group (FCG) in Bandar Seri Begawan, Brunei Darussalam on 17 April 2006 took note of the achievements of the projects that SEAFDEC implemented in 2005 and endorsed the proposed programs for 2006. In the planning for future projects and activities, the FCG asked SEAFDEC to give due consideration to the new ASEAN Member Countries.

Under the FCG mechanism, the programs are endorsed by ASEAN to the ASEAN Working Group on Fisheries (ASWGFi) and by SEAFDEC to the Council of Directors of SEAFDEC. The FCG meetings are co-chaired by the current Chair of the ASWGFi and the SEAFDEC Secretary-General. For the 8th FCG Meeting, the present ASWGFi Chair Mr. Hla Win of Myanmar and SEAFDEC Secretary-General Dr. Siri Ekmaharaj took turns as Chairpersons.

The achievements of the Special Five-Year Program on Sustainable Fisheries for Food Security in the ASEAN Region implemented from 2002 to 2005 were acknowledged with much appreciation by the FCG. They favorably considered the projects for the second phase of the Special Five-Year Program which SEAFDEC will implement from 2006 to 2010. The second phase of the Program includes the Aquaculture Component comprising two major projects, namely:

- Development of Sustainable Aquaculture Technologies
- Human Capacity Building for Sustainable Aquaculture

During the discussion, the FCG representative from Thailand announced the recent establishment of the Center of Excellence for Freshwater Aquaculture within the Department of Fisheries of Thailand, and asked AQD to coordinate with the new Center to fill requirements for technologies and expertise in freshwater aquaculture.

The FCG asked SEAFDEC to initiate more projects in coastal aquaculture to provide job opportunities to fisherfolk in tsunami-affected countries, especially Indonesia.

The FCG noted the Report on International Fish Trade Related Issues and Anti-Fisheries Campaigns and acknowledged the initiatives of SEAFDEC in monitoring the issues, keeping the Member Countries informed, and seeking common and coordinated positions among the ASEAN and SEAFDEC Member Countries for presentation in international fora.

The FCG also supported the proposed ASEAN-SEAFDEC Strategic Partnership (ASSP) to enhance collaboration by intensifying regional fisheries programs and strengthening the mechanism for raising important fisheries issues. The ASSP will be endorsed to the highest levels of SEAFDEC and ASEAN.

The Report of the 8th Meeting of the ASEAN-SEAFDEC FCG was submitted and discussed during the 38th Meeting of the SEAFDEC Council also held in Brunei Darussalam from 18 to 21 April 2006 (see page 3).