## AQUA DEPENEWS

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## First online aquaculture courses produced graduates

Forty-seven virtual students from 11 countries learned aquaculture technology without leaving their respective places of work from the first Internet-based courses on aquaculture. AquaHealth and AquaNutrition Online launched by AQD produced 24 pioneer graduates this month.

Enrollees were from Brunei Darussalam (2), Cambodia (4), Egypt (1), India (1), Indonesia (4), Malaysia (2), Myanmar (4), Singapore (4), Thailand (4), Vietnam (5) and the Philippines (16).

Knowledge and skills were actually transferred to learners via

information technology. They proceeded with the course as if they were in a classroom but with this important difference - they faced computer screens instead of instructors.

Guided by resource persons, enrollees performed learning-exercises or "homeworks" on their own and submitted reports of their work through the Internet. To this, Vietnamese participant Dr. Bui Thi Lang of AquaHealth said, "Very interesting homework that update my learning on the development of aquaculture in my country."

Proctors administered examinations near the places of their work.

Unlimited interaction among learners and their resource persons in the Discussion Boards made the course exciting and enjoyable. Sharing insights and experiences further enhanced the learning process. "The Course being so informative, is likewise entertaining and with so much fun." said Filipino participant Mr. Bonagua of AquaNutrition. Another local participant Dr. Gorospe of AquaHealth said, "I never expected that virtual learning could indeed be possible, entertaining and highly informative."

Participants who achieved high in formal examinations, to page 2

## Mangrove process shrimp pond effluents



The capacity of mangroves to process shrimp (*Penaeus monodon*) pond effluents was determined in an impounded natural mangrove area.

Twenty four-hour monitoring of effluents showed that there was net removal of ammonia and nitrate in the day but net production at night, as predicted. For suspended solids, its removal by the mangrove system was similar day and night.

Based on a rate of 115.3 mg to page 2

## Primavera elected to Royal Swedish Academy of Agriculture, appointed to MA, IUCN, ASEM committees

AQD Senior Scientist Jurgenne Primavera was appointed Foreign Member of the Royal Swedish Academy of Agriculture and Forestry on 12 December 2002, as relayed officially by Secretary General B. Nilsson.

The Academy promotes agriculture and forestry and their related fields with the support of science and practical experience and in the interest of society.

Also last December, Dr. Primavera was named to the Steering Committee of the Commission on Environmental, Economic, and Social Policy of the

International Union for the Conservation of Nature and Natural Resources (IUCN). (See related story in ADN No. 3.)

More recently, she was invited to contribute to the Millennium Ecosystem Assessment (MA), a four-year process designed to improve the management of the world's natural and managed ecosystems by meeting needs of decision-makers and the public for policy-relevant scientific information on the conditions of ecosystems, consequences of ecosystem change, and options for response.

Dr. Primavera has also been named to the Steering Committee of the Aquaculture Platform of ASEM (the Asia-Europe Meeting), a partnership of 15 countries in Europe and Asia. The Platform promotes dialogue, networking and coordination concerning sustainable aquaculture, and was developed during the Beijing Aquachallenge Workshop sponsored by the EU INCO (International Cooperation Program), which also funds the present EC-CAMS Project on the Mud Crab Scylla implemented by the AQD.

First online...from page 1

submitted satisfactory learning activities, and participated actively in the discussion boards were granted Certificates of training. Eleven and 13 participants of AquaHealth and AquaNutrition, respectively, were in this category. Others who had lesser achievements received Certificates of participation as observer.

Eighteen specialists prepared the course materials. These scientists and researchers have several decades of combined experience in various fields of aquaculture health management (virology, bacteriology, mycology, parasitology, serology, immunology and molecular biology) and aquaculture nutrition (feed development and aquaculture economics).

They were the ones who also painstakingly presided in the delivery of course modules. "It must be a tremendous work to compile the teaching materials and to spend time with us in the last few months. "Thanks for making the

course possible!" said Singaporean participant Dr. Tony Zilong Tan, AquaHealth Online topnotcher.

"Principles of Health Manage-Aquaculture" in (AguaHealth Online) conducted from 29 April to 16 August 2002 was designed by AQD for learners who wished to start a career in this field. Twenty-five participants enrolled in the course. On the other hand, "Basic Principles Aquaculture Nutrition" (AquaNutrition Online) with 22 enrollees, ran from 9 August to 19 December 2002. It aimed to teach the essentials of aquaculture nutrition, feed formulation and feeding management.

Distance learning in aquaculture delivered through the Internet is a new and exciting training method pioneered by AQD. Technical assistance was provided by the UP Open University, the country's premier institution in distance education and Internet based learning systems.

Encouraged by the positive response of learners, AQD will

continue to offer these two Online Courses this year. AquaHealth will be conducted from 5 May to 15 August and AquaNutrition is tentatively scheduled from May to September. For more details please inquire from training@aqd.seafdec.org.ph.

Mangrove process...from page 1

total N removed per sq m mangrove per day from this study and published values of N loss in culture ponds, N composition of feeds and feeding rates, 1 ha of natural mangroves was calculated to process excess N produced by 2,750 kg of shrimp. This means that 0.7 to 1.1, 1.4 to 2.2, and 2.2 to 3.3 ha of mangroves are needed to support stocking densities of 10, 20, and 30 shrimps per sq m, respectively.

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