



## Outcomes of the 15<sup>th</sup> NACA Governing Council

The 15<sup>th</sup> Governing Council of NACA held in Kandy, Sri Lanka on 23-25 April voted unanimously to accept the application of membership of the Islamic Republic of Iran. The Council also recommended a number of important initiatives under the current regional aquaculture development program. Among these, Council: (i) endorsed the recommendation from the FAO Expert Consultation on Aquaculture Status and Trends reporting to work with NACA on improving the information base for aquaculture development; (ii) urged the strengthening of cooperation among NACA members in international trade negotiations and in taking collaborative actions to ensure that the interests of the region are adequately represented in the formulation of international trade agreements and standards; and (iii) gave the go-ahead to develop and implement specific food safety and trade activities as part of the regional work plan.

The other key decisions were as follows: Council (iv) recommended the development of a regional program to address ornamental fish (and plants); and (v) recommended cooperation with the newly established Network of Aquaculture Centres in Central and Eastern Europe (NACEE).

The new Council Chairman, Mr. A. Hettiarachchi, Director General for Development of Sri Lanka's Ministry of Fisheries and Ocean Resources, stressed the importance of the new initiatives that have been endorsed to the sustained growth of the aquaculture sector, and enjoined the



*Participants in the 15th Governing Council Meeting, Kandy, Sri Lanka*

members and other governments, as well as the partners of NACA to focus on the new initiatives with the usual strong cooperative spirit.

Reflecting the member governments' assessment of the 2003 status report, he noted that NACA is invariably able to deliver a great quantity of useful accomplishments, despite its limited resources, because of the collective strength derived from the close cooperation of its members and partners. He attributed NACA's cooperative spirit to the fact that NACA's activities are developed and owned by the members and partners themselves.

At the meeting, Indonesia formally announced its official decision to accede to the NACA Agreement. The Sultanate of Oman was also

represented at the meeting for the first time by its Director General for Fisheries, who expressed Oman's interest in joining the Organization.

### Aquaculture Seminar

Preceding the Council meeting was a two-day aquaculture development seminar organized by the National Aquaculture Development Authority of Sri Lanka, which was the host institution of the Council Meeting, with the assistance of NACA. The theme of the seminar was "Aquaculture for Rural Development: Way Forward for Sri Lanka."

The Seminar – attended by some 150 participants including the delegates of the Council meeting - addressed the

technological and development concerns of Sri Lankan aquaculture. Presentations were made on trade and market requirements, certification, organic aquaculture, inland fisheries management, culture-based fisheries, coastal aquaculture, ornamental fish, and the benefits and risks of introducing new species (with special emphasis on *P. vannamei*, which was presented by FAO's regional aquaculture and inland fisheries officer, Simon Funge-Smith). NACA's Regional Lead Centers China, India and Thailand presented their accomplishments and their technology, training and information services.

NACA's STREAM Initiative, information program, and the Asia-Pacific Marine Fish R and D Network were briefly described, as with the prospects of freshwater prawn culture, tilapia hatcheries and farming systems.

This Seminar was the third since 2002 that was organized in conjunction with the Governing Council meeting. It is meant to benefit the host country's industry by providing a forum for discussion on issues and concern of the country, some of which would have regional relevance.

## Council Chair for 2004-2005

Mr. Amarawansa Hettiarachchi, Director General (Development) of the Ministry of Fisheries and Aquatic Resources of Sri Lanka was elected as Chair of the NACA Governing Council for the year 2004-2005.

Mr Hettiarachchi is a graduate of the University of the Philippines in the Visayas under the NACA training programme for senior aquaculturists, he began his career in 1979 as an

aquaculturist in the Ministry of Fisheries, serving in this capacity for 12 years. In 1991 he was appointed Director Planning of the Ministry of Fisheries, and in 1995 as Director Export Development. Among his many accomplishments, he developed and successfully implemented a programme to improve the quality of infrastructure of the fishing industry so as to meet the requirements of the European Union in respect of fisheries and aquaculture products. He also formulated and implemented several programmes to manage the shrimp farming industry. He served in this capacity till he was appointed Director General (Development) in 2002. Mr. Hettiarachchi was the chair of the FAO Sub Committee on Fish Trade in 2002 to 2004, and has contributed articles on fisheries and aquaculture related subjects to several journals and magazines.

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## Shrimp disease & coastal management - four years

MPEDA-NACA technical assistance on shrimp disease and coastal management in India stepped into the 4<sup>th</sup> year of since inception with an extension programme for sector wide impact with additional support from ACIAR. This year, in total seven farmer self-help groups or "Aqua Clubs" were facilitated in six villages along a creek in West Godavari District of Andhra Pradesh State. 130 farmers with a total of 254 grow-out shrimp ponds are participating in adoption of Better Management Practices (BMPs) with direct technical assistance from the MPEDA/NACA team. The programme focuses on BMP implementation at cluster and creek level with farmer-run Aqua Clubs as an extension model. The programme also aims at building the mutual trust among the farmers and between farmers and service providers. As a result these small-scale farmers have been able to procure high health post larvae from hatcheries that have

followed BMPs for seed production. The programme also looks for opportunity in implementation of traceability systems for shrimp produced under conditions free from harmful and banned chemicals such as antibiotics. The costs and benefits in

Five people are involved in the study team in this programme: Mr. Arun Padiyar, Project Supervisor; Mr. Ravi Babu and Mr. ABC Mohan, Senior Technical Assistants; Mr. G Ravi and Mr. John Mohammad; and Junior Technical Assistants. Shrimp health management expert Mr. Mongkhon Primphon, Thailand, provides technical advice with short-term visits to the study villages.

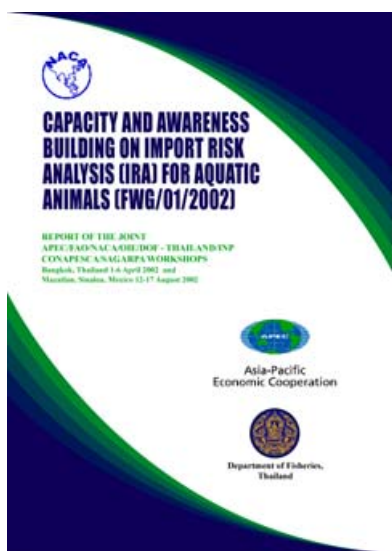


*Interviewing a farmer*

implementation of BMPs at various levels will also be analysed to understand the socio-economic implications of such programmes.

Recently during the Governing council meeting of NACA held in Sri Lanka, the National Aquaculture Development Authority of Sri Lanka has shown interest in developing and implementing such a programme with technical assistance from NACA. A suitable model for the Sri Lankan shrimp farming situation and farmer requirements will be developed through participatory approaches involving the stakeholders of shrimp industry.

## New Import Risk Analysis Publications



The Asia-Pacific Economic Cooperation (APEC) and the Network of Aquaculture Centres in Asia-Pacific (NACA), in partnership with the Food and Agriculture Organization of the United Nations (FAO) and the World Organization for Animal Health (OIE, the Office International des Épizooties), and together with our respective member economies/governments, are pleased to announce the publication of a number of resource documents on the conduct of risk analyses for the safe movement of aquatic animals as products of APEC FWG 01/2002 project *Capacity and Awareness Building on Import Risk Analysis (IRA) for Aquatic Animals*.

The project's purpose was to strengthen and facilitate trade in aquaculture products in the APEC Region and improve public health protection in APEC economies through improving human capacity, standardizing approaches, and establishing networking that will facilitate exchange of information, experience and expertise. Risk analysis for aquatic animal pathogens has become a major component of global strategies aimed at providing appropriate health management protocols and biosecurity measures that protect national biological, social and economic resources and support economically and environmentally sustainable aquaculture development

while, at the same time, facilitating trade.

Movement of live aquatic animals and their products is necessary for aquaculture development. However, it is now widely recognized that the introduction and spread of transboundary pathogens due to the careless movement of live aquatic animals have resulted in serious adverse consequences to national socio-economic and environmental well being. The countries in the Asia-Pacific, a region highly dependent upon aquaculture production and capture fisheries for food, income and employment, have to various degrees suffered the consequences of exotic aquatic animal disease. APEC, NACA and our partners have therefore initiated this project in order to improve aquatic animal health policies and practices that will contribute to reducing the risks of disease incursions and promote the development of better strategies to prevent such incursions, for higher productivity and smoother trade.

The following publications were produced:

### **Capacity and Awareness Building on Import Risk Analysis (IRA) for Aquatic Animals, Proceedings**

This report, which contains 26 technical presentations, is divided into four parts: (a) Background for Risk Analysis, (b) The Risk Analysis Process, (c) Risk Analysis and the World Trade Organization: Economies Experiences and (d) Strategies for Aquatic Animal Health. APEC#203-FS-01.2, ISBN974-92215-1-6, 221pp

### **Manual on Risk Analysis for the Safe Movement of Aquatic Animals**

The manual specifically addresses the risks associated with spread of aquatic animal pathogens with movement of live aquatic animals and their products.

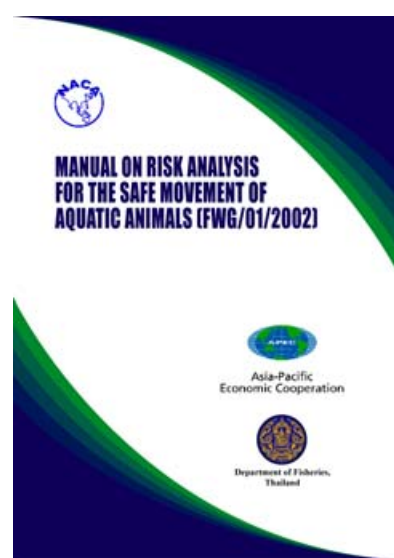
APEC#203-FS-03.1, ISBN974-92182-4-8, 74pp

These publications address an important policy issue – the responsible conduct and regulation of international and domestic trade in live aquatic animals and their products.

The publications will be sent to all participants in the workshops, APEC Fisheries Working Group members, and National Coordinators for the regional aquatic animal health management program. All requests for copyright and reproduction should be addressed to the APEC Secretariat at [jt@apec.org](mailto:jt@apec.org).

APEC and NACA extend special thanks to the representatives of the economies/governments, agencies, and organizations who took part in this important endeavor, as well as to all individuals who generously devoted their time and contributed information and expertise to the final production of these documents.

*Downloads of these publications are available from the APEC website [www.apecsec.org.sg](http://www.apecsec.org.sg). Links are also available on the NACA website [www.enaca.org](http://www.enaca.org).*



## Reducing the risk of shrimp disease outbreaks in Vietnam: another challenge for NACA and SUMA

Shrimp farming is a business equally profitable as it is risky. Every country ever involved with shrimp farming to some extent has experienced its share of health problems. Vietnam certainly has not proved to be any less susceptible to disease outbreaks than any other country. Outbreaks of viral diseases such as Yellow Head and White Spot Disease have been impacting the country's production since large-scale farming started, hampering the success of numerous development projects that use sustainable shrimp culture as a tool for alleviating poverty. NACA and SUMA (DANIDA) have been playing a major role in these efforts and are now facing the challenge of reducing the risk of shrimp disease outbreaks in Vietnam, in order to release the great potential that shrimp farming has in improving the livelihoods of many Vietnamese households.

It is not an easy task. At present hatcheries often supply shrimp seed of poor health to farmers, whom have no way of knowing if the seed is free from the most dangerous pathogens. Laboratories lack the infrastructure to assist in reducing the risk at either the hatchery or farm level. Vietnamese stakeholders have made huge efforts



*Farmers training on P. monodon seed quality assessment*

to put into place disease surveillance and control programs but the occurrence of disease outbreaks across the country witnesses the need for further action.

For this reason NACA and SUMA have initiated a cooperative effort to reduce the risk of shrimp disease outbreaks at every level of the Vietnamese shrimp production system. The project is being implemented in five pilot provinces of which three in

the North (Quang Ninh, Nghe An and Ha Tinh) one in the Center (Khanh Hoa) and one in the South (Ca Mau). Project activities are advancing very rapidly. Hatcheries in three of the five provinces have been visited, major disease problems have been identified and both short term and long term solutions developed and disseminated. In an area where about one fourth of the seed samples test positive for WSSV the improvement of hatchery-level biosecurity practices becomes of utmost importance and it is energetically sought through meetings and practical demonstrations. Six communes within two of the pilot provinces (Nghe An and Ha Tinh) have been selected, visited and are being followed up to implement Better Management Practices (BMPs) for shrimp culture. Farmers are being instructed on better ways to prepare the pond, assess seed quality and manage the pond under normal circumstances and when health problems arise. Farmers are also collecting seed samples and delivering them to a newly established laboratory to assess the presence of WSSV, allowing them to select WSSV-free seed and to reduce their likelihood to experience White Spot Disease. Provincial diagnostic capabilities are also being enhanced. Personnel in the



*Practical demonstration of Artemia decapsulation for hatchery managers in Nghe An province*

five pilot provinces are being trained in the use of PCR (a sensitive detection method for shrimp pathogens) and other diagnostic techniques. Broodstock and seed samples from hatcheries are being tested on a regular basis and hatcheries at higher risk are being identified and targeted to implement stricter risk reduction management practices.

This is only the start. The project team is seriously committed to the development of an effective disease surveillance program capable of reducing the risk of health problems not only at the hatchery and farm levels but also throughout the shrimp production chain starting from the fishermen that collect the broodstock. In these efforts much emphasis is given to the control of disease while minimizing the use of chemicals. The development of a traceability system capable of ensuring product quality throughout the chain is also being investigated. The project team will evaluate this approach for its potential to reduce the risk of outbreaks in other aquaculture systems, in an attempt to make Vietnam a leading country in aquatic animal disease control. For more information on the project feel free to contact us at: [Flavio.Corsin@enaca.org](mailto:Flavio.Corsin@enaca.org) and [PhamVanKhang@enaca.org](mailto:PhamVanKhang@enaca.org).



*Farmer meetings: Training on better management practices*



## Network of Aquaculture Centres in Central & Eastern Europe

NACA welcomes the establishment of the Network of Aquaculture Centres in Central and Eastern Europe (NACEE) and congratulates the leadership of the Network and the participating institutions. HAKI of Hungary, a collaborating centre with NACA, is currently the coordinating institution for NACEE, with Laszlo Varadi, Director of HAKI (email [varadil@haki.hu](mailto:varadil@haki.hu)), as the Network Coordinator. Membership is voluntary. As of December 2003, 14 institutions from 11 of the 19 Central and Eastern European states are members. NACEE's long-term goal is to facilitate the R&D sphere in Central-Eastern Europe to become an integral part of

the European Research Area. Its objectives are:

1. Exchange of information among members (within region)
2. Facilitate transfer of information relevant to aquaculture development of the region
3. Exchange of scientists with special regard to young ones
4. Initiate joint research and training programs
5. Facilitate efforts aiming at the better involvement of CEE institutions in European level aquaculture development programs
6. Assist the organization of regional aquaculture meetings and conferences
7. Facilitate the improvement of partnership between science and practice, with special regard to SMEs and Producers Associations
8. Enhance capacity of CEE institutions to be able to initiate and run regional aquaculture development projects supported by EU, FAO and other international organizations
9. Development collaboration between the "Network" and other regional networks/organizations with special regard to NACA).

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# OASIS: The One Stop Aqua Shop Information Service

*(oh-ay-sis)...a fertile spot / fertile...rich in the materials needed)*

As federated SHGs (Self Help Groups) and state governments in Eastern India begin to act on recent recommendations for changing the way that information is made available to farmers, this month STREAM begins piloting in eastern India an information service designed to help information flow between farmers Self-Help Groups and the national STREAM Communications Hub. This may have implications for information flow in other countries too.

Through state level meetings different stakeholders decided how they will support and help the establishment of the "One-stop Aqua Shop" (OAS) and how STREAM could assist, the result is OASIS.

## **New Access to Information and other Resources**

Farmers in India who are interested in starting aquaculture have to travel to many locations in search of the information and resources they require to understand how to get started. This includes becoming aware of government, inter-governmental and NGO support and rural banking services as well as specific technical advice and inputs.

In 2002-2003 a collaborative project between the Indian Council of Agricultural Research (ICAR), the NGO Gramin Vikas Trust (GVT), the Network of Aquaculture Centers in Asia Pacific (NACA) Support to Regional Aquatic Resources Management (STREAM) Initiative and the UK Government Department for International Development (DFID) Natural Resources Systems Program (NRSP) worked with farmers and fishers to look at how to improve aquaculture services to poor people.

During the project more than 350 farmers and fishers, fisheries service providers and policy makers across the eastern Indian states of Jharkhand, Orissa and West Bengal took part in numerous meetings, workshops at

local, state and national level, and developed case studies, films and drama.

Forty-two recommendations for changes to service provision were highlighted and a consensus was reached about 13 priority recommendations. These included changing the way information is made available about fish farming, government schemes and bank loans, including piloting the idea of a "One-stop Aqua Shop" to provide a single local location for interested stakeholders to access information, training, sources of micro-credit, loans and details of government schemes (and maybe in future inputs and fingerlings).

Since a consensus was built about the need for an OAS various models have emerged. One is being piloted and run by a federation of Self-help Groups, local to fish farmers (in a part of rural West Bengal), another at a centralized government service provision site run by the state Fisheries Department in Jharkhand and a third by a state government project in several poor districts of Western Orissa.

At a recent planning meeting involving government, intergovernmental and NGO service providers, STREAM agreed to support these One-Stop Aqua Shops through the provision of an information service the **One-stop Aqua Shop Information Service (OASIS)**. The service aims to make available information from farmers and fishers, service providers, news agencies, the internet, academia - including databases of research and outputs from specific research programs, on-line communities of shared-interest groups, as well as learning from other countries. The information service will be made available from the STREAM Initiative through the national Communications Hub in Ranchi.

Oasis aims to provide the following support to the One-stop Aqua Shop:

## **Learn from and share with others via the STREAM Journal**

The STREAM Journal is published quarterly to promote participation, communication and policies that support the livelihoods of poor aquatic resources users in Asia-Pacific, and to build links within the aquatic resources management and other sectors across the region. It is republished in local languages from the Communications Hub and hard copies will be available at the OAS.

## **Find out who is who with 'Contacts'**

'Contacts' is a searchable database of appropriate persons to contact including: Aqua Shops, Banks, Departments of Fisheries persons, NGOs, Panchyats, SHGs, Insurance providers, input suppliers and so on. Contact details can be printed out from a database search.

## **Utilize the STREAM Virtual Library**

Learn from the experiences of other STREAM countries and access through a CD-ROM at the One-stop Aqua Shop or live through the STREAM Communications Hub publications, documents, materials and links to websites via the STREAM Virtual Library categorized under Periodicals, Countries and Themes and searchable by typing key words into the search engine. <http://www.streaminitiative.org/Library/VirtualLibrary.html>

## **Get your questions answered via the NACA discussion forum**

OASIS will provide the OAS with a link to a discussion forum enabling stakeholders to ask questions of an expanding on-line community, available at [www.enaca.org](http://www.enaca.org).

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## Better-Practice Guidelines

STREAM produces and also commissions from local specialists Better-Practice Guidelines (BPGs) these are made available through Oasis to the One-stop Aqua Shops in local languages. BPGs provide guidance on an increasing number of ways of working and available techniques.

## Stories

People can read stories in local languages available from the OAS.

## Awareness Raising

People will be able to view video documentaries, street plays and other media which is available at OAS

*For more information please contact Rubu Mukerjee c/o STREAM India Communication Hub, Gramin Vikas Trust 186, Kanke Road, Ranchi, Jharkhand State, India streamindia@sancharnet.in.*

## Other recent STREAM activities

### Third Regional Conference

The Third NACA-STREAM Regional Conference was held in Siem Reap from 14-16 June 2004. The conference was organized by the STREAM Cambodia Country Office and STREAM Regional Office with the support of the Cambodian Department of Fisheries, NACA and FAO Regional Office. The annual gathering of all STREAM National Coordinators and Communications Hub Managers learned about and discussed on-going and planned theme-based work in each STREAM country and regionally. The conference discussed what we want to achieve over the next year and agreed on ways of working. In advance of a follow-on workshop on Monitoring & Evaluation, the conference reviewed where we are with the STREAM M&E System, with reference to data (bases) and reporting, before detailed practical follow-up in the M&E Workshop. The

Conference Report will be finalized shortly and will be available as an interactive CD.

Please see the Regional page of STREAM Virtual Library at [streaminitiative.org/Library/Regional/regional.html](http://streaminitiative.org/Library/Regional/regional.html). For details on the CD, or for a copy, contact [paul.bulcock@enaca.org](mailto:paul.bulcock@enaca.org).

### STREAM workshops on Livelihoods Capacity-building

Four national workshops have so far been conducted in the series "Workshops on Livelihoods Approaches and Analysis" as part of the FAO-funded Technical Cooperation Program (TCP), "Assistance in Poverty Alleviation through Improved Aquatic Resources Management in Asia-Pacific". The national workshops were organized by STREAM NACA and the communications hubs in the Philippines, India, Lao PDR and Myanmar, with assistance from the respective departments of fisheries in the four countries (and Grameen Vikas Trust in India).

The FAO TCP provides technical assistance to build national and regional capacity in livelihoods approaches and analysis; to empower a wide range of stakeholders through strengthened learning and communications channels and to encourage, support and strengthen on-going aquatic resources management policy change processes in the region. About 70 fisheries extension officers and representatives from NGOs and GOs in the five countries have completed the training.

The workshops took place on 24-28 November 2003 in Iloilo, Philippines, 2-6 February 2004 in Ranchi, Jharkhand for Indian and Nepali delegates; 8-12 March in Vientiane, Lao PDR; and 11-15 May in Yangon, Union of Myanmar. The fifth workshop will be held in Yunnan, China on 28 June to 2 July.

Outcomes from the workshops include a guide for livelihoods analysis teams and the formation of groups of stakeholders or (national) livelihoods

teams from organizations and agencies interested in implementing a participatory livelihoods approach.

### Vietnam and Philippines Publish Country Strategy Papers

STREAM Vietnam and STREAM Philippines have both just produced their Country Strategy Papers (CSPs). Prepared in consultation with a range of national stakeholders, the CSPs identify relevant national poverty and aquatic resources issues, examine policy and institutional environments, establish key objectives, propose implementation approaches and highlight partnerships with national and regional stakeholders.

The CSPs are available to download from the STREAM Virtual Library at [www.streaminitiative.org/Library/Vietnam/vietnam.html](http://www.streaminitiative.org/Library/Vietnam/vietnam.html).

[www.streaminitiative.org/Library/pdf/philippines/CSP\(ph\).pdf](http://www.streaminitiative.org/Library/pdf/philippines/CSP(ph).pdf).

### Pakistan Joins NACA- STREAM Initiative

Following a request from the Government of Pakistan and the recent visit of the STREAM Director to Islamabad and Lahore, the Fisheries Development Commissioner signed a Partnership Agreement with STREAM, making Pakistan the 11th country partner of the STREAM initiative. The National Coordinator is Dr Muhammad Hayat of the Ministry of Food, Agriculture and Livestock. A process is now under way to recruit a Communications Hub Manager for Pakistan. Anyone with suitable language and communications skills with a background in aquatic resources and an understanding of poverty alleviation issues is welcome to apply. To view the job descriptions, go to [www.streaminitiative.org/Library/pdf/newsevent/JobDescription.pdf](http://www.streaminitiative.org/Library/pdf/newsevent/JobDescription.pdf).

For more details or to submit your CV electronically please contact [ghaylor@loxinfo.co.th](mailto:ghaylor@loxinfo.co.th).

## New faces at NACA

**Dr. Brett Edgerton** has joined the NACA staff temporarily as Aquatic Animal Health Specialist whilst Dr CV Mohan briefly returns to India. Brett will be assisting NACA in running the Aquatic Animal Health program.

Specifically he has been assisting in finalizing import risk analysis resource documents, collating the Quarterly Aquatic Animal Disease reports, assisting with arrangements for regional workshops, overseeing the development of various disease cards for emerging diseases, and providing general advice and input into issues relating to aquatic animal health.

Brett has a BS majoring in marine biology and zoology, and PhD in Aquatic Pathobiology, from James Cook University. He has 13 years experience in aquatic animal disease including 10 years in researching disease in crustaceans from aquaculture and wild populations. Brett is perhaps best known for his research on diseases affecting freshwater crustaceans. He has received a number of international research fellowships, including an Alexander von Humboldt Fellowship, conducted research in Australia, Europe and USA, and collaborated with scientists in Asia and Central and South America. Brett also worked for 2.5 years as a Senior Professional Officer in international biosecurity policy development for aquatic animals in the Australian Government. He is committed to the development of sustainable aquaculture as a means towards food security and poverty alleviation in developing countries. Brett is based permanently at the Centre for Marine Studies, University of Queensland.

**Flavio Corsin** is an aquatic animal health specialist with a strong interest in the use of epidemiological methods for controlling aquatic animal health problems. He started working in the Asian region after completing his MSc at the Institute of Aquaculture in Stirling (UK).

In Vietnam, Flavio conducted research to identify risk factors for White Spot Disease. He then continued his efforts to control this disease by conducting a larger epidemiological investigation in South India. As a result of his work on White Spot Disease he was granted a PhD degree by the University of Liverpool (UK). He worked for the University of Stirling on a project focused on assessing the impact of aquatic animal health research on poverty alleviation in the Asian region. He later joined the North Carolina State University (USA) working on food safety issues associated with shellfish consumption and on several foreign aquatic animal pathogens, playing a key role in the design of a facility for conducting experimental infection trials with such pathogens. He recently joined NACA to continue his efforts in the control of aquatic animal diseases in the Asian region, and is currently based in Vietnam.



*Flavio Corsin*

**Pham Van Khang** is also an aquatic animal health specialist. After graduating in aquaculture from the Nha Trang Fisheries University (Vietnam) he joined the Research Institute for Aquaculture No.1 (Ha Noi, Vietnam) where he worked on several research projects aimed at controlling disease outbreaks in both fish and shrimp farms. He recently joined NACA to work with Flavio on collaborative project with SUMA (DANIDA) to reduce the risk of aquatic animal diseases in Vietnam. Although still at an early stage the project is progressing very rapidly and improvements in practices at every



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free of charge to  
governments, libraries,  
development agencies and  
other interested parties  
on request.

level of the shrimp production system are already noticeable thanks to Khang's expertise in diagnostic methods for shrimp diseases and Better Management Practices for sustainable shrimp farming.



*Pham Van Khang*