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# Lao PDR becomes the 18th member of NACA at the 20th GCM


*Participants in the 20th NACA Governing Council Meeting.*

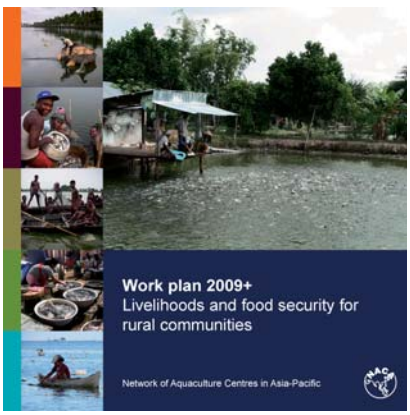
We are pleased to announce that the government of Lao PDR became the 18th member government of NACA, following the endorsement of its application by the NACA Governing Council at its 20th meeting, held 13-16 May 2009 in Xiamen, Fujiang Province, PR China.

Member governments and the Secretariat welcomed Lao PDR to the network and expressed a desire to work closely with Lao PDR in its development efforts on sustainable aquaculture, and to contribute to the food security and livelihoods of its people through sustainable aquaculture development.

Lao PDR has a long history of collaborating with NACA and is presently host to an ACIAR-funded project on *Culture-based fisheries in Lao PDR*. The primary objective of the project is to develop applied production models to optimise yields from culture based fisheries practices in flood plain depressions and reservoir coves, implemented through village community participation in two provinces. More information about this project is available from the project webpage, http://www.enaca.org/modules/inlandprojects/index.php?content_id=2.

The Governing Council also endorsed the new NACA Workplan for 2009 onwards, entitled "Livelihoods and food security for rural communities". The workplan contains several new programmes to address the changing priorities and emerging issues in the region. These include: Emerging Global Issues, which will address climate change and other international concerns; Food Safety and Quality, which will help farmers address increasingly stringent food safety and trade regulations, and Coastal Aquaculture, which will incorporate both the Asia-Pacific Marine Finfish Aquaculture Network and the Shrimp Farming and the Environment Programme.

You can view the new NACA workplan on the website or download a copy in PDF format from: http://www.enaca.org/content.php?page=workplan_2009.



# Vietnamese catfish farmers visit Andhra Pradesh, India

International farmer to farmer interactions for the exchange of technical information don't happen often due to the substantial cultural, language and geographic impediments that are usually involved. However, there can be considerable value in bringing farmers together to share their experience and solutions to common problems.

NACA recently facilitated a visit to India by a group of Vietnamese catfish farmers, so that they might observe the operation of collaborative shrimp farmer societies. The small-scale shrimp farmers of Andhra Pradesh have set a world example in their adoption of better farm management practices and coordination of cropping activities, based on clusters of nearby farms. Through mutual support and leveraging the market power of the group, small-scale farmers have been able to significantly improve crop outcomes, profitability and their livelihoods in an increasingly competitive international environment. The visit took place from 27 May to 3 June.

*Cultural differences were no barrier to sharing experience.*

The Vietnamese farmers were drawn from the four main provinces of catfish farming in the Mekong Delta, also joined by four provincial extension officers, and researchers from Can Tho University and the Research Institute of Aquaculture No. 2, Ho Chi Minh University, and two representatives from NACA, totalling 16 people. The exchange was undertaken under the auspices of the project Development of Better Management Practices for Catfish Aquaculture in the Mekong Delta, Vietnam, funded by the AusAID CARD Programme.

The shrimp farmer associations in Andhra Pradesh began as part of an initiative to reduce the impact of shrimp disease through the implementation of better management practices in small-scale farming clusters. The initiative was established under a cooperative program between the Marine Products Export Development Authority of India and NACA. As participating farmers began to realise greatly improved crop outcomes, market power and profitability the word spread, with farmers from adjacent clusters and villages forming their own associations and adopting better management practices. Over the last few years this has brought about a revival of small scale tiger shrimp farming in Andhra Pradesh and other coastal states of India. It has also lead to policy and institutional change within India, culminating in the formation of the National Centre for Sustainable Aquaculture (NaCSA).

The Vietnamese farmers visited the Chinavasala Aqua Famers Welfare Society (consisting of five Aqua Farmer Welfare Societies with a total of 84 farmers), the Venketawara Aqua Farmers Welfare Society (a well knit unit with 25 farmers), a contract hatchery (certified by NaCSA from which the BMP farmers purchase certified seed stocks) and participated at the field day of the Lakshmi Narasima Aquafarmers Welfare Society, which was attended by over 500 small scale shrimp farmers who are adopting BMPs, and the Nellore Shrimp Farmers Association. The Vietnamese farmers discussed the operation, management and benefits of the associations, including:

- The uniform manner in which farm records are kept.
- How the information is gathered on a collective basis.
- The advantages of forming associations in gaining higher productivity, reducing cost of operations, improving accessibility to lucrative niche markets, accessibility to government, banks and other interested agencies that wish to contribute to rural development, and in helping to generate synergies within the community, and most of all attain sustainability.

The Vietnamese farmers continued to compare and contrast their own situation with the way farmers were collaborating in Andhra Pradesh. By the end of the visit they had concluded that working in collective units offered great advantages to small scale farmers compared to working alone, and were convinced of the need to establish similar cluster-based management approaches for farmers in Vietnam. They were also convinced of the importance of developing better management practices for the Vietnamese catfish industry, which will improve the dialogue to finalise draft practices being developed under the project, in early October.

*Vietnamese farmers presenting a gift to their Indian counterparts.*

*Vietnamese delegation and Indian counterparts together with NaCSA and NACA staff.*

It was also very evident that cultural differences do not have to be a barrier to communication between small scale farmers; it was done very effectively in this instance with three way translation (Vietnamese into English into Telugu and vice versa), and the effectiveness was always evident from the hundreds of questions that the Vietnamese farmers had.

All in all this was a major step forward which NACA will try to emulate under similar circumstances. Logistically it was not an easy matter to handle but NACA was fortunate to enjoy excellent cooperation from the Indian farmers and authorities, who took care of every detail. NACA would like to express thanks to the NaCSA CEO and his staff for their excellent arrangements.

### Further reading

Umesh, N.R. (2007). Development and adoption of BMPs by self-help farmer groups. Aquaculture Asia XII, 8-10.

Umesh, R.N., Chandra Mohan, A.B., Ravibabu, G., Padiyar, P.A., Phillips, M.J., Mohan, C.V., Vishnu Bhat, B. (in press). Implementation of better management practices by empowering small-scale farmers through a cluster-based approach: the case of shrimp farmers in India. In: De Silva, S.S., Davy, F.B. (Eds.), Success Stories in Asian Aquaculture. Springer and IDRC, Canada, pp. 43-65.

*The Success Stories in Asian Aquaculture book will be available for free download from the NACA website in the near future.*

## Global Conference on Aquaculture 2010

**9-12 June, Bangkok, Thailand**

In 1976, FAO held the first ever global conference on aquaculture, the Kyoto Conference, which explored opportunities for aquaculture development and triggered the recognition of aquaculture as a significant food production sector. Ten years after the millennium conference, with aquaculture now providing nearly 50% of global food fish supplies, FAO in partnership with NACA and the Thai Department of Fisheries, are organising the Global Conference on Aquaculture 2010, to evaluate where the sector stands today and face the challenges and opportunities ahead.

Plenary lectures together with six regional reviews and one global synthesis will set the scene for six thematic sessions and associated expert panel discussions on key aspects of aquaculture development and management in the coming decades. The conference will provide a global forum to build consensus to advance sustainable aquaculture development and contribute to the Millennium Development Goals. Have your say on the future of aquaculture development: Join us in Bangkok from 9-12 June 2010. For more information, visit:

**http://www.aqua-conference2010.org/**

# Expert Meeting on the Use & Exchange of Aquatic Genetic Resources

Until late in the last century, genetic resources had largely been considered the common heritage of mankind, available to all. This view began to change in the latter half of the 20th century as issues surrounding intellectual property rights as well as access and benefit sharing arrangements have gained prominence, beginning with the establishment of the *Convention for the Protection of New Varieties of Plants in 1961*.


*Participations in the expert consultation*

An international framework for regulation of genetic resources has gradually evolved since. Major milestones include the establishment of the FAO Commission on Genetic Resources (CGRFA) in 1983, initially as the Commission on Plant Genetic Resources; the *Convention on Biological Diversity* in 1992; the *WTO Agreement on Trade-Related Aspects of Intellectual Property* (TRIPS) in 1994 and the *International Treaty on Plant Genetic Resources for Food and Agriculture* in 2004. All of these agreements have had significant impacts on the use and exchange of genetic resources for agriculture, and consequently have important implications for food security, poverty alleviation and agricultural research. The international framework for regulating genetic resources is still evolving rapidly, with many issues still under discussion, particularly with regards to access and benefit sharing arrangements.

While the international framework for regulation of plant genetic resources is well developed, at least for agricultural plants, arrangements for aquaculture are in their infancy, the latter sector being included in the portfolio of the CGRFA only in 2007. The heavy dependence of aquaculture on wild genetic resources distinguishes it from other agricultural sectors that are mainly reliant on domesticated strains. However, the *Convention for Biological Diversity* has firmly drawn wild genetic resources into the international debate and there is now a need to develop arrangements for the aquaculture sector as well.

To address these issues the CGRFA through the Aquaculture Management and Conservation Service (FIMA) of the FAO Fisheries and Aquaculture Department and NACA convened an Expert Meeting on the Use and Exchange of Genetic Resources Relevant for Food and Agriculture in Chonburi, Thailand, 31 March – 2 April 2009. The preparatory work for the meeting was coordinated by Dr. Thuy Nguyen, Coordinator, Genetics and Biodiversity Work Program of NACA in conjunction with Dr. Matthias Halwart, FIMA, FAO. The workshop was attended by 17 persons including scientists and government officers with a broad range of expertise in different areas of aquatic genetic resources including finfish, molluscs and crustaceans, as well as law and public policy. The purpose was to:

- Review the state of the use and patterns of exchange of genetic resources of important aquaculture commodities, including penaeid shrimps, Nile tilapia, oysters, common carp, salmon, Clarias catfish, and newly emerging aquaculture species.
- Develop a framework for a synthesis document on the use and patterns of exchange of aquatic genetic resources, to be submitted to the next Regular Session of the CGRFA scheduled for October 2009.
- Discuss and develop strategic plans including suggested future directions with regard to issues of access and benefit sharing (ABS) in aquatic genetic resources.

The consultation was conducted in a 'write shop' format. Selected participants prepared review papers on the use and exchange of the major aquaculture commodities highlighted above, which were presented for critique and further development. The final papers will be published in a forthcoming issue of the new peer-reviewed journal Reviews in Aquaculture.

The consultation also began work on a synthesis document, drawing together the patterns of use and exchange of aquatic genetic resources and the role of these processes in aquaculture development globally. The synthesis will be presented to the Twelfth Regular Session of CGRFA in Rome, October 2009. FAO has also commissioned background studies on use and exchange of genetic resources in other sectors related to food and agriculture. Together these studies will facilitate the Commission's consideration of how systems for access and benefit sharing in genetic resources could work, and planning for the inclusion of aquatic genetic resources in the Commission's Multi-year Programme of Work.

It was of interest to note that the common carp was most probably the most domesticated species in aquaculture with many hybrids and strains produced across the world and it still continues to be one of the major cultured species. In fact, its origin is difficult to trace with a suggestion of an Asian origin in the Amur River and Lake Biwa (Japan) and an Eastern European origin. In most ways common carp can be equated to rice which makes it the "rice of water". NACA and its partners will continue to develop various follow up strategies and readers should stay tuned to the NACA website for more information on this important topic.

# Training course in the application of business management skills in small-scale farming

NACA has taken the initiative to develop and deliver a short course in business management principles and practices for small scale aquaculture in partnership with the United Nations University, Fisheries Training program (UNU-FTP) and the Faculty of Aquaculture, Nha Trang University, Vietnam.

The importance of small scale aquaculture in Asia has grown rapidly and it now accounts for more than 90 percent of the world production. This has happened without the explicit application of principles of business management and planning. With increasing demand on the primary resources used and increasing prices of the inputs such as feed in aquaculture, there is a need for small scale farmers to be trained in business management if they are to remain economically viable and sustainable. Formal training and extension activities in aquaculture tend to focus on biological and technological aspects as skills and knowledge in the establishment and management of businesses are rarely included in tertiary curricula of regional fisheries and aquaculture teaching institutions.

In the context of globalisation and breaking down of barriers between small - and large scale enterprises, as well as cultured low valued species gaining increasing export market share, such as in the case of the striped catfish *(Pangasianodon hypophthalmus)* from Vietnam and rohu *(Labeo rohita)* from Myanmar there is an urgent need for business management skills to be developed in aquaculture, amongst small scale practitioners and trainers.

The United Nations University - Fisheries Training program (UNU-FTP) has thus far concentrated on fisheries management. Recognising the importance of aquaculture as an important contributor to food fish production and livelihoods, particularly in developing countries, the program has begun to address these aspects. In this regard the UNU-FTP expertise on business management and its fisheries related experiences could be harmonised and utilised to meet the needs of the small scale aquaculture farming systems in developing countries, and the first steps in this direction were undertaken through discussions with NACA.

A course development workshop was held at the Faculty of Aquaculture, University of Nha Trang, Vietnam, 15th to 22nd of October 2008 discuss the target group and design of the course, outline the content, budget and implementation schedule. Based on the recommendations of the above workshop (workshop report available elsewhere) and further deliberations between NACA, UNU-FTP and NU it has been decided:

- To develop a two week course utilising Icelandic and regional expertise in business management and aquaculture.
- That the target group should be personnel involved in aquaculture planning and development in relevant government departments, government agencies and/or the private sector in Vietnam and the region.
- To integrate the material developed for the course into the regular degree programmes offered by the Faculty of Aquaculture, Nha Trang University, Vietnam with a view to adapting and extending it to other fisheries and aquaculture academic institutions in Asia.
- A secondary and a relatively medium term objective will be to adopt this training material for delivery adapting and extending it to farmer groups and selected farming communities.

## Course contents

The course contents is expected to be approximately of 60 hours of teaching material, including lectures and practical exercises initially targeting undergraduate and postgraduate students, who are likely to move into aquaculture practices on their own, particularly in Vietnam, and personnel involved in aquaculture development and business management in national governments, and indeed capable farmers. Draft contents of the proposed course will be finalized by September 2009 and posted on the NACA website for comments from all interested parties.

## Activities

The proposed activities until the end of 2010 are:

- Preparation of course materials for delivery to an international group involved in aquaculture business management and development, as well as for delivery in the under-graduate curriculum of the Faculty of Aquaculture, Nha Trang University.
- To deliver the prepared material through an International Workshop, that will include participants from developing countries who are currently engaged in aquaculture development activities.
- To deliver and pilot test the prepared material as a part of the Nha Trang University under-graduate curriculum.
- Obtain feedback from all of the above, improve the course content for further dissemination, and possible adoption, with suitable modifications, for delivery to selected farmer communities.

**New email newsletter service**

Want to receive the latest network news and publications as they happen? Sign up for the NACA email newsletter service and you will receive personal updates delivered to your your mailbox once a month. To subscribe, submit your email address using the form at:

http://www.enaca.org/modules/newsletter/

# Culture, capture conflicts: sustaining fish production and livelihoods in Indonesian reservoirs

Stakeholder groups have made much progress in the development and implementation of co-management strategies in the Jatilnuihur, Cirata and Saguling reservoirs of the Ciratum watershed in West Java. These strategies will ensure the long term sustainability of the cage culture activities and improve the livelihoods of capture fishers of the three reservoirs, which collectively account for the production of nearly 700,000 tonnes of food fish annually.

*Governor Pak Ahmad, provincial officials and the project team.*

The strategies are being developed based on three years of scientific and socio-economic investigations funded by the Australian Centre for International Agricultural Research (ACIAR) in a cooperative effort between NACA and the Directorate General of Aquaculture, Ministry of Ocean Affairs and Fisheries, Government of Indonesia. They include the regular stocking of herbivorous/ omnivorous fish, such as milkfish to enhance capture fishery yields and a reduction in the stocking density and a corresponding reduction in feeding to reduce eutrophication from cage farming activities. The former has already been put into practice and there had been a significant increase in catch per unit effort from 8.7 to 11.4 kg/ fisher/ day in the fisheries in 2008. Negotiations are ongoing with fishers and the dealers with regard to introducing a levy on the landings to sustain the stocking program on a regular basis.

With regard to cage culture activities a number of farmer groups have been formed and these will form the nuclei to test the effectiveness of adoption of co-management strategies aimed at reducing the nutrient loading and reducing the incidence of fish kills, which are a source of conflict between fishers and cage farmers. The trial adoption of the co-management strategies will be monitored closely by the researchers with suitable modifications introduced and disseminated throughout the farming communities of the reservoirs.

An important advance in the adoption of strategies developed through the first phase of the project is the increasing involvement of the West Java Provincial Government in embracing the options and taking an active part in the dissemination of the co-management strategies, including adoption of a regular stocking program to enhance the capture fishery yield and indirectly contributing to reduced nutrient loading and eutrophication in the reservoirs.

The Governor of West Java, Pak Ahmad Heryawan, together with the reservoir management authorities, have shown a keen interest to continue implementing the strategies developed through the Provincial Administration. The support of the authorities will ensure the sustainability of the fishery related activities in the reservoirs and improve the water quality of these water bodies so that fish kills and conflicts between fishers and cage farmers will hopefully become a thing of the past. The Governor's commitment to the cause was best exemplified when he met with the researchers and the relevant Provincial administrative authorities at his residence, late in the night on 15 April and discussed the details of the co-management plans and their dissemination and implementation. This commitment will help bring about a lasting solution to this rather intricate problem of the management of the reservoirs of the Ciratum watershed and in resurrecting these to an environmentally and economically sustainable status. It is pleasing to note that the silver lining in the clouds is beginning to get brighter and brighter.

*Reservoir fisheries and cage culture are important source of livelihoods.*

# Regional Grouper Hatchery Training Course, 11 - 31 October 2009

NACA in collaboration with the Main Centre for Mariculture Development, Lampung, Indonesia, is pleased to announce that the 7th Regional Grouper Hatchery Production Training Course is now open for applications. The course is tentatively scheduled from 11 to 31 October 2009 and will be conducted in the Main Centre for Mariculture Development, Lampung, Indonesia. The training course only accepts a maximum number of twenty participants and it is operated on a first-come-first-served basis. If you would like more information, please email your request to Mr Yuan Derun (yuan@enaca.org) or download the course flyer for more information and application / payment details:

http://library.enaca.org/announcements/grouper-hatchery-flyer.pdf

# Sri Lankan group trained in cage culture in Thailand

*Fixing floats to cage frames.*


*Just finished making fish feed.*

Ten fish farmers, four government officers and one project officer from Sri Lanka completed a ten-day training and study tour on cage-based aquaculture in Thailand from 20-30 May 2009.

The training program was structured with a couple of class room lectures to provide participants with some background theory on cage aquaculture systems, hands-on sessions to practice feed making and cage construction and field visits to government fisheries centers and cage aquaculture sites. Despite the very short time for preparation and language constraints, participants expressed their satisfaction to the program and felt that the training is useful for cage aquaculture development in Sri Lanka.

NACA would like to thank AIDA, the Spanish NGO, for sponsoring the program and the Department of Fisheries, Thailand, for their cooperation and support which made the program possible.


*Discussion with Mr Somwang, the Director of the Freshwater Fisheries Research and Development Bureau, Department of Fisheries, Thailand.*

# First step towards the creation of a network of aquaculture centres in the Americas

A meeting for the initiative to create an Aquaculture Network of the Americas or Red de Acuicultura de las Americas was held in Guayaquil, Ecuador, 10-12 June 2009. The meeting was held in response to the request made by delegates of countries of the Americas that attended the IV Session of the Sub-committee of Aquaculture of the Committee on Fisheries of FAO in Puerto Varas, Chile in October last year. Delegates representing 13 countries (Argentina, Brazil, Chile, Columbia, Costa-Rica, Ecuador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Uruguay, USA) and two aquaculture-related intergovernmental organisations attended.

As an invited key-note speaker, Dr Sena De Silva, Director General of NACA, apprised the group of the successful evolution of the network. This presentation, along with a global and a regional synthesis of the aquaculture sector presented by FAO, provided the context for the discussions of the country representatives, who formulated and agreed upon the network's mission and vision statements. The delegates also designed and agreed upon the basic organisational structure of the proposed network and identified the priority areas that such a cooperation mechanism should address in its initial stages.

Delegates signed a letter of intent that ratified the interest of their governments to create an inter-governmental aquaculture network, an important step towards creating this long-aspired mechanism for cooperation in the sustainable development of the sector in the Americas.

The delegates chose Brazil as the host country for the network in its initial stage, which is expected to be approximately two years. This involves the provision of an office and the Secretariat for the network. The Secretariat will coordinate the formulation of the statutes and the processes that lead to its formal constitution through the signing of an inter-governmental agreement by the national aquaculture authorities of participating countries.

As an initial step the delegates recommended the creation of a Directive Council to coordinate with the Executive Secretary. The Council will be formed by the delegates of Mexico (representing North America); the Fisheries and Aquaculture Organization of the Centro America isthmus (OSPESCA) who will represent Central American countries; Ecuador (representing Andean countries) and Chile (representing southern cone of South America). A Caribbean representation is expected to join soon.

The meeting was organized by the FAO´s Deputy Representative for Latin America and the Caribbean and the Coordinator of the Multidisciplinary Team for South America and the Aquaculture Service, of the Fisheries and Aquaculture Department of FAO in Rome.

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NACA is a network composed of 18 member governments in the Asia-Pacific Region.



*Participants in the meeting to discuss formation of a NACA - like organisation for the Americas*