NACA Newsletter

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# 26th NACA Governing Council Meeting, Bali, Indonesia

The 26th meeting of the NACA Governing Council was hosted by the Government of Indonesia in Bali, from 5-7 May in the Inna Grand Bali Beach Hotel. Sixteen member governments attended, as well as representatives from four NACA Regional Lead Centres, the Food and Agriculture Organization of the United Nations, the Southeast Asian Fisheries Development Center and the Secretariat of the Pacific Community. A welcome address and opening remarks were given by Dr Slamet Soebjakto, Director General of Aquaculture, on behalf of the Indonesian Ministry for Marine Affairs and Fisheries. A keynote address on the foundation of NACA and its achievements over the past 25 years and looking forward was given by H.E. Dr Plodprasop Suraswadi, the founder of NACA and Chair of the NACA Task Force.

Dr Soebjakto was elected as the Chair of the Governing Council for 2015, and Dr Waraporn Prompoj, Thailand, was elected as Vice Chair. The Secretariat would like to thank the outgoing Chair, Mr Bounthong Saphakdy, Lao PDR, for shepherding the organisation during 2014.

The key issue for this meeting was setting a new direction for the organisation. In 2015 the Governing Council established the "NACA Task Force", a group of eminent persons with broad experience in aquaculture development in the region, to review NACA's role, structure, funding and operation with respect to the present needs of member governments. The Task Force was created in recognition of that fact that, in the twenty-five years since NACA had been established, the technical capacity and economic status of most member states had substantially improved, donor funding for the region was in decline and the organisation needed to be reoriented with respect to the contemporary operating environment. Twenty-five years ago aquaculture was just emerging as a new branch of science and there were very few technical personnel in the region, and for most countries food security, poverty alleviation and capacity building were the most pressing issues. For some member governments these are still the major concerns, while others now have relatively mature aquaculture industries and significant internal technical capacity and expertise.

The Task Force was chaired by H.E. Dr Plodprasop Suraswadi, with four members being Prof. Sena De Silva (former Director General of NACA), Dr Meryl Williams (former Director General of the WorldFish Center), Dr Brian Davy (formerly of Canada's International Development Research Centre) and Dr Pongpat Boonchuwong (Advisor to the Thai Department of Fisheries).

The Task Force, represented by Prof. De Silva, delivered recommendations on a wide range of issues, but with respect to the work programme, was essentially was of the view that given the decline in donor funding for the region member governments would increasingly needed to fund and execute joint development activities from their own resources. The Task Force therefore recommended that the member governments increase their financial contributions to the organisation and that the Secretariat strengthen collaboration in project development, implementation and information sharing across the network, with renewed emphasis on the regional lead centres.

The Task Force also indicated that NACA needed to move beyond basic capacity building and poverty reduction activities to accommodate, in addition to these core functions, an additional emphasis on building capacity in social issues, in particular in gender and in aquatic resource management with regards to inland waters. The Task Force also noted the need for an additional focus on more technical aspects of aquaculture such as food safety and trade, aquatic animal health, genetics and biodiversity and development of better management practices with a view to improving the sustainability of aquaculture as a livelihood and an industry.

Member governments outlined their current needs and priorities. Issues of broad common interest included food security, broodstock management and seed quality, aquatic animal health, climate change impacts, trade and gender. Labour rights were emerging as a significant regional issue, both from a social responsibility and trade perspective. Accordingly, traceability mechanisms to create transparency in the supply chain, and also to farmed products to be distinguished from fished products, were seen as a high priority. The Governing Council also requested the Secretariat to consult the Government of Nepal concerning a possible recovery assistance programme in the wake of the recent devastating earthquake.

The Governing Council also endorsed the NACA Work Plan 2015+ (PDF, 1.29 MB), the most recent iteration of the rolling work plan, which was developed by the 12th Technical Advisory Committee meeting, held in Cha-am, Thailand.

The 27th NACA Governing Council will be held in Thailand in 2015, in conjunction with the 11th Asian Fisheries and Aquaculture Forum.

## Regional Workshop on the Status of Aquatic Genetic Resources

FAO and NACA organised the Regional Workshop on the Status of Aquatic Genetic Resources in Asia-Pacific at Hotel Centara Grand Ladprao, Bangkok from 23-26 March 2015. This was the first workshop in the series of four to be conducted globally by FAO. The workshop was intended to enhance the capacity of national focal Points on Aquatic Genetic Resources within Asia-Pacific Region regarding the preparation of national reports on the current status of aquatic genetic resources for food and agriculture (use, conservation and management). These will be used as the major source of information for the first State of the World's Aquatic Genetic Resources for Food and Agriculture report, under the umbrella of the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA).

The national focal points from fifteen countries in Asia; Thailand, Cambodia, Lao PDR, Vietnam, Indonesia, Malaysia, Philippines, India, Pakistan, Nepal, Myanmar, Japan, South Korea and the Pacific participated in the workshop, along with Fiji and global experts. FAO staff including Dr Devin Bartley, Dr Halwart Matthias and NACA staff Dr Kuldeep K. Lal facilitated the process of workshop with expert input

from Dr Graham Mair (Australia), Dr Tim Pickering (SPC), Dr Clemens Fieseler (Germany) and Dr Ruth Garcia Gomez (FAO consultant).

The workshop started with the welcome address from Dr Cherdsak Veerapat, Director General of NACA and opening remarks by Dr Devin Bartley. The workshop was opened by Dr Miao Weimen, FAORAP, Bangkok on behalf of Dr H. Konuma, ADG, FAO Office for Asia pacific, Bangkok. The participants were given an appraisal on the theme and concept of this workshop through four expert presentations on workshop content, process, expected outcomes and outputs and introduction to the CGRFA by Devin Bartley. The Aquatic Genetic Resources Component of CGRFA and the steps towards the State of the World's Aquatic Genetic Resources report were addressed by Matthias Halwart; the German National Technical Programme on the conservation and sustainable use of aquatic genetic resources by Clemens Fieseler and perspectives on aquatic genetic resources management and conservation in Asia-Pacific by Kuldeep K. Lal.

The national focal points and experts discussed each chapter of the report in the respective groups. The groups also prepared each chapter as an exercise with information from one member country as an example followed by a presentation on the chapter by respective group.

This exercise was found useful by the national focal points as this not only provided them first hand feel of the whole questionnaire but also served as useful feedback for FAO colleagues to incorporate suggested modifications in the report format.

A one day field visit was organised by NACA for the delegates to see the activities related to aquatic genetic resources in Thailand. The forenoon session was devoted to observing activities at the Thai Department of Fisheries Inland Fisheries Research Station at Bangsai. In addition to various aquaculture activities, an interesting feature was on farm conservation of the Mekong giant catfish Pangasianodon gigas, a near extinct species conserved through a dedicated breeding program. In the afternoon delegates visited National Centre for Genetic Engineering and Biotechnology (BIOTEC) at Thailand Science Park. Here delegates were exposed to the activities through presentations about BIOTEC and its shrimp biotechnology program by Dr Sirawut Klingbunga, Director of the Animal Biotechnology Research Unit. The delegates visited the laboratories and also the pilot testing plant.

The technical session resumed on March 26, 2015 with the exercise on chapters. The exercise on drafting eight chapters of the State of the World's Aquatic Genetic Resources report were completed during the stipulated time. The delegates found the training useful and will help them to facilitate the process of preparing country reports for submission the FAO's Fisheries and Aquaculture Department and this accomplished the objective of this workshop.

## Developing an environmental monitoring system to strengthen fisheries and aquaculture in the Lower Mekong Basin

FAO and NACA convened a stakeholder consultation in Bangkok 25-27 March 2015 to discuss development of an environmental monitoring system for the lower Mekong Basin. The objective of the system is to strengthen the resilience of fisheries and aquaculture and to improve early warning for fishers and farmers.

The workshop was preceded by baseline assessments of existing environmental monitoring and early warning systems relevant to fisheries and aquaculture in the target area, which covers Vietnam, Cambodia and Thailand. The assessments also reached out to relevant agencies in the target countries to gather feedback on what environmental issues they considered important and what parameters should be monitored to meet these ends. While the main goal of the system is to serve the daily needs of farmers and fishers – providing information and warnings important to their livelihoods - a secondary objective is to facilitate long-term monitoring of the impacts of climate change over the long term.

The state of environmental monitoring was observed to vary between countries. Some such as Thailand, for example, have very good monitoring systems in place for meteorological and water management. Vietnam's meteorological bureau monitors also river levels and publishes flow and height forecasts. Cambodia has strong programmes to monitor water quality and biodiversity aspects, such as surveys of fish larvae and fish diversity and abundance in deep pools. However, these diverse systems are owned and operated by a raft of different agencies, as they have been developed to serve different purposes, and are not necessarily connected or sharing data. The workshop identified a need to try and integrate the available data produced by existing sources and to build on it, where required, to provide a unified environmental monitoring system capable of sharing data and reporting over different geographic scales, from the wider basin level (ie. between countries) to the local-level advisories of interest to farmers and fishers.

Another crucial issue is connecting the reports generated by the system to fishers and farmers using appropriate communication channels, to ensure that they actually receive the kind of information they need in a timely manner and can benefit from it. As accessibility to different forms of media, language and literacy skills are all substantial issues for often remote communities, communication channels must be chosen very carefully, and in line with the access, skills and convenience of fishers and farmers.

The consultation spent some time discussing recent technological developments. The dramatic increase in the penetration of mobile phones (especially smart phones) and coverage of mobile networks offers a way to directly deliver area-specific information services to farmers and

fishers as well as the opportunity to involve them in data collection through custom applications. The 'internet of things' also offers new opportunities for low-cost data gathering. Cheap programmable micro-controllers - essentially the tiny computer you might find operating a hotel door lock - are now widely available even as hobbyist kits, excellent documentation and can be fitted with a surprisingly wide array of off the shelf environmental sensors to monitor anything from light, temperature and humidity to gas and radiation levels.

The findings of the consultation will be used to develop a pilot project, to be implemented on a regional basis. Due to the nature of the project, implementation is expected to proceed over an extended, ongoing basis.

## Regional workshop documents sustainable intensification practices in aquaculture

Due to the world's rapidly growing population, which is expected to peak somewhere around 9.5 billion, food production will need to be massively increased over the next few decades. This increase must be achieved without further degrading the environment. The unit environmental footprint of food production must be significantly reduced from where it is today. This concept, termed sustainable intensification, applies as much to aquaculture as it does to other agricultural sectors.

As a step towards this goal FAO and NACA convened a Regional Workshop on Documentation and Dissemination of Successful Practices of Sustainable Intensification of Aquaculture in Asia-Pacific, from 16-18 June 2015 in Bangkok, Thailand. The workshop was attended by 29 experts from 17 states in the region and regional development organisations. It was opened by Mr Hiroyuki Konuma, FAO Assistant Director General and Regional Representative for Asia and the Pacific.

The purpose of the workshop was to identify and document successful farming practices and technologies that had contributed to the intensification of aquaculture in a sustainable way. That is to say that they had provided demonstrable benefits to farmers and farming communities without adding to the environmental impact of aquaculture production, or by reducing it. By documenting these practices, it is hoped that awareness of them will be raised and that they will be adopted in other countries in the region.

The workshop participants reviewed twelve case studies shortlisted for consideration:

- Development of an improved common carp strain and its dissemination in China.
- Development and dissemination of genetically improved "Jayanti" rohu (*Labeo rohita*), India.

- Development and dissemination of specific pathogen free shrimp seed (*Penaeus monodon*), Thailand.
- Successful development and dissemination of the mass grouper seed production technology in Indonesia.
- Development and dissemination of low cost farm-made formulated feed for improved production efficiency in polyculture, India.
- Increased resilience and empowerment of small-scale farmers through cooperatives, China.
- Development of bivalve farming as a source of income generation for women self-help groups in coastal India.
- Integrated rural livelihood development through trout farming and related business in hill areas of Nepal.
- A science-based management approach for sustainable marine cage culture, Hong Kong SAR.
- Integrated multi-trophic aquaculture of fish, bivalves and seaweeds in Sanggou Bay, China.
- Sustainable milkfish production in marine cages in the Philippines through strong government support and effective public-private partnerships, Philippines.
- Development and dissemination of closed and semi-closed intensive shrimp production systems, Thailand.

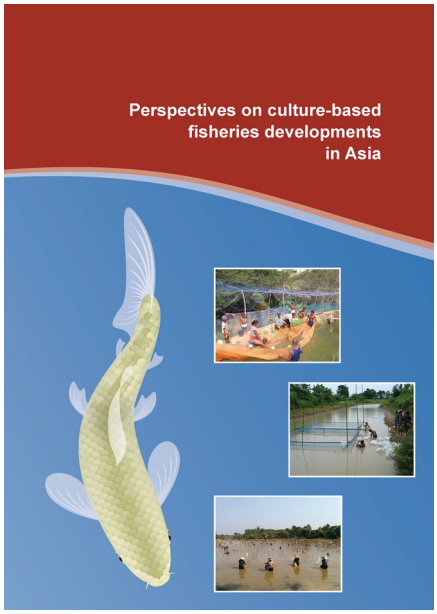
Case studies that meet the grade for sustainable intensification will be written up in a forthcoming publication to be released jointly by FAO and NACA, which will be released for free download in due course. For more information please contact kuldeep.lal@enaca.org.

## Perspectives on culture-based fisheries developments in Asia

This book is the proceedings of the Regional Consultation on Culture-Based Fisheries Development in Asia, held in Siem Reap, Cambodia, 21-23rd of October 2014, under the auspices of the Australian Centre for International Agricultural Research (ACIAR), the Mekong River Commission (MRC) and the Network of Aquaculture Centres in Asia-Pacific (NACA). The consultation was jointly organised by NACA and the Fisheries Administration of the Royal Government of Cambodia.

Food and nutritional security remains problematic in many developing countries. There are many initiatives underway which are designed to increase food supply, employment and income opportunities, most of which require considerable capital inputs (for instance cropping, livestock production and aquaculture). Often overlooked, are the opportunities to produce more food from the natural productive ecology of lakes and forests. Culture-based fisheries are one example of a relatively simple and low cost technology which can deliver nutritional and economic benefits to communities which often have few livelihood options.

Culture-based fisheries are based in lakes and reservoirs, where fish populations are supplemented by hatchery-produced fingerlings. The stocked fish may breed naturally in the lakes, or they may be species which are desirable but which do not breed in the still-water environments. Fish growth is driven by the natural productivity of the water bodies. Generally, local



communities have ownership of the fish, with the benefits shared or used for communal purposes. However, there are other options for management and ownership depending on local needs, cultural arrangements and other uses of the water.

Research and development of culture-based fisheries has been a major endeavour for NACA and ACIAR since the mid-1990s. This has involved projects in Sri Lanka, Indonesia, Vietnam, Lao PDR and Cambodia, the results of which have been reported in previous publications, as noted below.

In this volume, we bring together an update from research conducted in those countries and others. We trust the information will foster further development and spread of culture-based fisheries in Asia and beyond, and in doing so, bring livelihood and nutritional benefits to otherwise resource-poor communities.

http://www.enaca.org/modules/library/publication.php?publication_id=1150

**Network of Aquaculture Centres in Asia-Pacific**

Mailing address:
P.O. Box 1040,
Kasetsart University
Post Office,
Ladyao, Jatujak,
Bangkok 10903,
Thailand

Phone +66 (2) 561 1728
Fax +66 (2) 561 1727
Email: info@enaca.org
Website: www.enaca.org

NACA is a network composed of 19 member governments in the Asia-Pacific Region.



## SUPERSEAS PhD opportunities

SUPERSEAS is a major research programme funded by the NWO Food and Business Global Challenges Program. The objective of SUPERSEAS is to study area-based management and certification as an alternative governance and risk-sharing model for sustainable aquaculture and to explore how vulnerable producers and consumers can benefit from reduced risk of aquaculture production and more secure supply both directly and through markets. The SUPERSEAS program includes three PhD-projects. The full proposal can downloaded here and the individual advertisements here.

**Position 1 Design of area-based aquaculture management and certification models**

Based at the Environmental Policy Group (ENP) and Business economics Group (BEC) at Wageningen University in the Netherlands and the WorldFish Centre in Penang Malaysia, you will conduct independent research on the design of area-based management (ABM) and certification models for aquaculture in Southeast Asia. You will develop your PhD project in line with questions on the principles of effective ABM, the applicability and design of sustainability certification. You will answer these questions by undertaking an assessment of existing collective production systems and sustainability certification schemes. You will be based at Wageningen University, but with extended periods of field work in Bangladesh, Thailand and Vietnam.

**Position 2: PhD position: Inclusive value chain models for area based aquaculture certification**

Based at the Environmental Policy Group (ENP) at Wageningen University in the Netherlands and Prince of Songkla University in Thailand, you will conduct independent research on the potential for inclusive area-based business models for sustainable aquaculture in Thailand, Vietnam and Bangladesh. You will develop your research around questions related to how the contract conditions and value chain arrangements controlled by retailers in Europe and Southeast Asia, and regional trade policies under ASEAN, can lead to greater inclusion of vulnerable households through area-based aquaculture management and certification. Your scholarship is a 'sandwich' construction, meaning you will spend half your time at Wageningen University and the University of Prince of Songkla.

**Position 3: Opportunities and impact of area-based aquaculture on access to finance and risk transfer**

Attached to the Business economics Group (BEC) at Wageningen University in the Netherlands and Can Tho University in Vietnam. You will conduct independent research on the financial consequences of area-based aquaculture systems and related opportunities for finance and risk transfer. You will develop your PhD project in line with questions on what risk financing lessons can be transferred from other area-based systems in the world, what cost implications can be expected at specific sites in Southeast Asia, how design and access to risk financing is affected, and what implications for food security for Southeast Asian smallholders can be derived. The post will be based in Wageningen but expected to spend extended periods of time at Can Tho, University.

**Applications**

For more details on the minimum requirements of prospective candidates and application procedure please visit the following website:

http://www.wageningenur.nl/en/Expertise-Services/Chair-groups/Social-Sciences/Environmental-Policy-Group/Show/PhD-vacancies-on-areabased-aquaculture-management-in-Southeast-Asia-.htm

Applications should be submitted by email to simon.bush@wur.nl before **1 September 2015**.