



Roll-out of national aquatic animal health strategies continues

The second quarter has been a busy one for NACA's Aquatic Animal Health Program with assistance provided to the Philippines, Myanmar and Indonesia in the development of national health strategies. Dr Melba Reantaso, NACA's Aquatic Animal Health Specialist co-organized and facilitated three national workshops at the request of Governing Council members, as follows:

Indonesia National Health Strategy Workshop

34 people participated in the workshop held in Bogor, Indonesia from 12-14 June 2002. Attendees represented the Directorate General of Aquaculture, Central Office of Fish Quarantine, Central Research of Fish Aquaculture, representatives from West and Central Java, heads of stations in Jepara, Sukabumi, Sukamandi, Lampung and representatives from several universities such as Gajah Mada University and Bogor Agricultural Institute.



Participants in the Indonesian National Health Strategy Workshop

This is one of series of meeting/workshops which has been completed since the establishment of the Fish Health and Environment Directorate (under the new Ministry of Marine Affairs and Fisheries) headed by Dr. Rukyani, National Health Coordinator for Indonesia. This workshop finalized the key elements on Indonesia's National Health Strategy which include: surveillance, monitoring and reporting of fish disease, fish quarantine, regional and international collaboration network, fish disease control (contingency plan), public awareness,

research and development, rules and regulations, institutional framework, fish resource and environmental management for aquaculture and funding resource.

Philippine National Health Strategy Workshop

A three day national workshop was held at the Philippine Bureau of Fisheries and Aquatic Resources (BFAR) to finalize the Philippine National Strategy on Aquatic Animal Health Management. The workshop prioritized the key elements in the National Health Strategy and drafted a number of short, medium and long term activities that will be undertaken during the following three years. Atty. Reuben Ganaden, Assistant Director for Techni-

cal Services, chaired the workshop and Dr. Jojo Somga, National Health Coordinator, facilitated the organization and conduct of the workshop.

Myanmar National Health Strategy Workshop

Myanmar's National Strategy Framework on Aquatic Animal Health was developed during the National Workshop held at the Department of Fisheries from 10-11 April 2002. The National Workshop was opened by His Excellency, U Aung Thein, Deputy Minister for Livestock and Fisheries and U Than Thun, Director-General, Department of Fisheries. A total of 64 people participated representing Myanmar DoF, representatives from Yangon University, Dagon



Participants in the Philippine National Health Strategy Workshop



Participants in the Myanmar National Health Strategy Workshop

University and University of Mandalay, representatives from Myanmar Fisheries Federation and Myanmar Academy of Livestock and Fisheries, representatives from OIE and FAO and representatives from various DoF stations, private sectors and external resource experts from NACA and the Aquatic Animal Health Research Institute of Thailand.

This draft National Strategy will be circulated to cover wider participation of all relevant stakeholders for consensus and commitment building (through interaction and workshops) before submission to the Ministry of Livestock and Fisheries through the Director-General of the Department of Fisheries for approval. The development of the National Strategy will be an on-going process and will build on the resources available for its development and implementation.

The Workshop prioritized 4 key elements that shall comprise the National Strategy Framework. These include the following: (a) Legal Framework, National Coordination and Cooperative Mechanisms among Stakeholders; (b) Diagnostics, Research and Education and Extension Services; (c) Disease Surveillance, Reporting and Information Systems and (d) Training and Capacity Building. The framework also included some activities that will be initiated later this year.

Australia hosts the 5th Symposium of Diseases in Asian Aquaculture

November 24-28, 2002, Surfer's Paradise, Queensland

The Fish Health Section of the Asian Fisheries Society (FHS/AFS) cordially extends its invitation to all scientists, researchers and persons within the aquaculture community interested in diseases in Asian Aquaculture to its Fifth Symposium to be hosted by Australia. The Theme for this year's Symposium is "Health, Wealthy and Wise" with sessions on Biosecurity and Risk Assessment, Emerging Diseases of Finfish and other Vertebrates, Molluscan Health, Molecular Technologies, Genetic Selection for Disease Resistance, Shrimp Disease - Control and Prevention and Finfish and Shellfish Immunology. Two satellite workshops will immediately follow the conference: (a) Epidemiology and Risk Assessment from 29-30 November 2002 to be held at the Gold Coast International Hotel and (b) the Asia Pacific Regional Molluscan Health Management Training Program Phase II from 29 November - 4 December 2002 to be held at The University of Queensland in Brisbane. Further information on the Symposium and online abstract submission is available at the Symposium Website at <http://afs-fhs.seafdec.org.ph> or Daniel@ozaccom.com.au

STREAM concludes inception phase of DFID NRSP "Improved Policy on Aquaculture Service Provision to Poor People Project in India"

In India the STREAM Initiative manages the DFID project "Investigating Improved Policy on Aquaculture Service Provision to Poor People" (see Aquaculture Asia Vol. VII no 1). The purpose of the project is to identify, test and promote mechanisms for the delivery of improved rural services critical to the development of rural livelihoods, with emphasis on services in support of aquaculture objectives, strengths and constraints of marginalized groups and their complex and diverse livelihoods.

STREAM is working in close collaboration in India with the Fisheries Commission, the Indian Council for Agricultural Research, State Fisheries Departments and the NGO Gramin Vikas Trust (GVT). Its key role is to engage recipients to contribute to policy change processes, to give recipients of service provision a voice through media (such as videos, drama and photos) and papers drafted to document case studies of recipients' perspectives, and to learn lessons about policy change from elsewhere and engage different levels of government in the policy change debate.

Graham Haylor, William Savage and S.D. Tripathi made an Inception Visit from 17-24 March 2002. The team met with colleagues in Mumbai, Delhi and Ranchi, where discussions and field visits were conducted to inform an Inception Report. The Inception Report highlights the project's poverty focus, its geographic scope and key stakeholders and a potential policy change mechanism. Following the Inception Visit a "Rural Aquaculture Service Recipients and Implementers Workshop" was held from 9-10 May 2002 at the Catholic Charities in Ranchi, Jharkand. Workshop participants included GVT staff, officials of Departments of Fisheries in Jharkhand and Orissa, faculty from Birsa Agricultural University, Jankars (trained field specialists) from villages in Jharkhand, Orissa and West Bengal, and farmers from communities in Jharkhand. Discussions, reportbacks and documentation took place in Bangla, English, Hindi and Oriya.

The inception report and the workshop report can be downloaded from the STREAM website www.streaminitiative.org.

www.streaminitiative.org

Expert Consultation on Rapid Diagnosis of Shrimp Viral Diseases, held in Chennai, India from 12th-14th June 2002

The Central Institute of Brackishwater Aquaculture (CIBA), ICAR hosted the expert consultation in cooperation with the Network of Aquaculture Centres in Asia-Pacific (NACA), Australian Center for International Agricultural Research (ACIAR), Marine Products Export Development Authority (MPEDA) of India and CSIRO Livestock Industries (Australia).

In the past few years, use of PCR has been promoted extensively and used in India, as in other countries of Asia, to detect shrimp viruses. There is good experimental data and practical experience to indicate that PCR is a highly effective detection method. Work with white spot syndrome virus (WSSV) has shown that PCR, when properly applied for viral screening of broodstock or postlarvae and used in conjunction with good farming practices, can significantly reduce the risk of disease and crop failure. However, PCR is a highly sensitive method requiring a high degree of technical skill for valid and reproducible implementation. Frequently, people operate PCR laboratories with minimal technical training using inadequate precaution against inadvertent contamination. The wide range of available PCR tests with varying target sites and detection sensitivities also often contributes to a lack of reliability in interpretation of test results.

Through an ACIAR project “Diagnostic tests and epidemiological probes for prawn viruses in Thailand and Australia, led by CSIRO, Mahidol University and the National Center for Genetic Engineering and Biotechnology (BIOTEC) in Thailand, a range of new and existing PCR methods for shrimp viruses were assessed for sensitivity and reliability and standard methods for sample preparation, storage, extraction and analysis were developed. The project also conducted training courses in PCR for a group of 24 scientists

from Thailand and 6 other Asian countries. As a result of this project and follow-on activities at Mahidol University, most PCR technicians in Universities and private and government laboratories in Thailand have received uniform training and inter-calibrations of laboratory performances have been conducted. The CSIRO team has also trained PCR technicians from several Australian states in the correct use of PCR technology for detection of shrimp viruses. The final review of the ACIAR project has recommended extension of the results to other Asian countries to improve their diagnostic capabilities and regional shrimp health, and the development of new research projects on the application of molecular biology to shrimp diseases in the region.

During a workshop held as part of the MPEDA/NACA technical assistance on “Shrimp Disease and Coastal Management”, experts from Mangalore University, CIBA, MPEDA and TASPARC discussed PCR and diagnostic techniques for shrimp aquaculture. The meeting expressed concern about the different PCR tests in use in India, including the use of different primers, and how to standardize the approaches being used so that some more consistent message is given to farmers.

In response, ACIAR provided financial support for the expert consultation at CIBA in Chennai, India. The consultation brought together experts from India, Australia, and Thailand to: (a) examine current PCR techniques and procedures (and other rapid diagnostic techniques) in use in shrimp culture in India; (b) identify limitations and constraints in use of PCR and rapid diagnostic techniques as part of shrimp health management procedures in India; (c) introduce recent regional development in PCR and rapid diagnostic techniques and their application in shrimp

health management elsewhere in Asia; (d) develop practical recommendations for effective use of PCR and rapid diagnostic techniques in shrimp health management procedures within India; and (e) initiate a process of identifying research needs for viral disease diagnosis and shrimp health management in India

The consultation was successful, bringing together 41 participants, including scientists, private sector laboratories and hatchery operators, and international specialists from Thailand and Australia, for a fruitful discussion leading to a powerful but practical set of recommendations. The recommendations cover management methods for improving the use of PCR and rapid diagnostic techniques as part of shrimp health management and risk reduction procedures in India, recommendations on laboratory procedures and harmonization of PCR and diagnostic techniques, and a consensus on some important researchable issues needs for future improvement in viral disease diagnosis and shrimp health management. The final report of the consultation is under preparation. For further information, contact Dr Peter Walker (CSIRO, Australia - Peter.Walker@csiro.au) Michael Phillips (NACA – Michael.Phillips@enaca.org) and Dr Mathew Abrahams (Director, CIBA – ciba@tn.nic.in) or check out the NACA web site (www.enaca.org).

New Shrimp Farming and the Environment Case Studies

A new case study “Shrimp Farming in Brazil” is now available for free download from the NACA website www.enaca.org/shrimp. An additional thematic review of “Feeds and Feed Management Practices in Shrimp Aquaculture” is also available from the Consortium.

World Aquaculture Society awards Michael New with Honorary Life Membership

During the opening ceremonies of the annual meeting of the World Aquaculture Society (WAS), which was held in Beijing, People's Republic of China, Michael New was awarded an Honorary Life Membership of the Society in recognition of his services to international aquaculture development. Honorary life membership of WAS has been granted to only 34 individuals since the inception of the Society in 1970.



Michael New at WAS in Beijing

Having made the decision to make Michael New an Honorary Life Member more than a year previously, WAS decided to delay the presentation until its conference in Asia in 2002 because of his work in the region. This work began in 1979 when he was appointed co-manager of an FAO project on freshwater prawn farming in Thailand. One of the products of this project was an FAO manual, written with his co-manager Somsak Singholka, which became a sort of bible on the topic. Having already published a scientific book on this topic in 2000, Michael is currently preparing another technical manual on the subject for FAO.

From 1986-1988 Michael New was Senior Aquaculturist in the Aquaculture

Development and Coordination Programme (ADCP), a global and inter-regional programme funded by UNDP and based at the Rome headquarters of FAO. In 1988 the EC appointed him Programme Coordinator of the ASEAN-EEC Aquaculture Development and Coordination Programme (AADCP), a regional programme based in Bangkok. From 1991-1992 he was Senior Fishery Resources officer (Aquaculture) in FAO headquarters. In 1992 he returned to his post as AADCP Coordinator; the project successfully completed its practical activities at the end of 1994. An EU funded project, AADCP linked aquaculture institutes in ASEAN and EU countries. Several national projects in Southeast Asia were spawned by this programme, and many ASEAN individuals received postgraduate training in Europe. In this programme, Michael worked closely with Hassanai Kongkeo, who became the NACA Coordinator when the project ended. Michael New has assisted NACA in a number of ways, including participating in the development of one of its earlier work programmes, being a resource person in the ADB/NACA sustainable aquaculture policy workshop in Beijing in 1995, and being on the editorial board of *Aquaculture Asia* since its inception.

Michael has had aquaculture assignments in many Asian and Pacific countries and territories: Australia, Bangladesh, Brunei Darussalam, China, Hong Kong, Indonesia, Japan, Jordan, Kuwait, Malaysia, Nepal, Pakistan, the Philippines, Saudi Arabia, Singapore, Sri Lanka, Taiwan, and Thailand. He has been conference chairman, keynote or invited speaker at many conferences in Asia, including the 2nd (CSIRO) National Prawn Seminar (Brisbane, 1984), Australian Fishexpo '86 (Adelaide, 1986), AQUATECH '90 (Kuala Lumpur, 1990), VICTAM meetings (Bangkok, 1991; 1993; 1996), Asian Fisheries Society (Indian Branch) (Bombay, 1994), Sustainable Aquaculture '95 (Honolulu, 1995), IFS/EU Worksop (Can Tho, 1996),

World Aquaculture '99 (Sydney, 1999), 3rd World Fisheries Congress (Beijing, 2000), and the 6th Asian Fisheries Forum (Kaohsiung, 2001).

Michael New was President of WAS in 1997-1998 and commences a two-year Presidency of the European Aquaculture Society (EAS) in October 2002. In 1999 he was appointed an Officer of the Order of the British Empire (OBE) for his services to aquaculture in developing countries. He was one of the founders of the Asia-Pacific Chapter of WAS.

Vacancy announcement

NACA Socio-economist (Bangkok, Thailand)

The Network of Aquaculture Centres in Asia-Pacific is looking for an experienced Socio-economist to join the NACA team. Main responsibilities include a) coordination of the NACA regional programme on aquaculture for rural development, an Asia-wide cooperative programme promoting and supporting countries in improved aquatic resources management and aquaculture for rural development and poverty alleviation and b) a lead role in the development of project proposals, particularly those with rural development thrust, aquatic resources management orientation, and social development objectives.

Qualifications required include:

1. PhD and 5 yrs or MSc and 10 yrs experience
2. Degree in agricultural economics or rural development
3. Field experience desired (over academic) working in rural development projects
4. Desired – a proven capability for project formulation, planning, management, and evaluation

Enquiries to publications@enaca.org or visit our website for further details www.enaca.org/jobs.

ACIAR/NACA Workshop on Feeds and Feeding Constraints in Inland Aquaculture: Research and Extension Priorities.

A Workshop on “Feeds and Feeding Constraints in Inland Aquaculture: Research and Extension Priorities” was held in Siem Reap, Cambodia, from the 24-26 June 2002. The meeting was hosted by the Department of Fisheries, Cambodia, and organized by the Australian Centre for International Agricultural Research (ACIAR) and NACA. The meeting brought together 43 participants from Cambodia, Laos PDR, Thailand, Vietnam, and Australia to discuss how inadequate feeds and feeding practices are constraining inland aquaculture in Southeast Asia and discuss how applied research, technology transfer and extension can address these constraints. The Workshop involved country experts from the Mekong region, regional organizations (NACA and AIT), research providers and funding agencies.

The workshop stemmed from a review commissioned by ACIAR of feed and feeding practices in Mekong River countries. Many common problems were identified and several key priorities emerged. This review provided a starting point for the Workshop, during which participants discussed feed and feeding problems associated with inland aquaculture in Laos, Cambodia, Vietnam and Thailand. Based on these discussions, key researchable issues were identified and options to improve feeds and feeding technology through research, training, technology transfer and extension examined.

Some of the key issues discussed included:

- How to improve the use of fertilizers and supplementary feed ingredients of formulated feeds to increase production.
- The current and future limitations of trash fish and potential alternatives in different areas.
- How to improve methods of formulating and preparing supplementary feeds for key species.

- The potential to increase the use of rice bran in aquaculture diets.
- How to best improve farmer understanding of feeds and feeding.

The workshop report is under preparation and will be published in an ACIAR publication series. If you are interested in receiving more information, please contact Dr Michael Phillips (NACA) Michael.Phillips@enaca.org or you can contact Dr Geoffrey Allan Geoffrey.Allan@fisheries.nsw.gov.au

NACA supports health management in Indian shrimp farming

The third phase of the MPEDA/NACA “Technical assistance on shrimp disease and coastal management” is under implementation from January 2002. The objectives of the phase 3 are:

- (a) Demonstration of better farm management practices, giving emphasis to the implementation of management interventions recommendations from a shrimp disease risk factor study conducted during phase 2 of the technical assistance;
- (b) Assessment of the benefits to the farmers from implementing the recommended management interventions;
- (c) Identification of the problems and constraints in implementing the recommended management interventions; and
- (d) To develop a final set of recommendations for wider extension of the study findings to the farmers, farm technicians and institutional experts and other relevant extension agents.

A number of private shrimp farms were selected for demonstration in Nellore and West Godavari area of Andhra Pradesh on the east coast of India, and NACA has supported MPEDA in the testing of better management health practices on these demonstration farms throughout 2002. The findings indicate that significant improvements in farm performance can be achieved through better health management practice, although farmers face several constraints in implementation that need to be recognized and addressed if better health management practices are to be widely adopted. The findings from the study are now being analyzed and a final report prepared.

NACA publications available for FREE download www.enaca.org/publications

NACA publications are now available for free download from the NACA website by whoever wants them. This includes a screen-resolution version of the magazine Aquaculture Asia, this newsletter and flagship publications such as the Asia Diagnostic Guide to Aquatic Animal Diseases and the Technical Proceedings of the Conference on Aquaculture in the Third Millennium. New publications will similarly be added to the website as they are released, usually before the printed copy is available, such as the recently released report of the expert consultation on “Focusing small-scale aquaculture and aquatic resource management on poverty alleviation”. While the online versions are free, we will continue to charge nominal fees for hard copies to cover production and mailing costs. In most cases our books are stored as PDF files, so you will need the free Adobe Acrobat Reader software to view them, which is also available from our website. New releases will be announced in the NACA electronic newsletter, please visit www.enaca.org to subscribe. Please note that CD-ROM version of our publications are also available for areas that do not have internet access, contact publications@enaca.org.

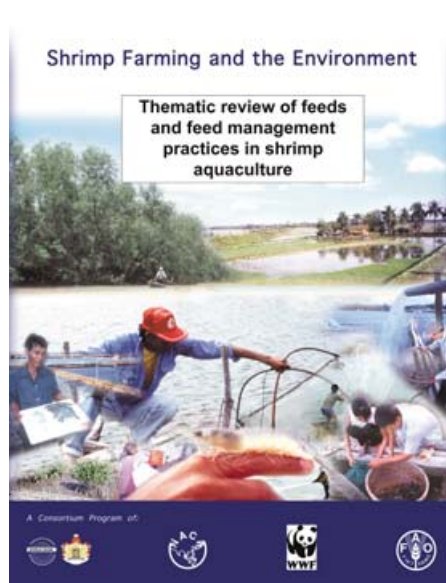
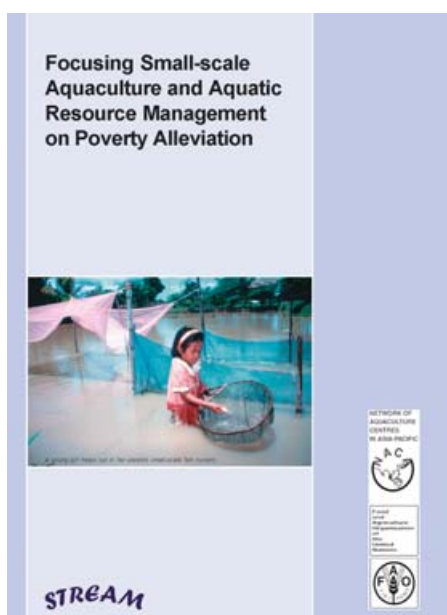
Marine Finfish Aquaculture programme gears up for workshop

The Regional Workshop on Sustainable Marine Finfish Aquaculture for the Asia-Pacific will take from September 30 – October 4, Halong City, Vietnam. This workshop is the fifth in a series undertaken by the Asia-Pacific Marine Finfish Aquaculture Network. Previous workshops have concentrated on specific aspects of grouper and marine finfish aquaculture, such as socio-economics, live reef food fisheries, etc. This workshop will concentrate on recent improvements in production technology for marine finfish aquaculture, and will incorporate the end-of-project workshop for the Australian Centre for International Agricultural Research (ACIAR) project FIS/97/73 Improved hatchery and grow-out technology for grouper aquaculture in the Asia-Pacific region (<http://www.enaca.org/aciarc>). The overall objectives of this workshop are to:

- Outline the status of marine finfish aquaculture in the Asia-Pacific region.
- Provide detailed technical results of research projects on sustainable marine finfish aquaculture in the Asia-Pacific region, including ACIAR project FIS/97/73 Improved hatchery and grow-out technology for grouper aquaculture in the Asia-Pacific region.
- Provide a forum for young researchers involved in the development of sustainable marine finfish aquaculture in the Asia-Pacific region to present their results and interact with other researchers.
- Review the R&D needs for sustainable marine finfish aquaculture development in the Asia-Pacific region.
- Identify potential collaborative projects to assist the development of sustainable marine finfish aquaculture development in the region.

The workshop is supported by the Government of Vietnam, ACIAR, the Australian Academy of Technological Sciences and Engineering, Network of Aquaculture Centres in Asia-Pacific, NORAD and DANIDA, and will be hosted by Research Institute for Aquaculture No.1. Further information on the workshop and outcomes can be obtained by logging onto the NACA grouper web site www.enaca.org/grouper, or contact grouper@enaca.org.

New publications for free download



www.enaca.org

Launch of Trans-Himalayan Coldwater Fisheries Network Website

<http://www.enaca.org/TransHimalayan/index.htm>

NACA has launched a website to support the Trans-Himalayan Coldwater Fisheries Network, pictured below. This network is being established to improve rural livelihoods through the sustainable development of aquatic resources in the Himalayan region.

The aims of the network are to:

- Improve communication and exchange of experiences and information;
- Promote inter-sectoral cooperation and coordination between fishery and other sectors concerned with rural development, poverty alleviation and water resources management;
- Promote more effective technology and information transfer and education, especially on breeding of native coldwater fish species; and to
- Raise the profile of highland fisheries in the International Year of the Mountains 2002.

The website includes news headlines, publications, events, and a background history on the network. Information

exchange will be facilitated through a free email newsletter which is available by subscription through the website.

The network is in a developmental phase at the moment. If you have an interest in fisheries, aquaculture or livelihoods/development in the Trans-Himalayan region then we encourage you to join the network by subscribing to the free email newsletter, or you can contact simon.wilkinson@enaca.org.

Contributions for the first issue of the email newsletter are welcome – please feel free to send in your work, publications, research and experiences and we will publish/distribute relevant material back to the wider network.

The network will be underpinned by a number of collaborative projects as participation grows.

NACA Organizes Emergency Assistance to Indonesia in the Control of a Serious Koi and Common Carp Disease

At the request of the Government of Indonesia, NACA has organized an Emergency Disease Control Task Force Team to accurately assess the disease situation and find measures to reduce the risks and further spread of the disease. The Task Force Team travelled to Indonesia from 8-13 July to work with the local fish health authorities. The Task Force will produce a comprehensive report that will contain the findings and recommendations, which shall be the basis for seeking further assistance required for follow-up activities/actions to support Indonesia to effectively address the control and management of this outbreak.

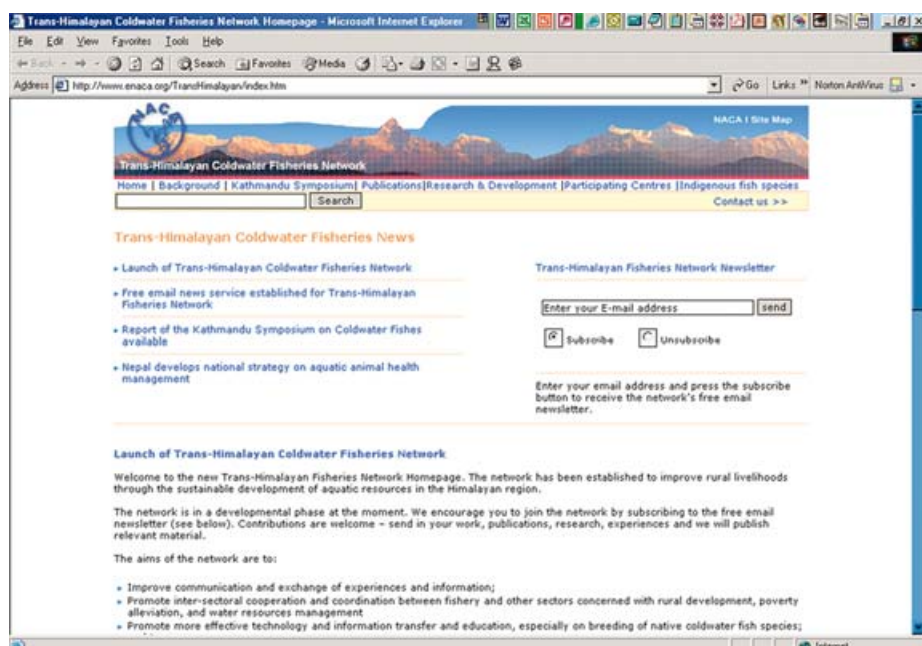
The Task Force was formed on a cost-sharing arrangement between NACA, ACIAR and Indonesia's Directorate General of Aquaculture, Ministry of Marine Affairs and Fisheries. NACA would like to thank the many nations, institutes, companies and individuals who have offered their technical support to this mission.

NACA Virtual Library in development

NACA is developing an electronic library to service the NACA network via the internet. The library will be based on the AGRIS software developed by FAO.

A key feature of the library is that it will feature many full-text documents and access will be completely free.

NACA is currently looking for partner institutions to participate in the regional collection program. Contact simon.wilkinson@enaca.org.



The New Trans-Himalayan Coldwater Fisheries Network website

Recent Training Program Activities

NACA's training program has been in full swing over the last quarter with 73 participants trained in six courses and study tours. A full report of the training course on Grouper Hatchery Production held in Indonesia is featured in the April-June 2002 issue of Aquaculture Asia.

Training Course on Post Harvest Technology of Farmed Fish and Shrimp, 8 - 22 April 2002

Seven fisheries officers from the Department of Fisheries of Nepal and National Aquaculture Development Authority of Sri Lanka attended a course in the Central Institute of Fisheries Technology (Cochin), India.

Integrated Fish Farming Training Course – 2002 Session, 10 April – 8 July 2002

36 participants from 18 countries in Asia and South America attended the course held in (and co-organized by) the NACA Regional Lead Centre in China, Wuxi City.

Inland Fisheries and aquaculture Training Course for Africa, 25 April – 20 July 2002

Ten participants from Africa attended the course held in (and co-organized by) the NACA Regional Lead Centre in China, Wuxi City.

Training Course on Grouper Hatchery Production, 1 - 21 May, 2002

Fourteen participants from Asia-Pacific countries attended the course held in (and co-organized by) the Gondol Research Institute for Mariculture, Bali, Indonesia and the Asia-Pacific Marine Finfish Aquaculture Network

Study tour to Southern China on Coastal Aquaculture Development and Environment Management, 10 - 17 June 2002

Five fisheries officials from Vietnam participating in the UNDP Environmental Management in Coastal Aquaculture Project traveled to Guangdong and Hainan, China

Study tour on Fisheries mitigation for communities affected by the construction of major infrastructure, 15 - 22 June 2002

Mr. Ranjit Kumar Biswas, Deputy Secretary, Jamuna Bridge Division, Ministry of Communications, Bangladesh traveled to Thailand under the Management At The Top (MATT) Project, Government of Bangladesh



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Training course on Post-harvest Technology of Farmed Fish and Shrimp, CIFA



The Grouper Hatchery Production course at the Gondol Research Institute for Mariculture