

Halwart, M.; Dam, A.A. van (eds) 2006. *Integrated irrigation and aquaculture in West Africa: concepts, practices and potential*, Rome, FAO. 181p

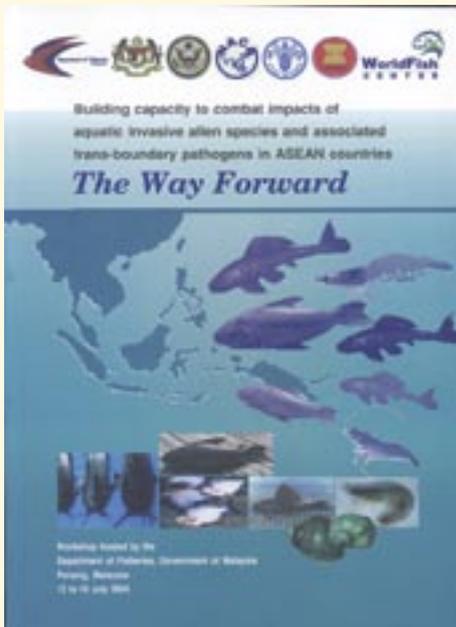
This volume contains background documents and papers presented at the FAO WARDA Workshop on Integrated Irrigation Aquaculture (IIA) held in Bamako, Mali, from 4 to 7 November 2003, as well as the findings of FAO expert missions on IIA in the West Africa region. The rationale for IIA development lies in its potential to increase productivity of scarce freshwater resources, enhance food security and poverty alleviation, and reduce pressure on natural resources, particularly in the drought prone countries of West Africa. Irrigated systems, floodplains and inland valley bottoms are identified as the three main target environments for IIA in West Africa. In irrigated systems, aquaculture is a non consumptive use of water that can increase water productivity. Pens and floating cages are often used to grow fish in the source, delivery and disposal subsystems of irrigation schemes (dams and canals). Rice fish farming is the most common form of aquaculture in the use subsystem of irrigation schemes. Continuity of water supply, the effect of aquaculture on water conveyance

and the use of agrochemicals are the main points of attention for aquaculture in irrigation systems.

Apart from irrigation schemes, river floodplains and deltaic lowlands also offer opportunities for integration of aquaculture. By enclosing parts of these flooded areas and stocking them with aquatic organisms, food production can be enhanced. Examples of community based rice fish culture in Bangladesh and Viet Nam show that fish production can be increased by 0.6 to 1.5 tonnes per hectare annually. Another example is the use of seasonal ponds in the wetlands surrounding Lake Victoria (East Africa) which are stocked with water and fish by natural flooding and are managed using locally available resources like animal manures and crop wastes.

Following the first three chapters which set the stage for IIA in West Africa, the fourth chapter presents a review of IIA systems in 13 West African countries which demonstrates the considerable potential for further development. Traditional marsh aquaculture systems exist in many West African countries and should be developed further, together with fish culture in irrigation schemes. The following chapters deal with current practices and constraints in Burkina Faso, Mali, Niger, Nigeria and Senegal. In addition, examples of development approaches in C6te d'Ivoire and Guinea are given. Concepts of economic analyses of IIA are reviewed and illustrated through an example of integrated aquaculture in Madagascar. This is followed by an overview of regional and international research institutions and networks. The final two chapters summarize the key factors for successful adoption of IIA participation of stakeholders and support for local development; an integrated, multisectoral approach to IIA; and improved knowledge management and networking and indicate the way forward in the form of a proposal for IIA development in West Africa.

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NACA. 2005. *The Way Forward: Building capacity to combat impacts of aquatic invasive alien species and associated transboundary pathogens in ASEAN countries*. Final report of the regional workshop, hosted by the Department of Fisheries, Government of Malaysia, on 12<sup>th</sup>-16<sup>th</sup> July 2004, NACA, Bangkok. 352p.

This report contains the papers presented and outcomes from the workshop "Building capacity to combat impacts of aquatic invasive alien species and associated transboundary pathogens in ASEAN countries, hosted by the Department of Fisheries, Government of Malaysia, on 12<sup>th</sup>-16<sup>th</sup> July 2004. The workshop was generously supported through a US State Department grant, implemented by NACA, hosted by the Government of Malaysia Department of Fisheries and co-sponsored by several agencies such as ASEAN, FAO, and the World Fish, and supported by other partners such as AIT, CAB International, OIE, SEAFDEC-AQD, Deakin University, Universiti Putra Malaysia, Mahidol University and AusVet Animal Health.

- Part 1 contains the proceedings of the Workshop
- Part 2 contains 19 resource papers and case studies
- Part 3 contains Country Papers from ASEAN countries, i.e. Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.

The participants concluded that aquatic invasive alien species (IAS) and invasive aquatic animal pathogens significantly impact the aquaculture industry in ASEAN, and can have negative implications for aquatic biodiversity, and the social and economic well being of people in the ASEAN region. Participants also recognized the positive social and economic benefits that have come from the introduction and farming of some alien aquatic species in the region. Participants agreed that the way forward is to minimize the risks and costs associated with negative impacts of aquatic IAS and aquatic animal pathogens whilst capturing the social and economic benefits possible through responsible aquaculture of alien species. (See also related article at FAN 32 – December 2004).

See articles of FAO staff:

Aquatic alien species and their contribution to aquatic production, food security and poverty alleviation: an overview of data from ASEAN countries by D.M. Bartley, V. Crespi, I.J. Fleischer and R. Subasinghe.

Movements of economically important penaeid shrimp in Asia and the Pacific by S Funge-Smith, M. Briggs, R. Subasinghe and M. Phillips.

Molluscan pathogens of concern to ASEAN by M.G. Bondad-Reantaso and F.C. Berthe.

For further information, please contact the Network of Aquaculture Centres in Asia-Pacific (NACA) at [naca@enaca.org](mailto:naca@enaca.org)

FAO/Regional Commission for Fisheries. 2006. Report of the second meeting of the Working Group on Aquaculture. Muscat, Oman, 29-30 November 2005. *FAO Fisheries Report*. No. 790. Rome, FAO. 65p.

The second meeting of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) was held in Muscat, Oman, from 29 to 30 November 2005 and was attended by experts from all the members of the Commission. The WGA reviewed the decisions and recommendations of the third session of the Commission held in Doha, Qatar, from 9 to 11 May 2005, and the activities of the WGA that followed. Among the activities, the experts acknowledged that progress had been made with regards to the technical arrangements that would lead to the preparation of the RECOFI Regional Aquaculture Information System (RAIS). However, it was noted that the system could not be developed as the budgeted funds had yet to be submitted by the hosting country. In this regard, the expert from Kuwait reconfirmed the commitment and willingness of its Government to host and finance the system and that the funds would be submitted by the end of the calendar year. The delay of remitting the funds was due to internal procedures involving different national authorities. It was agreed that should there be a further delay the system would be hosted by the Islamic Republic of Iran. The WGA acknowledged that the legal and policy framework project proposal remained a major regional priority and agreed to actively seek funding support from the Commission members as well as to approach regional donor agencies through the coordination of the RECOFI Secretariat. Other activities discussed at the meeting included the introduction of exotic species to the region and the preparation of a regional technical workshop on marine stock enhancement and artificial reefs. The WGA reviewed and adopted the structure of the technical guidelines for the control and responsible use of alien species in fisheries and aquaculture drafted by the Fisheries Department of the Food and Agriculture Organization (FAO) and other organizations in support of the Code of Conduct for Responsible Fisheries (CCRF).

This publication can be downloaded in pdf at the following website:

<ftp://ftp.fao.org/docrep/fao/008/a0386e/a0386e00.pdf>

FAO/General Fisheries Commission for the Mediterranean. 2006. Report of the Experts Meeting for the Re-establishment of the GFCM Committee on Aquaculture Network on Environment and Aquaculture in the Mediterranean. Rome, 7-9 December 2005. *FAO Fisheries Report*. No. 791. Rome, FAO. 60p.

The Experts Meeting for the Re-establishment of the (General Fisheries Commission for the Mediterranean) GFCM Committee on Aquaculture (CAQ) Network on Environment and Aquaculture in the Mediterranean (EAM) was held in Rome, from 7 to 9 December 2005. The meeting was attended by 13 experts from the region. The EAM Network, created in 1992 following the Mediterranean Regional Aquaculture Project (MEDRAP), ceased to operate as an effective network in 1996. The present experts meeting took place following a decision by the GFCM at its twenty ninth session. The meeting was called to update the terms of reference of EAM and identify short and medium term activities. The experts suggested that EAM be re-established as a subsidiary body of GFCM CAQ. It was envisaged that the restructured EAM would work through the following four working groups dealing with:

- (i) harmonization of environmental regulation and standards for aquaculture;
- (ii) scaling aquaculture environmental interactions;
- (iii) integrating aquaculture within a coastal zone management framework; and
- (iv) public perception of aquaculture in relation to environment.

This publication can be downloaded in pdf at the following website:

<ftp://ftp.fao.org/docrep/fao/009/a0466e/a0466e00.pdf>

Coche, A.G. (comp.) 2006. An indexed list of FAO publications related to aquaculture, 1964-2005. FAO Fisheries Circular. No. 924, Rev. 2. Rome, FAO. 111p.

A bibliographical list of about 970 FAO documents related to aquaculture and published during the period January 1964-November 2005. Their availability online on Internet and/or in pdf format (since 2001) is given as well as additional information on Web sites of interest (42) and available CD-ROMs (15). Author, geographic, taxonomic and subject indexes provide further assistance in locating the information required.

This publication can be downloaded in pdf at the following website:

<ftp://ftp.fao.org/docrep/fao/009/a0524e/a0524e00.pdf>

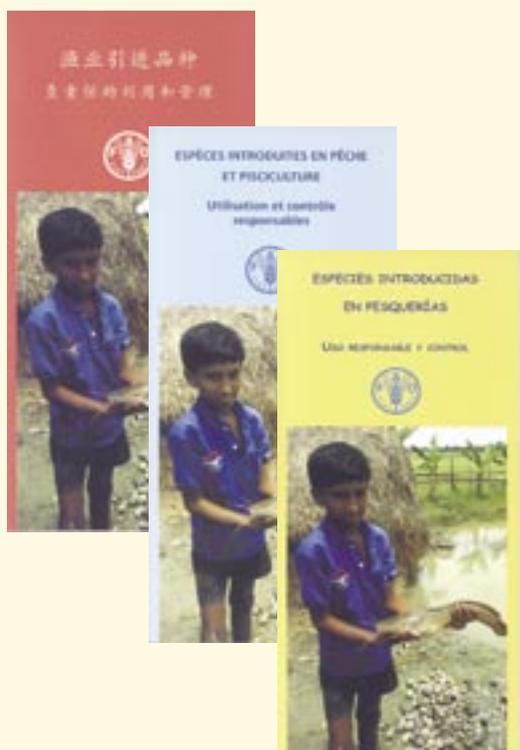


FAO Fisheries Technical Paper 476: Introductions and movement of two penaeid shrimp species in Asia and the Pacific are now available in Spanish and Chinese languages.

Other recent publications in Chinese languages are:

FAO Fisheries Technical Paper 428: Farming freshwater prawns: A manual for the culture of the giant river prawn *M. rosenbergii* by Michael B. New.

FAO Fisheries Technical Paper 451: Surveillance and zoning for aquatic animal diseases by Rohana P. Subasinghe, Sharon E. McGladdery and Barry J. Hill (editors).



Introduced Species in Fisheries: Responsible Use and Control - a brochure presenting some socio-economic impacts, biodiversity impacts of Alien species, what decision-makers and FAO can do, are now available in French, Spanish and Chinese languages

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Halwart, M. and Moehl, J.F. (eds). 2006. Cage culture in Africa. Proceedings of the FAO Regional Technical Expert Workshop held in Entebbe, Uganda. 20-23 October 2004. FAO Fisheries Proceedings 6. Rome, FAO. 104p.



# FAN

## **FAO Aquaculture Newsletter**

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The FAO Aquaculture Newsletter (FAN) is issued two times a year by the Inland Water Resources and Aquaculture Service, Fishery Resources Division, of FAO's Fisheries Department, Rome, Italy. It presents articles and views from the FAO aquaculture programme and discusses various aspects of aquaculture as seen from the perspective of both headquarters and the field programme. Articles are contributed by FAO staff from within and outside the fisheries Department, from FAO regional offices and field projects, by FAO consultants and, occasionally, by invitation from other sources. FAN is distributed free of charge to various institutions, scientists, planners and managers in member countries and has a current circulation of about 1,500 copies.

It is also available on the FAO Web page:  
[www.fao.org/f/newslet/newslet.asp](http://www.fao.org/f/newslet/newslet.asp)

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