

## Community Project to Safeguard Fish Stock

Inshore fishers and 50 secondary school students braved the mud to plant 5,000 mangrove saplings in Sungai Chenaam, Penang, Malaysia recently. This project was initiated by the Penang Inshore Fishermen Welfare Association (PIFWA). The planting took place on 11 August 2001 with the assistance of the Penang Forestry Department.

The mangrove-replanting project is inspired by two replanting activities held in the year 2000. These activities were well publicized, encouraging active discussions from the public. There are only 900 ha of mangroves left in Penang with 451 ha gazetted as forest reserve. The mangrove forest in Sungai Chenaam is about 300 ha.

Inshore fishers regard mangrove areas as a natural heritage that serves as an important breeding, feeding and nursery ground for many commercially important fish, prawns and shellfish species. They also provide shelter for wildlife, recycle nutrients and maintain the ecosystems of other wetlands.



*The mudflats did not deter these students from giving their hand at helping to rehabilitate a mangrove area in Sungai Chenaam.*



*Haji Saidin Hussain, President of PIFWA giving the theme 'Leadership By Example' a boost.*

## Second International Conference on the Straits of Malacca Tropical Marine Environment 'Charting Strategies for the Millennium' October 15-18 2001

Changes and impacts on the natural heritage of the coastal states of Malaysia, Indonesia and Singapore were discussed by delegates at the four-day Second International Conference on the Straits of Malacca Tropical Marine Environment - Charting Strategies for the Millennium, held in Penang,

Malaysia, in October.

Since the middle of the twentieth century, the growth of economies, trade and human populations has put great pressure on the natural resources of the Straits.

'Science can help in many ways' said Dr Meryl Williams, Director General of ICLARM – The World

Fish Center, in her keynote speech. 'The link between science and society is becoming more vital. Scientists need to be closely involved with local, state and national governments, sometimes the private sector and their representatives, and non-government organizations representing stakeholder interests.'

In the Straits of Malacca, scientists have helped resolve the conflicts over fisheries resource allocation by presenting the decision makers with the facts on the state of the stocks and the need to act.

Environmental scientists and economists are beginning to help policy makers resolve questions over values of different uses of the Malacca Straits environment. Researchers are concerned that policy makers need to give more weight to non-market values provided by wetlands, mangroves and coastal resources.

Scientists can help create solutions for problems and new options to sustain the Straits heritage, for example, new natural resource management plans and policy options, new sustainable aquaculture technologies and innovative models and approaches to managing risk, for example of oil spills.

‘To be effective in the policy process, scientists and the organizations that employ them must understand the policy and decision-making processes,’ Dr Williams added.

The conference was organized by the Universiti Putra Malaysia, Malaysian Straits Research and Development Centre (MASDEC), and the Universiti Sains Malaysia, in collaboration with the Department of Fisheries, Malaysia, ICLARM – The World Fish Center, and the Malaysian Fisheries Society. Conference sponsors were the Japan International Cooperation Agency and the GEF/UNDP/IMO Regional Program on Partnerships in Environmental Management for the Seas of South East Asia.

## Second Meeting on Marine Protected Areas in Malaysia at ICLARM-The World Fish Center, 19 October 2001

On 14 March 2001, ICLARM – The World Fish Center, in collaboration with the Fisheries Research Institute (FRI) Malaysian Department of Fisheries, Universiti Putra Malaysia (UPM), and the Universiti Sains Malaysia (USM) convened the first meeting on Marine Protected Areas (MPAs) in Malaysia to identify potential areas for collaborative research on MPAs in Malaysia. As agreed during the first meeting, the group decided to convene a follow-up meeting on 19 October 2001 to further identify and develop research topics to form an attractive proposal for collaborative work on MPAs in Malaysia.

The following areas were identified by FRI, UPM, USM and ICLARM as a preliminary list for future research activities that either 1) provide important information for establishing MPAs, or 2) assess the effectiveness of MPAs.

- Mapping of habitats (mangroves, seagrass) thought to be important as nursery areas for fish and shrimp.
- Sampling of the nursery habitats over large temporal and spatial scales to determine which ones

consistently receive good numbers of recruits and therefore should be a priority for protection.

- Document indigenous knowledge on where fish aggregate to spawn to assist in the identification of spawning areas to be protected as MPAs.
- Describe the structure of stocks of commercially important fish and invertebrates such as grouper, *Stolephorous*, *Leiognathus splendens*, *Lates*, *Scylla* spp, to determine whether more than one population exists for Malaysia, and whether stocks are shared with neighbouring countries.
- Analyse the TrawlBase database to see whether the length frequency distributions reveal areas where juveniles and adults are more abundant, (as a guide to the location of nursery and spawning areas.
- Analyse/compile existing oceanographic data (including those held by the navy) and conduct new oceanographic research near existing and proposed MPAs, to determine the major coastal current patterns so that dispersal of larvae from MPAs can be predicted.

- Conduct sampling of fishes at Pulau Sembilan island group, and at a series of control sites, before and after an MPA is declared there, to test the hypothesis that establishment of an MPA will lead to an increase in catch of *Stolephorous*.
- Develop a long-term monitoring program to compare biodiversity, coral cover etc. at existing MPA and non-MPA areas.
- Stakeholder analysis to assess the user’s needs and understanding of benefits of MPAs and their distribution.
- Development of indicators to measure the effectiveness of MPAs.

The group also agreed that the overall theme of the research activities was aimed at understanding the contribution of MPAs to fisheries and designed to complement existing initiatives of the use of MPAs to maintain biodiversity, and improved management of MPAs. A research proposal will be developed by FRI in consultation with UPM, USM and ICLARM and a potential donor will be identified.

## Strategies and Options for Increasing and Sustaining Fisheries and Aquaculture Production to Benefit Poor Households in Asia

ICLARM – The World Fish Center and partners in 9 Asian countries with partial support from a regional technical assistance grant (RETA) from the Asian Development Bank (ADB) has embarked on a project to assess the fish supply and demand in Asia in 2015 entitled “Strategies and Options for Increasing and Sustaining Fisheries and Aquaculture Production to Benefit Poor Households in Asia”. The Project is being implemented in nine developing member countries (DMCs) in Asia namely, Bangladesh, Sri Lanka and India from South Asia, Indonesia, Malaysia, Philippines, Thailand and Vietnam in South East Asia and China in East Asia. The general objectives of the project are to assist DMCs in (i) developing appropriate strategies for helping poor (often-landless) fisherfolk to escape poverty, and (ii) identifying appropriate fish species and technologies in aquaculture and fisheries management to increase fish production and improve the income and nutrition of poor fishers and fish farmers and to protect the fisheries resources. The duration of the project is from March 2001 to February 2004. Financial grants were provided by the Asian Development Bank, other core donors of ICLARM and by the governments of the participating countries. ICLARM has established a project office at its headquarters in Penang, Malaysia.

On 21-24 August 2001, the first workshop of the project was conducted in ICLARM Headquarters, Penang, Malaysia. This Inception Workshop was attended by 60 research scientists composed of 45 representatives from the partner countries, two from JICA and 13 from ICLARM. The



general objective of the Workshop was to discuss and finalize the methodologies, analytical framework, survey design and implementation arrangements including a detailed workplan for the Project. The project webpage was inaugurated by the ICLARM's Director General, Dr. Meryl J. Williams and activated during the Opening Session of the Workshop. The webpage is a useful communication and information tool not only to the project collaborators but to other research scientists as well. The complete address of the webpage is <http://www.cgiar.org/iclarm/demandsupply/index.htm>.

The scope of research, training and workshops under the Project has been elaborated by identifying five interrelated components. These five major research activities are:

(i) Profile of Key Aquaculture Technologies and Fishing Practices, (ii) Analysis of Policies, Institutions, Support Services and Infrastructure in Fisheries and Aquaculture, (iii) Socioeconomic Profile of Major Stakeholders (Producers,

Consumers, Traders) in Fisheries, (iv) Analysis of Fish Supply and Demand and Projections and (v) National Action Plans.

The major elements of the work program during the three-year implementation are:

- Compilation of available literature on aquaculture technologies and capture fisheries practices, policies, institutions, infrastructure and support services to fisheries including aquaculture, supply and demand studies and other fishery management references
- Review and evaluation of existing policies, institutional framework, infrastructure and support services to fisheries and aquaculture
- Review methodologies and available data and information relevant to the socioeconomic profile of major stakeholders and the supply and demand analysis components
- Provide technical guidance on the implementation of the socioeconomic profile and

- supply and demand analysis research components to each partner country
  - Participate in national workshops
  - Organize and conduct regional workshops
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## Bureau of Agriculture Research (BAR) Organizes Consultation with Future Harvest Centers in the Philippines

The Bureau of Agriculture Research (BAR), Philippines, held the 2<sup>nd</sup> International Agriculture Research Day on 3 October 2001. This event was held in conjunction with the annual National Agriculture and Fisheries Research and Development Week. In line with its overall mandate to ensure that research in the Philippines is coordinated and undertaken for maximum benefit to the agriculture and fisheries sector, the BAR organized this special day. The aims were to hear from the international research centers which have been conducting work with institutions in the Philippines the most recent advances in their research, to review work that has thus far been done with these research institutions in the country, and to provide a forum to discuss of future plans which could be carried out in coordination with the various research networks the bureau has established.

“New Science and Tools for Food

Security and Poverty Alleviation in the Countryside” was the theme of this year’s symposium. Dr. Boris Fabres and Ms. Menchie Ablan represented ICLARM – The World Fish Center at the symposium which was attended by five Future Harvest Centers: the International Rice Research Institute (IRRI), the International Livestock Research Institute (ILRI), Centro Internacional de la Papa (CIP), and International Plant Genetic Resources Institute (IPGRI). Philippine Vice President His Excellency Teofisto T. Guingona, Jr. gave the keynote address which primarily emphasized the key role of modernization and the use of research information in agriculture to increase national food security. He expressed the government’s support for R&D particularly in agriculture.

Dr. Fabres presented the paper “New Aquatic Science Tools and Partnerships for Food Security and Poverty Alleviation” which discussed

The World Fish Center’s operations and partnerships and its commitment to continue to address poverty alleviation and food security issues particularly for small-scale fisheries and aquaculture stakeholders in developing countries. The Center does this by providing new knowledge made freely available as international public goods (e.g. global databases and models of aquatic ecosystems and their use, germplasm, and aquaculture practices for species useful to poor people). Discussions with National Agricultural Research System (NARS) representatives followed. Representatives from the Center met with the national representatives from the R&D networks for capture fisheries, aquaculture and food processing and discussed their current thrusts and possible assistance the Center may provide as well as the new role and activities of the BAR initiated networks.