Fish for All update

Fish as Food
Fish for Livelihoods
Fish and Environment

Fish Now Part of World Food Model:

Workshop on Global Fish Outlook for Developing Countries

I. Background

On 2 November 2002, around 70 participants representing researchers and policymakers from the academe, national institutions, regional agencies and donor community, and other CGIAR Centers gathered in the WorldFish Center to discuss the implications of global fish outlook in developing countries based on the results of projections for fish supply, demand, price and trade. The Workshop was the culminating activity of the project "Fish in Food: The Critical Role of Fish in World Food Issues" jointly undertaken by researchers from the International Food Policy Research Institute (IFPRI) and WorldFish Center. The Workshop was jointly organized by WorldFish and IFPRI through support from the Australian Centre for International Agricultural Research (ACIAR) and the International Development Research Centre of Canada (IDRC). The Project is an attempt to raise the issue of fish into national and global debates about food and agriculture and analyze the factors that either help or hinder the continuing growth of fisheries in developing countries.

The main objectives of the Project were to:

1. incorporate fisheries into IFPRI's comprehensive global food model for projecting food demand and supply to 2020; and
2. analyze the context of rapid changes in world demand for fish, and the long-term contribution aquaculture will make to global food supply and demand patterns.

Specific objectives were to:

1. better integrate fisheries into broader discussion of world food issues;
2. illustrate the key role of aquaculture and its interactions with other food sectors;
3. quantify price interactions of major fisheries product categories with each other and with major meat; and
4. provide scenarios for fish supply, demand, trade and prices to 2020.

In addition, the Project examined comprehensively the relationship between aquaculture and nutrition, food security, poverty alleviation, trade, environment, public health/food safety, and technology issues in developing countries. It also analyzed the significance of the rise of aquaculture and its trade-offs and complementarities with the rest of fisheries. An in-depth analysis of these issues was done in the course of project implementation and became the basis of the working group discussions during the workshop.

IV. Workshop Sessions and Discussions

Using different assumptions about resource, ecology and technological development for supplies from capture fisheries and aquaculture significant price and quantity changes were projected by the model. For example, under the most likely scenario prices for high-value food fish would rise by 15 per cent and prices of low-value fish such as carp, milkfish and tilapia would increase by 6%. On the other hand, substantial part of increased demand will arise in developing countries such as China and those in Southeast Asia and South Asia. The Workshop raised questions, whether rising prices will drive fish out of the reach of growing poor people who rely on the sea for their protein.

Chaired by Dr. Robert Kearney, Professor from University of Canberra, Australia and Chair of the Board of Trustees of WorldFish, the main speakers of the Workshop were Dr. Mahfuzuddin Ahmed, Principal Social Scientist from WorldFish Center and Dr. Chris Delgado, Senior Research Fellow from IFPRI.

The Technical Sessions dealt with the emerging issues on food security, environmental sustainability and technology needs and prospects.

1. *Nutrition, food security and poverty alleviation*. Questions on (a) the composition of target fish species and/or fish groups; (b) competition-substitution effects among fish species and fish groups; (c) roles that market changes will play in changing the species combination or species selection in aquaculture; and (d) implications of high-value aquaculture
2. *Environmental sustainability and public health*. Questions include (a) lessons learned about the way aquaculture interacts with the environment (concentrations of organic material, polluting chemicals, and toxins in water) and public health/food safety (disease transmission at the harvest and postharvest levels); and (b) what are the issues identified in public health and food safety for consumption and trade.

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The Fish for All Summit was supported by:

3. *Technology needs and prospects.* Discussions revolved on (a) the kind of technologies needed to deal with environmental and health risks; and (b) scope for increasing production through technological change in this fast-growing commodity area.

In relation to this, two keynote papers were presented in Session 2. These are 1) Trends and Development in Fisheries - Priorities for Policy Research in Developing Countries by M. Ahmed; and 2) IMPACT Model and Fish to 2020 Scenario by C. Delgado. The discussions highlighted the following points: (i) institutions and policy shifts as the main driving forces for the change in agriculture in China; (ii) implication of the fish price increase vis-à-vis the low value fish (LVF) for the poor; (iii) country categories for the IMPACT model; and (iv) issue of bycatch was not considered in the Model.

The second part of Session 2 focused on the implications of the model projections on food security and poverty elimination, and consequences on environment, public health and on the needs for technology development in aquaculture and fisheries. Below were the highlights of the discussion:

(i) There are three different ways to increase and sustain aquaculture production namely: a) increase intensification; b) reduce inefficiency in production systems through better extension system that can increase production with increasing yield frontier and c) shift in production frontier.
(ii) Fishmeal and fish oil were included in the sector and are expected to have technological changes in fisheries thus influencing the fishmeal and fish oil scenario.
(iii) Researchers are encouraged to examine technologies that are more ecologically friendly for the small-scale farmers, fishers and aquaculturists. Likewise, institutions should promote these environment-friendly technologies.
(iv) The critical role of commercial markets was emphasized where the small-scale traders should be involved.
(v) Enhancement of culture-based fisheries and stocking both in marine and freshwater fisheries.
(vi) Small-scale fisheries - price scenario: high-value fish (HVF) has higher price growth vs. low-value fish (LVF). HVF were produced more by developed countries while LVF produced in developing countries creating the gaps in trade values. Thus benefits from trade were realized more on developed compared to developing countries.
(vii) The Model is more responsive to aquaculture as compared to capture fisheries in terms of price changes. Thus as price for farmed fish species rise, capture fisheries price decreases with increasing fishing effort. However this is not always the case as in the case of salmon which is both farmed and capture and thus not a perfect substitute to each other from the market.

The third session discussed the major issues that should be addressed by further research, policy actions and dissemination. Two concurrent group discussion sessions were held. Outputs of each discussion group were presented during the Plenary Session.

Group 1 – Policy Research Priorities

Overall Discussion

- Recognized the value of global IMPACT model and broad implications for future resource and market interactions.
- Concerned about the poor people and supply for human benefits; also in the interest of aquatic resources conservation and the difficulty of picking up these features within a larger scale approach.
- A global model can be used as a guide, however can this be taken down to the regional and national levels?
- Expect significant differences in context and implications and these differences need to be explored.

Group 2 – Action and Dissemination Strategies

Possible Actions Required

- Greater commitment by governments to reduce overcapacity in the fishing industry, including mechanisms and means.
- Further devolve the laws, policies and institutions at national and local levels to correspond to the international regimes such as EEZ and UNCLOS.
- Improve the national data on aquaculture production and fish consumption through household sample surveys.
- Greater commitment from the international donor community to put resources for research and policy advocacy to improve the state of fisheries resources.

Mechanisms or Dissemination Strategies

1. Regional and national summits are needed for improved management of fisheries.
2. Improving fisheries governance at the local and national levels through increased dialogue with a broad range of stakeholders.
3. Secure resources from other sections of the society.
4. Disseminate widely the findings of the Fish to 2020 IMPACT Model results using key pressure points such as the media, government planning units, NGOs, and through regional and international organizations.
5. National workshops to a wide range of stakeholders on the outcome of the research.
6. Establish knowledge-based systems on internet complimented with CD Roms describing the outputs of research and implications for fisheries policies and actions required by the government.

A project report entitled "Fish to 2020: Supply and Demand in a Changing World" by C. Delgado, N. Wada, M.W. Rosegrant, S. Meijer and M. Ahmed will be published jointly by IFPRI and WorldFish Center by mid-2003.

Water and Fish Summit in Philippines

Philippine Council for Aquatic and Marine Research and Development
Department of Science and Technology
Los Baños, Laguna Philippines

Dr. Meryl Williams, Director General, WorldFish Center delivering keynote speech in Water and Fish Summit, Philippines

Recognizing the urgency to ensure water conservation and water sources clean, the United Nations declared 2003 as the "International Year of Freshwater". This declaration aims to raise awareness of the water problem and bring governments, the private sector and non-profit groups together to find ways to ensure water conservation and keep water sources clean.

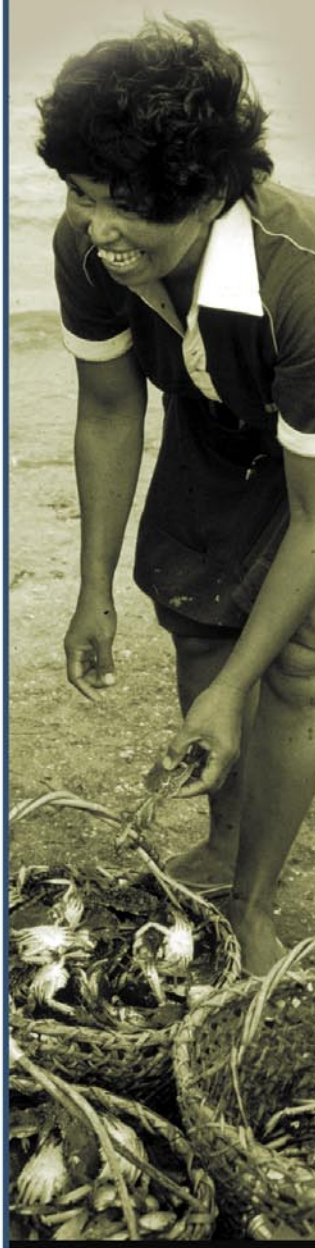
Fish is an equally vital resource, for food production and security. Protecting water and aquatic resources and ensuring availability of food and fish in a sustainable manner are among the top action agenda at the World Summit for Sustainable Development (WSSD) held in Johannesburg, South Africa in 2002. To help address fish-related issues and instill urgency into the issues identified in the WSSD, the WorldFish Center launched the Fish for All Initiative in November 2002.

Cross section of participants in Water and Fish Summit held in Laguna, Philippines on 30 January 2003

The Philippines held its 'WATER AND FISH SUMMIT" on 30 January 2002 in response to its commitment to the WSSD, translating into the national context, the action agenda for the sustainable of development of water and aquatic resources. The Summit which was organized by the Philippine Council for Aquatic and Marine Research and Development (PCAMRD) in collaboration with the Bureau of Fisheries and Aquatic Resources (BFAR) and the National Academy of Science and Technology aimed to highlight the global and national scenario on the status of water and fish resources in the Philippines and identify major issues and courses of action until 2020 and beyond to ensure the sustainable development of these resources. Over 190 participants from academic institutions, government and non-government organizations, international organizations, media, and representatives from the private sector attended the summit.

Dr. Meryl Williams, Director General of the WorldFish Center, in her Keynote Speech expounded on the challenges of water and fish security: effective human and science capacity and institutions; strategic vision and direction for the sustainable management of water and fisheries; and follow-through in implementing the plans and policies of the vision. While Philippines has great strengths in each of the elements, the challenge is to ensure the right implementation. Dr. Perla D. Santos-Ocampo, President of the National Academy of Science and Technology, opened the Summit with notes on the importance of water in health and nutrition. Panel discussions for water and fish sectors were held and focused on the status of resources, policies, programs and major issues for each sector and recommendations for the sustainability of the country's water and fish resources until 2020 and beyond. Workshop sessions were conducted separately for the water and fish sector groups to determine priority issues and identify specific action plans for each sector.

At the Summit's closing, former senator Leticia Ramos Shahani inspired the audience to develop a keen appreciation of the Philippines as a



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" water and fish country" and to work on the implementation of the Philippine Fisheries Code which provides the policy and institutional framework to address pressing problems on fish and water resources.

In summary, the summit has revealed that

- Out of 400 rivers in the country, 50 are considered polluted, and 40 are classified as dead. Laguna de Bay is among the most polluted inland water bodies with 1 481 industrial firms, mainly food processing, chemical manufacturing, and metal fabrication companies using the lake and its tributaries as sink for their wastewater. Liquid waste is considered the most serious source of river pollution.
- Manila Bay is rated as one of the most polluted coastal areas in the Philippines with estimated total organic matter load equivalent to 250 000 tons of biological oxygen demand per year. The Bay is experiencing occurrences of harmful algal blooms contaminating shellfish from the Bay with fatal algal bloom and fecal coliform bacteria.
- Philippine mangroves which originally occupied 500,000 ha have been reduced to 120,500 ha mainly due to conversion to aquaculture ponds. Over 90% of reefs area is threatened and their overall health status is on the decline. Seagrass beds are threatened by loss of mangroves, coastal development and mining.

The workshop recommendations include

- Creation of a national vision, awareness and appreciation of the Philippines as a "water and fish" country.
- Effective implementation of R.A. 8550 or the Philippine Fisheries Code. Create an Oversight Committee to evaluate the extent and impact of implementation/non implementation of the Code.
- Development of a unified plan for the fisheries sector and stronger lead role for BFAR in pursuit of sustainable use and development of fisheries and aquatic resources.
- Pursuance of the reorganization of the National Water Resources Board to strengthen its power to implement the Water Code of the Philippines.
- Undertaking Research and Development for the use and re-use of irrigation water for aquaculture and reducing salinity intrusion and water drawdown caused by aquaculture.
- Development of master plans for water resources development and management in areas experiencing water shortage.

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