Report

IIFET2002 Conference

Global economy, global fisheries?

An account of the 20th anniversary conference of the International Institute of Fisheries Economics and Trade

The International Institute of Fisheries Economics and Trade (IIFET) is an organization primarily for fisheries economists. Its 20th anniversary conference, IIFET2002, was held in Victoria University in Wellington, New Zealand from 19-22 August 2002. Delegates from over 40 different countries represented numerous occupations and fields like pure economics (including those who advocate perspectives of property rights distributed by market-based regulation), fisheries management, regional and national fisheries organizations, seafood industries, environmental organizations, national and State governments. This diversity meant that the conference's principal topic, 'Fisheries in the Global Economy', was as dynamic as the setting.

Presentations, discussion and debate centred on the following themes:

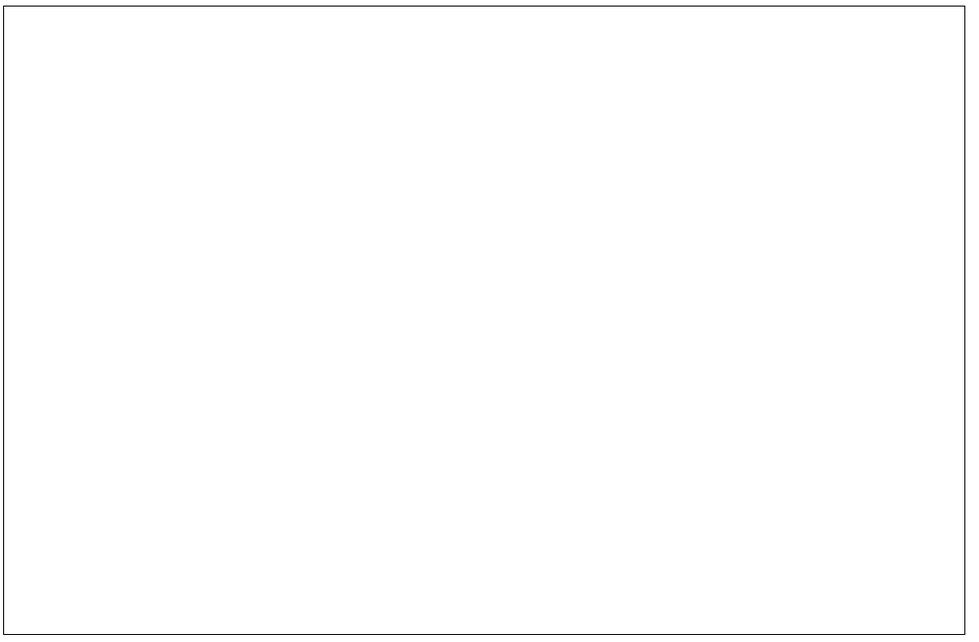
1. The international seafood trade: rules-based reform
2. Economic solutions to customary, aboriginal and traditional fishing rights issues
3. Fisheries management through regional fisheries organizations
4. Ecosystem and oceans policy approaches to fisheries management
5. Aquaculture
6. Marine resources for recreation and tourism
7. Theoretical and empirical bioeconomic management
8. Future paths for rights-based fisheries management
9. Co-management: devolution and beyond

Lead speakers presented the conference with an overview to delineate issues and offer challenges. But, with at least three of these themes running concurrently and three additional special topics, it was impossible to cover all the important papers. My choices were shaped by my areas of knowledge and belief that individual transferable quotas (ITQs), co-management and aquaculture were the topics likely to have most direct implications for small-scale fisheries in developing countries. Brian O'Riordan's report in *SAMUDRA Report* No. 32 on ITQs quotas in Chile confirmed the fear that ITQs could enable corporate and large-scale fishers to gain access to artisanal fisheries.

While it was stated at the conference that management using ITQs are not appropriate in artisanal fisheries, it was overlooked that individual quotas, as in this case, are already being issued for species on which artisanal fishers also depend. Co-management has been regarded as an alternative to rights-based management that is more appropriate for small-scale fisheries and fishing communities, while the exponential growth of aquaculture will have profound impact on capture fisheries, especially in inshore areas.

Rights-based management

Significantly, IIFET conferences have been important forums for the development of fisheries management with ITQs, now commonly referred to as 'rights-based management' (RBM). New Zealand has hosted two conferences, the first in 1984, held just as the deep-water fisheries were being privatized and ITQs were being debated for the coastal fisheries. Since



some of the major theoreticians and prominent developers of ITQs were also at that conference, there appears to be a profound relationship between key IIFET members and the development of New Zealand's Quota Management System (QMS) that uses ITQs. Now, two of them were here at IIFET2002. Lee Anderson, President of IIFET, opened the conference, while Peter Pearce, Emeritus Professor, University of British Columbia, was keynote speaker for Theme H: Future Paths for Rights-Based Fisheries Management.

Pearce had not only co-authored one of the most significant papers leading to the introduction of ITQs, but he had also wrote the 'Pearce Report' reviewing current States and a call to "build on progress", concluding that the fishing industry should be more involved in fisheries management, and further defining stakeholders' and community rights, recommendations that were incorporated into the 1996 Fisheries Act.

The majority at the conference seemed to accept, if not strongly advocate RBM. From the perspective of economists and industry spokesmen, it was regarded as 'strengthening the rights' and, from the point of view of social scientists and the few community representatives, as 'closing the commons'. In his keynote speech, Pearce noted that ITQ systems have expanded exponentially. There are now 200 ocean species 'ITQed' and Australia, New Zealand, Netherlands, Greenland and Iceland use ITQs, while Canada and Chile have individual quotas in some fisheries. There were problems, biggest for fishermen being initial allocation, while displacement of fishermen and communities were the biggest for others.

The economists at IIFET2002 did little to deal with such negative externalities. Indeed, Lee Anderson felt that the problems were exaggerated and each fishery is different. Pearce, in turn, asserted that documentation provides a convincing conclusion that RBM is successful in reducing the depletion of fish stocks and poor economic performance. In particular, he cited the paper of Ragnar Arnason, Professor of Fisheries Economics, University of Iceland, comparing ITQs in four countries—Iceland, Greenland, Holland and New Zealand—which claims that, with ITQs, average catch per gross registered tonne doubled, and average catch per fisherman is thrice that in non-quota countries, and that ITQs are the only fisheries management system that can provide these successes.

Maximizing value

ITQs, he argued, can strengthen the economics of fisheries organizations due to the alignment of individual fisheries with positive incentives, elimination of

fishing costs and maximizing the value of the catch. ITQs strengthen fishermen's property interests in fisheries through the exclusivity, duration, security and transferability of the rights.

New Zealand has used ITQs to manage fisheries comprehensively, but was criticized for getting on with the job and not analyzing the issues or disseminating the experience. Pete Hodgson, New Zealand's Minister of Fisheries, in his plenary address, was at pains to present a favourable perspective, noting that many scientists from both New Zealand and overseas would be presenting papers on the country's experience, and hoped that this would redress the lack of information.

He stressed the economic benefits of ITQs to the seafood industry. The security and business confidence that ITQs provided companies with, enabled them to make large investments in quota, vessels and equipment so as "to produce value-added products for specific export markets".

While not referring to the concentration of quota, he claimed, more controversially, that given the decline of the owner-operator sector of the industry, good results were also generated in the social area. Some aspects of management had been devolved from government to industry. For example, the registry that tracked quota ownership and catches was now operated by an industry-owned company.

The minister also attributed the ITQ system with the resolution of Maori claims to the fishery. It 'precipitated', he said, "successful claims by Maori against the government for breach of the Treaty of Waitangi by preventing Maori from exercising their fishing rights...Operating within the ITQ system, the government bought quota from the industry and transferred it to Maori". He proposed "two areas for future development of rights-based management systems: first, the incorporation of ecosystem considerations into fisheries rights, and second, the extension of rights-based systems to incorporate other uses of the marine environment", and challenged delegates to determine how this could be achieved.

ITQ critic

The majority of presentations at IIFET2002 supported RBM, but a few were critical. Parzival Copes, Emeritus Professor of Economics, Institute of Fisheries Analysis, Simon Fraser University, Canada, perhaps the most prominent international critic of ITQs, noted that the terminology of 'rights-based' fishing wrongly restricted recognition of 'rights' to ITQ systems, whereas "any managed fishery has rights effects".

He compared application of limited-entry licences and individual quota management systems, each with transferable and non-transferable subsystems for the management of different types of fisheries in industrialized countries. He concluded that the most appropriate fisheries using ITQs were large-scale industrial fisheries for low-value stocks.

Concentration of ownership of quota to bigger companies is one of the significant criticisms of ITQ systems. James Stewart and Peter Callager of UNITEC Institute of Technology, Auckland, New Zealand, analyzed quota concentration in New Zealand by identifying the top 10 species by volume and the top five species by popularity in terms of the domestic market and recreational fishing, and then calculated concentration measures for the top 20, 10 and four quota-owning and holding companies. They found that concentration of ownership had increased for all 15 species, that the New Zealand fishing industry has become more concentrated since the introduction of ITQs, that the most significant changes were for snapper and *tarakihi*, both coastal species important as recreational and retail species with high commercial value, and that concentration of ownership is greater in deep-water fisheries.

Clearly, under RBM, quota ownership and, therefore, the commercial fishing right has shifted from small-scale and community-based operators to the big companies. Would, therefore, the extension of RBM to other users of the ecosystem mean that rights to use and enjoy the marine environment would shift to larger-scale commercial and corporate entities in the same way?

Cath Wallace, Senior Lecturer in Public Policy and Economics, Victoria University of Wellington, New Zealand, pointed to a serious contradiction in New Zealand's rights-based system. She noted that the purpose of the New Zealand Fisheries Act 1996, the statutory framework for the QMS, provides for "the utilization of fisheries resources while ensuring sustainability" and that "ensuring sustainability" is defined as "maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and avoiding, remedying or mitigating any adverse effects of fishing on the aquatic environment". Yet, when she asked Ministry of Fisheries officials what provision had been made in the Act for that purpose, her question was regarded as malicious. Such a fundamental purpose —the sustainability of the marine ecosystem—was, for such a rights-based system, somehow so inimical to it.

Co-management has often been seen as an alternative to RBM, especially for indigenous peoples and fishing communities. For example, Oumarou Njifonjou, of the Fisheries Research Station, Cameroon, showed for the community fishery of Aby Lagoon in Côte d'Ivoire that co-management arrangements were evolving to facilitate an improved sense of ownership, empowerment and access of fishers and other stakeholders to resources—if poverty is not just low income but also loss of self-esteem and reputation, absence of education and healthcare or from prejudice and discrimination. Co-management arrangements here have also helped enhance sustainable livelihoods and coping mechanisms, alleviating the incidence of poverty in these communities.

Tracy Yandle noted that the literature has focused, as in Aby Lagoon, on co-management as arrangements combining community and bureaucracy-based management, but in New Zealand, co-management has developed out of a market approach. Here "non-core" management responsibilities have been "devolved" to quota-owning groups, which are defined in the legislation as stakeholder groups. She believes that a key foundation of co-management is that users have "a strong bundle of property rights".

Co-management

With RBM attracting increasing attention for global fisheries and so strongly advocated by the majority of delegates at such a prestigious conference as IIFET2002, does this mean that the definition of co-management becomes closer to participation by quota owners, as in New Zealand, to the exclusion of others? Will this mean that the economic benefits will flow increasingly to large-scale and

corporate entities to the detriment of small-scale fishers and coastal communities?

At the session on aquaculture, it was pointed out that aquaculture is either privately or corporately owned and, therefore, has major consequences for coastal ecosystems and communities. Plenary speaker Gunnar Knapp, Professor of Economics, Institute of Social and Economic Research, University of Alaska, showed the explosive growth of aquaculture and its impact on capture fisheries. While noting major environmental impacts such as spatial competition, alteration through the introduction of antibiotics and waste, the introduction of other species, and disease transfer, he claimed "the most significant effects of aquaculture on wild fisheries will be market effects, and their resulting political and management effects."

The direct consequences of aquaculture result in changes in the economic conditions, which affect "political support for wild fisheries, which, in turn, affect subsidies for wild fisheries and allocations between commercial and other uses of fish". The "direct effects of aquaculture", therefore, "lead to changes in the management of capture fisheries." Unlike capture fisheries, aquaculture has the ability to change with aspects such as feeding regimes, bio- or genetic engineering and the introduction of antibiotics. Aquaculture, therefore, has greater control over products. Aquaculture is market-driven, with potential market effects on wild fisheries far beyond increasing the supply of similar products. Not only can aquaculture supply what the market wants when it wants, but it can also create new products to meet existing demands, change consumer tastes and demands, and change short-term dynamics such as price cycles as in the meat and poultry markets. Indeed, large-scale aquaculture will "affect the distribution and retailing of seafood" and "change the balance of economic and political power in the seafood industry."

A special session was held on 'Fish and Food Security and Income in Developing Countries: Role of Growing Aquaculture and Changing Trade Regime'. In his introduction and overview, Mahfuzuddin Ahmed from ICLARM-The World Fish Centre, put Knapp's analysis into global and regional perspectives. He informed that such factors as liberalization and growth in fish production and trade have resulted in major structural changes over the past several decades in the world supply and demand for fish.

Aquaculture

In particular, improvements in "fish breeding and fish farming have made aquaculture the world's fastest growing

food-producing sector". In the developing countries, where fish exports are growing, this was even more dramatic than in the developed countries. Indeed, in the low-income food deficit countries (LIFDCs), fish is paying for growing food imports.

Among the developing countries, China has the biggest growth in per capita consumption. By comparison, in the developed world, capture fisheries are stagnating and overall fish production is declining, despite expanding aquaculture. Even so, the developed countries are benefiting at the expense of developing countries. Just what the consequences will be for ecosystems or downstream externalities are uncertain.

From his team's economic modelling, Christopher Delgardo, Senior Research Fellow, International Food Policy Research Institute, Washington, presented production and trade trends up to 2020. First, the production share of the developing countries will rise from 73 per cent in 1996-98 to 79 per cent in 2020, and about 5 of the 6 per cent increase in share will be accounted for by China.

Second, the share of aquaculture worldwide is projected to increase from 31 to 41 per cent by 2020. While China's share of food fish production from aquaculture will increase from 59 to 66 per cent, other developing countries' share of production from aquaculture will rise from 17 to 27 per cent, a larger relative change. The share of aquaculture will increase worldwide, but especially in the developing countries, and not just in China.

Third, the share of low-value fish in the total food fish trade is remarkably stable, at about 48 per cent The overall shares in total food fish production of high- and low-value finfish capture species will fall (by 4 and 6 per cent of total production, respectively), but the production shares of low-value finfish and (high-value) molluscs and crustaceans from aquaculture will rise enough by 2020 to compensate for this.

IIFET2002 concluded with a review of each of the conference themes by the plenary lead speakers, indicating either the points missed or putting forth a different perspective. Lori Ridgeway, Chairperson, OECD Fisheries Committee, referred to the engines driving fisheries—expanding aquaculture, declining capture fisheries, economic liberalization and trade expansion. The themes stressed sustainability, markets, health, products and the value chain. Apart from technical barriers to trade, the impacts of globalization on developing countries, and questions of integration of trade and management were also dealt with. The fundamental issue was managing resources to produce food and, while there is an opportunity to address management and trade in fish products, an integration of both is needed.

On 'Economic Solutions to Customary, Aboriginal and Traditional Fishing Rights', Tom McClurg of Ernst & Young, Wellington, New Zealand, said that the challenge issued by the Minister of Fisheries related not just to Maori and indigenous people but to the whole conference. There were four challenges: structure, training, co-operation and integration. The Waitangi Fisheries Commission, which manages the quota granted to Maori to settle their grievances, has set standards for the allocation of quota to Iwi (Maori tribes). Maori are new entrants into all parts of commercial fisheries, including fisheries management. The challenge is: how do customary rights integrate with commercial rights held by the same people? While New Zealand Maori fisheries attracted most attention, there were also interesting case studies presented for people from other countries.

Equitable allocation

The focus of 'Fisheries Management Through Regional Fisheries Organizations', said Michael Lodge, Legal Counsel, International Seabed Authority and Head of the Preparatory Conference for the Western and Pacific Fisheries Convention, was on the need to reform the existing organizations in terms of major challenges, how to apply ecosystem-based management, ensure equitable allocation and deal with free riders or non-members. High-seas property rights were seen as a possibility for overcoming management difficulties,

while UN proposals on high-seas property rights and trade measures could be used to deal with free riders.

Jonathan Peacey, Chief Policy Analyst, Ministry of Fisheries, New Zealand, summarizing the 'Ecosystems and Oceans Policy' theme, said it is imperative to incorporate ecosystem management into fisheries management. Ecosystems were dynamic, not static. Though changes were needed in institutional arrangements, costs would be problematic. Interaction with stakeholders was part of the process.

On the theme of aquaculture, Gunnar Knapp questioned the potential for economic development, especially with rapid economic change. How do we address environmental externalities? Associated problems are those of depressed world agriculture prices and trade conflicts. Finally, no capture fisheries will escape the impacts of aquaculture.

On the future paths for RBM, Jon Sutinen, Department of Enviromental and Natural Resource Economics, University of Rhode Island, said that we are learning more of the experience of 'strengthening the rights' (Peter Pearce) or 'closing the commons' (Bjorn Hersoug of the Norwegian College of Fisheries Science, University of Tromsø). Surprisingly, it was confessed that delegates do not have a good understanding of the opposition to strengthening RBM. There was discussion of institutional building and the design and implementation of new institutions, integrating non-commercial and non-extractive stakeholders in stronger RBM. There is tension in choosing between the government and the market in an either / or situation, but markets are social constructs for resolving conflict.

The mini-seminar on management of Pacific Islands fisheries showed their diversity, the extent of problems and interests shared, and the potential for development. Speakers talked of the widespread desire to develop local industries rationally and sustainably, that all those who fish in the Forum Fisheries Region, both local and foreign fleets, should play by the rules, while ensuring compliance and equitable returns from the resource. There is a need for developing regional co-operation by sharing access rights, and greater assistance required in management planning and training human resources.

The perspective on fisheries in the global economy, which I got from the conference, was one of rapid development of a 'rights-based' management where the essential 'rights' concerned are those of private or corporate ownership and where market values dominate. Indeed, 'rights-based' management, in keeping with other major global trends such as globalization, corporatization and liberalization, is being promoted as the solution to problems in fisheries management regionally, nationally and internationally. The explosive growth of aquaculture has been facilitated by being market driven and is even expected to influence the management of capture fisheries. Projections of present trends indicate that most growth in fisheries, especially in aquaculture, will occur in the developing world, particularly in China.

While co-management—in the sense of governments and local communities bearing a joint responsibility—and the aquacultural production of low-value species, do offer some hope for some of the world's poor, just what the consequences will be for the majority of the world's small-scale fishers and the communities that both support and depend on them was, however, an externality not generally considered.

In the end, IIFET2002 has strengthened, rather than alleviated, my concerns for the environmental and social aspects of fisheries.

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