

Summary of Presentations and Discussions of the Symposium on “What Are Responsible Fisheries?”

Summary of Dr. Kato’s Speech: Notes prepared by Rapporteur Suriyan Vichitlekarn

1. Dr. Yasuhisa Kato, Special Advisor, Southeast Asian Fisheries Development Center (SEAFDEC) made a keynote presentation. He briefly introduced SEAFDEC as the inter-governmental organization in fisheries in Southeast Asia. He outlined three interrelated approaches to assist the member countries in the implementation of sustainable fisheries in the region. They are the process of identifying regional priority issues, policy coordination and dialogues with the member countries, and implementation of the regional prioritized activities assisting the member countries.

- Dr. Kato referred to ‘external factors’, which could be used as driving forces to induce changes in fisheries policy and practices. He introduced the role of SEAFDEC in the promotion of implementation of the Code of Conduct for Responsible Fisheries in the Southeast Asia through a regionalization process considering the internalization of issues at the regional level. He gave examples of issues that developed at the regional level.
 - He expressed the need for quality statistics and information of fisheries and aquaculture to support better development planning and management of the industries
 - Different definition and application on the issue and terminology of by-catch in the tropical multi-species fisheries; small scale fishers in tropical areas depend on the by-catch, most of which is not the source of waste.
 - Ongoing overfishing and IUU fishing, which undermine the existing management framework and initiatives, continue to have impacts on fisheries industries as a whole including livelihoods of fishers.
 - A dilemma exists between the need for increasing production from aquaculture to compensate the declining production from capture fisheries vs. the need to mitigate environmental problems.
2. **Issues and challenges** to be addressed in future promotion of fisheries and aquaculture in Asia are:
- Holistic approach to development and management of capture fisheries, aquaculture and fisheries trade to sustain Asia as the global fisheries and aquaculture production base.
 - Due to interlink of fisheries and aquaculture within Asia and with other regions, there is a need for collaboration, possibly in the form of networks, in fisheries and aquaculture industries. This includes sub-regional collaborative networks such as South China Sea for fisheries and aquaculture as well as inter sub-regional dialogues.
 - There is a need for quality statistics and data to indicate status and trend of fisheries and aquaculture and facilitate development planning and management.
 - Cooperation, in contrast to competition, is needed among the Asian member countries to research the interrelation of fisheries and aquaculture to ensure their sustainable development.
 - Although there have been some initiatives in relation to this, there is still a need for more active roles in response to the need of the member nations.
 - There is a need for harmonization of trade policy among the countries within the ‘South’.
 - The Code of Conduct for Responsible Fisheries needs to be instrumental. There is a need to devolve the code to national and local levels of implementation.

3. In summary, fisheries management is conflict. This was reflected in all special sessions ranging from small-scale and industrial fisheries, aquaculture, and trade of fish and fishery products. How are conflicts solved? Should solutions be science-based or political? There are many questions to be addressed

regarding how to solve these conflicts. Who gains and who loses? The issue of governance should be addressed to promote transparency and participation to enhance the world's responsible fisheries.

4. Based on the priority issues clarified at the regional level, Dr. Kato further explained systems for policy coordination and dialogues among the member countries. He referred to the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region. The Resolution and Plan of Action were regarded as the regional common policy and guidelines for implementation adopted by high-level authority of ASEAN in 2001 to facilitate government actions toward sustainable fisheries. He referred to close cooperation between SEAFDEC and ASEAN to raise the priority issues for policy support and endorsement.

5. In line with the Resolution and Plan of Action, Dr. Kato further introduced a number of regional programs developed and promoted by SEAFDEC as a regional mechanism to support the Member Countries in the implementation of the Resolution and Plan of Action. These initiatives have substantially developed ownership of initiatives and encouraged joint efforts among the member countries in achieving sustainable fisheries. He concluded by giving emphasis on feed back mechanism to ensure relevance of initiatives and joint endeavors.

**Responsible Fisheries and the Role of Economics: Comments by Richard S. Johnston,
Oregon State University**

In his keynote address, Dr. Kato provided some most interesting insights into the many aspects of "responsible fisheries," especially in a regional context. His paper was entirely consistent with an observation he made in 1997 that "The Code of Conduct for Responsible Fisheries seeks to ensure that aquatic resources are exploited and utilised responsibly and in accordance with long-term principles of sustainability."

What is the role of economics in helping to achieve such a goal? In my view the greatest contribution of economists is likely to be made in the area of positive, rather than normative, economics. Dr. Kato alluded to this when he called for improved understanding of the socioeconomic implications of proposed policy actions.

As economists we can both generate - through conceptual models - and test, perhaps via econometrics, hypotheses that will improve our understanding of decision-making in the marine economy. Through the classroom, published papers, seminars and the like, we can share our findings with those charged with devising policies to promote responsible fishing.

But to understand decision-making generally means we need to understand decision-makers. And who are the decision-makers? They include consumers, marketers, producers, processors, fishery managers, trade policy-makers, to name a few. Their decisions help determine what's to be produced, what's to be consumed and the "rules of the game."

But this sounds like standard microeconomics, right? Yes, but in a circumstance where we know even less about a key resource than we think we know about land, labor and capital. But I am getting ahead of my story.

Back to those decision-makers. Consider the consumer. As economic analysts do we tell the consumer how to consume optimally? No, of course not. In fact, the consumer in our economic models is an analytical construct. We do not, in general, follow consumers around stores as they make their purchase decisions. Rather, we assume that they behave in a way that maximizes their satisfaction, subject to

budget, price, time and other constraints. Aggregating over all consumers (again, in our analytical models) and considering the impacts of "externalities" enables us to generate "demand curves" whose parameters can be empirically estimated. This, in turn, allows us to test, albeit indirectly, the assumptions we have made about consumer behavior.

This is the standard neoclassical model in which consumer choice is seen as a constrained optimization problem. This model has served us well but, in recent years we have realized the need to expand it to understand - or, at least, account for - apparent anomalies, such as preference reversals, non-market valuations and, my favorite, Giffen goods. Economics have found it helpful to borrow from the other social sciences to improve their understanding of consumer choice. This was recently made explicit when the Nobel Prize in Economics was awarded to a psychologist.

Economics has also been enriched via the insights of the other social sciences. Hasn't our understanding of open-access fishing benefited from the framework of political science (micro motives and macro behavior) and sociology (group behavior in coastal communities; decision-making within cooperatives)? And who has generated new insights into the workings of fish markets, including the Tsukiji fish market but the cultural anthropologist (In fact, Ted Bestor was one of the tour guides during our recent pre-conference visit.)

Similar arguments can be made with respect to decision-making by fishermen, processors, marketers and policy-makers. Economics borrow from - and often team up with - legal scholars, business theorists, geographers, even biologists, in trying to increase their understanding of choice, at both the individual and the aggregate levels.

My point is, perhaps, too obvious. It is simply that economics is growing and our understanding is becoming richer, in part through interaction with other sciences and through recognizing the limitations of our discipline - and, in my judgment, we can make our biggest contributions to the discussion of responsible fishing by continuing this pattern.

Let me give you some examples of the "gains from trade" with other social sciences from our own IIFET membership. At the first IIFET meeting in 1982, Jon Sutinen and Peder Andersen reported their work on enforcement costs in fisheries. Since then this work has taken off in several directions, including examinations of why fishermen - and, perhaps, people in general - break the law and, perhaps more important, why they don't break the law. This has led to explorations of the roles of religion, culture and other factors generally held to be outside the research arena of economics. In the process, the effort has increased our understanding of why some regulations are routinely violated while others are not.

And what about rights-based fisheries? Fishery economists have largely accepted the view that efficiency requires the strengthening of private property-like rights. Parzival Copes, however, has suggested that ITQ systems have both strengths and weaknesses and papers at this conference have reported on tests of some hypotheses emanating from his arguments. In addition, at least two papers have reconsidered the fee system proposed by Martin Weitzman and identified circumstances under which such a system may be consistent with sustainable fisheries.

At this and other IIFET conferences both ideas and empirical findings of the relationships between fishery management (responsible fisheries) and markets have been presented, ranging from consumer and industry responses to eco-labeling, to the efforts of wholesale buyers of seafood to encourage responsible fishing in order to assure themselves of a steady supply of fish for their restaurants and retail stores. Would interaction with management scientists help to enrich our understanding?

And there is a great deal we don't know. I am aware of two models by highly –respected economists that make opposing predictions about how effort in an open access fishery will respond to price changes. In one, it is predicted that higher prices will place more pressure on fish stocks as effort increases; in the second, it is predicted that lower prices will place more pressure on fish stocks because effort increase. The difference? The second assumes a backward-bending supply of labor: fishermen try to catch more to maintain their income levels. Would the behavioral sciences help us sort this out?

Then, what about decision-making by policy-makers? Gil Sylvia and his colleagues have proposed a trade-off analysis among competing objectives, not to formulate policy but to understand the process of making it. Kate Barclay suggests we can increase our understanding of decision-making across countries by becoming more familiar with the culture, institutions and history of the relevant countries.

Economics has even ventured into the “ethics” area to deal with perceptions of fairness – not to generate normative judgments but to try to understand decision processes. Decision-makers range from the consumer who thinks the price of a good is too high relative to some notion of a “fair price,” to the strategic game-player who, in a commercial setting, seeks to exploit a rival's sense of fair play.

It is a cliché to say we live in an era of change. During the pre-conference tours we witnessed new auction market institutions and heard discussion of the new trade arrangements that are emerging. At the conference we have learned that there is concern not only with responsible fisheries but also responsible aquaculture, including deep-sea aquaculture. There has been discussion of responsible trade policies that are sensitive to food security issues. We have also witnessed increased awareness of ecosystems, so that the focus has shifted, in many cases, away from exclusive attention to single-species fishery management. Another example of change was presented in Su-Chang Chen's analysis of e-learning by Taiwanese fishermen.

The list is long and ever-growing. We need to keep abreast of the new developments, including the policy actions to promote responsible fisheries. But I believe our greatest contribution, as economists, lies in the search to understand the underlying relationships that drive these changes and I feel we can be assisted in this through continued interaction with those in our sister sciences. There is no need to abandon our economic models but, by being open to alternative perspectives and to the potential gains from expanding our models, we minimize the likelihood of missing the forest for the trees.

I share the view of Jim Wilen, who, almost twenty years ago, called for a “fairly major shift in emphasis from normative modeling towards predictive models.” In my judgment it is the responsible thing to do.

**Discussion on “What are Responsible Fisheries?” Voices from the Floor: Notes prepared
by Rapporteur Suriyan Vichitlekarn, with Tadashi Yamamoto¹**

Based on the outcome of the special sessions and experiences presented during the Conference, the participants exchanged views, comments and proposals to clarify directions and approaches for effective implementation of responsible fisheries. Major areas and issues of discussion can be summarized as follows:

¹ This is the result of the panel discussion as well as questions and answers of the Symposium on “What are Responsible Fisheries” of IIFET 2004 Japan.

Sustainable Development of Fisheries has three different objectives, which are inter-related. Taking into account the multiple-species nature of resources in tropical countries, ways to develop eco-management should be sought in a practical manner.

- Sustainable development lies on three distinctive but inter-related objectives of social, economic and ecological aspects. Understanding of linkages and interaction among the three objectives including their implication for action towards sustainability of fisheries could serve a solid foundation to set course of action in balancing the objectives and applying management to achieve responsible fisheries. In addition, 'responsible fisheries' suggests perspectives to go beyond single species (resource-based) model of management to eco-system based management to address multiple uses of resources in a holistic manner.

Guidance on ways to implement the FAO CCRF is needed particularly for tropical developing countries

- Although the FAO Code of Conduct for Responsible Fisheries (FAO CCRF) was adopted in 1995, note has been taken of the slow progress in the implementation at the national level particularly in developing countries. Efforts should be exerted to clarify the concept of the FAO CCRF and its implications for actions at the national level, to develop national capacity in both institutional and human aspects required to support the effective implementation of the FAO CCRF, and to identify incentives for practicing responsible fisheries. In addition, cooperation and exchanging the above experiences and lessons learned could also enhance the promotion of the FAO CCRF.

Fisheries management within the EEZ of tropical developing countries has to be strengthened not only at the national level but also at the regional level.

- Devolution and decentralization of governance evolved since the adoption of UNCLOS Law of the Sea in establishing Exclusive Economic Zones (EEZs) in 1982 has set in motion a new era of fisheries governance. Considering differences in geo-biological aspects of fisheries particularly in developing countries and tropical areas, there is a need to clarify this concept to enhance the effectiveness fisheries management. Governance does not only imply a duty of national governments to be transparent in national policy formulation but also cooperation among countries in harvesting common or transboundary resources. Experience from various regions indicated that political will, effective communication and consultation processes in consensus building among stakeholders, ownership of initiatives are among crucial factors in achieving responsible fisheries. Understanding and applying local knowledge as well as social norms and regulations could also clarify adoptable rules and measures in managing fisheries to ensure compliance and cooperation. Consideration should be given to these areas in the future development of management approaches in fisheries. Understanding of how these factors influence fisheries as well as building an enabling environment to ensure favorable conditions and feedback mechanisms could enhance efforts in promoting responsible fisheries.

The conference considered the necessity of shifting from open access to limited entry by means of fishing right systems. However, it was concluded that further in-depth study is required.

- In contrast to the open-access regime of fisheries management, which is believed to contribute to unsustainability of fisheries, the rights-based fisheries concept was generally accepted as an approach to tackle the problem of "Tragedy of the Commons". However, clarification on the implications for institutional reform and restructuring of fisheries industries from production to distribution levels should be considered. Efforts to explore various forms of rights systems and the ways in which they are introduced and implemented including impacts on sustainability of fisheries should be promoted.

- ‘Responsible fisheries’ also implies rights of consumers to high quality and safe fish and fishery products as well as their duty to direct fisheries practices in a responsible manner through their consumption behaviors. In addition, the concerted efforts and interaction of those involved in fisheries and aquaculture would also affect the concept of responsible fisheries. Roles of market and trade mechanisms in directing fisheries practices need to be clarified to explore how these increasingly important factors play roles in responsible fisheries.
- The issues of reduction of discards, waste and post-harvest losses from handling and market channels, as well as utilization of by-catch, such as developing value-added products to an extent and manner that does not increase demand for targeting by-catch species, are also considered priority concerns in achieving responsible fisheries. Effective strategies to address these issues are therefore important and should be incorporated into future research agendas.
- ‘Responsible fisheries’ implies maintaining fish stocks for future use. The concept does not only imply actions within the fisheries sector but also sustainable utilization in multiple water resource use. Approaches and mechanisms to resolve conflicts among fishers themselves and among various aquatic resource users should be further explored. And resolution of conflicts should not merely focus on distribution of resources but defining obligation and responsibilities of resource users.
- ‘Responsible fisheries’ should take into consideration sustainability of livelihoods of those who depend on the fisheries. This is particularly important in countries where fishing is considered a traditional way of life and fish continues to provide a major source of animal protein and forms the main diet of the people. The notion of responsible fisheries should be based on local knowledge, giving respect to and acknowledging the importance of fish as a source of livelihood. The concept of responsible fisheries would in this context be embedded as part of society and should be further strengthened. Along this line, note was also taken of the importance of responsible fisheries in flood plains in terms of its importance to local food security and livelihoods.
- To bridge the gap between small-scale fisheries, and commercial fisheries supporting international trade, links between CBFM, which directly involves sustainable livelihoods of small-scale fishers, and globalized market driven forces should be made to better address the issue of responsible fisheries. Under the globalization of fisheries, this also implies promotion of international trade and foreign direct investment, which might soon be taken up for discussion in trade negotiations as it is directly connected to sustainable utilization of fisheries resources and trade in fish and fishery products. Experiences in many countries have proven that CBFM helps to protect the resource base and enhance management of resource use. However, if CBFM is to be implemented in the context of a market-driven economy, efforts should be made to bridge the gap of access to market-driven forces.
- Concern was expressed regarding the manner in which international trade negotiators are applying concepts and principles of the industrial sector, rather than the natural resource sector, to fisheries. Considering fisheries products in a natural resource context would better reflect the issues and context of fisheries. Due to differences in the nature of the products, trade rules and concepts applicable to fisheries which could lead to better initiatives and ways to promote sustainable trade in fish and fishery products should be clarified and developed in the future.
- Not only has the fisheries situation changed over recent years, but the ways people perceive problems and interact have also changed. Awareness and capacity building using the advancement of information technology such as e-learning should be explored to define effective delivery system to support promotion of responsible fisheries.