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## *The FAO's vision on fisheries management*

*Dr Moritaka Hayashi, Assistant Director-General (Fisheries) of FAO, discussed various aspects of fisheries management during a recent interview in Rome with Dr Kee-Chai Chong, Programme Coordinator of BOBP. Part 1 of this two-part interview is excerpted in the pages that follow.*

# *The FAO's vision on fisheries management*

Dr Hayashi, who joined the FAO in Rome in 1997 as Assistant Director-General of the Department of Fisheries, is a specialist in law and international affairs. He was Legal Officer with the United Nations in New York from 1971 to 1979. He then joined Japan's Foreign Ministry but remained in New York as Minister with Japan's Mission to the United Nations for eight years. In 1988, he rejoined the UN as Principal Officer and later as Director of the Division for Ocean Affairs and the Law of the Sea. He held this post till 1997.

As FAO's top official in fisheries, Dr Hayashi brings to bear his expertise in legal affairs and his experience in negotiating various global agreements in fisheries.

**Chong:** *What are your immediate priorities as ADG of FAO?*

**Hayashi:** Some of the issues we must tackle immediately relate to over-investment and over-capacity in fisheries which lead to over-fishing. There is also the problem of excessive by-catch, leading to discards. FAO figures indicate that about 20 million tonnes per year are lost on account of discard of bycatch. This is a serious waste of resources at a time when we need to utilize whatever is produced.

In seeking solutions to these problems, we should not rely exclusively on market forces. History shows that overfishing leads to further over-capitalization in industrial fisheries. It also generates excessive pressures on small-scale fisheries, because of a headlong pursuit of higher harvests. This has led to the collapse of some fisheries and some stocks.

We should learn from history and practise self-restraint in goals and targets, investment and capture. Such self-restraint is essential to promote the long-term sustainability of fisheries, also to ensure the livelihood of fishermen.

I am glad that these are also the current goals of the Bay of Bengal Programme, which has been doing excellent work for the past 18 years.

**Q:** *You have been instrumental in bringing about several global agreements in fisheries. What is the significance of these agreements?*

**Hayashi:** The foundation for the current international "charter" in fisheries was established in 1982 through UNCLOS, the United Nations Convention on the Law of the Sea. This agreement is legally binding. It follows the introduction of EEZs or exclusive economic zones by several nations during the 1970s. These EEZs embrace some 90% of the world's marine fisheries. UNCLOS gave coastal States rights and responsibilities for managing and using fishery resources within their EEZs. Thus the Convention established a new legal regime for the world's marine fisheries.

In 1993, the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks was convened. The FAO provided important technical back-up to the conference, which adopted in 1995 a new agreement on conservation and management of these stocks. In the meantime, the FAO Conference adopted in November 1993 the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas. These Agreements aim at facilitating the implementation of, or further elaborating on some of the basic provisions of UNCLOS.

Another important, albeit not legally binding, agreement is the global Code of Conduct for Responsible Fisheries, adopted by the FAO Conference in 1995. It grew out of the discussions at the Committee of Fisheries in 1991 and the International Conference on Responsible Fishing, held in Cancun, Mexico, in 1992, to address the problem of uncontrolled exploitation of fisheries resources.

The Code sets out principles and international standards of behaviour for responsible practices. The idea was to help ensure the effective conservation, management and development of living aquatic resources in a sustainable manner. The Code is directed at members and non-members of FAO, fishing entities, sub-regional, regional and global organizations.

Not all elements of the Code are applicable to all States in all circumstances. But the Code is an important source of guidance to everyone concerned with sustainable development and management of world fisheries.

These four agreements are instruments that form a comprehensive basis for further international co-operation and national action. In order to improve the current serious situation confronting world fisheries and aquaculture, all countries should observe and implement these agreements.

**Q:** *Do member-nations have sufficient information and knowledge to manage their fisheries?*

**Hayashi:** Information and knowledge are the basis for sound judgment on fisheries management. Hard data are needed, but they are quite sparse. More information on various aspects of fisheries is certainly needed in many parts of the world. Many countries, particularly in the developing world, do not have sufficient knowledge on good management. FAO is doing a great deal of work to improve the situation. But a lot more must be done to assist these countries in need. It is unfortunate that funds from donors in this area have been decreasing.



**Q:** *What is your view on the punitive approach to ensure fisheries compliance?*

**Hayashi:** The punitive approach should be secondary - not only in fisheries, but also in other areas of law enforcement. The primary emphases should be on voluntary compliance. The preventive approach should precede the punitive approach. I'm glad to note that the Bay of Bengal Programme recently held a successful regional workshop on the Precautionary Approach to Fisheries Management.

Simply put, the preventive approach says "Don't wait for evidence of overfishing to take conservation and management actions." It should be an integral part of fisheries practice--on the part of government, institutions, fishermen. It needs people's participation to succeed.

**Q:** *What role do you envisage for FAO regional fishery bodies?*

**Hayashi:** I think FAO member-governments should look at these bodies as fora for discussing problems of common concern and management of common resources.

They should also serve as means for assisting one another—to acquire new technologies, to become more competent in research and management, to become more self-reliant.

The regional fishery bodies should be used to bring fisheries management and development to the centre-stage of government planning, policy-making and resource allocation.

How effective these bodies are will depend on how strong the political commitment of member-nations is to implement

fisheries management and provide technical and financial support as appropriate.

**Q:** *Aquaculture was once held out as the hope of the future. Today it is under attack from environmentalists and others. What are the prospects for sustainable aquaculture in the future?*

**Hayashi:** Aquaculture is one of the fastest growing food production systems in the world. The bulk of current output is by developing countries. While capture fisheries seems to have stabilized around 85-90 million tons per year, aquaculture has expanded rapidly in recent years.

The vast majority of aquaculture practices has led to significant social and nutritional benefits. But there have been some social and environmental concerns, and these should be energetically addressed by those practising aquaculture as well as by planners and fisheries authorities.

To be sustainable, scientific practices should be followed—in culture, feeds, fry capture, water exchange practices, soil management. The FAO has brought out a booklet on aquaculture development under the series "FAO technical guidelines for responsible fisheries" (No. 5) The booklet provides some help in this direction.

I believe that aquaculture can still make a great contribution to food security and economic benefits if it is conducted in an environmentally sound and sustainable manner.

*(To be continued)*

*"More information on various aspects of fisheries is needed in many parts of the world". This vallam fishery in Adirampattinam, Tamil Nadu, is an example.*



# BOBP in the Field

## Mapping fishing areas in Kanniyakumari

A significant activity begins in 44 fishing villages of Kanniyakumari district, Tamil Nadu, in February 1998: a survey of fishermen. A two-member local team in each village, equipped with a map and a questionnaire, will interview the three main groups of fishermen in the village – users of *kattumarams*, *vallams* and small trawlers. (Not all three groups exist in every village.) The data obtained will help determine who is fishing for what, when, where, and how much. This in turn will make possible maps of fishing areas in Kanniyakumari district.

Explaining the rationale of the activity, Dr Kee-Chai Chong, Director of BOBP, says “Many resource conflicts have erupted in the past in Kanniyakumari district among the three fishermen groups — because they apparently fish for the same resource at the same place at the same time, using different fishing gear. To resolve these conflicts, one needs detailed and reliable data, and maps based on the data. The maps can highlight where conflicts are likely to occur. Measures can then be jointly discussed by the three fishermen groups to prevent further tension. Such maps may even show areas that fishermen have overlooked ...”

Ms Barbara Bierhuizen, BOBP’s Geographical Information Systems (GIS) Associate Professional Officer (APO), says “The survey will make possible a database and a GIS. These would serve as tools to map fishing areas or patterns. For example, we could create a map of shrimp fishing areas during the shrimp season targeted by *kattumaram*, *vallam* and boat fishermen. We could prepare any map as needed on the interaction between two or more of the following factors — species, gears, locations and seasons.

“How reliable or accurate any map is depends on how good is the data obtained,” says Ms Bierhuizen. Training was provided on interviews and data collection to 56 persons who will do the interviews in Kanniyakumari district. They were selected by the local Parish priests of the 40 villages. The training was provided by Ms Bierhuizen and Mr Rene Verduijn, Fishery Resource Economist (APO), at Nagercoil and Colachel during a recent visit to the district.

“The maps that result may not be scientifically rigorous, but they would be useful and indicative of resource use patterns. They would also show overlaps in fishing areas by the three groups,” says Ms Bierhuizen.

A second survey has also been initiated -- on infrastructure needs in every coastal village of Kanniyakumari district. It will give an idea of the current status of infrastructure, and the felt needs and priorities of the population, concerning land availability, housing, health care, sanitation, roads, clean drinking water, electricity, telephones, schools.

This survey is a follow-up to the various stakeholder consultations held by BOBP over the past year in Kanniyakumari



district. During these consultations, participants identified a number of needs and concerns relating to the infrastructure (see article on pages 9-12).

The Secretary of Fisheries, Tamil Nadu, suggested that information on such needs and concerns be obtained for every village, to facilitate action by the government.

Says Mr Rene Verduijn “The two-member team that is to conduct the fishing areas survey will also collect data for the infrastructure survey. But the *modus operandi* will be slightly different. For this survey, the team will hold joint meetings with groups of villagers – men, women and children – to elicit their views on infrastructure needs and get them listed in order of priority.”

The results of both surveys will be presented at a workshop to be called by the Secretary of Fisheries, which will be attended by agriculture and public works officials besides representatives from the Department of Fisheries. The workshop will propose a plan of action aimed at sustainable fisheries in Kanniyakumari district and better living conditions for the coastal population.

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## Task Force Proposed to Manage Ornamental Fisheries in Sri Lanka

A Cabinet Task Force on Conservation and Management of Critical Aquatic Habitats (COMCAH) was proposed at a meeting held on January 8, 1998, to discuss management of ornamental fisheries.

The meeting was convened by the Secretary to the Ministry of Fisheries and Aquatic Resources Development (MFARD). The Senior Adviser to MFARD, Mr Henry Gunawardene, presided. Fifteen government agencies concerned with ornamental fisheries, and representatives from other stakeholder interests, took part.



The meeting discussed future action on the problems of ornamental fisheries on the basis of a presentation by BOBP. Participants agreed that the ornamental fish sector had to be looked at in a holistic manner – examining the resources, the habitats and the human pressures on the habitats. Managing the sector was possible only through a three-pronged strategy – raising awareness on all fronts; participation of all stakeholders in evolving, agreeing to and implementing management plans; and effective enforcement of regulations. Research should be promoted to understand the sector better, and generate information to help management decisions.

The meeting agreed that given the complexity of ornamental fisheries, no single government agency could manage it. The meeting proposed that the Minister should take up the matter with the Cabinet and suggest a high-level task force to evolve management plans and coordinate implementation. COMCAH should include senior decision-makers from the government agencies concerned, as well as from ornamental fisheries. It should be empowered to establish subgroups to address such issues as management of the ornamental sector and management of critical aquatic habitats.

The Task Force should consult all stakeholders, evolve a national policy on conservation and sustainable management of critical aquatic habitats, and prepare precautionary management plans within three months for presentation to the government. These plans should be periodically reviewed and updated. COMCAH should be empowered to oversee the actions of concerned stakeholder agencies.

The meeting prepared a note on the deliberations, to be handed over to the Minister through Mr Gunawardene.



Meanwhile, several ideas have emerged from the various stakeholder consultations on ornamental fisheries conducted by DFAR with BOBP support. These include initiatives for providing insurance coverage to divers, a pension scheme for divers and fishermen, a licensing scheme for divers and collectors, a scheme to facilitate access to credit for purchase of diving equipment. These are in various stages of implementation. The ordinance to ban or restrict the export of certain species of ornamental fish has been submitted to the Cabinet for approval and publication in the national gazette.

## ***BOBP now on the Worldwide Web!***

You may now access BOBP by clicking on Internet, the worldwide computer system that links several million people through 30,000 networks in some 100 countries.

BOBP has had its own website on the Internet (located on FAO Rome's server) from November 1997. The site provides a general overview of BOBP and its activities in member countries, gives addresses of member-country officials who coordinate with BOBP, reproduces selected articles from *Bay of Bengal News*, and contains a list of BOBP publications since 1979.

This is the basic structure of the web page. Additional information can be provided on request to meet any specific need; BOBP welcomes suggestions and requests from individuals or institutions to make the web page more useful. One of the aims of BOBP is that member-countries should share ideas and experiences on fisheries management, so that everyone learns from from each other. Internet can be a very useful tool in this process.

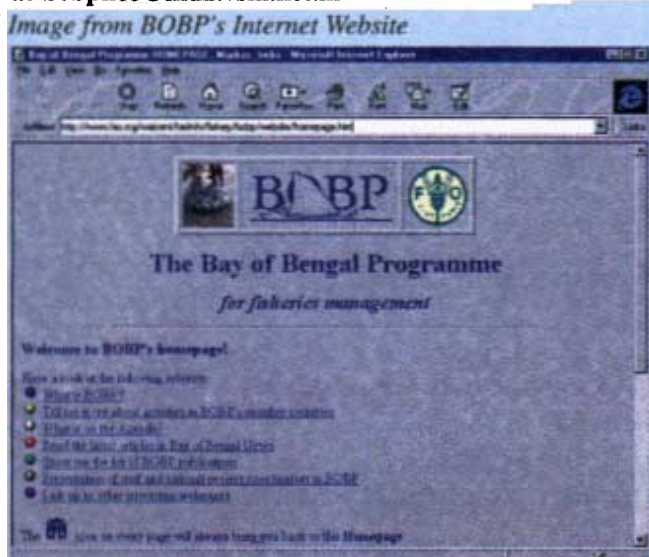
The uniqueness of Internet lies in its huge mass of interactive information from anywhere in the world. Users could access the websites of many organisations, browse libraries to look for interesting articles, and use E-mail to communicate amongst themselves. Thousands of special-interest mailing lists are active on Internet. You may join

them if you like, and exchange messages with others all over the world. It is believed that by 2000 A.D., some 200 million people will be part of the Internet family.

### **BOBP's website address:**

<http://www.fao.org/waicent/faoinfo/fishery/bobp/website/homepage.htm>

**For more information contact Ms Barbara Bierhuizen at [bobpkcc@md2.vsnl.net.in](mailto:bobpkcc@md2.vsnl.net.in)**



# Parliamentarians Consider Food and Livelihood Security Issues of Coastal Bangladesh

by Rathin Roy

*Parliamentarians from coastal areas of Bangladesh, and senior officials from fisheries and other departments, met recently in Dhaka. Their agenda: to discuss food and livelihood security of the peoples of coastal Bangladesh. "The door has been opened for a new era in the development of coastal areas of Bangladesh," says the author. Here's a brief report about what the meeting discussed and what it means for the future.*

The Ministry of Fisheries and Livestock (MOFL) recently called an important meeting, which brought together Members of Parliament from the coastal constituencies of Bangladesh. The meeting was held in Dhaka on 12 November 1997. It was organized by MOFL, in co-operation with the BOBP of FAO and the UK's Department for International Development.

Mr Ayub Quadri, Secretary, MOFL, chaired the meeting. Mr Humayun Rasheed Chowdhury, Speaker of Bangladesh's Parliament, was the Chief Guest. Mr Satish Chandra Roy, State Minister of Fisheries and Livestock, and Mr Dharendra Debnath Shambu, Deputy Minister of Shipping, were present as special guests. Senior officials from other departments concerned with coastal development and management, and senior representatives of international aid agencies, also took part.

The objective of this august gathering was to discuss issues and concerns relating to food and livelihood security of coastal Bangladesh. There was a particular emphasis on the need for, benefits of and approaches to more comprehensive and integrated management of coastal natural resources. The MOFL wanted advice on policy directions and on possible mechanisms to facilitate closer coordination and cooperation among agencies concerned to address the food and livelihood security needs of the coastal peoples of Bangladesh.

**Why should Bangladesh worry about coastal food and livelihood security?**

The need for such a consultation grew out of the work being undertaken by the

Department of Fisheries in projects assisted by the BOBP and the DFID (UK) in coastal Bangladesh. **What has emerged from these efforts is a better understanding of the "problematic" confronting the coastal peoples of Bangladesh and its implications to their food and livelihood security.**

Central to the DOF's justification to improve the management of fisheries is the evidence that some fisheries, such as the estuarine set bag net (ESBN) and the push net (PN), are destructive. They catch juveniles of aquatic organisms, which are of commercial interest, thus affecting the fishery resources through both growth and recruitment over-fishing. Fisherfolk are concerned about decreasing catch-per-unit-effort rates, falling incomes and a general deterioration in the quality of their lives.

Given the indications that the near-shore fisheries stocks of coastal Bangladesh are under stress and occasionally even show signs of depletion, **the only real biological management option to sustain the fisheries would be to reduce the fishing effort.** This would enable fisheries stocks to recover and enable profitable fisheries for those who are fishing the resource. Reduction of fishing effort would necessarily mean that some fisherfolk have to fish less or not fish at all. This would seriously reduce their earnings — unless they are given other work options, either in fisheries or outside of it. **So the solution to the crisis in fisheries may well lie outside it, in other sectors.**

The ESBN fishery provides livelihood for a large number of people, and

estimates vary from about a hundred thousand to 1.5 million. It also provides a sizable fraction of the capture fishery production of Bangladesh. More importantly, the ESBN catch is mostly consumed in the rural hinterlands, providing valuable and affordable animal protein to a large population. The PN fishery provides over 90 per cent of the juvenile *P monodon* requirements of the country's coastal aquaculture industry. **Any drastic management actions on the ESBN and PN fisheries would have serious impacts on the people concerned and on other sectors.**

**Coastal fishery resources are not only affected by fishing but also by other factors that affect the eco-system, and the very habitat which provides shelter and sustenance to aquatic organisms.** While hard data is difficult to come by, there are enough indications that the quality of the coastal waters is being affected by human habitations that release sewage and dump garbage into coastal waters; industrial effluent and toxic substances finding their way to the sea; pollution from shipping; destruction of mangroves and wetlands; changed water management regimes of rivers that affect the flow of fresh water and increase silt deposition; and so on and so forth. All these affect the ecosystem and its productivity, which in turn affects what the coastal peoples can extract from such resources for their food and livelihood.

Finally, coastal Bangladesh is geographically prone to natural disasters such as floods and cyclones, causing unacceptable levels of damage and loss of human lives. All these factors —



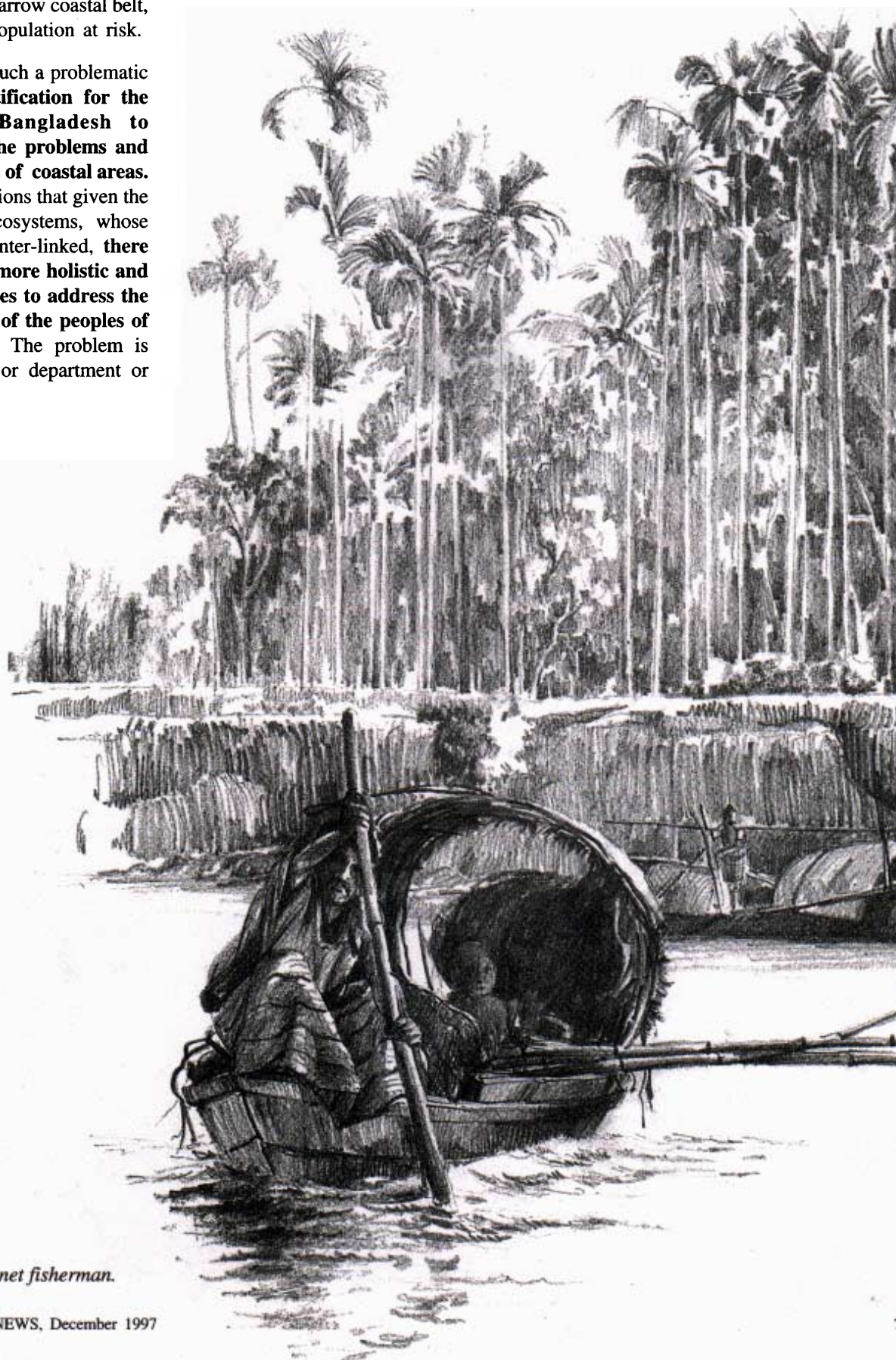
stressed natural resources on land and in the waters, increasing deterioration of the ecosystems through waste disposal and pollution, and proneness to natural disasters — leave the peoples of coastal Bangladesh particularly vulnerable, and their food and livelihood security is at risk. Going by developing country norms, at least 20 to 30 per cent of Bangladesh's population live on a narrow coastal belt, which puts a large population at risk.

What emerges from such a problematic is that there is justification for the Government of Bangladesh to specially focus on the problems and development options of coastal areas. There are also indications that given the nature of coastal ecosystems, whose problems are often inter-linked, there may be a need for more holistic and integrated approaches to address the needs and concerns of the peoples of coastal Bangladesh. The problem is that no one agency or department or

ministry can do the job working alone. One sector's solution may be another's problem, and the actions in one sector may well affect another, often detrimentally. Government ministries, agencies and departments each have their own objectives, agendas, budgets and ways of functioning. This often

makes it difficult for them to address complex, inter-linked and multi-disciplinary problems, such as in coastal areas.

There is a need for a more proactive, holistic, comprehensive and integrated approach to addressing the needs and



*Estuarine set bag net fisherman.*



concerns of the coastal peoples of Bangladesh. This will require policies to be developed, coordination and co-operation among agencies and perhaps even changes in the ways that agencies function. The issue at hand is not so much what policy or action will emerge but the very means of achieving a coming together of forces to address the needs of coastal Bangladesh. There is a need to build awareness amongst senior decision makers, administrators and technical staff of the status, trends and the peculiar problematic of the coastal areas and to seek their advice and support to ensure the food and livelihood security of the coastal peoples.

This was the message presented to the parliamentarians. The organizers of the consultation sought to facilitate discussions amongst senior decision makers, administrators and technical staff hoping that the meeting will give opportunities to think through the situation, raise issues, consider policies, and above all consider approaches to working together to address problems and issues that cannot be resolved in isolation.

#### What did the Consultation achieve?

A large gathering of Members of Parliament, cutting across political party lines, is in and of itself an important step. As representatives of the people, and members of the highest decision making body in the country, Members of Parliament have a major role to play, not only in guiding and evolving policy but also in overseeing the resulting programmes and activities. The discussion was enthusiastic and often hard hitting, as each MP addressed the concerns raised at the meeting in the context of their own constituencies. Problems were identified and elaborated upon. Complaints of inaction and poor performance by concerned agencies were raised. But through it all, the discussion reinforced the fact that the only way to address the needs of the coastal peoples was to encourage various ministries and departments to come together and work in harmony. The Director-General of Fisheries, Mr Md. Liaquat Ali, pointed out that the marine and coastal fisheries sector was emerging after long years of neglect. Trained

manpower was inadequate, facilities were lacking and there was no clear policy to guide programming in the sector. However, new directives and actions of MOFL are beginning to address these shortcomings. Mr Simon Bland, First Secretary (Fisheries), British High Commission in Dhaka, reiterated the Director-General's concerns. Given the potential for expansion and development of the marine fishing sector, he assured the meeting that the DFID would co-operate closely in the further development of programmes in marine fisheries.

The FAO Representative in Bangladesh, Mr H Konuma, pointed out that none of the problems mentioned were new. What was new was our understanding that these problems are interlinked and affect each other. The solutions to fisheries may well be on the land and *vice-versa*. Such problems, he said, are difficult to solve — not because technical expertise is lacking, but because it needs people and governments to look at them differently, look at them as a whole rather than in bits and pieces. The real challenge, he added, is to forge new relationships, develop integrated policies and evolve mechanisms to enable different government agencies and people to really work together as stakeholders. **The Members of Parliament, agreeing with this new perception, proposed that a dialogue is necessary among people and the various government bodies and stakeholders to address local and national problems. Most importantly, they offered to facilitate the process by taking the lead and bringing such groups together.**

#### Where do we go from here?

The State Minister of Fisheries and Livestock, Mr Satish Chandra Roy, proposed the first steps by which the people of coastal Bangladesh, the government agencies and the leadership, could come together and address the food and livelihood security concerns of the coastal areas. He said that the Ministry of Fisheries and Livestock was in the process of finalizing a national fisheries policy that would give holistic direction to the sector. He also proposed the formation of a high-level, inter-ministerial task force, with the Prime Minister chairing it, to evolve policy and oversee action.

A first and important step has been taken, senior political leaders and government agencies have gathered, across political party lines, to address an important national issue: food and livelihood security of coastal peoples of Bangladesh. Awareness has been developed about the peculiar inter-connected nature of the problems. A beginning consensus has been arrived at to work together, with all stakeholders and to evolve mechanisms that will enable the various parties to work together. Members of Parliament have offered to facilitate the progress by helping build a dialogue that will lead to development. Perhaps, expecting more from such an august body in so short a time would be asking for too much and would be unfair. The door has been opened for a new era in the development of coastal areas of Bangladesh. Future success would depend on how many pick up the challenge and the commitment to walk through to a better tomorrow.

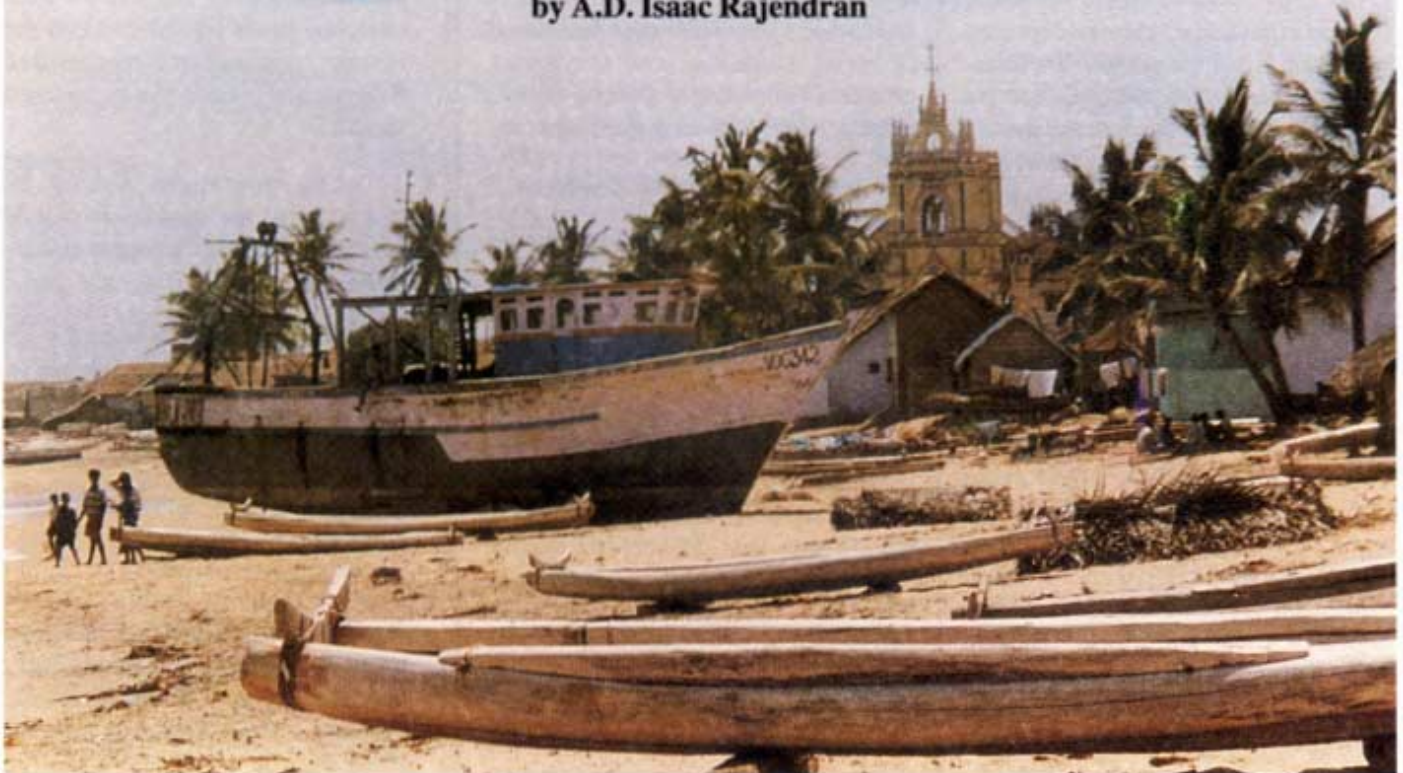
*The push net is another fishery in Bangladesh which provides jobs to hundreds of fisherfolk but is resource-damaging.*





# Coastal Fisheries Management: The View from Kanniyakumari

by A.D. Isaac Rajendran



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*Better coastal fisheries management is possible only with the full co-operation of fishermen, who have an important stake in the fisheries resource. What are the perceptions of fishermen in Kanniyakumari district, Tamil Nadu about resource use? What are their problems and their views of solutions? The Tamil Nadu Department of Fisheries, with BOBP support, raised these questions and obtained some answers.*

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The Tamil Nadu Department of Fisheries has given high priority to coastal fisheries management. It is implementing a pilot activity in CFM (Coastal Fisheries Management) with support from the BOBP. Chennai and Kanniyakumari districts have been chosen for the pilot activity. In Chennai, the focus is on management of trawl fisheries; in Kanniyakumari district, on coastal fisheries.

Fisheries has many stakeholders: fishermen, fish vendors, fish traders big and small, middlemen and money-lenders, processing plants, exporters. In fact, there could be as many as 20 types of stakeholders in any fisheries management scenario. For fisheries management to succeed, all these stakeholders should co-operate and participate. Both top-down and bottom-up participatory approaches are called

for. The resource users should become resource managers in collaboration and co-operation with the government and other non-user stakeholders.

As a first step in the pilot activity, the BOBP initiated a series of workshops to train officers of the Department of Fisheries (DOF) in identifying the stakeholders, finding out their perceptions, identifying and analysing their problems, and building a consensus among them about action to be taken.

The trained officers then carried out field work among various stakeholders to obtain and assess their perceptions and identify problems they faced. The field studies provided a vast amount of information. This was analysed and studied by the DOF officers in a follow-up workshop. This workshop indicated the need for detailed consultation by

DOF with the different stakeholders in various geographic areas of the district.

It was hoped that these consultations would help reduce or remove differences among various stakeholders, produce understanding and agreement and lead to solution options. Such negotiated settlement would provide legitimacy and co-operative commitment by all stakeholders for the success of agreed management options. Issues that remained unsolved could be taken up later, as and when confidence and goodwill built up among the stakeholders to develop a consensus on those issues.

The Kanniyakumari district has 44 fishing villages spread over 68 km of coast line — three villages on the east coast and the rest in the west coast. There are some 120,000 fishermen in the

district, of whom about 25,000 (21%) are engaged in active fishing. 42% of the fisherfolk are literate, all of them are Roman Catholics. The fisherfolk belong to one of two castes – Mukkuva and Bharathar.

The Roman Catholic church, the Kottar Diocese in particular, plays an important role in the life of the people. Traditionally the fisherfolk are well organised and united. However, the introduction of mechanised boats operating trawl nets that target high-value shrimps and other exportable varieties, has resulted in big profits for small groups of mechanised boat fishermen. Result: social imbalances. During the last five years, this had led to intra and inter-village quarrels during the fishing season, endangering law and order.

The Kottar Diocese of the Roman Catholic Church arrested further social unrest by constituting in May 1996 the Kanniyakumari District Coastal Peace and Development Committee (KDCPDC). The aim was to maintain peace and unity among fishermen and work towards development of the coastal villages. A capable and experienced priest heads the committee as Director.

This apex committee works through zonal and village units of KDCPDC on all matters relating to the professional, social and religious needs and problems of the fisherfolk. The coastal villages are grouped into six zones, each comprising six to eight villages. Every village and zone has its own village and zonal committee to attend to needs and problems within their jurisdiction and settle them amicably.

Matters that cannot be settled at the village level are taken up at the zonal level, and thereafter to the apex district body, for settlement. It is heartening to note that most issues including fishing resources management are handled and decided at village/zonal level.

The consultations with various stakeholders relating to coastal fisheries in Kanniyakumari district were held at each of the six zones. Five more consultations were held with other stakeholders. The various stakeholders identified were fisherfolk from the six zones representing the interests of villagers in the zone (including traders, boatbuilders, boat and engine maintenance groups, financiers etc),

office bearers of *vallam* and *kattumaram* unions, a mechanised boat operators welfare union, fishermen's co-operative societies, town panchayats and state government officials.

At each and every consultation, in-depth discussions about the perceptions of stakeholders were held about the existing fisheries situation, and the needs, problems and possible solution options relating to the following three aspects:

- 1) Ensuring sustainable fisheries
- 2) Administration and management of the fisheries
- 3) Development and welfare of the fisherfolk

The results of the consultations on these three aspects are outlined below. The facilitators (KDCPDC, DOF and BOBP) did not interfere with the discussions; they knew that fisherfolk dislike interruptions when they are expressing their views, whether or not these views are relevant to the discussion. If they are asked to adhere to the discussion format, the fisherfolk clam up and become silent. Hence, many ideas/needs not directly relevant to fishery resources management were also expressed and recorded.

The views and suggestions expressed at the consultations have been analysed and grouped for follow-up action under the above three heads. The agencies most suitable for follow-up action on these suggestions — such as government departments, NGOs and others — are being identified. Ways and means to implement these suggestions will be discussed at a future workshop. The results that emerge will be placed before fisherfolk and other stakeholders for action and implementation on fisheries resource management.

## ENSURING SUSTAINABLE FISHERIES

### Fishing methods

- Bottom trawling is the main cause of fishery depletion (the view expressed by the majority of *kattumaram* fishermen). The government should issue notifications on bottom trawling — when and where it should be permitted. (*Vallam* and *kattumaram* fishermen suggested that bottom trawling should be done only between 6 a.m. and 6 p.m. and in the area

beyond 25 fathoms in the west coast and 18 fathoms in the east coast.)

- The government should issue notifications to regulate mesh size of cod end of trawlnet and ensure survival of juvenile fishes. (*Kattumaram* fishermen suggested 40mm stretched mesh size at cod end for bottom trawling; and mechanised fishermen suggested 35mm stretched mesh).
- Trawling operations should be restricted to six months in a year (suggested by *kattumaram* fishermen).
- Deep sea fishing operations by foreign vessels within the EEZ area should be banned.
- Fishing with lights to be banned (a few *vallam* fishermen do not agree).

### Information

- The government should conduct detailed studies about the spawning and life cycles of commercially important fishes so as to avoid fishing operations during spawning seasons. Fishermen should be told about the breeding season of fish and the area of breeding, so that they avoid fishing at this place during this time.

### Conservation of marine resources

- Artificial reefs should be installed to improve fishery resources in selected areas off fishing villages.
- Dredging of river mouths should be taken up to increase exchange of water to enhance materials and plankton production.
- Hatcheries should be constructed to breed mature fishes for sea ranching. Each zone may be provided with such hatcheries. Hatcheries should also be set up in suitable coastal villages, to replenish the export variety of fish seeds in the sea.
- Catching of juvenile cuttle fish and prawns should be avoided. Lobsters below 100 gm in size should not be fished. Regulations may be introduced by the government to prevent export of lobsters below 100gm.
- Fishermen may be advised to release gravid females and juvenile fishes at the catching point.



### Pollution control

- Pollution of sea water by factories at Manavalakurichi and Tuticorin should be checked and controlled.
- Testing of bombs and use of explosives in the sea should be banned to save fish resources.

### ADMINISTRATION AND MANAGEMENT OF FISHERIES

#### Enforcement

- The pattern of fishing in Kanniyakumari district varies from zone to zone. It has been suggested in Zone IV that agreements (relating to reason and area of operation) entered into by country crafts and mechanised crafts should be given legal status through government order.
- Department of Fisheries should initiate action to ban fishing with lights from October through March.
- Fishing by foreign vessels should be prohibited as per the 'Dunkel Agreement'.
- Most coastal *kattumaram* and *vallam* fishermen suggest a ban on bottom trawling during June, July and August.

- Motorised crafts should be operated beyond 14 fathoms so as to avoid conflict with country crafts.
- Patrol boats are to be provided to effect strict watch on crafts and prevent fishing in violation of rules.

#### Dispute settlement

- Problems that arise between villages over individual fishing rights will be taken to the zonal committee. If not solved, the dispute can be taken to KDCPDC. and then to the government. The decision of the government is to be final.

#### Facilities

- Facilities should be provided to tow country crafts to the Wadge Bank area and tow them back after fishing. The catches should be bought by the government at sea.
- Electronic appliances like walkie-talkie should be provided to mechanised crafts and *vallam* to ensure easy contact by fishermen with the shore.
- As the east coast is heavily surf beaten, sea groin (hook-shaped jetties)

should be constructed to enable proper berthing of crafts in selected villages.

- Speed boats and helicopters should be provided by the government for rescue operations during monsoon.

#### Training

- Diversification of fishing methods should be encouraged. Fishermen should be trained in off-shore pelagic long lining and gill netting.

### DEVELOPMENT AND WELFARE SCHEMES

#### Information and communication

- Information centres should be set up in coastal villages to improve awareness among fishermen of new and improved technologies and happenings elsewhere.
- Special fisheries programmes should be prepared in TV and video—like 'Vayalum Vazhvum' for farmers.

#### Finance and subsidy

- Just as farmers get free power supply for farms, fishermen should be provided with free fishing gear.

*Fishermen like these, in Kanniyakumari, now take vigorous part in discussions to manage the fisheries resource.*







*Some of the demands of Kanniyakumari fisherfolk relate to infrastructure and training.*

- Kerosene for motorised country crafts and *vallams* should be supplied through fishermen co-operative societies on subsidy.
- Fishermen should be exempted from excise duty on outboard motors (OBMs)
- Policy of one-time government subsidies to fishermen for OBM should be amended. They should be allowed to buy an OBM on subsidy five years after the first OBM.
- Special banks should be set up to provide credit on liberal terms for fishermen.
- The Government of India should resume its one-third contribution to the Marine Savings-cum-Relief Fund, which it stopped some time ago.

#### **Welfare schemes**

- The government should acquire coastal *poramboke* lands to strengthen free housing schemes for fisherfolk.
- Coastal roads and proper transport facilities should be provided to

villages to promote economic development and to facilitate marketing of fish and allied products.

- Guide lights on the shore are required for villages in Zone VI.
- Ice plants and freezing plants should be put up in every zone.
- Shore-based insulated ice boxes of 200 kg capacity should be supplied to *vallam* and *kattumaram* fishermen — either free or on subsidy.

#### **Education and training**

- Training in alternative income generating activities should be given to fisherfolk (assembling electronic spares, tailoring, etc.)
- Technical training centres on the lines of ITI (Industrial Training Institute) should be set up exclusively for fishermen.
- A fisheries college should be started in Kanniyakumari district.

#### **External employment opportunities**

- The recommendations of the Venugopal Commission (priority to the sons of the soil) should be implemented, particularly in the police and fisheries departments.

#### **Law and order**

- *Vallam* and mechanised crafts that fish in other states are constrained by the sons of the soil policy in those states. Protection should be given to these fishermen.
- Crime in coastal villages should be dealt with severely. Possession of explosives and bombs should be prohibited. There should be at least one police station for every three coastal villages. Patrolling by the police after 5 p.m. is essential.

It is heartening that fishermen of Kanniyakumari have articulated their needs and demands so clearly and congenitly. It augurs well for the future of fisheries management, and for the welfare of fisherfolk communities.



# When fishermen ban fishing gears: A case-study from the Coromandel Coast, Tamil Nadu

by Maarten Bavinck\*

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*Along the Coromandel Coast of Tamil Nadu, fishermen have themselves banned two gear varieties which they consider particularly damaging to the marine ecosystem. Discussing these non-government regulations, the author argues that the "local knowledge" they represent should not be discounted. He says the management capacities of fishing communities along the coastline should be better utilized than they are at present. Legal recognition would constitute the first step in this direction.*

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One of the important discoveries of fisheries science during the past two decades is the existence of sea tenure systems outside the purview of government. In many places all over the world, fishing communities use their own rules to regulate access to fishing grounds. Sometimes these rules merely structure the interaction between fishing units. But in many cases there are objectives – and effects – of resource maintenance as well.

Some of the important questions that keep researchers in this field busy are : under what circumstances do fishing communities develop and enforce local rule systems? Are the goals of local sea tenure systems similar to those of modern fisheries managers? And to what extent can management systems be linked, to the benefit of all parties concerned?

This article focuses on the regulatory instruments utilized by artisanal fishermen along the Coromandel Coast of Tamil Nadu, India. It gains relevance from the fact that, outside Japan, there is very little evidence of effective sea tenure from large coastal fisheries in Asia. One of the assumptions of researchers is that sea tenure is less likely to exist wherever fishermen are well integrated into a market system (cf. McGoodwin 1990: 108).

My study brings out the weakness of this supposition. If the situation of the Coromandel Coast is at all representative, tenure systems may resist a variety of adverse circumstances besides market integration, including severe competition from trawler fisheries and governments which ignore and sometimes thwart their functioning. My material also draws

into question the belief that the Japanese inshore fisheries co-management set-up is so unique that it cannot be replicated in other country settings.

The regulatory instruments I call attention to are of a special kind. Many researchers have pointed out that fishing communities exercise proprietary rights over defined sea territories and control fishing effort by regulating access to space (cf. McGoodwin 1990: 123; Schlager and Ostrom 1993). The fishing communities of the Coromandel Coast go one step further: they also restrict the application of certain types of gear. Such gear bans are of particular interest as they reveal a logic of environmental concern which is not far divorced from the pursuit of governmental fisheries managers.

Following a brief sketch of the character of local fisheries, I describe two instances of gear bans enforced over a large coastal region. I then look into the mechanics of indigenous regulation to conclude with comments on the possibility of co-operative management between government and fishermen. Note that trawler fishing is excluded from the discussion due to its fundamentally different character.

## **Fisheries along the Coromandel Coast**

The Coromandel Coast of Tamil Nadu, which stretches over 400 kilometres of surf-beaten sandy coastline from Point Calimere in the south to Pulicat Lake in the north, covers 229 marine fishing hamlets with an average of about 200 households. They are largely inhabited by fishermen of the Pattinavar caste, who have a long-standing tradition of

inshore coastal fishing and are extensively related through marriage. Their fishing technology displays remarkable similarity. The usual craft is the raft *kattumaram*, varying between 3 and 9 metres in length and fitted either with a latin sail or a long-tailed outboard engine. Crews make use of a variety of drift nets and bottom set nets, occasionally also taking recourse to more traditional bag net technology such as beach seines.

Most fishing is concentrated in the 20 fathom zone off their own settlement, with neighbouring communities sharing substantial overlaps in fishing territory. Although there is a sense of 'commonness' to the sea, which makes it unsuited for exercising property rights, fishermen recognize the prerogative of each community to control activities taking place in their specific sea area. The boundaries are formed by extending land borders seaward. As land borders are contiguous, so are sea borders. The consequence is that the inshore waters of the Coromandel Coast can all be considered to be under tenure, subject to the regulation of adjoining settlements. There is no sea area within 20 fathoms depth which is genuinely no-man's space.

What does the control of fishermen over sea territory mean in practice? In the words of one hot-headed young fisherman, it signifies that outsiders must follow directions, and "we will hit them if they don't do as we say". Many of the 'directions' he is referring to are decided upon by non-governmental councils

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which administer common affairs in fishing villages. These councils also enforce decisions, applying a range of sanctions which, contrary to the suggestion of my respondent, are decidedly more elaborate than a show of fists. A restriction on the type of fishing technology that can be used forms one of the more usual rulings.

There is evidence that the fishing communities of the Coromandel Coast have selectively pronounced bans on gear for at least a century.<sup>1</sup> Needless to say, however, not all new gear is prohibited: a reconstruction of technical change demonstrates that new gear types and applications have often found acceptance along this coastline. Instead, banning is restricted to those gear varieties which are felt to be exceedingly harmful to the communities concerned.

One point must be emphasized: gear bans are decided by individual village councils and may differ from community to community. Interestingly, however, some gear bans are replicated over a very large coastal region. This suggests the existence of a common denominator in the motivations of the village councils concerned – common ideas on what is good or bad for the profession and for the fisher people in question.

### **The banning of the snail net<sup>2</sup>**

At some point in 1995, export traders dealing in special seafood products offered individual fishermen small hoop nets called *kachaavalai* (literally net baited with waste) with which they could catch snails on the sea floor. As the prevailing price for snails was worthwhile, fishermen in a number of hamlets decided to give snail netfishing a try. (In 1995, the landing price for snails was approximately 7 Rs/kg, with special rates for the ventricle lids or opercule)

In the following months, however, village councils along at least 100 kilometres of coastline swung into action, prohibiting the use of the net. In 28 fishing hamlets for which I have evidence, the snail net was disallowed soon after it was introduced by

trading interests. In some locations prohibition was subject to discussion and dispute. In others, it was decided quietly and without much ado. Government authorities were involved in only one case, when law and order was at stake. In all instances the council decision received adherence.

Why the ban on the snail net? Fishermen advance two ecological arguments. First, they believe that the smell of the bait (which invariably consists of decomposing meat) has a negative influence on fish stocks in the surrounding area. Second, they argue that the snails targeted by the snail net play an essential role in maintaining fish stocks in inshore waters. If snails were to be removed in large quantities, fishermen felt that fish stocks were likely to decline in inshore areas. Social motives reinforce this line of thought. A fisherman attending a meeting to decide on the matter wondered: "Why should everyone suffer because of the activities of a few?" And another, quoting a common saying, said "Ten people shouldn't make a profit at the expense the community".

The snail net ban is too recent to make judgements on how long it will remain in force. The banning of the ray fish net demonstrates, however, that gear prohibitions can be effective over a long period of time.

### **The banning of the ray fish net**

Although fishermen along the Coromandel Coast were vaguely familiar with the 12" bottom-set ray fish net (*tirukkaivalai*) at least since the beginning of this century, they prohibited its usage only in the 1970's. The timing of this 'act of resistance' coincided with the Fisheries Department's innovative programme of that period, which offered fishermen the choice of a large range of gear types, including the ray fish net, at subsidized rates. This threatened to give the net a wide distribution, perhaps triggering restrictions.

Like the snail net, the ray fish net was banned over a large geographical region by one village council after another. Like its successor it was also prohibited

in spite of an active demand for the target species – ray fish – on the domestic market<sup>3</sup>. This implies that those enforcing the ban were, and are, regularly pressurized to relax control. The fact that they have not done so is because any relaxation can cause much harm.

Today the ban is enforced by a majority of village councils within a radius of at least 50 kilometers from Madras, although the net can be readily procured from gear manufacturers and net shops. My data demonstrates that even where the net is used, it does not necessarily imply a lack of popular support for prohibition. In many cases non-enforcement is clearly related to a crisis in village administration and a consequent lack of control.

Why ban the ray fish net? Here again the fishermen have their reasons. For one, they say that ray fish act as umbrellas for many smaller fish varieties congregating in their shade. Removing ray fish will therefore cause the dispersal of more important target species from inshore waters. This process is reinforced by the pungent smell exuded by ray fish in what is said to be a protracted death struggle. This apparently transmits warning signals to other forms of marine life in the vicinity. As in the case of the snail net ban, ecological motives combine with social ones. Why should we let a few fishermen profit from ray net fishing if the rest would suffer from its effects?

### **Reflections on gear bans**

In both examples presented above, village councils prohibited fishing gear on the basis of local knowledge with regard to the functioning of the marine ecosystem. It must be emphasized that the veracity of this knowledge has not been studied or validated through scientific enquiry; but the value of 'local knowledge' should not be written off too quickly.

But even if fishing communities along the Coromandel Coast would prove to be wrong in their ecological reasoning, it must be noted that they are concerned about (a) possible social conflicts

1. For a review of the history of restrictions on fishing gear, see Bavinck M., 1997.

2. This instance of gear banning is discussed in greater detail in Bavinck M, 1996.

3. The ray fish belongs to cheaper varieties of seafood on the domestic market. It is appreciated mainly for its nourishment. (c.f. Marketing and Research Group Pvt. Ltd. 1992: 64-65)



between the different groups of fishermen – those who want the gears banned and those who continue using it; b) the sustainability of fishing operations. It must also be noted that the communities have developed organizational structures and mechanisms to handle perceived threats to the common good. These may well have their uses in another management framework.

### Organizational structures of regulation

Small group size and social homogeneity, it is said, often contribute to effective self-management of common pool resources. This is brought out by the communities of the Coromandel Coast, which are renowned for their cohesion and their predilection for self-governance. A council with a *chettiyar* or president as its head has traditionally managed common village affairs, including those which pertain to fisheries. Important matters, however, are invariably discussed and decided on at public meetings, to which all village members are invited. It must be pointed out that membership conveys privileges and duties and is a highly formal affair. Generally speaking the roll includes all local fishermen (with the emphasis both on 'fisher' and on 'men'). Village members pay taxes, take part in meetings and are also the main enforcers of decisions taken. The most common current sanction against violations of village rules is the imposition of a fine, payable to the village fund or the temple.

This institutional set-up is of course neither permanent nor perfect. What impressed me most, however, is its flexibility. Institutional history demonstrates that the form of village administration has changed repeatedly in the past decades in response to new demands – such as the wish for more democracy – without losing much of its effectiveness. Its continuing strength and adaptability would appear to be useful in any attempt to forge a co-operative resource management framework between government and fishermen.

### Possibilities for co-management

The Japanese inshore fisheries resource management set-up is often cited as an example of successful collaboration between government and fishermen (cf. Ruddle 1987). Perhaps because it is presumed to be unique, little effort has

gone into replicating this set-up in other countries of Asia. I argue that, with the exception of one, the same conditions exist along the Coromandel Coast.

In Japan, the government has delegated formal authority over inshore fishing territories to local fishermen organizations. These have decision-making authority on access and withdrawal in the territories over which they have jurisdiction. It is often emphasized that this arrangement forms the continuation of an old feudal set-up; this would in fact explain much of its success. Along the Coromandel Coast I have pointed out a tenurial system, run by fishermen, for inshore waters. Each fishing settlement exercises control over a defined sea space; authority is vested with a village council which takes measures to regulate fishing in accordance with common interest. Concern with long-term resource sustainability is demonstrated through the selective prohibition of gear types and applications. Just as in Japan, this arrangement dates back over a long period of time; for fishermen it has a large measure of matter-of-factness.

The important difference between the two country settings therefore does not seem to lie with the fishermen. Rather I believe it is in government policy with regard to fisheries regulation that the distinction gains force. By transferring formal authority over sea space to local fisher organizations, the Japanese Government has followed a course fundamentally different from the Tamil Nadu and Central Governments. Here formal authority over inshore waters remains vested with the state, which recognizes fishermen institutions only informally.

Schlager and Ostrom (1993:32) have pointed out that communities which hold more complete sets of property rights are more likely to achieve success in resolving common pool resource dilemmas. This ties in with observations made by proponents of fisheries co-management, for whom legal recognition is a crucial variable. Jentoft (1989:144) thus pleads for granting fishermen's organizations "authority by law to enforce regulations on member fishermen".

In Tamil Nadu therefore it now appears to be the government's turn to act.

Recognition of the legal right of fishermen councils to regulate inshore fisheries, however this right would be circumscribed, might be a first step towards a potentially fruitful new management approach. And what could be won by taking such a step? I believe co-management forms a possible solution to several of the problems looming over inshore fisheries along the Coromandel Coast: the rapid depletion of fish stocks, competition between artisanal and trawler fisheries, and the danger of thousands of fishermen families losing employment and income.

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# Do Commercial Users Influence Marine Fisheries Management?

by Susan Shipman

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*Commercial fishers should be encouraged to provide their inputs into decision-making on fisheries management. Here are some interesting examples from the United States, provided by the author, a marine fisheries official from Georgia state.*

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Commercial fishers do have political influence in the fishery management process. What is the barometer of this influence? Escalating declines in fisheries resources due to politically forced inaction or mismanagement? Increasing occurrences of managers exiting regulatory forums with a sense of satisfaction that both the resource and the fishers are emerging winners? I prefer to use the latter gauge.

Increasingly, I encounter situations in which commercial fishers are influencing, if not crafting, fisheries the management strategies to yield positive results. One example at the state level is the recent regulation of Georgia's blue crab fishery. This fishery was arguably the most unregulated of our state's commercial fisheries until 1995, when industry members allied with fishery managers to implement not only a gear regulation but also a licence moratorium in only a few short months. Fearing an influx of commercial fishers displaced by gear bans and/or declining fisheries in neighboring states or other regions, industry leaders approached the Georgia Department of Natural Resources (DNR) in the fall of 1994, seeking controlled access for this fishery. For six months, the crabbers held industry meetings, lobbied elected officials, recruited legislative sponsors, and—with technical support by the DNR—successfully made their case for a licence moratorium to the 1995 Georgia General Assembly. Just weeks prior, these same industry leaders were co-hosting public hearings with regulators, promoting another industry initiative—a requirement for escape rings in crab traps—that was subsequently adopted into regulation by the state's Board of Natural Resources in February 1995.

The influence of commercial fishers at the federal level has no doubt been fostered by provisions of the Magnuson Fishery Conservation and Management Act (Magnuson Act), which assure representation of commercial fishing interests in the voting membership of the regional fishery management councils. The act also provides for further input into the process via industry advisory panels. I believe the council deliberations benefit from these members' first-hand knowledge of the fisheries being managed.

Examples of commercial fishers influencing the federal management process abound in the South Atlantic region. Consider the case of two South Florida fishers, former fish trappers who were closed out of that fishery by a gear ban adopted by the South Atlantic Fishery Management Council and implemented by the National Marine Fisheries Service in 1992. These individuals had worked within the council system for several years as snapper-grouper advisors before their method of fishing was prohibited on a close 7-6 vote. Embittered, they engaged in a lengthy, costly, and eventually unsuccessful court battle against the council and the U.S. Secretary of Commerce. With great trepidation, these same individuals nonetheless returned to the council system in October 1994, requesting management of a relatively new crustacean fishery they had helped pioneer in 1992. The council responded favorably, collaborating with them and other industry members to develop a controlled-access management regime for the new golden crab fishery in six short months.

My belief that commercial fishers do influence the federal process was further

reinforced during management deliberations involving the South Atlantic rock shrimp fishery, which is conducted almost exclusively off the east coast of Florida. After two years of public hearings, including input from South Atlantic industry advisers, the South Atlantic Council was poised to take final action to prohibit fishing in a large geographic area because of potential coral habitat damage. Virtually silent for the preceding two years, a large contingent of the industry came forward at the final public hearing, not surprisingly objecting to the proposed trawl prohibition. The group largely comprised harvesters and processors from outside the South Atlantic region. The rock shrimpers pledged to form an industry advisory group broadly representative of all industry participants if given the chance to craft a compromise on the proposed closure area. The South Atlantic Council delayed action. The industry did indeed organize, and harvesters, packers, and processors sacrificed considerable work time to attend meetings. Gaps were bridged between rival East Coast and Gulf of Mexico competitors, and the industry delivered on its promise. The council and the industry reached a compromise, and the council adopted the rock shrimp amendment to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region in June 1995. Although a portion of the industry's former shrimping grounds was placed off-limits, the final outcome was undeniably less severe than what it could have been, and was about to be, only four months earlier.

The commercial fishing industry's growing industry influence is largely attributed to emerging industry leaders characterized by their commitment to the

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resource as well as to their profession, and recognized by their credibility and perseverance to work within existing management systems to evoke positive change. The industry leadership has detected the rising groundswell of other interest groups that often boast greater memberships and financial resources. Recognizing the distant light as the oncoming train, fishers are re-routing that train via proactive co-operation in the areas of bycatch reduction, elimination of marine debris, and habitat protection. New alliances are being formed, as evidenced by the Georgia shrimpers during the summer of 1995.

Twice during the same year, Georgia trawlers were subjected to more restrictive Turtle Excluded Device (TED) regulations pursuant to an emergency response plan to curb elevated sea turtle mortalities. The first round of restrictive regulations allowed only top-shooting, hard TEDs. Industry leaders vociferously but civilly protested, making their case to federal regulators and their congressional delegations to relax the regulations and allow bottom-shooting, hard TEDs. The shrimpers even garnered the support of Earth Island Institute, one of the staunchest national animal rights organizations and an otherwise unlikely ally. Georgia shrimpers had previously allied with Earth Island Institute in litigation to block imports from shrimp-producing nations lacking TED requirements. When elevated turtle strandings again plagued the Georgia fishery a year ago, federal regulators implemented a second round of emergency measures, this time allowing the use of bottom-shooting TEDs.

The days of shaking fists, flying expletives and physical threats are, thankfully, more the exception than the norm. Commercial fishing industry leaders recognized by their peers for their influence with regulators are more often than not even-tempered, articulate, open-minded, and respectful not only of decision makers but also of those users who hold different opinions. In my fishery management council experience, fishers come to the table better prepared with data and graphics than they did in the past. In turn, they are queried, and their input is given weight by managers during deliberations.

During recent South Atlantic Council deliberations to craft the Golden Crab FMP, a particular sticking point was who would be in or left out of the controlled access system. After weeks of data review, debate, and testimony from fishery participants, commercial fishers sitting on the Council broke the deadlock and proposed tiered eligibility criteria that would accomplish the desired level of participation and pioneering in the fishery while assuring the risk-averse underpinning of the new FMP.

As governments at all levels and jurisdictions strategically reinvent and embrace high-quality management, focus groups incorporating citizen and user advisory panels are increasingly the trend. Commercial fishers must seize these opportunities to participate in the fishery management process. Excellent publications exist to guide commercial fishers in the how-to's of involvement. *Fisheries Management for Fishermen: A Manual for Helping Fishermen Understand the Federal Management Process* (Wallace et al. 1994); and *Fish*

*or Cut Bait: An Introductory Guide to the Federal Management System for Atlantic Coast Fishermen and Women* (McKay and Creed 1995) are two such guidebooks. Although oriented toward the federal process, the principles and procedures detailed in these easy-to-read manuals are useful at the state and local levels as well.

Providing commercial fishers with information early and incorporating them into decision-making helps circumvent the controversy and conflict that erupt when decisions are made without the industry's input. Although the end result may not be their preferred option, including commercial fishers in the dialogue enhances their "buy-in" of the resulting regulations. With most fish stocks fully exploited, if not overexploited, and an ever-increasing number of users wanting a slice of the pie, continued and increased regulation is inevitable. Even congressional leaders such as veteran Sen. Ted Stevens (R-AK) acknowledged this to South Atlantic fishers and managers attending a 1995 Magnuson Act reauthorization field hearing (U.S. Congress 1995). Increasingly affected by this regulatory trend, commercial fishers are becoming more knowledgeable about the process and, in turn, are learning how to effectively influence it. The process itself and ultimately the resource stand to gain from this involvement.

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# Smart Partnerships—the Message from Penang

By Karin Borzel<sup>1</sup> and Kee-Chai CHONG

*Sustaining the fisheries resource and alleviating poverty among fisherfolk – these are ambitious goals. Achieving them is possible only through 'smart partnerships' among different types of stakeholders – such as the government, the fisherfolk community, the scientists, the private sector. This was the theme of a workshop in Penang, Malaysia, reported in brief on these pages.*

'The Pearl of the Orient' — beautiful Penang, Malaysia — was the venue for a three-day seminar on 'Smart Partnerships For Sustainability in the Fishing Industry' which was held from 26 to 28 November, 1997. It was organized jointly by the BOBP and the Institute on Governance (IOG, Canada), with support from the Department of Fisheries, Malaysia (DOFM), and the Maritime Institute of Malaysia (MIMA).

The seminar's objectives were:

- (a) to provide an understanding of the global forces that shape changes in the regulatory processes in the fishing industry;
- (b) to share information about innovative approaches to self-regulations which have been implemented in different countries;
- (c) to provide an understanding of the factors behind the successes and

failures of self-regulation in different social, economic and political settings; and

- (d) to explore how the participants might enhance the effectiveness of their own national regulatory processes through enhanced private-public sector partnerships.

The 50 workshop participants came from both developed and developing countries. There were plenary presentations from Dr Masamichi Hotta (Japan), Mr. Richard Cashin (Canada), Mr. Patrick Appleton and Mr. Peter Finglas (Australia), Ms. Sevaly Sen (Denmark) and Dr Kee-Chai CHONG (BOBP). Country experiences were reported from Malaysia, Philippines, Thailand, Indonesia, Maldives, Sri Lanka, Bangladesh and India.

Each presentation was followed by discussion. Together, they provided

insights into the successes and failures of fisheries management, and yielded suggestions for more successful practices. Community-Based Management (CBM), highlighted throughout the seminar, was seen as a key factor behind the sustainability of fishing industries, whether national or global (please see other articles in this issue).

Judging from the discussions and the proposed follow-up activities, the seminar was a great success. Information and experiences were shared. Participants returned home convinced that the battle to create a sustainable industry does have its warriors. In the words of Mr. Richard Cashin of Canada, 'There is no single solution. There is no single lesson'. The process of sharing and learning, through seminars such as this,

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*Small-scale fisherfolk of Phang Nga Bay who have volunteered to serve as sea wardens or rangers to help enforce resource regulations, are being distributed uniforms by the local chamber of commerce and Trawler Fishermen Association. An example of "smart partnership".*





enables a search for solutions that everyone can adapt everywhere to further the cause of sustainability. Participants agreed that opportunities for meaningful partnerships among the diverse groups of stakeholders are endless.

### Glimpses into Workshop Papers

Here are glimpses into a few papers presented at the workshop.

Ms Sevaly Sen, from the Institute of Fisheries Management, North Sea Centre, Denmark spoke of the 'moral distance' of government from its people as partly responsible for the continuing ineffectiveness of government's top-down approach to fisheries management. Because of this 'moral distance,' the fishing community does not fully appreciate management efforts introduced (or rather imposed) by the government. Likewise, government does not fully understand the local conditions of the fishing community it wishes to regulate. Ms Sen said the concept of fisheries 'co-management' encompasses a wide range of partnerships between the government and stakeholder resource users, especially in the process of consensus solutions.

Dr Kee-Chai Chong spoke on 'Sustainability of Fisheries: Global Challenges for the Future'. He focused on three factors that have caused environmental degradation and resource depletion: overpopulation, consumption excesses, and abusive use of technology.

He said the needs of an increasing population can be met if the idea of sustainable development and management of fisheries is promoted. "Without management, there is no way supply can meet demand."

Decrying consumption excesses, Dr. Chong said that human irresponsibility has exacted a heavy toll from fisheries. He said "Mother Nature has been bearing a large part of the costs... It will no longer subsidise irresponsible consumption and production". Management was needed to moderate 'undesirable human impact' and regulate it.

Technology can be used positively, but the current power-hungry attitude makes it a tool of destruction. Fisheries planners do not help either because they keep projecting higher and higher per capita fish consumption in their 5-year national development plans. These automatically translate into pressures on the production

unit to find ways to increase production. Today, the per capita consumption of fish in Japan is already 65kg/capita/year. In Hong Kong, Taiwan, Singapore and Malaysia, it ranges from 40 to 55 kg/capita/year, while in Indonesia and Thailand, it is only about 20-25 kg/capita/year. For India, Bangladesh, Sri Lanka it is still way below 10 kg/capita/year. With ever increasing projections made by fisheries planners, is it any wonder that our fisheries are continuously under severe and heavy fishing pressure? World trade in fish has surged to over US\$ 50 billion a year.

Dr. Chong said that management 'revolves around the effort to help the natural resource ecosystem and the environment to cope with increased uses'. This type of management can best be done through 'smart partnerships' or, the forging of partnerships between different stakeholders in the entire

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*"Human irresponsibility has exacted a heavy toll from fisheries... Mother Nature will no longer subsidize irresponsible consumption and production."*

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marketing chain (government, fisherfolk, market intermediaries, chefs/cooks, consumers, so that the interests of all stakeholders can be considered. The government continues to play an important role in smart partnerships, by maintaining order and resolving political and legal disputes.

Community-Based Management (CBM), Dr Chong said, confers on people limited rights or ownership of their fisheries system and promotes positive changes by altering socio-cultural attitudes and practices that relate to fisheries management. He identified three basic steps for the success of CBMs. First, a consensus must be arrived at through public hearings on what is at stake for all concerned. Once this consensus is established, the style and type of management to be implemented must suit the needs of the communities. Finally, education. Educating the public through practices such as ecolabelling and realistic cost evaluation will create informed consumers and producers who will take personal responsibility for fisheries management.

Dr. Chong said that government-centralised management intervention in fisheries is on its way out as it is cost-inefficient and relatively ineffective. Further, governments are downsizing. "Reduced government support for sustainable management of fisheries has created the need for new funding mechanisms" for management. Such mechanisms must be worked out quickly if fisheries is to be managed.

"Giving citizens pride of place and putting them at the centre-stage of management, with government managers watching from the sidelines, will go a long way toward promoting community management of local fisheries".

In Queensland, Australia, several tiers of government bear the responsibility for fisheries management. Some light on the system was shed by two guest speakers from Queensland: Mr Patrick Appleton of the Queensland Fisheries Management Authority (QFMA), and Mr Peter Finglas, of the Queensland Department of Primary Industry (QDPI).

Mr. Appleton said that QFMA drives appropriate management, use, development, and protection of fisheries resources. It liaises with other state governments, statutory authorities and local governments and promotes co-operation at all levels for strategic planning and effective day-to-day management of fisheries.

He said that Queensland fisheries have met substantive challenges over the past 3-4 years. The management of Queensland's fisheries has moved away from a technocratic model of management, because of dissatisfaction on the part of key stakeholders. Besides, increased population, changes to commercial and recreational fishing and pressure from traditional fisheries are impacting the capacity of the environment to sustain fishing.

As 'custodians' of fisheries resources, the government must adapt to these challenges, Mr Appleton said. 'In order to ensure the continued sustainability of fisheries and their effective management, all levels of government must co-operate'. Such co-operation meant the need for a different approach to fisheries management that involved equity in decision-making and long-term protection of resources. The new model adopted sets out to protect the public



*At Pulau Payar Park, Kedah, Malaysia, young men from the fishing community and from tourist business receive training as underwater tour guides.*

interest in resources, provide a technical basis for management and involve major stakeholders directly in management planning.

In 1994, the Queensland Fisheries Act was established. It sets out clear directions for fisheries management. It further established a new statutory authority, the QFMA. Prior to 1994, the QFMA's role was unclear. Following the Act, its prime function was to deliver management based on the principles of ecologically sustainable development.

"Management planning requires a co-operative and integrated approach across agencies and user groups", Mr Appleton said. He further elaborated that "management offers opportunities for integration of information and expertise from across a range of users and disciplines...". He went on to say that, "The aim is to produce a management plan which is user-friendly, is broadly accepted by stakeholders and ensures protection of the state's fisheries resources as well as access to them."

For such management to occur, consultation and community involvement are necessary. Two levels of consultation and involvement were created through the Management Advisory Committees (MACs) and Zonal Advisory Committees (ZACs).

MACs, Mr. Appleton explained, 'are building blocks in the process of developing management plans'. They are the principal sources of planning and advice for the authorities. ZACs, on the other hand, provide a forum for regional communities to provide advice on the diverse range of issues impacting on local fisheries. The principal benefit is that ZACs enable the collection and dissemination of information to the general public.

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*Three basic steps are needed for community-based management to succeed. Establish a consensus. Work out a management style that suits the communities. Finally, educate the public.*

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Creating MACs and ZACs was difficult but rewarding, because they have changed the culture of fisheries management in Queensland in three significant ways. They have generated the feeling that 'publicly owned resources need to be shared on a fair and equitable basis'. Second, stakeholders, government and the community have come to realise that fisheries resources are limited and that uncontrolled and irresponsible fishing by any group must not be permitted. Finally, that the role of

government agencies is facilitation, negotiation and mediation.

Mr. Appleton was not able to comment on the success or failure of such a process as it is still in the developing stages. New arrangements and processes take time but can create an 'ownership attitude'. Further, the Queensland model will only be as successful as the participants allow it to be. The workability of the new arrangements will depend on the support and participation of the users.'

Mr Peter Finglas of Queensland's Department of Primary Industry (QDPI), concurred with much of Mr. Appleton's remarks. He said that QDPI functions as a rural economic development agency that links government and industry in partnership to "increase the profitability of primary industry-based enterprises on a sustainable basis". Overall, QDPI is responsible for management, use, development and protection of aquaculture, marine plants and fish habitats. However, the fisheries resources are available to all, and the 'responsibility for their management and stewardship is a public service shared by government, the resource user and the general community'.

Specifically, the Department of Primary Industries is guided by policies that ensure equitable and consistent decisions which impact fish habitats. A part of this process of policy creation is to include communities in the decision-making process. Mr. Finglas stressed that it is important to 'include inputs from the community early on in the process to ensure that decisions are based on available knowledge and that community members are genuinely part of the process'.

Mr. Finglas stressed the importance of community inputs into decision-making. Partnerships between fisheries agencies such as QDPI and the community reduce conflicts, increase information sharing and create a feeling of ownership within the community. Result: they become a part of the solution to the challenges now facing the fishing industry.



*Bay of Bengal News* is a quarterly publication of the Bay of Bengal Programme (BOBP), a regional multi-agency fisheries programme which covers seven countries around the Bay of Bengal — Bangladesh, India, Indonesia, Malaysia, Maldives, Sri Lanka and Thailand. The Programme plays a catalytic and consultative role: it develops, demonstrates and promotes new methodologies, techniques, technologies or ideas to help improve the conditions of small-scale fisherfolk communities in the member countries. The BOBP is sponsored by the governments of Denmark and Japan, by member governments in the Bay of Bengal region. The main executing agency is the FAO (Food and Agriculture Organization of the United Nations.)