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BOBP and the Code of Conduct for Responsible Fisheries

Management of the set bagnet fishery in Bangladesh – which engages thousands of fisherfolk but endangers the resource – is a major challenge which the Ministry of Fisheries and Livestock is meeting courageously. One tool the Ministry can use in its support is the Code of Conduct for Responsible Fisheries (CCRF) which all stakeholders in fisheries must respect and follow in their own interest.

This issue of Bay of Bengal News explains the Code of Conduct and its technical guidelines, and reports in detail the National Workshop on CCRF organised recently in Chennai, India, by the BOBP.



Code of Conduct for Responsible fisheries

A Word from the Editor

BOBP and the Code of Conduct for Responsible Fisheries

As a first step toward promoting implementation of the Code of Conduct for Responsible Fisheries, a National Workshop on the subject was organised by the BOBP in association with the Government of India at Chennai during 29-30 September 2000. The Workshop brought together the most senior fisheries administrators working with the Union Ministry of Agriculture and the State and Union Territory Governments, scientists and experts from fisheries institutions, and representatives from national and international NGOs. The objectives of the Workshop were to frilly familiarise government functionaries with the elements of the Code and the technical guidelines that have been prepared by FAO to assist member-countries in implementing the Code. The output of the Workshop – an agreed plan of action for operationalising the Code.

The two-day Workshop highlighted several problems concerning implementation of the Code in a large country like India. Keeping in view the strengths and weaknesses of national and state governments, the vastness of the country and the diverse and highly complex demographic and socio-political fabric, the planners and experts concluded that massive efforts would be needed to take the Code to the grassroots level quickly in India.

Although much smaller in size and geographically and socio-politically more homogenous, island nations such as Sri Lanka and the Maldives, which I subsequently visited, also spoke of similar difficulties in implementing the Code – in fact the requirements were almost identical.

Learnings from the Chennai workshop and the detailed discussions with the authorities in Sri Lanka and the Maldives highlight the primary task of educating everybody about the Code. The Code needs to be popularised and effectively communicated, understood and also frilly imbibed by everyone concerned in the fisheries sector – fish workers, investors, traders, processors, scientists, bureaucrats, politicians and others.

The BOB large marine ecosystem covers some of the most productive waters in the world and supports a large population of small-scale fishermen – some 6-8 million directly and some 35-40 million others engaged in ancillary activities relating to fisheries. Declining catches, environmental degradation, post-harvest losses, conflicts between large-scale and small-scale harvesters – such issues fast threaten the livelihood of millions of small-scale fishers in the Bay. Steady loss of productivity and biodiversity is also amply visible. Per capita consumption has already declined over the years.

The contribution of coastal fisheries to the region is substantial. Any decline in fisheries would severely impact the food security and national economy of the BOB countries. While governments in the region have recognized the need for better fisheries management and adoption of the Code, action has been lacking. Ignorance and lack of understanding are largely responsible. The constraints include not merely a lack of resources and technical expertise, but also the will and the determination to implement the Code.

The Code of Conduct for Responsible Fisheries, which was unanimously adopted on 31 October 1995 by the FAO Conference, is now five years old. Beginning with the 23rd Session of the Committee on Fisheries held at Rome during February 1999, FAO has also started reporting the progress achieved by member-countries in implementing the Code.

The recent Workshop in India and discussions with officials in Sri Lanka and the Maldives reflect the state of preparedness for implementing the Code in countries on the western side of the Bay. The situation is largely similar in member-countries on the eastern side (Thailand, Malaysia, Indonesia) of the Bay. In sum, implementation of the Code in most member-countries of the BOBP falls short of what is required. Massive efforts are needed on many fronts to help these countries put their act together.

The FAO is frilly committed to assisting Member States in the efficient implementation of the Code. Special measures are needed to address the needs of developing countries, especially in the areas of financial and technical assistance, technology transfer, training and scientific co-operation. Developing countries must also enhance the ability to develop their own fisheries, participate in high sea fisheries, and improve their access to such fisheries.

BOBP, as a catalyst, facilitator and neutral coordinator, has been instrumental in sensitizing national governments on the needs of the Code from time to time. With its excellent networking, BOBP as an IGO can also be an ideal mechanism for assisting member-countries to implement the Code in areas relevant to its mandate in future.

This issue of Bay of Bengal News has attempted to popularise the Code and the FAO's nine Guidelines on the various articles of the Code. We hope that it helps better understanding of the Code and the promotion of sustainable practices. These could yield rich dividends by reducing poverty and enhancing food security in the Bay of Bengal region.

Y S Yadava

Many ideas, many insights, a new plan of action: Chennai Workshop moves the Code of Conduct forward

S R Madhu

“It’s in the same category as motherhood and patriotism,” said one delegate before the National Workshop started. “Everyone professes strong support. But when it comes to concrete action, it’s limited, few even attempt it.”

The delegate was talking about the Code of Conduct for Responsible Fisheries, and the occasion was a National Workshop on the subject, hosted by BOBP in Chennai from 29 to 30 September, 2000. As many as 43 delegates from the Union and State Governments, various fisheries institutions, NGOs, FAO and BOBP attended the Workshop. Incidentally, it was also the first occasion when the senior-most fisheries administrators from the Union and the coastal States and Union Territories had assembled to discuss the Code and arrive at an implementable plan of action.

For many of them, the Workshop marked the first systematic exposure to the Code of Conduct. “Five years after the Code came into being, there’s a Workshop on the subject. It’s late, but better late than never,” said John Kurien, fisheries activist and Associate Professor at the Centre for Development Studies, Trivandrum.

This article is a round up of what happened at the Workshop. A few Workshop presentations are reported here. A complete account will be provided in characteristic BOBP style by a report to be published a couple of months from now.

Mr Mohan Verghese Chunkath, Tamil Nadu’s Secretary for Fisheries and Livestock, made a terse and well-worded welcome address. He said that thanks to BOBP, Tamil Nadu had taken early action on the Code by translating it into Tamil and distributing it to fishermen’s co-operative societies and other user groups. He expressed Tamil Nadu’s delight and enthusiasm at the prospect of BOBP emerging as an inter-government organisation (IGO).

Mr M K R Nair, Fisheries Development Commissioner to the Government of India, warned of “death clouds” hovering above the seas if practices like overfishing, illegal fishing and dumping of wastes into the sea weren’t curbed. The Code was timely and should be taken seriously by one and all. He said the key factor today is to ensure sustainability and make all the stakeholders active partners in adopting the tenets of responsible fisheries,

Dr Y S Yadava, Interim IGO Co-ordinator, briefly described the nature, scope and objectives of the Code. He also

highlighted the activities undertaken during the three phases of the BOBP and the Programme’s achievements during the last 20 years.

FAO Representative in India and Bhutan Peter Rosenegger berated mankind for its thoughtlessness. “We try to outsmart nature, pollute the air, do everything we shouldn’t do,” he said. There were two reasons why such behaviour was obnoxious. “Our life span is at most 100 years, Nature goes on for hundreds of thousands of years. We have no right to make the world unlivable for our children and grandchildren. Second, in nature, when one person commits a crime, it’s others who suffer.” Mr Rosenegger read out a message to the Workshop sent by Dr R B Singh, FAO Assistant Director-General, from the FAO Regional Office for Asia and the Pacific in Bangkok (page 5).

Mr N K Sinha, Secretary in the Department of Animal Husbandry and Dairying, Ministry of Agriculture, Government of India inaugurated the Workshop and delivered a thoughtful keynote address (pages 6-8). He pointed out that while demand for fish is growing, production is falling, on account of factors that cry out for a Code of Conduct. He traced the Code’s origin and described its features. Since the Code is elaborate and complex, it needs to be simplified. It must be translated into local languages, workshops must be held, especially at the grassroots level, to explain the Code’s provisions.

Mr Sinha cited some decisions taken by the Government of

India recently to implement the Code. Efforts were being made to optimise the fishing fleet size. A move to impose a uniform ban on fishing during monsoon months had been initiated. An expert group had been set up to prepare a comprehensive policy for marine fisheries. A Working Group of experts had been constituted to reassess the 1991 estimates of the potential yield of marine fishery resources. The Ninth Five-Year Plan for the fisheries sector had focused on an integrated approach to sustainable development but management had received inadequate attention. He suggested that adequate funds be earmarked for fisheries management activities in India’s Tenth Five-Year Plan.

Complimenting the BOBP on its performance and its initiative organising the Workshop, Mr Sinha said “the fullest and most effective implementation of the Code can only be through a viable partnership between the government, industry and society.” He suggested that BOBP in its future role as an IGO should help the member-countries implement the Code.

Code of Conduct for Responsible Fisheries

After a coffee session, delegates reassembled to hear Dr. John Kurien talk about responsible fisheries and pose them the question: “Can it be achieved with a Code of Conduct?” He said that the movement of India away from responsible fisheries began with the neglect of the wealth of knowledge and technology that numerous traditional small-scale fishing communities possessed. The dominance of the state in setting the research agenda, choosing the technology and setting the administrative framework aggravated the problem. It curbed the initiative of the most important fisheries player, the fish worker.

Dr. Kurien laid down a set of pre-conditions for responsible fisheries. (See article on pages 9-16)

Dr V.S. Somvanshi of the Fishery Survey of India presented a useful and informative overview of marine fish stocks and their management in India. He said that annual marine fish production in India was about 2.7 million tonnes, while the maximum sustainable yield of fish stocks in the EEZ was estimated at 3.9 million tonnes. He suggested investigations into fish stocks and stressed the need for management regimes for various fisheries. Some recommendations: Legislation for coastal fishing craft and deep sea vessels should be compatible. Colour codes should be specified for every category of fishing craft and every fishing zone. Names of the craft and their registration numbers should be in large standard size to facilitate easy identification.

A long session of presentations by various coastal States and Union Territories followed. Representatives from Gujarat, Maharashtra, Karnataka, Kerala, Tamil Nadu, Pondicherry, Andaman and Nicobar Islands, Andhra Pradesh, Orissa and West Bengal provided information and insights about their fisheries and their development and management problems. Most of them sought assistance from FAO and the Central Government.

Dr K. Gopakumar, Deputy Director-General (Fisheries) in the Indian Council of Agricultural Research, described the role of fisheries research in supporting fisheries management. For example, in marine fisheries, R & D organizations had developed fishing vessel designs, standardised quality control of marine products for exports and organised fish inspection. They had undertaken research in mariculture, pearl culture, the setting up of shrimp hatcheries, the utilization of fishing wastes, the application of electronic equipment in fishing. He suggested the creation of a Ministry of Fisheries. Fisheries science should be declared a technical subject like engineering. A standard course and degree syllabus should be set up at the national level.

The State presentations concluded in the morning of the second day of the Workshop. Then followed a lively talk by Mr K. Jose Cyriac, Chairman of the Marine Products Export Development Authority (MPEDA) on seafood quality assurance and eco-labelling. Talking about international quality

standards for fish and fish products, he outlined the role of the Codex Alimentarius Commission, the ISO 9000 series standards, the Hazard Analysis Critical Control Point system. He also explained the role of eco-labelling and its role in promoting sustainably managed fisheries. He described MPEDA's work in promoting seafood quality.

Replying to questions, Mr Cyriac said that the Union Government could fund half the cost of turtle exclusion devices to be fitted on to trawlers for conservation of endangered marine turtle species. There were no national guidelines yet on eco-labelling, but it was a matter of time before they were formulated. He described as exaggerated the problems of women in fish processing units. More than 30,000 women from Kerala earned more than Rs 1,200 per month in fish processing units. Isolated and anecdotal issues had been blown up.

Mr Sebastian Mathew of the International Collective in Support of Fish Workers made an enlightening presentation on the application of the Code of Conduct to small-scale fisheries (pages 17-24). He pleaded for compatible legislative regimes on conservation and management at the national and state levels. He emphasised that it was essential to create a feeling of “ownership” of the Code among all players in fisheries. Only then would they take an active part in promoting the Code. Another important and urgent need was to address the numerous information gaps in fisheries. Better data collection tools were needed.

Dr Kee-Chai Chong, SEAFDEC Consultant, presented and discussed a checklist of guidelines on operationalising the Code. He emphasised on the need for guidelines based on the Code that met individual country requirements. The guidelines should be practical, specific and legitimate in the eyes of the stakeholders (See pages 25-27).

The post-lunch session of the second day was devoted to a panel discussion of key points and issues that had emerged from the Workshop. It was chaired by Mr N K Sinha. The session led to a Plan of Action (page 5). Sample points: The Code should be simplified, condensed and translated into vernacular languages, it should be popularized through street plays and comic books, fishing capacity should be maintained at optimum levels, there should be a uniform ban on fishing during monsoon months

The BOBP distributed a set of posters to every participant and a video film showing how a street play was used to popularise the Code in fishing villages around Chennai.

What did the National Workshop achieve? Better understanding. Vigorous interaction. Many new ideas and insights. Some useful recommendations. Most importantly, the Code of Conduct is now much more than a noble concept akin to motherhood and patriotism, it is a practical goal toward which all players in fisheries can constantly move.

Message from Dr R B Singh, Assistant Director General, FAO Regional Office for Asia and the Pacific, Bangkok.

I'm very happy that the Bay of Bengal Programme is organizing a National Workshop on the Code of Conduct for Responsible Fisheries,

The Code of Conduct for Responsible Fisheries has been correctly described as one of the most important international instruments devised for management of our planet's aquatic resources. It is global and all-encompassing in scope, directed at everyone concerned with the conservation of fishery resources and the management and development of fisheries.

The Code sets out principles and standards of behaviour for responsible practices in fisheries. It covers not merely the capture of fish and fishing operations, but the processing and trade of fish and fishery products, aquaculture, fisheries research, and integration of fisheries into coastal area management.

The FAO is happy to have brought the Code into existence in 1995. But its purpose can be served only when the Code is understood by all and given effect to by all – governments, international

organizations, corporate firms, NGOs, officials, fishers and fishery-related individuals.

A special effort must be made to ensure that officials dealing with fisheries in the government are aware of the content, meaning and implications of the Code. Their ideas, inputs and advice are needed to propagate the Code. The present Workshop is therefore an essential and a very useful exercise.

The Code reflects the spirit, substance and effort of a number of FAO and United Nations initiatives, conventions and conferences. In organising this Workshop, the Bay of Bengal Programme not merely promotes the Code of Conduct, but furthers awareness and action on all these important global initiatives. Wider application of the provisions of the Code will promote sustainable and responsible fisheries and thereby help in achieving the goals of national and global food security.

I wish the Workshop and its organisers and all its delegates two days of constructive discussion and a lifetime of useful follow-up!

National Workshop on the Code of Conduct for Responsible Fisheries: Plan of Action

The Code of Conduct for Responsible Fisheries (the Code) should be translated into vernacular languages. A simplified and concise version of the Code should be provided to the States! Union Territories on a priority basis for translation into vernacular languages.

The Code should be popularised through street plays, comic books, audio-visual presentations, etc. The electronic media should be considered for speedy dissemination of the Code.

The coastal States and Union Territories should organise workshops! meetings with various user groups for better understanding of the provisions of the Code and its implementation.

The fishing capacity should be kept at optimum levels, commensurate with sustainability. The practice of multi-agency registration of fishing vessels, prevalent in some States, should also be reconsidered.

The coastal States and Union Territories should consider formulating a clearer definition of access rights to the territorial waters and harmonise their zonation policy for different categories of fishing vessels,

There should be a uniform ban on fishing during monsoon months.

Resource enhancement programmes, such as setting up of artificial reefs and ranching with restricted access, should be undertaken, especially for species under threat or subjected to over-exploitation.

Every coastal State and Union Territory should consider setting up a Resource Management Wing in the Department of Fisheries

- The coastal States and Union Territories should consider setting up Awareness Centres to popularise the Code and other activities concerning fisheries development, conservation and management.
- The Government of India (the Centre) and the States! Union Territories should consider laying more emphasis on post-harvest requirements of the fisheries sector, including quality control of fish and fish products for both domestic and export markets.

- The research institutions under the Ministry of Agriculture and the State Agricultural Universities should aim at providing adequate research support to the implementation of the Code.

- The Centre and the States should endeavour to set up a sound information data base to meet the implementation requirements of the Code.

- The States and Union Territories should be provided with special assistance for implementation of the provisions of the Code.

- The Centre and the States should consider laying more emphasis on fisheries development, conservation and management aspects in the future Five Year Plans.

- The *subsidiarity principle*, which takes management to the lowest meaningful level to enhance participation, should be encouraged.

- The Centre should consider introducing model bill (s)/ legislation with the active participation of all stakeholder representatives for implementing those provisions of the Code which are presently not covered by legislation.

- The Centre and the States! Union Territories should consider instituting reforms in the existing legislation on fisheries to meet the requirements of the Code.

- The Centre should consider bringing all fisheries matters, now divided among various Ministries and Departments, under one administrative umbrella.

- To check poaching! illegal fishing in the Bay of Bengal, FAO! BOBP may consider setting up a mechanism to enable the Bay of Bengal countries to interact regularly.

- A regional mechanism for study tours should be encouraged among countries around the Bay of Bengal to learn from one another's experiences in implementing the Code.

Code of Conduct for Responsible Fisheries

Keynote Address

Code of Conduct for Responsible Fisheries

N K Sinha

Secretary, Department of Animal Husbandry & Dairying
Ministry of Agriculture, Government of India

We take pleasure in presenting key excerpts from the keynote address at the National Workshop on the Code of Conduct for Responsible Fisheries held in Chennai

It is a great privilege to be invited by the Bay of Bengal Programme of the Food and Agriculture Organization of the United Nations as the keynote speaker for the National Workshop on the Code of Conduct for Responsible Fisheries.

This Workshop is being organised at the most opportune time, Fisheries faces a crisis all round the world and India is no exception. On the one hand there is a growing demand for fish and fish products due to many reasons. On the other hand, fishers find it difficult to meet the demand because of depleting catches despite increasing efforts,

For decades, maritime nations have pumped billions of dollars into expanding fishing fleets, subsidising everything from fuel costs to the construction of factory vessels. The open access nature of the fishery in a large part of the world, including India, has allowed unregulated entry. All these have led to extra fishing pressure, reducing fish stocks in many parts of the world to levels much below their sustainable yield.

Overfishing isn't man's only destructive act against nature. We have been continuously adding billions of tons of toxic substances into the sea. Habitat damage, industrial pollution, non-degradable effluents and wastes – all these have taken a heavy toll. About 97% of earth's living space is ocean. In other words, the sea is man's life-support system. But man's actions are fast destroying his own life-support system.

If we look at the world fin and shell fish production, there is a steady increase in production from 67 million tonnes (mt) in 1970 to 103.5 mt in 1990. The latest statistics for 1997 reveals that the world production from both capture and aquaculture reached the peak of 131 mt. During the period 1990 to 1997, a growth rate of 7.4% per year was achieved. However, the increase of about 27mt during this period was largely due to aquaculture. Capture fisheries showed undisputable signs of plateauing. This has been true for both inland and marine capture fisheries,

In India the trend is no different. The total fish production increased from 1.76 mt in 1970-71 to 3.84 mt in 1990-91 and to 5.26 mt in 1998-99. During the period 1990-91 to 1998-99,

an average growth rate of a little over 4.0% was achieved. In the marine sector the production increased from 1.09 mt in 1970-71 to 2.3 mt in 1990-91 and reached a peak of 2.97 mt in 1996-97. Thereafter, it came down to 2.95 mt in 1997-98 and 2.7 mt in 1998-99. During the period 1990-91 to 1998-99, an average annual growth rate of 1.93% was recorded in the marine sector.

Keeping in mind the annual marine harvestable potential of 3.9 mt, about 3/4th of the potential is being harvested. Since the present effort is largely restricted to the near-shore waters, it may be correct to say that further increments in marine fish production can only be achieved from the deep sea. As most coastal resources are being fished to their maximum sustainable limits, and optimisation of catches from deep sea still being a distant reality, we need to concentrate our efforts on the coastal resources and ensure that their sustainability is maintained.

The Code of Conduct for Responsible Fisheries or simply the Code, as it is popularly known, declares in its General Principles that ***“The right to fish carries with it the obligation to do so in a responsible manner.”*** It sets out principles and standards of behaviour for such practices and aims at effective conservation, management and development of living aquatic resources. The Code covers not merely capture of fish and fishing operations, but the processing and trade of fish and fishery products, aquaculture, fisheries research, and the integration of fisheries into coastal area management.

The Code is global in scope. It is directed toward members and non-members of FAO, fishing entities, organizations of all kinds, fishers, people engaged in the processing and marketing of fish and fishery products—in short everyone concerned with conservation of fishery resources and management and development of fisheries.

The Code is an outcome of several contemporary global initiatives, which expressed concern about the over-exploitation of important stocks, damage to ecosystems, economic losses, and issues affecting the fish trade. All these threatened the sustainability of fisheries. The 19th Session of the FAO Committee on Fisheries, held in March 1991, recommended

that FAO should develop the concept of responsible fisheries and elaborate a Code of Conduct toward this end.

Subsequently the Government of Mexico, in collaboration with the FAO, convened a Conference on Responsible Fishing in Cancun in 1992. A declaration was passed at this Conference which developed the concept of responsible fisheries. The Cancun declaration was subsequently critically assessed, strengthened, refined, elaborated and fine-tuned at a number of conferences by various groups, and the Code of Conduct for Responsible Fisheries finally came into being on 31 October 1995 at the 28th session of the FAO Conference in Rome.

The Code contains 12 articles plus two annexes. The resolution as contained in Annex 2 of the Code calls on everyone concerned with fisheries to collaborate in implementation of the Code; urges that the special requirements of developing countries be taken into account in implementing the Code; requests the FAO to advise developing countries in this respect; calls upon the FAO to monitor and report on the implementation of the Code; urges the FAO to strengthen Regional Fisheries Bodies to deal more effectively with fisheries conservation and management issues.

On fisheries management the Code urges conservation and management measures based on the best scientific evidence available. Coastal states should co-operate in the management of transboundary, straddling or highly migratory fish stocks. Mechanisms should be set up for fishing monitoring, surveillance, control and enforcement. Excess fishing capacity should be prevented; fishing effort should be commensurate with sustainability. The precautionary approach should be a guiding principle for fishery management; the absence of scientific information should not be reason for inaction on conservation and management measures. States should regulate fishing in such a way as to avoid the risk of conflict among fishers. States should take measures to minimize waste, discards, catch by lost or abandoned gear, catch of non-target species. The Code also suggests integration of fisheries into coastal area management. It urges an institutional framework, policy measures and regional co-operation to facilitate sustainable use of coastal resources.

The Code is one of the most important international instruments devised for wholesale management of the living aquatic resources of our planet. The effort that has gone into the Code is perhaps its main strength. It is all-inclusive and all-encompassing. It belongs to all of humanity. It is an indispensable source of reference on good conduct in fisheries,

The main weakness of the Code springs partly from its strength. The Code is elaborate and complex. Its language is dry and legal. It doesn't make for easy reading or comprehension.

To be meaningful, the Code must be not merely understood by all but implemented by all. The Code has to be translated into local languages. It needs to be simplified for various groups, particularly fishermen. Workshops and consultations are

necessary, particularly at the grassroots level, to explain and discuss the provisions of the Code. The present National Workshop is one step in this direction.

As regards implementation of the Code, the Government of India has taken some landmark decisions in the recent past to implement the Code. To oversee implementation of the Code and other issues related with it, a National Level Committee has been set up under my chairmanship in the Ministry of Agriculture.

As we all are aware, marine fisheries in India – more so the coastal fisheries – have largely been an open-access fishery. Consequently no catch limits have been set on effort or the catch. To optimise the fishing fleet size, a National-Level Review Committee was constituted to study the size of the present marine fishing fleet in India *vis-à-vis* the harvestable potential and give recommendations on the effort that need to be deployed. The Committee has concluded, after discussion with experts and with coastal States, that the mechanized fishing fleet, in the size range of 8-15 m OAL, has attained optimum strength. But 700 new-generation resource-specific vessels, about 18m OAL, including trawlers and gillnetters-cum-longliners, could be added to the fleet to tap resources in the exclusive economic zone beyond the 50 m depth zone.

Presently, there are about 200 000 traditional craft in the country, of which about 35 000 are motorised. It is believed that this figure could be increased to 50 000. Motorization will ease the drudgery of traditional fishermen and enable them to go further out, reducing pressure on near-shore waters.

On the issue of resource conservation, a move to impose a uniform ban on fishing during monsoon months has been initiated. This ban will help reduce fishing pressure and stimulate rejuvenation of fish stocks. Most of the west coast States and Andhra Pradesh on the east coast have been enforcing bans on fishing during the monsoon period, although during different periods. I would urge all the coastal States to take an early decision on the uniformity of the ban after taking into account the best scientific evidence available with us.

The Government of India has set up an Expert Group to prepare a Comprehensive Policy for Marine Fisheries. The draft policy document is under finalisation and I believe the document has taken into account the requirements of the State towards implementation of the Code. Further, we have also constituted a Working Group of Experts to reassess the 1991 estimates of the potential yield of marine fishery resources, estimate the additional harvestable yield, and make suggestions about conservation of fishery stocks. The report of this Working Group is likely to be made available soon.

As regards popularisation of the Code and making it available in regional languages, the Tamil Nadu Fisheries Department with BOBP support has already translated the Code into Tamil. Street plays to popularise the Code have been organised in fishing villages. A video film has been made. More such

Code of Conduct for Responsible Fisheries

initiatives are needed to make the Code a living instrument, a Code of action, rather than another document to be preserved in the library and shelved,

We believe these are major steps towards implementation of the Code, but more needs to be done. I urge the delegates present here, who together represent a formidable array of expertise on marine fisheries, to study the issue and come up with ideas and suggestions. Let this National Workshop move fisheries development and management forward on sound lines, in accordance with the principles of the Code of Conduct for Responsible Fisheries,

Ladies and Gentlemen,

The Ninth Plan for the Fisheries Sector has focused on an integrated approach to sustainable development and aims to optimise production and productivity, augment export of marine products, generate employment, improve socio-economic conditions of fishermen and fish farmers, conserve aquatic resources and genetic diversity and increase per capita availability and consumption of fish. This focus shows that so far there has been emphasis on development, in other words more and more exploitation of the resources. However, management, which is often perceived as a response to development, has not received the desired attention and most of us have been lagging in this aspect. The Code provides an excellent opportunity to integrate management with development. In this context, it would not be out of place to suggest that we incorporate suitable provisions in the Tenth Plan, preparations for which may begin soon, to earmark separate funds for activities relating to management of fisheries.

Fisheries management deals with multiple user groups, and sustaining a fishery resource requires the active participation of all user groups joining hands, agreeing on fisheries management plans and finally implementing and enforcing them. The concept of 'people's participation in natural resources management is being voiced and increasingly recognized in international fora. It is highly essential that management agencies, research and industry should be explicitly and directly associated with development of the resources.

The importance of local-level community management was the focus of BOBP in its Third Phase activities. The BOBP has done good work on community-based fisheries management and on a participatory approach to fisheries management. I would suggest that coastal States and Union Territories use the already tried models on community-based fisheries management and participatory approach to fisheries management in implementing the Code. The BOBP, as an Inter-Governmental Organization, should also take up major programmes to meet the requirements of the member-countries towards implementation of the Code.

Largely arising out of global initiatives, there is now also a pronounced trend towards adoption of preventive approaches to management of renewable resources. Such approaches are

being increasingly used for fisheries. The wide adoption of such approaches will help marine living resources conservation and also offer opportunities to improve fisheries management and ensure sustainable fisheries development. However, care must be exercised to avoid indiscriminate application and ensure that any change does not lead to social or economic chaos.

In conclusion, I would like to reiterate that fisheries is vital to our economy as it provides food, creates jobs and generates foreign exchange. With fisheries under threat everywhere, so is economic well-being. We must change our behaviour so that fisheries has a tomorrow, so that future generations aren't deprived of fish. Collective action is critical for survival. Hence the need for implementation of the Code of Conduct for Responsible Fisheries in letter and spirit.

The National Workshop is an important step forward in our efforts to sustainably and equitably manage our fisheries resources. The renewable fishery resources, if properly managed, can produce long-term sustainable yields and thus support continuous economic activities and employment.

As we progress, the fullest and most effective implementation of the Code can only be through a viable partnership between the government, industry and society.

I would once again like to thank BOBP for inviting me and I wish the Workshop success. I sincerely hope that the Workshop deliberations lead to a fruitful outcome, especially with regard to an action plan for implementation of the Code.

Contents of the Code of Conduct for Responsible Fisheries

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Responsible Fisheries: Can it be Achieved with a Code of Conduct ?

John Kurien*

The author divides India's fisheries history into three phases. Landmarks of these phases include modernization and bureaucratisation of fisheries, a big export push, a motorization drive for fishing vessels, the birth of joint ventures, and the strengthening of industrial shrimp aquaculture. Together these measures have hastened and aggravated the trend toward irresponsible fisheries. The author suggests an Indian code for responsible fishing, aquaculture and exports; greater awareness at all levels of the Code of Conduct; and better inter-State coordination in fisheries.

Introduction

When the era of freedom of the seas was about to end in the late 1980s, the FAO's annual State of Food and Agriculture made the following proclamation:

"The opportunity exists, as never before, for the rational exploitation of marine fisheries. Realization of the opportunity, however, will require major adjustments to the redistribution of benefits from the seas - wealth and improvements in the competence of the coastal states to exercise their newly acquired authority. The 1980s provide the threshold for a new era in the enjoyment of the oceans' wealth in fisheries."

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Twelve years later in 1992, the FAO made a review of the changes that had taken place in the decade following the above 1980 statement and the signing of the UNCLOS III in 1982. In this review, the optimism of the 1980s was replaced by careful introspection, in view of the fact that progress on all counts was slow. The Declaration of Cancun in 1992 best expressed the reality by stating:

"[May] the next ten years be declared the decade of responsible fishing, so that by the turn of the century, the rich opportunities afforded by fishery resources will begin to be realised."

We have now reached this watershed. The two decades before the arrival of this new millennium saw a tide of international conventions, agreements and codes rising in the disturbed sea of global fisheries. These international instruments were negotiated with a distinct hope that opportunities to tap the

Mr N K Sinha delivers the keynote address at the CCRF Wor/cshop in Chennai.



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wealth from the oceans and seas would expand to ensure the greater good of society as a whole.

At this juncture, two questions arise. Have we achieved a state of responsible fishing at the international, national or local levels? If not, is it due to a lack of conventions, agreements and codes?

As a social scientist, and also as an activist being involved in fisheries from the village to the global levels, my own answer to both these questions is a firm NO. There certainly have been many honest attempts at all levels to move towards responsible fishing. But we have a long way to go to reach our goal. However, lack of guidance in the form of conventions, agreements and codes is the least important of the reasons for not achieving our goals. Our non-performance is despite the availability of both legally binding and voluntary guides for action,

To talk about these issues of non-performance in the global context would be too general. Examining them at the local levels is too complex. Reflections at a national and sub-national level would be the most appropriate. The question before us today therefore is the following:

Why have we in India not been able to achieve “responsible fisheries” despite decades of our stated attempts to do so? Other than codes, conventions and agreements, what else is needed to achieve it?

To answer these questions, it may be useful to first define what we mean by “responsible” fisheries. The Collins Westminster dictionary defines “responsible” with three words:

- Accountable – being able to explain one’s actions
- Rational – being sane, equitable and fair
- Trustworthy – being reliable and accurate

Achieving responsible fisheries is therefore an ART! Why have we not been able to achieve this ART of responsible fisheries? This warrants a brief and selective review of the evolution of our fishery history and its present status.

Phases of Fishery History in India

A brief review of the history and the present status of Indian fisheries will show that our concrete actions in the sector have been far from being accountable, rational and trustworthy. My focus here is on the marine sector. However, I do not think the inferences drawn are significantly different in inland fisheries or aquaculture.

I’ll identify three phases in the movement – from the “initial” state of the fishery sector to its present “less than responsible” state of affairs. It is from this juncture that we wish to move towards responsible fisheries. I’ll highlight the prime

contradictions that arose in each phase and finally suggest some measures we may adopt to resolve them. Let us face it, fishery was never the hot favourite of development planners in our country. It still is not. But we need to remind ourselves that the future need not be so.

The First Phase

When he constituted the National Planning Committee (NPC) prior to independence, Pandit Jawaharlal Nehru (the first Prime Minister of independent India) wanted the problems and prospects of all sectors of the economy to be closely examined, and suggestions for a development strategy made. Consequently in 1945-46 a sub-committee did look into fisheries. It provided two perspectives that marked a turning point in the direction taken by the sector in the post-independence phase. The first perspective was the condemnation of the status of the existing industry expressed in the following manner by the General Secretary of the NPC:

“Though the fishery resources have been exploited from time immemorial, they lack scientific utilisation and development. Certainly, in the case of coastal and still more, as regards deep-sea fishing, the occupation is largely of a primitive character, carried on by ignorant, unorganised and ill-equipped fishermen. Their techniques are rudimentary, the tackle elementary, the capital equipment slight and inefficient. (Shah, 1948:118)

The second perspective was a three-pronged state-led modernisation strategy

- (1) institutionalisation of the knowledge of fishery-related activities
- (2) introduction of technologies being used in the developed maritime countries and
- (3) creation of a fishery bureaucracy.

It is interesting to note that these perspectives aroused contrary opinions even at that time. The NPC Sub-Committee on Fisheries report contains the dissent note of one of its members, Dr. C.C. John. He was an eminent fishery scientist and fishery development adviser to the State of Travancore and Government of Ceylon. Dr. John was known for his pragmatic approach to introducing change in the fishing industry in Travancore. He stated his differences thus:

“Though I fully agree that technological and biological researches are essential for providing technical and scientific advice to the fishing industry, I feel that the most fundamental need is the development of the industry itself on the basis of sound commercial principles with a view to eliminate waste, increase production and ensure proper distribution, *without overlooking the interests of those engaged in the industry and their urgent problems.* (emphasis ours)” (CC John in Shah, 1948:137)



The author criticises the neglect of the knowledge of traditional fishing communities.

About the imposition of new technologies such as the sporadic attempts to introduce the trawling techniques practiced in the North Atlantic regions, Dr. John was of the opinion that,

“these experiments were not based on scientific data and were doomed to failure and proved nothing more than the futility and absolute wastefulness of blind imitation of foreign methods on the random suggestions of foreign experts who had no knowledge of Indian fisheries.” (ibid: 138).

Dr. John felt that the yardstick of success and responsibility for an industrial department like fisheries was,

“not merely the number of new fishes which they have christened or the number and bulk of reports produced but by the extent of their usefulness to the industry in terms of new ideas or suggestions calculated to promote efficiency and expand scope and possibilities.” (ibid: 138)

In my understanding this was the starting point of our movement away from “responsible” fisheries. That momentous decision to totally ignore what was the backbone of the fishing activity in the country and replace it with a new state-sponsored

scientific, technological and bureaucratic framework was hardly an accountable, rational or trustworthy action. We are still paying for this today.

First, the neglect of the rich diversity of knowledge, technology, and institutions (rules and norms) of our numerous traditional, small-scale fishing communities scattered around the coastline of the country, is at the root of their continued economic plight. Fishing communities continue to be marginalised in most maritime States including Kerala, a State that has been heralded the world over for the success of its overall social development. If fishing communities in the maritime States are restive and belligerent today, the root cause is to be found in the historic blunder of moving to build a “modern fishery” *without basing* it on the strengths of what existed in the “traditional fishery” of that time.

Secondly, the dominant role given to the state for setting the research agenda, deciding on the choice of technology and setting out the administrative framework for disseminating it had a negative side to it. It curbed most avenues for initiative from other players in fisheries. One important result of this, which has been rarely highlighted, is the *defacto* change in the institutional ownership arrangement *vis-a-vis* the fishing

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communities and the fishery resources that they had harvested from time immemorial. Most fishing communities had a clear conception of their “community rights and duties” with regard to the resource. None of this was of course in the form of any title deeds or written claims. The mere fact that for centuries, other people in society accepted the fishing communities’ implicit ownership stakes, was sufficient proof of the latter’s property right claims,

The state rode roughshod over these historical rights. What was once a mosaic of community property rights was first declared as state property. Thereafter it was relegated to the realm of “open access.” In open access, there are no property rights – only *possession rights*. Anyone can have access to the resource as a matter of right. Today’s overfishing problem and excess capacity problems, even in the small-scale fishery, have their roots in this transition. In hindsight, this was certainly an action of the state that fostered and promoted irresponsible fishing.

The Second Phase

The next stage in the movement away from responsible fishing came with the large international economic crisis of the early 1960s. This can be traced back to two important happenings in Kerala State in the **1950s**. The first pertains to the export of frozen shrimp to USA by a private entrepreneur and the second was

the successful introduction of small trawlers by the Indo-Norwegian Project. These two initiatives in tandem highlighted the fisheries sector’s ability to generate quick foreign exchange earnings. It brought the marine fishery, hitherto a state subject, into sharp focus at the level of the Central Government. The forced devaluation of the rupee in 1966 was another watershed in the policy directions taken for the fisheries sector. The great push for exports resulted in the larger allocation of plan funds for fisheries as well as the promotion of private initiatives into adopting bottom trawling for shrimp and freezing them for exports to the US and Japan. This period saw a big rush of “outside capital” into the hitherto “caste occupation” of fishing. With the huge amounts of money that could be made, it suddenly became socially respectable to say that you were in the fish export business!

Equally important in this phase was the direct entry of the state into the fish economy in a big way. The Central Government took on the onus of making huge infrastructure investments in the form of major harbours and landing centres. Many State governments set up wholly owned fishery corporations to get involved directly in fishing, export processing and ancillary activities. Fisheries development in India, and particularly in the maritime states, became synonymous with the “pink gold rush.” The state and unbridled market forces were very much in control. The fishworkers and the fishing community were largely out or remained at the periphery.

Many conflicts occurred between trawlers and traditional fishing craft during the second phase of India fishing history.



This phase, which lasted until the end of the Sixth Five-Year Plan in 1985, was also the period when the fishery sector in most of the southern States (Goa, Karnataka, Kerala, Tamil Nadu and Andhra Pradesh) experienced sharp internal social conflicts. There were battles at sea between fishermen on trawlers and those operating artisanal fishing crafts. It became a case of one sea and many contenders. Result: some stark contrasts. On the one hand the amassing of wealth by a few (the recent entrants into fishing, particularly those who only made capital investments) and on the other, the impoverishment of traditional fishers. This was also the period when the social and political mobilisation of the fishworkers was most widespread. The formation at the national level of the independent National Fishworkers' Forum and several State-level political party affiliated fishworker trade unions were also a salient feature of this phase.

The marine shrimp harvest in the country increased from 70,000 tonnes in the period 1966-70 and stagnated around 113,000 tonnes in 1981-85. Shrimp exports during the same period rose from 15,000 tonnes and stagnated around 53,000 tonnes. Earnings from shrimp exports, due to the steady increase in the international prices of shrimp, rose from Rs 176 million in 1966-70 (accounting for 51 per cent of the total value of all marine products exported) to Rs 3003 million in 1981-85 (accounting for 86 per cent of the total value of all marine products exported).

Another major realm of contention during this phase related to the appropriateness of the bottom trawling nets used to harvest shrimp in a tropical fishery ecosystem. There was evidence to show that the composition of the shrimp catch over the years, particularly in Kerala State, moved towards the smaller, less market-valued species. Consequently, though the quantity exported may have increased, one major question still remains unscrutinised. If the catch composition of the mid-1980s (species-mix harvested using bottom trawls on a perennial basis) remained the same as that which we had in the early 1970s (species-mix harvested using passive gear on a seasonal basis) would India have earned more foreign exchange at lower capital and recurring costs? An examination of the data of Kerala and the whole of the southwest coast provides a positive answer to this question. Surely this is not an accountable action or sound economics!

In this period fisheries development could by no means be equated to fishworkers' development. Also, fisheries development did not yield the optimum economic benefits. These were by no stretch of imagination rational consequences.

The Third Phase

The period after 1985, until the end of the century, can be considered as the third phase in the movement towards increasingly ART-less fishing. This phase is also co-terminus with the post-liberalisation of the Indian economy which began gradually in the early 1980s and speeded up in the early 1990s.

Three major new features can be identified during this phase.

- Firstly, following a liberalised import regime, there was a marked increase in the motorisation of artisanal fishing crafts by using outboard and inboard motors. This was combined with the successful introduction of small beach-landing boats made of new materials like marine plywood and fiberglass. This was a widespread phenomenon along the whole coastline of the country. Some maritime states encouraged this trend more than others. Secondly, under external and internal pressure, the Central Government permitted many new joint venture agreements for fishing in the Indian EEZ outside the 12 nautical mile territorial waters.
- Thirdly, there was the thrust to encourage industrial shrimp aquaculture in the coastal areas presumably to compensate for the stagnation in the marine shrimp harvest (mentioned above).

The most significant feature of this phase was a withdrawal of the state from making new financial commitments to the sector. Also, many regulatory regimes that once provided a frame of reference to the direction of development in the sector were grossly diluted in the name of national economic liberalisation and commitment to the global community. The focus of this period was on a greater role for the market that was actively aided, directly and indirectly, by this withdrawal of the state and its agencies.

There was a very unfortunate dimension to this *laissez-faire* (non-interference) approach by the state. In all the three features mentioned above, this withdrawal resulted in anarchy of sorts. It resulted in free play for all and sundry. Unfortunately, the playing field was not level and there was no referee for the game.

- The motorisation and new craft designs of the artisanal, small-scale fishworkers led to severe overcapitalisation and excessive use of fossil-fuel energy. We are spending more and more to catch less and less fish per unit of effort. Kerala state provided the classic example.
- The joint venture initiatives led to many unwise collaborations and would have resulted in a virtual sell-out of our fishery resources were it not for the united opposition to this policy from all the existing sub-sectors in the fish economy. This forced the government to retreat. Most of the foreign investors seem to have development cold feet in the murky waters.

The export-led aquaculture "boom" was also short-lived. A combination of disease (caused by reciprocal externalities of the aquaculture units themselves) and protest from civil society to the uni-directional negative externalities of the activity, hastened its "bust."

In all the above we see the failure of both the market and the state – particularly when the two are totally divorced from

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each other. The state totally abdicated its role as a regulator and coordinator of economic activity and was thus unable to ensure the larger interest of the society. The mindless encouragement of the logic of the market for short-run gains also alienated fishery-related activities from the moorings of the larger community ethos in which it could have been situated.

Some Pre-conditions for Responsible Fisheries

This brief narrative of the three phases of fisheries development in India leads me to conclude that if the Code of Conduct for Responsible Fisheries (CCRF) is to become an effective instrument in guiding Indian fisheries into an accountable, rational and trustworthy future, certain pre-conditions must be met. I shall enumerate below three of the most basic among them. They may serve as the foundational building blocks for sustainable fisheries development and management into the future,

First, a clear definition of the nature of property rights to the resource should be spelt out. Who should be given access rights to the sea? Should these rights be assigned based on both socio-economic and techno-spatial criteria?

Secondly, the quantum of harvest of the fishery resource and the technology used for it should match the given bio-ecological realities of our aquatic terrain. Should our focus be on seasonal targeting of specific species or on merely maximising the total volume of output? Can we blend time-tested craft and gear designs with new fabrication materials to obtain a proper mix of value and volume of output from the sea?

Thirdly, the roles of community, market and state in fisheries must be clearly delineated. Only such mutual interactions will increase the trust between actors in the different realms. Should the process be left to evolve with time or can institutional arrangements be crafted by a conscious exercise of the actors concerned?

In a way, these three pre-conditions reflect the important primary contradictions that surfaced during the three phases of fisheries history that were enumerated above. My contention is that Indian fisheries moved from one phase to the next without resolving these contradictions. Consequently, the problems have compounded themselves. As we enter the new millennium in Indian fisheries, we are confronted with a situation where we need to take steps to fulfill these pre-conditions contemporaneously if we are to move into a phase where

All stakeholders must take active part in the fishery, says the author.



accountability, rationality and trustworthiness are the key organising principles of the fishery. Codes and conventions become effective guidelines only if the above pre-conditions – which are largely socio-political in nature – can be met.

Moving towards Responsible Fisheries

The first step to moving towards responsible fisheries is to recognise these pre-conditions as part of an explicit government fishery policy. On this score, one hopes that the Government of India's recently constituted Expert Committee for the Formulation of Fishery Policy will take account of these issues and reflect upon them carefully.

The role of the state is paramount in giving *direction to* the steps that the sector will take and *NOT* in deciding the *pace at* which it will move. The latter will require the participation of all the stakeholders in the fishery. It is essentially a collaborative initiative that has to be undertaken by all those involved in the fishery sector. The CCRF attains its special relevance in this context. Unlike other international instruments it is addressed to all.

To my mind the CCRF can become the rallying point around which we can get every category of stakeholder involved in fisheries to discuss both the pre-conditions for responsible fisheries and the direction and the pace at which we should move forward. In our country, the special emphasis that must be given to the small-scale fishery is also adequately addressed in the CCRF.

The first step for ensuring this all-round participation will be to initiate a process to ensure that awareness about the CCRF spreads concurrently at all levels: politicians, policy-makers, bureaucrats, scientists, entrepreneurs, fishworkers and others such as environmentalists with a demonstrated interest in fisheries. To achieve this, there has to be a conscious and committed process of making all stakeholders aware of the CCRF and its contents. A concerted Plan of Action that makes **it possible** to create awareness simultaneously from above and below must be initiated. It is gratifying that the FAO/BOBP is setting a good example in this direction. The main focus should be the maritime states. The Departments of Fisheries should initiate measures to translate the CCRF into their respective state languages. This has been done in Tamil Nadu with the assistance of the BOBP. In Maharashtra, the National

The Code of Conduct urges special emphasis on the small-scale fishery.



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Fishworkers Forum translated a lengthy annotated summary of the CCRF into Marathi. Simplified and illustrated versions providing the essence of the CCRF should be distributed at the coastal panchayat level. Fishery Department Extension Services in all the maritime states should mobilise a variety of communication aids to get the message of the CCRF across in the fishing villages,

Agencies like the Marine Products Export Development Authority (MPEDA) have a major role to play. The MPEDA is the only agency with a legally mandated role for management (though technically only for the offshore and deep-sea) and the funds to finance such initiatives. The MPEDA should take the initiative to ensure that all fishing vessels, aquaculture units and exporting firms registered with it are made aware of the implications of the CCRF and in particular, Articles 7, 8, 9, 10 and 11 relevant to their activities. Technical and financial assistance should be offered to make the changes necessary in their operations to meet CCRF requirements.

At the level of national governance of fisheries, there is need for much greater inter-state collaboration. This is particularly crucial if we are to move towards a sustainable management of our marine resources. It was recently suggested at a multi-stakeholder workshop in Gujarat that fisheries should move to the concurrent list in our Constitutional schedules. Even if this takes time, it is paramount that we have more inter-state fishery coordination councils to deal with the issues of resource sharing, harvesting and marketing. Issues pertaining to inter-state movement of fishworkers in the harvesting and processing sectors also merit greater collaboration by state fishery and labour departments. To facilitate such collaborative action in the future, agencies like the BOBP, in collaboration with the Government of India, should organise common training programmes for the state fishery department officials.

At the fishing village level a far greater role needs to be played by panchayat raj institutions. The initiatives of the Government of Kerala in this regard are worthy of emulation by other states. A far-reaching legal measure on this account would be for maritime states to give coastal panchayats effective control over the landward coastal regulation zone and the seaward littoral regulation zone.

The formulation of an Indian Code for Responsible and Safe Fishing, Aquaculture and Exports (ICORSAFE) should be given priority. It should be a combined effort of the Government of India, the state governments, the MPEDA, the various boat owners' associations, fishermen trade unions, shrimp farmers and seafood exporters' associations and representatives of the workers in these units. This effort should have the backing of the numerous Indian fisheries research bodies. Such an initiative will go a long way to create consumer confidence in Indian marine export products. This is a measure long overdue if we are to increase our share of the world market. This can also be a first step towards evolving a national eco-label on our terms rather than have standards dictated to us by First World multinationals and environmentalists.

The transition process to responsible fisheries is unlikely to be smooth and painless. There is a mistaken notion that responsible fisheries can be achieved if we merely adjust the rates of harvest to the rates of resource rejuvenation. In other words a mere technological fix. What we need to constantly bear in mind is that the transition is fundamentally a socio-political one. There will be winners and losers and therefore resistance to this change. Consequently, any transitional plans intended to meet any of the pre-conditions and measures mentioned above need to be handled with care and caution. A recently constituted independent global commission on fisheries resources (WFIAT, 2000) examines this issue at the global level. Much of what is said in that report is applicable to the national level as well.

Conclusion

The millennium ahead calls for some radical changes in the manner in which we have been doing things so far in our fishery sector. This calls for a fresh commitment on the part of all the stakeholders in the sector. Over the decades we have overloaded our boat with a variety of cargo. Added to this, we have also often placed the cargo aboard in a haphazard manner, making our craft unstable and unsafe. The priority is to shed a lot of the dead weight, take on some new cargo and reorganise the lot on the deck in balanced fashion. Then we can reset the rudder to take a new course towards accountable, rational and trustworthy fisheries development and management with the codes and conventions as our navigational aids.



Applying the Code of Conduct for Responsible Fisheries to Small-Scale Fisheries in India*

Sebastian Mathew

International Collective in Support of Fish Workers

Implementing the Code of Conduct requires legislative reform so that the emphasis in Indian fisheries switches from exploration and exploitation toward conservation and management. The latter requires a spirit of 'ownership' amongst principal stakeholders, through a consultative process among the Union and State Governments, the fishing industry and fishing communities. Reliable information is essential as well.

Introduction

An Internet search of the term "Code of Conduct" yields hundreds of references. Most of them relate to activities on a moral plane - to conduct in the areas of education, public life, sports, humanitarian assistance, the arms trade. A code of conduct attempts to bring ethics into a professional act. A person or group that subscribes to a Code agrees to practise a profession according to the principles and standards that are laid down in it.

A code of conduct is thus a standard-setting exercise with ethical connotations. But fishing is an act based on taking aquarian life. How appropriate is a Code with moral and ethical connotations for setting standards for such an activity? In this sense, there may not be any parallel to the Code of Conduct for Responsible Fisheries.

The Fisheries Code

The Code of Conduct for Responsible Fisheries (henceforth, the Code) was the second example of FAO taking part in developing a Code (FAO 1995a). This is a voluntary, standard-setting code; its main objective is to establish principles and standards of behaviour for responsible fishing and fisheries practices after taking into account relevant biological, technological, economic, social, environmental and commercial aspects. It was developed through a consultative process involving States, representatives of the industry and NGOs.

Although the focus of the Code is mainly on fishing operations, especially aspects relating to fishing in the high seas, the scope of the Code includes capture, processing and trade of fish and fish products, fishing operations, aquaculture, fisheries research and the integration of fisheries into coastal area. It includes, in other words, all aspects of fisheries - from the fishing ground to the final consumer.

Problems and Prospects in Applying the Code

Adopting the Code is one thing; applying it to fisheries is indeed an onerous task. States may reveal the best of intentions during the negotiations for producing a non-binding legal instrument like the Code. But intentions do not necessarily lead to action for several reasons. Even legally binding instruments like the UNCLOS are yet to be fully implemented.

So far, rich coastal States like the United States, Canada and Australia have taken major steps to implement or apply the Code. In the United States the initiative has come from the State, and in Canada and Australia, from the industry. The U.S. has prepared an implementation plan for the Code that addresses key elements of sustainable marine fisheries. While the Australian Code applies to aspects of the seafood industry like production, processing, and marketing, that of Canada applies only to fishing operations that will contribute to sustainability in marine and freshwater fisheries.

It is five years since the Code has been adopted. So far we have not heard of any developing country taking concrete steps to apply the Code to its marine fisheries, let alone its industry. On the contrary, we hear of the Southeast Asian Fisheries Development Center (SEAFDEC) expressing some concern about the Code being "more relevant to the developed countries". SEAFDEC is in the process of producing an Asian Code for coastal fisheries.

* This article is an abridged version of a paper presented at the National Workshop on the Code of Conduct for Responsible Fisheries, held 29-30 September, 2000, in Chennai, India.

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Conservation and management do make better business sense when a country seeks to access international markets. The recent debates around eco-labelling are sufficient proof of this. As resources come under increasing pressure, the market for eco-labelled fish is bound to expand. Those countries that are in the forefront with better conservation and management regimes are bound to benefit from better marketing opportunities. Consumers of fish and fish products in rich countries are likely to express a greater preference for fish produced under better conservation and management regimes. The origin of eco-labelling schemes like the Marine Stewardship Council is based on these expectations.

There is a tremendous opportunity for developing countries to adopt conservation and management measures—since it is they who produce most of the fish preferred by the rich countries. The latter will pay a higher price for fish that are responsibly produced. This calls for a proactive engagement with fisheries conservation and management issues both by the State and the industry. To set national product and process standards to access lucrative markets, developing countries would need co-ordinated action, especially implementation of principles and standards that the global community would approve of. Applying the Code should also be seen from this perspective,

Adapting the Code to India's Small-Scale Fisheries

1. Dynamism of the small-scale sector

In the past, small-scale fisheries most often meant non-mechanised fishing units, irrespective of size and quantum/kind of gear. The polarisation of Indian marine fisheries into mechanised and non-mechanised, which prevailed until the early 1980s, has since broken down. With the advent of affordable new technology and the introduction of new materials for construction of boats and gear, the traditional! artisanal/small-scale fisheries are going through unprecedented changes. For example, the investment in a “traditional” pelagic fishing unit using purse seines now exceeds that of a 12 meter (m) bottom trawler. The advent of outboard motors (OBM), the use of fibreglass reinforced plastic (FRP) and plywood boats, the use of global positioning system (GPS) and even cell phones, are significantly redrawing the fisheries profile of the small-scale sector in India and contributing to a growing differentiation within the sub-sector,

The small-scale sub-sector is much more diversified than before. It is difficult to recognise it as a homogenous category any more even in terms of propulsion techniques. Under current circumstances in India, one would tend to argue that most, if not all, fishing vessels that operate within the territorial waters would qualify as ‘small-scale’. This would include all fishing methods employed by these vessels including trawling, purse-seining, gill-netting and long-lining and any other forms of fishing. The nuances that one may associate with ‘small-scale fisheries’ may vary from state to state.

Organisations of small-scale fishermen are even getting into trade arrangements with countries in the European Union. The South Indian Federation of Fishermen Societies (SIFFS), for example, is negotiating the terms of entry into the German Fair Trade market through its biggest super market chain, *Deutsche Sea*. There also seems to be significant improvement in fish handling practices with iced fish travelling great distances to reach markets offering the best prices. The quantity of fish travelling the length and breadth of the country also seems to have increased tremendously. The ‘revolutionary’ implications of these dynamic changes in production, processing and marketing remain largely unexplored even today.

2. Worrying signs of overfishing

According to the *Handbook on Fisheries Statistics* 1996, fish has been the fastest growing item in the food sector in India since 1950-51 – after eggs, chicken and potatoes – thanks to the phenomenal growth of small-scale fisheries in India. The largest share of marine fish production now comes from the mechanised sector using inboard or outboard engines in the territorial waters under the jurisdiction of maritime States.

This increase in fish production in response to market demand from within and outside the country has come at a price. It has led to anarchic growth of fisheries, with too many boats chasing a resource with a shrinking base. Coastal fishing vessels registered with various maritime States are moving into waters beyond the territorial sea, also from the waters of one maritime State to another—all signs of an exhausted home fishing ground and excessive fishing capacity. Gujarat trawlers, for example, fish beyond the territorial sea and also in the waters of Maharashtra. The longline fishermen of southern Tamil Nadu fish for shark all over the country. The teppa fishermen of northern Tamil Nadu, using gill-nets, fish in the waters of Andhra Pradesh. The plywood boat fishermen of Kerala using purse-seines fish in Karnataka and Goa. Trawlers from Kakinada, Andhra Pradesh, catch shrimp in Orissa and West Bengal.

The Central Marine Fisheries Research Institute (CMFRI) has observed that the potential of the current fishing grounds in India has already been crossed. The FAO Fisheries Country Profile of India talks about how “India’s marine fisheries production has reached a plateau...”

Gujarat, which is in the forefront of market-led development, and is currently the biggest producer of fish in India, now faces a major crisis in its marine fisheries, with economic and biological overfishing. After a phenomenal and almost unbroken run, the marine fish production in absolute terms suddenly dropped by over 27 per cent to 552,000 tonnes in 1998-99, from a peak of 702,000 tonnes in 1997-98.

Clearly, the stage is now set for conservation and management. Given sufficient will and imagination, it can be achieved.

3. Conservation and management: problems with current fisheries legislation at the national level

The Code cannot be applied to national fisheries in a legal vacuum. Framework legislation is essential for that purpose. There should also be a sense of collective responsibility among the provincial and the central governments, and coordination between them.

The Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act, 1976 of India, for example, recognises {through Section 7 Para(4) (a)} the sovereign right to conservation and management of living resources in the Indian EEZ in addition to their exploration and exploitation. Section 15 (c) gives further power to the Central Government to make rules, *inter alia*, for conservation and management of the living resources of the EEZ and Section 15 (e) for the protection of the marine environment. The basic fisheries legislation that followed this Act, viz., the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981 and the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Rules, 1982, however, do not make any mention of conservation and management and it is high time that legislation was amended to bring in these measures.

The only Indian legislation that talks about “undertaking measures for the conservation and management of offshore and deep-sea fisheries”, is the Marine Products Export Development Authority Act, 1972 [Section 9(2)(a)]. The Act, however, does not define what it means by ‘conservation and management’. It also has a provision by which the costs of conservation and management of waters beyond the territorial sea are met by the Marine Products Export Development Fund [Section 17.2 (c)]. However, MPEDA has never invoked this legal provision.

4. Conservation and management: problems with current fisheries legislation at the State level

The above legal instruments apply only to the EEZ, which is the marine area beyond and adjacent to the territorial waters and which contributes only negligibly to the total marine fish production of India (about 0.01 per cent!). According to the Seventh Schedule, Article 246 of the Constitution of India, fisheries within the territorial waters of India are under the jurisdiction of the State Government. The pressures of overfishing are felt most acutely within these waters. Reform of the State-level conservation and management regime is therefore urgent.

Small-scale fisheries has become much more diversified than before, says the author.



Code of Conduct for Responsible Fisheries

As far as the State Governments are concerned, the most significant drawback in the legal system for marine fisheries is that, in spite of the resources being overfished, they are yet to introduce conservation and management measures. Nor is there any legal mechanism to address inter-State movement of fishing vessels. The main emphasis of the Marine Fishing Regulation Act of the maritime States of India (except for Gujarat, which is yet to have a legal instrument for its marine fisheries) is on regulating fishing vessels in their respective 12-mile territorial sea, mainly to protect the interests of fishermen on board traditional fishing vessels.

The Act was based on a model bill prepared by the Ministry of Agriculture, Government of India, more than two decades ago. The Act has been primarily used to separate trawlers from other gear groups. In this sense, the Act has mainly served to maintain law and order at sea rather than to promote fisheries management. In the light of developments in the traditional sector over the past 15 years, this Act looks very outdated today and urgently needs amendment.

5. Conservation and management: need for compatible legislative regimes at the national and State levels

In general, Indian fisheries legislation seems to target the fishing vessel rather than the fishery per se. This is true of the Merchant

Shipping Act 1958, MPEDA Act 1972, the Maritime Zone of India (Regulation of Fishing by Foreign Vessels) Act 1981 and Rules 1982 as well as the Marine Fishing Regulation Acts of the Maritime States. What seems to be essentially regulated is access to fishery resources in time and space. Technical specifications for the fishery are sometimes prescribed but they do not seem to be followed up in strict implementation.

The need for conservation and management of marine fisheries should be seen in proactive terms, consistent with United Nations Convention on the Law of the Sea (UNCLOS) and the other international legal instruments that India has acceded to. They should refer to all of the rules, regulations, conditions, methods, and other measures, which are required to rebuild, restore, or maintain any fishery resource and the marine environment. It is also important that conservation and management are made the collective responsibility of the Union and the State Governments.

The emphasis has to be on the fishery rather than on the fishing vessel. The above focus would help us look at the impact of a particular fishery on associated and dependent species of the target stocks. It would enable us to address issues of social dimension within the scope of fisheries management. It would also allow for bringing into the scope of conservation and management, not only the supply side of fisheries, but also the demand side.

“Since India has a large coastal population, labour-intensive gears and techniques must be promoted within a sustainable rights-based regime.”



It is high time the Ministry of Agriculture at the Centre drafts and circulates a model fisheries conservation and management bill amongst the littoral States and Union Territories,

The dynamism of Indian small-scale fisheries also clearly highlights the need for greater co-ordination between States and between States and the Union Government. Marine fisheries ought to move from the State and Union List respectively into the Concurrent List. This could facilitate coordination between the maritime States of India and the Union Government to work in conservation and management. It could also mean setting up, as in several other countries, a co-ordinating body for the fisheries resources of the country with representatives of all stakeholders.

Conservation and management of fisheries resources should, needless to say, go hand in hand with protection of the fish habitat. Measures are needed to protect the marine environment from pollution. The Water (Prevention and Control of Pollution) Act, 1974 has provisions to protect the coastal sea from land-based sources of pollution but subject to the discretion of the State Government.

6. Adapting the code: the need to engender 'ownership'

(a) *Engendering 'ownership' among State Departments of Fisheries*

The Ministry of Agriculture is the nodal agency for FAO and represents India in all FAO projects and processes. This includes the process that led to the development of the Code. State Governments, which have greater jurisdiction over fisheries within the territorial waters, haven't participated in the process. This is because the Constitution assigns to the Union Government the responsibility for participation in international conferences and implementation of treaties, agreements and conventions. State Governments can participate in such processes only if they are part of the national delegation. It may not therefore be easy to foster 'ownership' of the Code amongst State governments. But this problem can be overcome by initiating a process for development of a national Code in which all maritime State governments and other stakeholders participate.

If State Governments develop a sense of 'ownership' of the Code, it should then percolate to the fish producer, processor and trader/exporter and the fishing community. Historically, India has a prescriptive move-down tradition. What is most significant is a consultative approach with all stakeholders to build up this sense of ownership at the grassroots.

(b) *Engendering 'ownership' in the fishing industry*

A sense of ownership amongst the practitioners of marine fisheries could be better engendered if the State fisheries departments and the Union Ministry of Agriculture publicly

defend the interests of the sector. But fisheries departments in India seldom take any position on the importance of protecting coastal habitats – which are very significant for the regeneration of fish, especially when they are young. The quantity and quality of nutrient-laden freshwater discharged into the coastal areas are quite significant for regeneration of fish. In various debates on dams, when engineers lament the "wastage" of water that is drained out to the sea, no fisheries department has ever cared to point out that this discharge helps maintain the appropriate salinity regime for the regeneration of fish, which are a crucial source in India of livelihood, jobs and foreign exchange.

It is the duty of the State fisheries departments and the Union Agricultural Ministry to defend the interests of the fisheries sector and ensure sufficient recognition for it. A degraded coastal habitat will certainly impinge on jobs and live'hood in the fishing industry. In Japan, property rights are given to fishing communities; if any firm wants to set up a unit in the coastal area, it has to negotiate with the community and buy rights.

(c) *Engendering 'ownership' amongst fishing communities*

So long as open-access regimes remain, fishers have no incentive to be interested in management. This is linked to the issue of 'ownership'. Unless recognised rights are granted to fisher communities, they will not act responsibly towards the resource. We should move towards rights-based fisheries, which are equitable and conservation-oriented in nature. Since India has a large coastal population, sustainable and labour-intensive gears and techniques should be promoted within a rights-based regime.

The entire text of the Code makes only three references to the notion of 'access' to fishery resources in waters under national jurisdiction. All these are in the context of small-scale fisheries or coastal fishing communities. The most important reference is under Article 6 on General Principles (para. 18).

6.18 Recognizing the important contributions of artisanal and small-scale fisheries to employment, income and food security, States should appropriately protect the rights of fishers and fishworkers, particularly those engaged in subsistence, small-scale and artisanal fisheries, to a secure and just livelihood, as well as preferential access, where appropriate, to traditional fishing grounds and resources in the waters under their national jurisdiction.

The second reference in the Code to access is in the context of aquaculture development. Article 9.1.4 talks about the need to protect the access of local communities to fishing grounds while

developing aquaculture. The third reference is under the Article on Integration of Fisheries into Coastal Area Management, where States are asked to take into account the rights of coastal fishing communities while determining access to coastal resources.

Code of Conduct for Responsible Fisheries

The 'preferential access to small-scale fishers' theme is embodied in Christy's notion of creating territorial use rights in fisheries or TURFs, as they are popularly called (Christy 1982). Within this framework, Kurien proposes the need for aquarian reform to bring in the notion of equity in a labour-intensive fishery, especially in a labour-intensive, tropical context. These are

- (i) to restrict the right to fishing assets for use in coastal waters, exclusively to those who fish and
- (ii) to have a ceiling on the number as well as the scale of fishing assets. Specific measures could include a ceiling on the number of boats that could be actually owned by one individual or family.

Limited access regimes are the fence within which responsible fisheries can be institutionalised. The basic fisheries legislation should, therefore, allow for these access rights to be defined and legitimised in a consultative manner. They should also devolve down to the panchayat level. (Article 6.1 of the Code). Rather than reinvent the wheel, what is required is the creative adaptation of existing arrangements, which are generally strong on distribution but weak on conservation and management. They are also more cost-effective and would therefore be of greater relevance to countries like India.

(d) Addressing Information Gaps

Information that will help sound fisheries planning is essential. Better tools to collect information are also necessary. To cite a few examples: we do not yet know how reliable our stock assessment estimates are since they are based on a model developed for the temperate ecosystem. We have no idea about the impact of fisheries on associated and dependent stocks. We have no way to find out the relative impact of fishery-dependent and natural factors on our fish stocks. Is it El Nino or is it

excessive fishing pressure that is responsible for decrease in production of some of our pelagic species? How much do we know about the impact of habitat-degrading activities like pollution, reclamation, mangrove deforestation, and dams on the biological productivity of fisheries resources? What is our understanding of the marine and coastal ecosystem?

The reliability and comparability of our fisheries data needs to be improved and raised to international standards. We have no reliable information except for our export statistics. The categories 'full-time', 'part time' and 'occasional' fisherfolk used by the Ministry of Agriculture seem to serve only a limited purpose in planning for fisheries management and development. We have no real data on women, men and children gainfully employed in fisheries-related activities. Terms have to be

Advocates of aquarian reform say that the right to acquire fishing assets for use in coastal waters should be conferred only on those who fish.





More reliable data and better data collection tools are needed in fisheries.

standardised. To describe fish stocks, for example, several terms like 'standing fishable stock', 'marine fishable stock', 'maximum sustainable yield', 'total potentiality' and 'total potential yield' are interchangeably used.

We have no clear picture of the level of investment in our fisheries, either aggregate or by sub-sector. Although we have a rough idea of the quantity of fish that is produced, we do not have a clear understanding of the total value of fish that is being produced and marketed within the country. We have no idea about trans-border trade of fish within India. We have no reliable information on fishing capacity by number of fishing units and their fishing power, including the specifications of craft, gear and engine,

We have no clear understanding about the extent of migration into fisheries from other sectors and vice versa. The system for collecting basic statistics also seems to be quite inadequate. There are conflicting figures on fish production. Take the fish production statistics of Gujarat compiled by the State Government and CMFRI. There is considerable divergence

between the two sets of figures. The functions of some of the national agencies also seem to 'overlap'.

The absence of proper co-ordination and lack of incentives seem to prevent the large number of marine research centres – one of the highest amongst developing countries in the world – from bringing out quality information in a timely and complementary fashion. These centres employ some of the most well qualified personnel in fisheries in the country, especially biologists. The links between India's research centres and the industry are also weak – unlike in China.

Coming to terms with this shocking lack of information is perhaps the first step towards responsible fisheries. Marine fisheries are a significant sector from the standpoint of employment, income, foreign exchange and national security. The economic profile of this sector demands generation of more diversified, reliable and accessible information towards a common set of objectives and goals. This would call for developing a national marine fisheries policy through a truly consultative process.

Code of Conduct for Responsible Fisheries



Conclusions

Over and above political considerations, the countries that have adopted the Code are the ones that have reliable information about their fishery resources and fishing fleets. In India, we still base our understanding of fisheries on surmises or outdated pieces of information. Moving towards a knowledge-based system for fisheries management and development is the first step towards applying the Code, whether or not we talk about large-scale or small-scale fisheries. And while deciding to apply the Code, we should avoid a compartmentalised approach. Selective application of the Code to a particular group of fisheries may prove to be counter-productive,

What we need is a holistic perspective and a mechanism to arrive at collective responsibility, compatible between different user groups. This also raises questions about political will. In a country where fisheries contributes only a little over one per cent of the GDP (at current prices) and 3% of export earnings, it may be difficult to generate the political will to undertake all the changes proposed. A concerted effort in this direction certainly needs to be made.

Once the central goal of conservation and management and the role of a consultative mechanism to achieve this goal are recognised, and once the importance of limited access regimes is accepted in principle, marine fisheries could move towards

responsible fisheries, based on the principles and standards of the Code. Almost the entire fish production of India comes from the small-scale sector. Adapting the code to small-scale fisheries is tantamount to adapting the Code to Indian fisheries.

One of the important peacetime tasks of the United Nations and its agencies is to help set priorities and standards. In a world where member-nations and peoples are too preoccupied with a multitude of issues, the UN draws the attention of the global community to issues that may have a bearing on our future.

More than standard-setting, one would argue that the greater relevance of the Code is in making us think about the state of our fisheries resources and in putting some pressure on us to set our priorities right. When we read the Code and look at Indian fisheries it shocks us. Can the Code help us set down our main priority as conservation and management? could we then prime up our fisheries to make it more responsible within a reasonable time frame?

To revamp a mind-set oriented to development through production and marketing, and change it to one that focuses on development through conservation, management, habitat protection and value addition, requires a radical change in our thinking. It calls for a multi-dimensional perspective, a 'cubic' approach to fisheries management and development issues.

Operationalising the Code

Kee-Chai CHONG

How can the Code of Conduct for Responsible Fisheries be operationalised? How best can it be translated into action? A checklist of guidelines was presented and discussed at the Chennai workshop by BOBP's former director, presently a consultant to SEAFDEC – which is preparing a regional version of the Code of Conduct for Asia.

The checklist that follows is meant to facilitate discussion on the preparation of guidelines to the Code of Conduct for Responsible Fisheries. First, some basic points:

- Fisheries Management often means *Un-doing Less Responsible Practices of the Past*. It does not necessarily mean new ways of doing old things. It entails **More Responsible Practices to Harvest Fish to Ensure Conservation and Sustainability**. These practices should promote greater and wider adoption at the local level.
- The guidelines being prepared by the SEAFDEC Core Group of Experts are different from the **globalised** technical guidelines prepared by FAO. The SEAFDEC guidelines use inputs from your country and your fishers.

Likewise the Guidelines you must formulate should reflect your own views, your country's views and needs.

- We need to banish the myth that fisheries management is carried out only at sea when the fishers are in action, and that it requires large numbers of patrol boats and enforcement staff. Fisheries management activities can be wholly shore-based; they may be carried out on land – before the fishers leave the fishing port to fish, or after they return from fishing. Of course, patrolling at sea (when the government can afford it) strengthens further compliance of fisheries management measures.
- **Constraints to Implementation:** We must specially tackle constraints that inhibit implementation at the local, national and regional levels.

Orientation of Guidelines: Who are the guidelines prepared for? For whom and at what level? Responsible behaviour is not automatic: people do not automatically do the right things, like forming a queue, unless instructed to do so. How can the guidelines proposed be

“Fisheries management activities can be wholly shore-based.”



Code of Conduct for Responsible Fisheries

institutionalised, made a part of regular practice? Note that the guidelines promote the opposite of what shouldn't be done. They induce change from bad practice to good, from what's wrong to what's correct.

We should find ways to get fishers and other stakeholders **more involved and to take more responsibility to manage the fisheries**. This is because past **government-led** effort has not worked; it has resulted in overfishing and degraded habitats and environment. New government-led initiatives must be **more inclusive and more participatory in orientation**, both in decision-making and implementation. **Give fishers and stakeholders a voice and a choice.** Develop guidelines with this in mind,

The Code and Guidelines based on the Code must meet your country's needs. Emphasis must be placed on solutions, rather than on stating problems again and again. Turn solutions into guidelines,

Here goes the **checklist. The Code should be**

Practical: doable/actionable, simple and straightforward, not expensive to adopt/implement.

2. Accompanied by supplemental **livelihood options:** Income-generating activities to diversify sources of present income (from fishing) must be specified. This is partly because guidelines may propose curbs on fishing. What should fishermen do if they can't fish? Other sources of livelihood must be provided,

3. **Accompanied by funding to encourage adoption of guidelines,**

Who will pay for management, for adoption of the Code? Build and integrate budgetary requirements into the government budget. Try fund-raising at local level. **Evolve a self-financing mechanism, if possible and practical**

4. **Accompanied by alternatives: It's not enough to tell the people not to do this or that. We must tell them what they should do. Give them alternatives.**

5. **Very specific. It's not enough to talk about overfishing – spell it out, identify it. What species in coastal waters are being overfished? Detail the catch composition, the size composition, the reproductive condition of the fish. What are the endangered species (if any)?**

What stocks (are being overfished, or are in danger?) Different species or stocks have different population dynamics and production potential.

What areas (are being overfished?) Nearshore? Offshore? Within the 12 mile territorial seas? Within the 200-mile EEZ? Is it growth overfishing?

Is it recruitment **overfishing?**

Unless we are specific, guidelines too will be general, of little use to the end-users.

6. **Fisheries management today is no more solely about fisheries biology or about stock assessment/population dynamics of the fish stocks BUT about human beings, about management of fishers more than anything else. Guidelines must therefore be tailored to responsible behaviour to prevent misconduct by fishers and other resource users.**

7. **Management so far has been responsive, not proactive or precautionary. Management has responded to development gone wrong. We are proposing management today because of overfishing in the past caused by over-crowding and over-capitalisation, because of habitat degradation from pollution and other destructive activities. This approach is wrong. Management should have been precautionary and pro-active. Manage before problems arise.**

8. **Existing fisheries acts and legislation must be consulted in order to develop sound guidelines.** The Code of Conduct for Responsible Fisheries and its various articles, provisions and technical guidelines produced by FAO, as well as those produced by SEAFDEC and other institutions, must be studied. Revisions and amendment to existing laws could then be proposed. Our guidelines must be as comprehensive and realistic as possible to be effective.

9. **The proposed guidelines must address salient and key issues.** Fishers will carry out management only if it benefits them, if it is worth their effort.

10. **The proposed guidelines must address the issue of costs and benefits of adoption and non-adoption, and other consequences of non-compliance with management. Emphasize the benefits:**

Less resource waste, less energy waste.

Lower costs, higher returns, more profits

More fish in the future and the distant future

“Green” fish from managed fisheries

11. **A coordinating mechanism, a co-operative working arrangement among stakeholders, is essential if the guidelines are to be adopted and implemented.** Some institution at the local, district, state or national level must promote the adoption of guidelines. Without such coordination, co-operation among all the stakeholders may not be forthcoming.

12. **The proposed guidelines should be integrated into the existing system of governance, administration and management of coastal areas.**

The fisheries must be integrated into Integrated Coastal Management.

13. What incentives or disincentives can be provided for **greater and wider implementation of the proposed guidelines? What about disincentives for non-adoption? What are the costs and benefits of adoption?**
14. The proposed guidelines **must be prioritised on** the basis of local needs. They should not be just a shopping list.
15. **The proposed guidelines must deal with conflict resolution among the different stakeholders.**
16. **Management must command legal legitimacy. Without legitimacy in the eyes of the stakeholders, i.e the fishers, as well as severe penalties for violation, compliance may not be high.**
17. **The guidelines must be classified by stakeholder type or subject. Example:**

Guidelines applicable to Fishers

Guidelines applicable to Government (policy, programme, other instruments)

Guidelines applicable to Technology

Guidelines applicable to Resource Base (habitats/ ecosystems)

Guidelines applicable to Other Stakeholders (such as Market Intermediaries, Input Suppliers, Consumers, Bystander Stakeholders)

18. **Reduction of Capacity - how to go about it?**

Define capacity and its criteria.

Unit of Measure/Unit of Analysis - in terms of:

Number of Fishers

Number of Boats

Number of Nets/Harvesting Equipment

Tonnage (GRT)

19. **What do Guidelines Mean?**

Personalising responsibility to act or do something about conservation and management. Example:

Principle: Fishers will take appropriate measures to **pursue the ecological sustainability** of your country's fisheries

Guidelines: Develop protocols (including when practical and appropriate, the use of selective fishing gear and practices) regarding the catch of targeted (and non-targeted?) resources which may jeopardise the health of the fisheries stocks

Fisheries management is not about fisheries biology or fish dynamics but about human beings.



Technical Guidelines for Responsible Fisheries



Fishing Operations

The technical guidelines on “fishing operations” are addressed to States, international organizations, fisheries management bodies, owners, managers and charterers of fishing vessels, as well as fishers and their organizations.

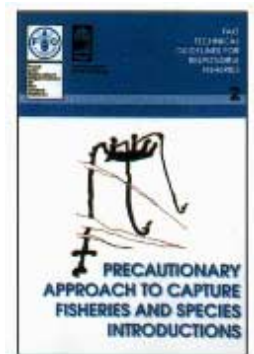
The booklet’s immediate objective is to provide practical advice to implement provisions of Article 8 of the Code of Conduct. It contains guidelines for all states (about conditions that ensure responsible fishing – relating, for example, to incomes, health and safety, and systems of education and training), for flag states, for port states. There are guidelines concerning a host of subjects – such as fisheries protection, fishing activities, energy optimization, the design, construction and modification of harbours, the creation of artificial reefs. Half a dozen annexes contain examples of conventions and standard specifications for international vessels, and procedures for development and management of harbours.

A supplement on Vessel Monitoring System (VMS) also forms part of these guidelines.

Precautionary Approach to Capture Fisheries and Species Introductions

The guidelines in this booklet were elaborated by the Technical Consultation on the Precautionary Approach to Capture Fisheries held at Lysekil, Sweden, from 6 to 13 June, 1995. The booklet proposes a definition of the precautionary approach to fisheries as well as an elaboration on the burden of proof. There are detailed guidelines on how to conduct fishery management and research and how to develop and transfer fishery technology in a context of uncertainty.

Guidelines are also provided on species introduction, voluntary or accidental. The guidelines are aimed at governments, fisheries authorities, the fishery industry, regional fishery management bodies, NGOs and other interested parties in order to raise their awareness about the precautionary approach and provide practical guidance on how to apply such precaution.



Integration of Fisheries into Coastal Area Management

This booklet elaborates Article 10 in the Code of Conduct for Responsible Fisheries, which concerns the integration of fisheries into coastal area management in order to achieve rational use of scarce marine resources. In particular, the booklet addresses the issue of how the fisheries sector can be integrated into coastal management planning -- so that interactions between fisheries and other sectors are taken into account while establishing management policy and practice on coastal resources.

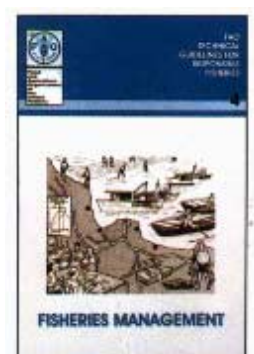
The booklet’s Guidelines are addressed to everyone who wants to improve the use of coastal fisheries resources in coastal areas. The Code sets out actions that are required at the national government level, or the level of the authorities responsible for fisheries.

Fisheries Management

This booklet provides a background to the need for fisheries management and an introduction to fisheries management activities. It introduces the major constraints experienced in fisheries and fisheries management, and some fundamental concepts related to these. Biological, environmental, technological, socio-cultural and economic constraints and concepts are examined.

The booklet emphasises the range of data required for informed decision-making on responsible fisheries management. Aspects of the collection and interpretation of data are examined. Data are discussed in terms of three suggested scales in fisheries management: fisheries policy and development planning, formulation of management plans, implementation of management action.

The range of possible management actions is outlined – including technical measures such as gear restrictions and direct approaches such as limiting catch and effort. The booklet stresses the importance of an effective legal framework, institutional structures, and mechanisms for monitoring, control and surveillance.



The FAO has published a series of nine booklets known as “FAO Technical Guidelines for Responsible Fisheries”. They are meant to support implementation of the Code of Conduct for Responsible Fisheries, and have been developed in collaboration with member-countries and various organizations. A synopsis of the booklets appears below. Copies of the booklets are available with the FAO in Rome.



Aquaculture Development

The booklet points out that aquaculture is one of the world’s fastest growing food production systems. While the vast majority of aquaculture practices have generated significant social and nutritional benefits, potential social and environmental problems must be addressed to ensure sustainable development.

The booklet provides annotations to the principles of Article 9 of the Code of Conduct for Responsible Fisheries. They are meant to assist those interested in sustainable aquaculture development. The booklet points out that an enabling environment for such development requires fair and responsible attitudes and partnership among number of players: experts from government and its institutions, social and natural scientists, the media, aquaculture producers and manufacturers, input suppliers, processors and traders in aquaculture products.

Inland Fisheries

Inland fisheries differs from other fisheries in its high degree of inter-relatedness with other users of the aquatic resource. In most areas of the world, the principal impacts on inland fisheries originate not from the fishery itself but from outside it. Implementing the provisions of the Code is therefore a question of negotiation and consultation with other interests.

Explaining the scope of inland fisheries, the booklet points out that it covers fisheries in lakes, reservoirs, swamps, wetlands, rivers and their floodplains. The booklet discusses Articles 6, 7, 9 and 10 of the Code of Conduct (General Principles, Fisheries Management, Aquaculture Development, and Integration of Fisheries into Coastal Area Management respectively), and their relevance and implications for inland fisheries.



Responsible Fish Utilization

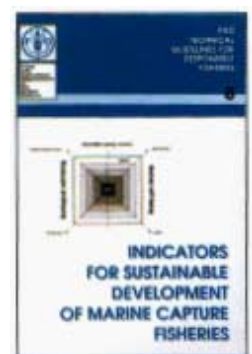
This booklet contains guidelines to help implementation of the Code of Conduct for Responsible Fisheries, and highlights the meaning and implications of the Code for the post-harvest sector of the fish production industry.

The booklet points out that the fish production industry has three major areas of responsibility: to fish consumers, to the fish resource, to the environment. The industry also has a responsibility to itself— to ensure the continued ability of millions of people throughout the world to earn a gainful living from fisheries. These areas of responsibility run through all articles of the Code in one way or another. But Article 11 (Post-Harvest Practices and Trade), highlights the responsibilities to the consumer. This booklet provides annotations and guidance on the provisions of this article.

Indicators for Sustainable Development of Marine Capture Fisheries

The guidelines in this booklet were developed at a special technical consultation organised by Australia’s Department of Agriculture, Fisheries and Forestry in close collaboration with the FAO, and held at Brighton Beach, Sydney, Australia, on 18-22 January, 1999. The guidelines relate mainly to Article 7 (Fisheries Management) but also to Article 6 (General Principles), Article 8 (Fishing Operations), Article 10 (Integration of Fisheries into Coastal Area Management), Article 11 (Post-Harvest Practices and Trade) and Article 12 (Research). They clarify why a system of indicators is needed to monitor the contribution of fisheries to sustainable development.

The guidelines outline the process to be followed to establish a Sustainable Development Reference System (SDRS) at the sub-national, national or regional level, focusing on the design of the SDRS, its development and its implementation. The guidelines also highlight a number of issues, related for example to data needs, cost-effectiveness, institutional requirements, capacity-building, and coordination.



Expert Indian Government Panel Recommends Use of Turtle Excluder Devices in Fishing Trawlers

An expert scientific panel of the Government of India has made several recommendations to protect marine turtles in its report submitted to the Government in March 2000. (See box on expert scientific panel, page 32)

An important recommendation concerns the Olive Ridley turtles which nest *en masse* for a few months in the year in the Gahirmatha area in Orissa. The panel says the area should be declared a permanent sanctuary for these turtles, a no-fishing zone for mechanized fishing vessels and gillnetters.

The Olive Ridley is the most common turtle in Indian waters. It is the smallest of sea turtles, measuring about 70 cm in length and weighing about 50 kg. Data collected on Olive Ridley nestings in Gahirmatha, Orissa, between 1976 and 1999, shows that the number of nestings varied from a low of 150,000 in 1976 to a high of 602,000 during January-March 1987. In March 1999 the figure was 340,000. (See box on marine turtles in India).

The panel also suggests sanctuaries to protect marine turtle rookeries in two other areas of Orissa - Rushikulya (a 20-km stretch of the beach northward from the Rushikulya river mouth) and Akashdia island (at the mouth of the Devi river). Fishing by mechanised fishing vessels and gillnetters within a radius of 20 km should be prohibited.

Use of Turtle Excluder Devices

A very important panel recommendation relates to shrimp capture by trawlers. It says that Turtle Excluder Devices (TEDs) should be fitted to mechanised trawlers fishing for shrimp. The use of TEDs should be made mandatory in areas of mass nesting of turtles to reduce the mortality of endangered species of marine turtles and their incidental catch.

The TED measure is partly an outcome of the pro-turtle environmental movement in the United States which has led to curbs on shrimp imports on the ground that shrimp

capture leads to incidental capture of turtles. The US State Department and the National Marine Fisheries Service of the US evaluate shrimp fishing in every exporting country. Curbs are imposed on shrimp imports unless shrimp trawlers in the exporting country use TEDs, or provide documentary evidence of a regulatory program on the incidental capture of sea turtles.

TEDs were first introduced to the US shrimp fishery during the late 1980s. Extensive research and development has been undertaken to improve the performance of TEDs. A variety of standard TED designs is available to fishermen today. In India, both Central Institute of Fisheries Technology (CIFT) and Central Institute of Fisheries Nautical Engineering and Training (CIFNET) have been conducting trials and demonstrations with TEDs following the expert panel's recommendations (CIFNET trials took place off the Visakhapatnam coast between October and December 1999. CIFT undertook trials off the coast of Kerala during March 1999.)

The panel says that the TED trials have demonstrated the utility of the exclusion device, but have led to reduced catches, perhaps because of escape of fish. Use of TED may be resisted by subsistence fishermen. It should therefore be made compulsory only in areas where mass nesting takes place. The periodicity of the use of TEDs should be determined by States or Union Territories according to the period of migration of the turtle species in their waters.

The panel says that management of the marine turtle population in India requires both long-term and short-term management measures.

- habitat preservation of critical nesting areas
- use of TEDs by trawlers in critical nesting areas
- enforcement of turtle conservation laws
- mass awareness, training and extension programmes
- research in frontier areas of marine turtle biology and ecology.

Habitat preservation of critical nesting areas: The panel says that with populations going up, many activities influence changes in the coastal habitat. Examples: littoral drifts causing beach erosion, plantation of secondary forests in areas close to the high tide line, construction of jetties and tourist complexes without adequate environmental impact assessment, and pollution. Planting of casuarina trees close to turtle nesting beaches should be avoided – it results in a decline in the nesting population over a period of time.

This is because the plantations reduce the nesting space available for turtles. Once the trees grow, they change the entire beach soil sub-structure through root growth.

Marine Turtles in India

Five of the seven species of marine turtles found worldwide reportedly occur in the Indian coastal waters including the Lakshadweep and Andaman and Nicobar Islands—the Olive Ridley (*Lepidochelys olivacea*), Green (*Chelonia mydas*), Hawksbill (*Eretmochelys imbricata*), leatherback (*Dermochelys coriacea*) and loggerhead (*Caretta caretta*). All the five species of marine turtles are protected and placed in Schedule I of the Indian Wildlife (Protection) Act, 1972.



Marine turtle species in Indian waters.

Law enforcement for turtle conservation: There should be better coordination between the forest and wild life departments and the fisheries department of maritime states on enforcement of the Wildlife Protection Act of 1972 and the Marine Fishing Regulation Acts of maritime states. Regular surveillance of areas where mass nesting takes place should be strengthened with the help of the Coast Guard. The Ministry of Agriculture has sanctioned aid for the construction of 26 patrol boats.

Research in frontier areas of marine turtle biology and ecology: Scientific research on sea turtles started in Orissa only about two decades ago, and has been largely confined to the Olive Ridley rookery at Gahirmatha. Biological and ecological research should also be undertaken on other marine turtle nesting beaches along the Orissa coast and the rest of the Indian coast. Since the migratory range of turtles extends to thousands of kilometres across national boundaries and the high seas, India should take part in regional co-operation on the conservation of endangered turtle species.

Mass awareness, training and extension. With the enactment of the Indian Wildlife (Protection) Act, 1972, fishermen refrain from wilfully netting marine turtle species. Because of religious sanctions attached to turtles, its meat is not consumed in coastal states. A survey by the Wildlife Institute of India in 1994 showed

that only a few fishermen eat turtle meat; there is hardly any market for it.

But concerted efforts are needed to educate local villagers, fishermen, and fisheries and forest officials about conservation of turtle species. A cadre of volunteers should be created among school children and college youth who can assist government and NGOs in the conservation of endangered species. Organised training courses should be conducted on marine turtle conservation for all field and extension officers.

A workshop on turtle excluder devices organised by Orissa's Department of Fisheries was held at Paradip from 11 to 14 November, 1996, in co-operation with the US National Marine Fisheries Service. The 4-day programme included a practical demonstration of TED operations at sea, on-board training in the manufacture, installation and maintenance of TEDs, and coaching of trawler owners and operators, fish net makers, government officials, scientific personnel and NGOs. A second workshop on TEDs was organised by MPEDA, Kochi, during 5-6 May, 1997, again in partnership with the NIMFS.

To popularise the use of TEDs, the expert scientific panel suggests that such workshops should be organised in all the Coastal States and Union Territories with the active participation of expert institutions.

Expert Scientific Panel on TEDs

In November 1997, the Marine Products Export Development Authority (MPEDA) constituted a committee of experts to assess the economic gain or loss from installation of TEDs in shrimp trawl nets. The Committee recommended that an Expert Scientific Panel (ESP) be set up to conduct a detailed study. The Government agreed and constituted the panel on July 10, 1998.

The Fisheries Development Commissioner was to act as member-convenor of the panel. Other members included the heads of various research institutes – the Central Marine Fisheries Research Institute or CMFRI, Kochi; the Fisheries Survey of India, Bombay; the Central Institute of Fisheries Technology or CIFT, Kochi; the Central Institute of Fisheries Nautical and Engineering Training (CIFNET), Kochi; and a representative of the Wildlife Institute of India, Debra Dun.

The terms of reference of the panel covered the following subjects:

- Distribution of sea turtle species in Indian waters
- Incidental catch of sea turtles by trawl nets, gillnets etc.
- Study on the mortality of sea turtles due to factors other than fishing
- Trials/demonstrations on the efficacy of established TED models
- Loss of catch through the use of TEDs in trawl nets (cost-benefit analysis)
- Management measures for conservation of marine turtle species along the coastline of the mainland and the islands.

The Director, CMFRI, Kochi, was to coordinate the study. CIFNET and CIFT, Kochi, would be responsible for fabricating TEDs and conducting trials with TEDs. The Report of the ESP was prepared by Dr Y S Yadava, then Fisheries Development Commissioner and Member-Convenor of the ESP.

Sri Lanka's Minister for Fisheries

Mr. Mahinda Rajapaksa (right) has been appointed to a second term as Sri Lanka's Minister for Fisheries and Aquatic Resources Development by the country's President, Mrs. Chandrika Kumaratunga. After assuming office, he urged officials of the Ministry to pay more attention to the management of fisheries and aquatic resources, and strive for efficient implementation of a new six-year plan of action.

Mr. Rajapaksa said a number of measures would be taken by the Ministry to modernize the fisheries infrastructure, protect the environment, better the quality of *fish*, improve the nutrition standards of the population, and strengthen the welfare of fishing communities.

During his first term, Mr. Rajapaksa was instrumental in expanding the programmes of the Department of Fisheries and in introducing the Aquaculture Act. This first term also saw a number of programmes for the upliftment of the socio-economic status of small-scale fishing communities in Sri Lanka. It was Mr. Rajapaksa who represented Sri Lanka at the 1995 FAO Conference where the Code of Conduct for Responsible Fishing came into being. He moved a motion for early implementation of the programme.



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 and by member governments in the Bay of Bengal region. The main executing agency is the FAO (Food and Agriculture Organization of the United Nations).