

Responsible Fisheries in India

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The concept of Responsible Fisheries can be considered as a set of guidelines for ensuring sustainable utilization of fisheries resources of the world. In that sense, it is synonymous with the FAO Code of Conduct for Responsible Fisheries (CCRF). The Code is often referred to as the Bible of Global Fisheries Management.

The CCRF is an international policy instrument for fisheries management. This was developed and released by Food And Agriculture Organisation (FAO) functioning under the United Nations on 31 OCTOBER 1995. The code was developed after a series of international deliberations that began in 1992. More than 160 countries, including India are signatories to this international instrument. The Code is considered as a landmark document symbolizing the international consensus achieved on the necessity for providing guidelines to ensure.

The most salient feature of this global instrument is its **voluntary** nature.

Foundations of the Code

That the sustainability of marine capture fisheries at the current level of harvesting is at stake is no longer a moot point. It is being realized that fisheries anywhere in the world is more a socioeconomic process with biological constraints than anything else. The open access nature of the resource coupled with unregulated penetration of advanced, but not necessarily eco-friendly, harvesting technologies (a phenomenon called

technological creep) has enacted a virtual “tragedy of the commons” in our seas. Making the issue still more complex, especially in the context of the Millennium Development Goals, is the rampant poverty existing among our fisher folk though the capture fisheries makes significant foreign exchange contribution in our country. The plateauing of the resource as revealed by recent trends in landings doesn’t augur well for the ecologic and economic sustainability of the marine fisheries sector.

If there are no technological magical bullets for the current impasse what is the way out? This is precisely the question the FAO code is trying to answer. “*The right to fish carries along with it an obligation to do it responsibly*” is the cardinal principle of the code. This principle is built on the foundation of what is known as a **Precautionary Approach**.

Precautionary approach, which originally was proposed as Principle 15 of Agenda 21 the Rio Earth Summit meeting in 1992, enunciates that

“where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”.

While in simple terms the precautionary approach means “better safe than sorry”, it clearly recognizes that changes in fisheries systems are only slowly reversible, difficult to control, not well understood, and subject to changing environment and human values.

It involves the application of prudent foresight. It is about applying judicious and responsible fisheries management practices, based on sound scientific research and analysis proactively rather than reactively to ensure the sustainability of fishery resources and associated ecosystems for the benefit of future as well as current generations.

Taking account of the uncertainties in fisheries systems and the need to take action on incomplete knowledge, it requires, *inter alia*:

- a. consideration of the needs of future generations and avoidance of changes that are not potentially reversible;
- b. prior identification of undesirable outcomes and of measures that will avoid them or correct them promptly;
- c. that any necessary corrective measures are initiated without delay, and that they should achieve their purpose promptly, on a timescale not exceeding two or three decades;
- d. that where the likely impact of resource use is uncertain, priority should be given to conserving the productive capacity of the resource;
- e. that harvesting and processing capacity should be commensurate with estimated sustainable levels of resource, and that increases in capacity should be further contained when resource productivity is highly uncertain;
- f. all fishing activities must have prior management authorization and be subject to periodic review;
- g. an established legal and institutional framework for fishery management, within which management plans that implement the above points are instituted for each fishery, and
- h. appropriate placement of the burden of proof by adhering to the requirements above.

The reversal of burden of proof means that those hoping to exploit our marine resources must demonstrate that no ecologically significant long-term damage will result due to their action. Or in other words human actions are assumed to be harmful unless proven otherwise.

Contents of the Code

The code provides a necessary framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment. It is achieved through **12 articles** covering areas like

- a) Nature and scope of the code (article 1)
- b) Objectives of the code (article 2),
- c) Relationship with other international instruments (article 3),
- d) Implementation, monitoring and updating (article 4),
- e) Special requirements of developing countries (article 5),
- f) General principles (article 6),
- g) Fisheries management (article 7),
- h) Fishing operations (article 8),
- i) Aquaculture development (article 9),
- j) Integration of fisheries into coastal area management (article 10),
- k) Post-harvest practices and trade (article 11), and
- l) Fisheries research (article 12).

(The full text of the FAO CCRF (hereafter referred to as the Code) translated into Malayalam was published by CMFRI in 2002 under an agreement with the FAO (Ramachandran, 2002). Thus, Malayalam became the second language, after Tamil, to have a translated version of the most important international fisheries management instrument. You can access it at www.cmfri.org.in. The pdf of the English full text is supplied with the Winter school CD rom).

Characteristics of the Code

As we have seen, the most salient feature of the code is that it is *voluntary* in nature. Unlike other international agreements like UN Agreement to Promote Compliance with International Conservation and Management Measures by Fishing vessels on the High Seas or the Straddling Stock Agreement, 1995, it is not legally binding and violation of the code cannot be challenged in a court of law.

A **fundamental objective** of the Code is "to serve as an instrument of reference to help states to establish or to improve the legal and institutional framework required for the exercise of responsible fisheries and in the formulation and implementation of appropriate measures." The policies of the state for managing the fisheries resources should be based on the provisions of the code.

Implementation of the code is primarily the responsibility of states. The code will require regional and sectoral implementation in order to address the particular needs of fisheries in different regions or sub-sectors.

Relevance of the Code

The most important problem a fishery faces is what is known as Over Fishing. It takes place over time as the fishing is intensified. It is the stage where a stock of fish loses its capacity to keep on providing the Maximum Sustainable Yield. It is at this stage that the fishery is at the verge of an almost irredeemable loss, economically and biologically. MSY is like a *Laxman Rekha*. The most frightening aspect about this *Laxman Rekha* is that we need to cross it to realize that we have trespassed it. Hence we can build our defense against the specter of overfishing only on the basis of a stronger understanding and contextual analysis of its symptoms.

Will our waters also witness collapses like that of the Canadian Cod? That such a tragedy has not happened so far is not a guarantee that it will not happen here. But we have a better sense of optimism thanks to the resilience of our marine ecosystem which is mainly due to the rich bio diversity. However, we need to be concerned if recent events like pelagic fatigue in Kerala are of any indication. The decline experienced by our fishers vouch for a serious rethinking on our laid back attitude. Our fishers also share the veracity of different ways in which symptoms of overfishing are being manifested. They are:

a) severe decline or total absence in those fish which used to be abundant,

- b) decline in the size range of major species ,
- c) excessive catch of juveniles,
- d) increase in fishing time and distance,
- e) frequent fluctuations in the total catch, and
- f) changes in species composition.

Our Tool Box

There are five types of remedies for the disease called “over fishing”.

1. Based on the total catch of the fish (yield or Output)
2. Based on fishing effort or input
3. Based on time or season (temporal)
4. Based on space or depth (spatial)
5. Based on technical things

A typical example of the first type of remedies is the Quota system of fisheries management which is common in countries like EU, USA. This demands the assistance from a very precise stock assessment science. These measures which are similar to rationing of the catch, can be considered as the last ditch effort feasible in areas of lower species diversity that makes determination of MSY much less cumbersome. The second type of measures aims rationalizing the fleet size. Licensing based on an optimum fleet size is an example here. The next type of measures based on time and space is well known to us through the Monsoon Trawl Ban. Other examples are Marine sanctuaries, and no- fishing zones. Technical measures include Mesh size regulations, and Minimum legal size.

(For an overview of the status of the tool box (interpreted in a slightly different mode) in our context see Shinoj and Ramachandran 2017).

As long as a fishery remains a common property resource, a regulated fishery is more profitable than an unregulated fishery in

the long run. Our fishers have started accepting this truism. But they are helpless to avoid competitive fishing due to two main reasons. One is the increase in fuel cost. And the other is the high demand for fish which has led to a situation where you are economically rewarded whatever be the catch. So fishers tend to do indiscriminate fishing. This has resulted in an illusion of super abundance which again drives more fishing effort. This is leading to a very dangerous situation. There are fishers (like Mr Jossy Palliparambil, Munambam Kerala) who characterize this ugly scenario as a phase of “Foolish Fishing”. It is high time each fisher take more care in analyzing the fluctuations observed in the economics of their operations.

The Code and CMFRI Initiatives

Our fisheries have undergone tremendous changes during the past six decades. Before the advent of modernization, (motorization, mechanization, refrigeration, export orientation and transportation) the access to sea was limited to a few skillful and adventurous people who were by birth fishers. The community could afford to have self-regulations oriented towards resource conservation which were arrived through the ecological experience of the community over generations. These concerns were institutionalized too. An example of such an institution still, surprisingly, surviving in Kerala is the *Kadakkody* of the Malabar coast (Ramachandran,2006). The self-regulations and community regulations which were rooted in the traditional wisdom have given way to technological skills. These skills, unleashed by what we generally refer to as an era modernization, most often take a dehumanized manifestation thus weakening the hold of the community. This is where the crucial role of the State comes into play in the management as well as development of the fishery. This is better known as fisheries governance.

Fisheries governance is dependent on the particular stage of economic development and local ecological status of the fishery

resources. This varies with each country. It is because of this contextual nature that the Code has been made as a voluntary tool. Each government is free to make its own rules, regulations and strategies based on the guidelines and principles elaborated in the Code. Thus article 4.3 says “FAO through its competent bodies, may revise the code, taking into account developments in fisheries as well as reports to COFI on the implementation of the Code. (But in recent times an argument against this position has also emerged).

It is in this context that the actions and initiatives being taken by CMFRI, mainly through an NATP funded research project titled “Designing and validation of communication strategies for responsible fisheries –a co-learning approach” become relevant. A Responsible Fisheries Extension Module (RFEM), which consists of 13 tools including a Malayalam translation of the code, animation films in all maritime languages etc. developed have been widely used to create awareness among the fisherfolk. A state-wide campaign on Responsible Fisheries was launched and the RFEM was released for further scaling up by the respective State Fisheries Departments. These mass communication tools have the potential to reach almost 85 % of the fisher folk and other stakeholders in the country. It is reasonable to conclude that CMFRI has made a pioneering initiative in the cause of popularization of the concept of Responsible Fisheries in India (Ramachandran, 2004)

There is now widespread scientific consensus on the ecological impacts of continued over-fishing and the threats to seafood security and broad agreement on policy issues such as curtailing illegal catches and minimizing the impacts of fishing on marine ecosystems. The basic requirement for adoption of Ecosystem Approach is a dynamic knowledge base on stock assessment. The stock assessment knowledge base generated and continuously maintained by CMFRI is a unique achievement among the developing tropical context countries.

Though the communication tools and strategies already developed by the institute have been useful in creating awareness on the need for sustainable /responsible fisheries there is a need to develop and scale up specific communication interventions to sensitize the stakeholders in making a transition towards ecosystem based approaches that ensure responsible management of our waters. Fisheries management is fisher management and participatory approaches informed/initiated by a proactive research system taking place in a democratic and decentralized civil society space is globally accepted as the key to Ecosystem Based Fisheries Management. The future is decided by the capacity we build today amongst the different stakeholders responsible for sustainably utilizing the marine fisheries resources of our country. It is with this objective that we are continuing the efforts in this line through innovative research projects in Capacity Development for compliance to Ecosystem Based Responsible Fisheries Management in India through Co-Learning and Multi-disciplinary action research under the leadership of Extension scientists in CMFRI.

Pathways before us

Engendering a scientifically informed fisheries management governance system is the need of the hour. As recent events like the Kochi Initiative (Ramachandran and Mohamed 2015) is of any indication, formation of multi stakeholder platforms of responsible fisheries co-governance is not an impossible task in our context. The response of the State in facilitating this transition is essential. With the landmark promulgation of insisting Minimum Legal Size for 55 species of fish by the Government of Kerala (GoK,2017) done based on the recommendation of CMFRI (Mohamed et al 2014), the State of Kerala has shown an instance of proactive engagement with responsible fisheries governance which is worthy of emulation by other maritime states. It is however, worth remembering that regulatory measures like MLS would become impotent in the absence of strong arm efforts to eliminate (or at least rationalize) external drivers like demand for the juveniles

either for reduction or consumption. As scholars of regulatory politics argue, legislative coercion though necessary cannot be open to tendencies for inefficient rent seeking in a public good.

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