

Responsible Fisheries

Kerala Fish Workers Open New Path in Co-Governance

C RAMACHANDRAN, K SUNIL MOHAMED

Traditional fish workers and trawl operators in Kerala, long at loggerheads, have framed a code of responsible fishing practices. The article argues that this landmark agreement between two hitherto irreconcilable groups was borne out of a crisis in pelagic fish resources. It also argues that the agreement holds important lessons for multi-stakeholder governance in the fisheries sector.

Marine fish workers in Central Kerala are on the verge of creating history by opting to practise responsible fishing practices. Traditional fish workers (represented by the inboard ring seine units) and trawl boat owners, both mainly based in Kochi, have reached a consensus on adopting a package of responsible fishing practices that will ensure a sustainable future for the fishing industry. What started as an informal, stakeholder-induced initiative facilitated by the Central Marine Fisheries Research Institute (CMFRI) is poised to garner statewide legitimacy and wider acceptance by the fisher community in Kerala.

The new development, which can be christened as Kochi Initiative, is historic with many political as well as epistemological implications on the current notions of fisheries management and governance. This short article first traces the genesis of the initiative and then casts a brief analysis on its scientific and policy relevance.

A Timeline

A very serious decline in pelagic resources¹ like sardine and mackerel, the mainstay of the traditional small-scale fishing sector, experienced along the Kerala coast in recent months acted as the immediate trigger for a collective rethinking on fishing practices in the area. The first move was, obviously, made by the traditional fish workers who approached CMFRI for advice on sustainable fishing in the wake of the “pelagic famine.”

A team of fisheries scientists² took the strategic lead in converting the “perceived crisis or the felt need” of the community into an opportunity. They paved the way for a much needed multi-stakeholder fisheries co-governance platform. The trajectory for achieving this was conceived as a three-stage process consisting of

opinion storming, consensus building and legitimacy appropriation. Separate freewheeling interfaces of the two sectors were conducted to thrash out the issues and suggest solutions which could then be debated amongst officials of the fisheries department and Ernakulam District administration, and a consensus arrived at. Based on the outcome of the consensus building, a final meeting with the district administration was conceived as an exercise in appropriating legitimate governance support from the state.

As part of opinion storming a one-day interface called by the Kerala Paramparagata Matsya Thozhilali Union (the traditional fish workers’ union) of the Ernakulam District was held on 27 June 2015 near Kalamukku harbour. It was attended by around 60 inboard fish workers from Ernakulam, Alappuzha and Thrissur apart from scientists from CMFRI, Central Institute of Fisheries Technology (CIFT), officers from Matsyafed (the Kerala State Cooperative Federation for Fisheries Development) and leaders of fishing communities. The interface, after in-depth discussion on the various issues confronted by the sector, resulted in an intra-sectoral convergence on the need for formulating a set of codes for responsible fishing practices (Table 1, p 17). The fish workers suggested that a multi-stakeholder platform (MSP)—comprising representatives from the trawl boat sector, fisheries department officials, traders and scientists—was essential to implement and monitor the code.

A separate opinion storming interface with the trawl boat owners, which was convened at CMFRI on 4 July 2015, came out with another code pertaining to the trawl fishing sector. Both the codes were communicated to select members of the two sectors and amendments were incorporated. The consensus debate on the two codes of conduct, which was held in CMFRI on 17 July 2015, was presided by the deputy director of fisheries in Kerala. This was a significant meeting: it was the first time that the two sectors had come to a talking table. The interface agreed on the code. That too was a very significant development given the fact that the traditional fish worker’s union had declared a statewide agitation against the practice of pelagic trawling by the trawl fishers. As a

C Ramachandran (*ramchandranair@gmail.com*) and K Sunil Mohamed (*ksmohamed@gmail.com*) are scientists with the Central Marine Fisheries Research Institute, Kochi.

Table1: The Codes of Conduct Agreed by the Traditional (Inboard) and Trawl Sectors in Kochi

The Traditional Sector (Inboard Ring Seine Units)	The Mechanised Trawl Boat Operators
Fishing and trading of juveniles of pelagic fishes will be avoided. The CMFRI recommendations on the minimum legal size will be adopted.	The regulations and provisions of Kerala Marine Fishing Regulation Act regarding pelagic trawling will be followed. Trawling will not be done for catching sardine and mackerel usually caught by traditional gears.
To curb overcapacity scientific and timely recommendations will be accepted. Committees with fisher participation should be constituted to make such recommendations. Licensing and registrations should be limited to replacement vessels.	Adoption of square mesh nets and 40 mm cod ends will be promoted. The CMFRI recommendations on the Minimum Legal size will be adopted.
Night fishing will not be done within the territorial waters (TW).	Engine horse power for fishing boats above 20 m will be scientifically fixed over time.
Fishing will be done during 6 am to 6 pm only.	To curb overcapacity scientific and timely recommendations will be accepted. Committees with fisher participation should be constituted to make such recommendations. Licensing and registrations should be limited to replacement vessels.
	Regarding night fishing, KMFR Act will be followed within territorial waters. The same will also be attempted beyond territorial waters.
Landing centre based MSPs/MFCCs will be formed and their recommendations will be followed towards achieving sustainability.	Landing centre based MSPs/MFCCs will be formed and their recommendations will be followed towards achieving sustainability.
	Willing to adopt marine protected areas as a resource conservation measure.

major outcome of the meeting, it was unanimously decided to moot multi-stakeholder fisheries co-governance committees (MFCC) in the two major harbours of Kochi and Munambam as well as major landing centres in Kalamukku, and Chellanam on an experimental basis.

Based on the recommendation of the joint interface and the mutually agreed code, a meeting of 25 stakeholders (consisting of representatives of inboard and trawl operators, other traditional/artisanal fish workers' associations, fisheries-related trade unions, officers of the marine enforcement and scientists) with the district administration was organised on 30 July 2015—the initiative for this was taken by the deputy director of fisheries. The deputy director in presence of the additional district magistrate elaborated the enforcement support required for the implementation of the code as well as the functioning of the harbour/landing centre-based MFCCs. The meeting deliberated on the activities required for creating awareness, enforcement support and formulation of MFCCs.

In the mean time, the informal intervention seems to have attracted the attention of the government. The minister of fisheries and excise, Government of Kerala, has reportedly called for a one-day interface with a wider stakeholder constituency, later in August. The interface is expected to bolster policy support

for fisheries co-governance. It is a welcome development.

Lessons

A careful contextualised analysis of the code, banking on the deliberations of fish workers during the four interface stages of the whole exercise, reveals some interesting lessons. These have bearings on fisheries governance and fisheries research.

Crisis Born and Crisis Driven: The first major learning is actually a reiteration of the dictum “Fisheries management is crisis born and crisis driven.” Only when the resource supply is so threatened that the livelihood options are severely hampered, do fish workers appreciate the need for scientific management.

No amount of precautionary evangelism will work until there is a felt need for conservation-oriented strategies. But the current tendency of fish workers to coalesce, probably a clement offshoot of the controversial Meenakumari Commission report, is a golden opportunity for forging new strategies in breaking the disconnect existing between fisheries governance system and the stakeholder constituency.

Technology, the Villain: The second learning pertains to technology. Innovation, often eulogised, turns into a villain in a free-for-all common property resource regime. This often leads to technology

creep—an “innovation war”—that ends up worsening the resource crisis. The enforcement support of the state and conservation-oriented National Marine Fisheries Policy for realms beyond territorial waters become all the more important in implementing stakeholder-driven management solutions.

The traditional sector represented by the inboard ring seine units took the lead in the dialogue because it was hit hardest by the pelagic resource crisis. Compared to the mechanised trawl units, the inboard units are technologically handicapped: they cannot pursue the usual strategy of spatial expansion to overcome the crisis.

It is interesting to note that the ring seine was considered a banned gear under Kerala Marine Fishing Regulation (KMFR) Act 1980, till 2007.³ The inboard ring seine units emerged after 2007 as an indigenous innovation aimed at more efficient harvest of pelagic fishes, especially during the monsoon months when the trawling operations are banned. Each unit provides employment to 50–60 traditional fishers ensuring their livelihood security. Since they cannot go for long fishing trips, like the trawlers, the inboard fishers feel more secure with these units. The high demand for pelagic fish in Kerala meant these units earned profits to begin with and that led to the construction of more boats and capital penetration.

During this period the trawl sector did not keep its own innovation machine idle. They came out with a new gear which some fish workers call as a “three-in-one trawl.” It is technically a mid-water trawl. With a very large mesh size of 5,000 mm at the mouth, this gear could target fish in an entire water column. This is also known as pelagic trawling and has become a contentious innovation. Inboard fish workers allege pelagic trawling as the major reason behind the pelagic decline while trawl operators deny the allegation arguing that they use this gear to catch only high value fish like cuttlefish and ribbonfish. They claim that they never target pelagic fish like sardine though they do admit that mackerel is a by-catch. Another serious technological advancement which happened simultaneously is the widespread use of high horsepower Chinese engines for pelagic

trawling—as it requires higher speed to chase the fish. These engines also provide other competitive advantages. The power of engines has reached 600 HP.

The trawl operators claim that there is nothing illegal about the pelagic trawling as it is allowed beyond territorial waters. Operating a trawl boat means high expenditure and in such a context heavy demand from fish meal plants for trash fish makes pelagic trawling an attractive option. Another important factor is the nature of labour used by these boats. More than 90% of the labour force is contributed by fish workers from Colachel (in Tamil Nadu's Kanyakumari District) who are known for their seaworthiness and exemplary fishing skills. Being migrant labourers, they exhibit a “fish or die” attitude ensuring each multiday trip is a no-loss venture. No wonder they have become so dear to the boat owners that they even own a share in ownership of some of the trawl boats.

Though the trawl operators claim that their operation is confined to areas beyond territorial waters, the inboard operators refute the claim. They cite incidents of trawl boat encroachment that cause heavy damage to their nets.

In this context, it is remarkable that the code mooted by the trawl sector gave a commitment that trawl operations would only be undertaken beyond territorial waters. It also committed to adopt square meshed nets which could reduce juvenile fishing—though arguably so. But it is an accepted fact that certain amount of trash fishing is unavoidable when trawl nets operate. Though CMFRI has come out with minimum legal size (MLS) for 58 species of exploited fish, its praxis vis-à-vis mesh size of gears is an issue that needs empirical endorsement. But the information on MLS itself is valuable. It can be used for monitoring landings and consequent market regulations. The in-sea adherence to the code, though, remains unresolved. This calls for the implementation of vessel monitoring systems and observer programmes in the trawl boats.

Similar is the case of night fishing. Though Munambam harbour has the history of banning night fishing—a product of a stakeholder induced initiative during 2002–04—the ban did not

last long. It suffered due to lack of adequate enforcement support from the state. When there is a surfeit of fishing vessels, competitive fishers cannot be blamed for “desperate” fishing practices. Since trawl boats go for multiday fishing, some amount of night fishing cannot be denied. Moreover, there is no scientific consensus on the alleged deleterious effect of night fishing—this method is amenable to certain types of shrimp. Nevertheless, it is a welcome sign that both the sectors have indicated their willingness to curb a practice generally reckoned as harmful in traditional wisdom.

Given the challenged marine ecosystem, it is high time that innovations in certain harvest strategies are sanctioned by the state. Building of fishing boats, though represents the glory of indigenous technical skill and artisanal entrepreneurship, needs to be brought under a regulatory regime in order to curb technology creep.

Reconciling Two Concerns: Reconciling livelihood concerns with the issues of resource conservation is a daunting task in tropical waters where inter-sectoral income disparity is rampant. The third major learning from the pact pertains to this concern.

The inboard sector and trawl boat sector employ about 25,000 fishers each. There is another small-scale sector which comprises fish workers who use board motors for gill netting and ring seining and fish workers who do not use any motors and rely on *kattamarans* and thermocol units.⁴ They together constitute about a lakh fisher workers, who can operate only in inshore waters. Their interests need to be protected.

A scientifically-informed fisheries governance regime is the need of the hour. The state has to play the role of a responsible facilitator. It has to aid the much needed transition from a sustainability-challenged marine ecosystem to a sustainable one. The question that was asked till the late 1960s was “How to catch?” This needs to be rephrased as “How much to catch?” Fish workers need to be made aware about the importance of conservation and management of fish stocks for sustainable harvests.

A Last Word for the State

The word “overfishing” found a place in English language in 1850. Canadian cod fishery, once considered the epitome of scientific management, collapsed in 1992. But a robust multi-species biodiversity combined with a multi-ethnic treasure of traditional wisdom could keep our waters resilient till a few years back. The current pelagic crisis, however, shows that the fall in the number of the iconic small pelagic oil sardine is not influenced by heightened fishing effort. Their abundance is dependent on favourable environmental conditions in the sea. This is borne out by the historical collapses in early 1940s, 1960s and 1994. And the stock has recovered in five to 10 years. The present crisis is deepened by the fact that the investment in the inboard ring seine sector is very heavy leading to insurmountable debt burden to traditional fish workers.

But if the resource is to be sustained, livelihood-driven over capacity can no longer be taken as an alibi against taking precautionary approaches in fisheries governance in the country. In the wake of untamable external drivers like climate change, the role of the state is to bolster consensus-based and conservation-oriented fishing practices. An informed community is the best immunity against the “Tragedy of the Commons.” The fish workers have shown their willingness to be proactively concerned about the sustainability of the resource. The state has to shed its vote-bank prejudices and revenue mindset. The Kochi initiative is a clarion call in this direction.

NOTES

- 1 The annual oil sardine landings in Kerala during 2011, 2012, 2013 and 2014 were 3.221 lakh tonnes, 3.997 lakh tonnes, 2.468 lakh tonnes and 1.551 lakh tonnes respectively as per CMFRI database. Data for current year is under processing.
- 2 The crucial role played by Charles George of Trade Union Centre of India in making the whole process moving is acknowledged. Also acknowledged is the support provided by all fish workers organisations especially those under T B Unnikrishnan, P B Dayanandan and Joseph Xavier Kalapurackkal.
- 3 This was made possible through the Pelagic Fisheries Protection Act, Government of Kerala in 2007.
- 4 Thermocol units, which are indigenously designed boats made of thermocol, numbering more than 2,000 have a dominant presence in Purakkad coast, Alappuzha District of Kerala.