Responsible Fisheries?
A Response to the 'New Path' of Co-governance

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The article "Responsible Fisheries: Kerala Fish Workers Open New Path in Co-governance" (*EPW*, 29 August 2015) argued that the "Kochi Initiative" in Kerala—a collaboration between fishers and government scientists—was a major breakthrough in fisheries governance. We suggest that these authors cheered too soon. Through evidence from coastal Tamil Nadu, we note the history of the debate among fishers on environmental and justice impacts of new technology. Fisher management skills are usually ignored by state agencies which also fail to govern effectively. While co-management is the way to go, it requires more state effort.

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Written by two scientists of the Central Marine Fisheries Research Institute (CMFRI), C Ramachandran and K S Mohamed, the article "Responsible Fisheries: Kerala Fish Workers Open New Path in Co-governance" (*EPW*, 29 August 2015) describes the so-called Kochi Initiative of fishers and scientists that resulted in agreements for the problems occurring in the fisheries for small pelagics such as oil sardines and mackerel. The authors argue that the "pelagic famine," or reduction in migratory fish stocks, which is currently affecting the state, has induced both small-scale fishers and their mechanised boat counterparts to approach the scientific community and agree to codes of conduct for both ring seining and trawling. In addition to other clauses, these codes include "scientifically proven" regulations to reduce overfishing. Moreover, the state is argued to be buying into the initiative, creating conditions for responsible co-governance.

While agreeing on the urgency of fisheries governance in India and the need for the state to change its attitude of viewing capture fisheries as a source of endless expansion or near collapse, this article aims to contextualise the Kochi Initiative in various ways. We agree that endeavours like this one are worthwhile and that scientists should indeed roll up their sleeves and engage in the "dirty work" of real-life governance. This article challenges, however, the exceptionality of regulatory attempts in the capture fisheries of India and also underlines their complexity. The latter quality is illustrated by the stalling of the Kochi Initiative following the publication of the article, which is explained as the result of discord in the fisher leadership as well as governmental temporising.[1] This teaches us, if anything, that when it comes to the restructuring of fisheries governance in India, one should beware of cheering too soon. Successful management requires a broad and long-term vision, strong communication skills as well as perseverance.

Rather than expanding on the details of the Kochi Initiative, we highlight the fisheries of the Coromandel coast of Tamil Nadu, which shares many of Kerala's features. Here too, ring seining has emerged in a major way. It is particularly common among small-scale fishers who debate its pros and cons vociferously. Here, too, the trawl sector plays a contested role. Finally, in the midst of regulatory efforts by fishers themselves, the state dithers and bows to electoral as well as revenue motives, leaving important governance imperatives unheeded.

Our contextualisation starts at the level of India as a whole. The CMFRI (2010) census speaks of 3,288 fishing settlements and a total of approximately one million seafaring fishers, up from 2,132 fisher settlements and less than half a million seafaring fishers in 1980. The steady increase in the number of fishers in India (as well as in Tamil Nadu) is paralleled by a "blue revolution" in fishing technology: while the main focus after independence was the introduction of a trawling sector, the small-scale sector too has seen its share of innovation. The result has been an enormous increase of catches, with the curve stabilising in the mid-1990s. While fishing efforts still continue to grow, through population increase and technical innovation, there are more and more signs of overfishing (Vivekanandan et al 2005; Bhathal 2014); a trend, which is luckily offset (for fishers) by steady price increases. Conflicts between groups of fishers, partly—as Ramachandran and Mohamed (2015) suggest—relate to perceived environmental impacts, but also to issues of allocation and fairness (Johnson and Bavinck 2010). The regulatory efforts that India's traditional fishing castes typically engage in deal with both issues.

The irony is that their management skills and responsibilities have largely been ignored by the state that has, however, not been able to fulfil its own promise of effective fisheries governance. Research demonstrates an ongoing condition of institutional fragmentation and legal pluralism in India's fisheries (Bavinck et al 2013), a condition that can only be overcome through concerted efforts of co-management (Jentoft et al 2009). It is on one of such efforts that Ramachandran and Mohamed (2015) reflect.

Ring Seine Fishing in Tamil Nadu

As with India as a whole, Tamil Nadu has seen the number of its fishers increase over the years, with innovations contributing to higher catches, but—alarmingly—also to serious evidence of overfishing (Vivekanandan and Kasim 2011). Fishers along the coast generally describe their fate as one of steadily declining yields, with predator species becoming scarcer and sizes and numbers declining. In order to maintain a decent level of income, they must continuously look for new options in and outside fishing. In the fishers' view, the future is gloomy; realising that education provides a possible way into other professions, they are investing heavily in the schooling of their children.

The Food and Agriculture Organisation (FAO) of the United Nations describes the ring seine as a surrounding net used to catch schools of small pelagic fish, such as sardines or mackerel.[2] Although, variations of this type of gear were already known in India, the modern ring seine was introduced in the 1980s. After the rapid growth in numbers, size, and catching capacity of the ring seine along the west coast of India (Edwin and Hridayanathan 2004), the technology has spread to the east coast where it has become popular especially among groups of small-scale fishers pooling capital and labour. They have thus responded to the increasing availability of oil sardines on this side of the continent (Kizhakudan et al 2014). According to 2010 census data (CMFRI 2010), ring seine nets are now used in Kerala, Tamil Nadu, Andhra Pradesh and, to a lesser extent, in Karnataka. Their rapid diffusion has been accompanied by heavy disputes within the fishing population.

The Coromandel coast of Tamil Nadu, where we have done extensive ethnographic field research, has had its share of fishing disputes. These disputes often focus on the introduction and application of new fishing gear[3] that are felt to threaten other livelihoods in the present and the future. While most innovations are accepted without much ado, some cause serious social division. This was the case with the introduction of trawl vessels in the 1960s. While its proponents saw trawling as a unique opportunity to modernise Indian fisheries, and new trawl fishers rapidly understood its economic potential, small-scale fishers in 1977 and 1978 took their protests to the streets of Madras (Chennai). Trawlers were argued to be threatening due to the competition they generated for shrimp in the inshore fishing region, for the destruction they caused to small-scale fishing gear, and for the unfairness they embodied, taking so much from the sea and leaving so little for those remaining in the small-scale sector. In response to this large-scale, violent protest, Chief Minister Marudur Gopalan Ramachandran announced the adoption of the Tamil Nadu Marine Fishing Regulation Act, which was finally passed in 1983 (Bavinck 2001a). Although this act separated the warring parties on paper, its regulations have largely remained symbolic—a condition we will note again in regard to ring seine fishing. While the debate on regular trawling has died down, it has turned virulent about a specific type known as pair trawling. Pair trawling is carried out by two boats that each haul one end of a large trawl net, used especially for schools of small pelagics.

Trawling has not been the only contested innovation, and Tamil Nadu fishing history is replete with regulations decided upon and implemented by local, informal bodies, known as *ur panchayats*. Ur panchayats are hamlet councils that undertake a variety of tasks, including fisheries management.[4] While maximising their effectiveness at the level of the coastal hamlet and its population, the fishing population of the Coromandel coast also possesses organisational structures at the regional level. We will now focus on one of these regions which largely coincides with the districts of Nagapattinam and Karaikal. The 58 villages of this coastline constitute a traditional *nadu* (territory), with head villages defined at two scale levels.[5] It is at the regional level that the dispute over the ring seine attained full force. Before describing this debate, however, we describe the ascent of ring seining through the cases of two villages and the accompanying debates taking place along this shore.

Nambiyar Nagar

In Nambiyar Nagar (population 1,814), the traditional head village of the *Nadu*, the ring seine was reportedly introduced in 2008 by four fisherfolk who had learned about the gear from relatives along the coast. Since then, the number of ring seines in the village has grown significantly. At the time of investigation (2014), an estimated number of 350 fisherfolk, divided over seven shareholder groups, were involved in ring seine fisheries. Each shareholder group received investments of ₹50,000 to ₹1.2 lakh from each member. The remaining funds needed to purchase the necessary gear were gathered via informal sources such as loans from wealthy relatives and friends.

Villagers ascribe the rapid increase of ring seine fisherfolk to (i) the overexploitation of marine living resources and the reduced effectiveness of usual fishing gear; (ii) the current boom of oil sardine populations; and (iii) the ongoing conflict over Sri Lankan fishing grounds, which forces fisherfolk to operate closer to home (Scholtens et al 2012).

This rise of ring seine fisheries in Nambiyar Nagar has sparked conflict with fisherfolk from neighbouring villages. In the spring of 2014, the ur panchayat of Akkarapettai, which holds a dominant position in the region, banned pair trawling and ring seining as well as the sale of oil sardine. They thereby pressurised neighbouring villages to follow suit, triggering mutiny amongst the ring seining fisherfolk of the region. Despite the perseverance of these conflicts, the fisherfolk in Nambiyar

Nagar argued that they have no choice but to continue ring seining.

Karaikalmedu

Compared to other fishing villages in Tamil Nadu, Karaikalmedu (population 2,818) makes a rather prosperous impression. Many recently built, large, concrete houses suggest that fisheries are still a good source of income. Research reveals, however, that the incomes of fisher families have been decreasing for years. As in Nambiyar Nagar, the decline of catches is blamed on increasingly efficient technologies, such as trawling. To meet the needs of the future, households are investing in education and in short-term migration to Singapore or the Gulf countries. The remittances from migratory labour are, however, still invested in fishing. Recently two ring seine fishing groups have been set up. Poorer fishing families complain about ring seining and argue that their opportunities have declined.

Following the aforementioned pressure from Akkarapettai, the ur panchayat of Karaikalmedu banned pair trawling. Purse seining, however, is still allowed in the village. Its proponents argue that ring seining is after all one of the only remaining ways to make a decent living in fishing.

The Regional Debate

By November 2013, the Nagapattinam and Karaikal region counted one harbour town (Nagapattinam) where trawl boat owners were still, despite a denial hereof, operating pair trawls.[6] Table 1 presents figures on the distribution of ring seines along the same coast in that time period.

The table demonstrates that, while hamlets practising ring seining were still a minority in 2013, their number was expected to increase significantly in the near future. It also points out, however, that a substantial percentage of hamlet councils had actually decided to ban the use of ring seines in their waters. This signals an important division within the fishing population.

Table 1: Ring Seine Activity in Karaikal–Nagapattinam, 2013

	Ring Seine Activity (%)
Hamlets with ring seines	19 (33)
Hamlets without ring seines	39 (67)
Hamlets with ring seine banned	5 (9)
Hamlets planning ring seine activities next year	11 (19)
Total	58 (100)

Source: Bavinck (forthcoming).

The Tamil Nadu Fisheries Department had meanwhile also taken a stand on both pair trawling and ring seining, prohibiting the use of both gear types in territorial waters. There is no evidence, however, that the department is making an effort to enforce these rules.

As a result of continuing indecisiveness, the fisher nadu convened a meeting in Nagapattinam in May 2013 to discuss the future of pair trawling and ring seining in the region. While the gathering, which consisted wholly of fisher representatives from the various hamlets, decided to prohibit pair trawling with immediate effect, ring seiners were given three years to phase out their operations. These decisions were immediately put to paper, with delegates adding signatures to the agreement. Implementation was expected to be difficult, however, with the proponents of ring seining gaining rapidly in number. The decision to prohibit pair trawling too faced difficulties, as practitioners were known to enjoy political support.

Conclusions

Ramachandran and Mohamed assert that "marine fish workers in central Kerala are on the verge of creating history by opting to practise responsible fishing practices" (2015: 16). The stalling of the Kochi Initiative suggests that they may have rejoiced too soon. By suggesting that the willingness of fishers to engage with management is unique, they also overlook the strong traditions and practices of management that exist within the fishing population (more than within the government). An overview of the history of fisheries in India since independence can only conclude that it has been the state in particular that has pushed recklessly for further development of fisheries, ignoring the signals of resource decline as well as many appeals for distributional justice.

What do recent events in the fisheries of Kerala and Tamil Nadu tell us? A few points emerge: (i) Serious debates are ongoing within the fishing population of both regions on the future of the fisheries, with concerns expressed about the health of the ecosystem and of important fish stocks, and also about the need to maintain fairness in the distribution of access to and proceeds from the fisheries; (ii) Fisher opinion is currently divided about the acceptability of at least two technical innovations, pair trawling and ring seining, with each innovation having proponents and opponents, and fisher decision-making is thus facing a stalemate; (iii) Calling upon state agencies to take decisive action, fisher populations are frustrated by what they see as indecision and a proclivity for symbolic gestures, leaving core problems unaddressed; (iv) While co-management policy, which gathers fishers and government officials in a common decision-making structure, is gaining adherence in both Kerala and Tamil Nadu, state agencies find it difficult to engage with fisher populations in policy discussions, which necessarily involves the application of science but also practitioner knowledge; (v) In this sense, the Kochi Initiative is ground-breaking, as it marks one of the first times in which a leading government agency has taken up the challenge of co-management.

While differing with Ramachandran and Mohamed on details, we endorse their plea for a new and responsible fisheries management regime in India. This regime needs to balance livelihood and conservation imperatives, and reflect on limiting access and effort in fisheries. Rather than assuming either a Valhalla or, conversely, a Tragedy of the Commons, the pathway to establishing sustainable and fair fisheries requires sensible deliberation between government, science, and fishers. This should not be a one-time, hit-and-run affair: events in other parts of the world demonstrate that establishing an effective co-management system requires substantial time and effort. One of its first ambitions is necessarily the development of trust between parties with a strong history of suspicion and mutual condescension.

While the Kochi Initiative is a worthwhile endeavour, it is unlikely to be replicated on a broad scale. With a future in fisheries being experienced as highly uncertain, many fisher families in Kerala

and Tamil Nadu are sending their children to school and hoping that they will eventually find jobs outside the sector. It is unlikely, however, that they will succeed in the short term. It is for this reason that realising a sustainable management regime in fisheries is so incredibly important.

NOTES

1 Personal communication Sunil Mohamed (12 November 2015).

2 See http://www.fao.org/fishery/geartype/250/en, accessed on 3 February 2016.

3 See Bavinck and Karunaharan (2006) for a historical overview of gear disputes in Tamil Nadu since the 1880s.

4 See Bavinck (2001b) for a summary description of the structure and functioning of *ur panchayats* amongst Pattinavar fishers along the Coromandel Coast, Tamil Nadu.

5 The original *nadu* is supposed to include 64 villages, a number of which are, however, now located in Cuddalore District. We have not collected data on their position with regard to ring seining.

6 The Minister of Fisheries in Tamil Nadu hails from Nagapattinam and his relatives are rumoured to be involved in pair trawling operations.

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