

Growth Blues

Coastal degradation, socioeconomic inequality and the rise of purse-seine fishing in India pose a set of problems that often end in a zero-sum game for fisher groups

The Millennium Ecosystem Assessment (2005) provides testimony to the degradation of the world's natural environment. In the lush, deltaic landscape of the Netherlands, such degradation is not immediately evident, but figures on the immense loss of biodiversity taking place in the country testify to its occurrence. Thus, according to the Natural Capital Index, the Netherlands now boasts only 18 per cent of its original biodiversity, down from 30 per cent in 1950 and 55 per cent in 1900. The same is probably true for India. As far as 25 years ago, the environmental historians M Gadgil and R Guha argued in *This Fissured Land*—

natural fishing grounds of the world, upon which fishers in the Netherlands rely, is emerging from a deep crisis. Major fish stocks that have been overfished for decades, are recovering slowly after very severe measures were taken. But this same marine region is suffering from land- and sea-based pollution, habitat destruction, and a variety of new economic activities gathered under the label of 'Blue Growth'. Fishermen themselves are becoming a threatened species.

Like the North Sea, the Indian coast has become a prime region for developmental activity, as is testified by the increasing number of ports and industrial areas. Marine pollution is a growing concern. Although the scientific evidence is still limited, the damming of rivers and cutting of mangroves are affecting the quality of inshore waters and spawning areas. Intense fishing activity is significantly reducing catches, and there is thus reason to believe that, certainly in inshore and offshore waters, overfishing is taking place. Government agencies in India are slowly acknowledging that inshore waters may be overcrowded and overfished, and that the scope for increasing catches in these regions is slim. In such waters, fishing seems to have largely become a zero-sum game: the gains of one fisher, or group of fishers, come at the expense of the catches/incomes of others. There are few new niches to exploit, and competition within existing niches has become more severe.

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An Ecological History of India that "the country is living on borrowed time. It is eating, at an accelerating rate, into the capital stock of its renewable resources of soil, water, plant and animal life".

What is true for countries as a whole, is also true for coastal regions and for the resources on which capture fishers depend. The Millennium Ecosystem Assessment (*Ecosystems and Human Well-being: Synthesis*, 2005) makes the following assessment of global fisheries: "Over much of the world, the biomass of fish targeted in fisheries [...] has been reduced by 90 per cent relative to levels prior to the onset of industrial fishing." The North Sea, which is one of the richest

Inequality

So how does this relate to socioeconomic inequality? The first Blue Revolution instigated by Indian governments from the late 1950s

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resulted in the establishment of a modern fishery sector, next to a large, small-scale fishery. This modern fishery was based on trawling, and the assumption was that this fishery would complement the small-scale fisheries, which possessed limited geographical range, by exploiting new, offshore grounds. Instead, all over India, the trawl fishery has been in severe competition with small-scale fisheries. This resulted—with a peak in the 1970s and 1980s—in violent conflicts between the two sub-sectors and in the establishment of a national fisher movement and organizations like the National Fishworkers' Forum.

My colleague Derek Johnson and I have argued, for the states of Gujarat and Tamil Nadu, that the Blue Revolution has enlarged socioeconomic inequalities in the marine fisheries sector of India, separating a richer class of trawler owners from trawl workers as well as from the mass of small-scale fishers working along the coasts. The evidence: trawlers now bring in three-quarters of total fish catches, leaving only one-quarter for the small-scale fisheries—and this while the fishing grounds on which trawlers operate can easily be covered by small-scale fishers. It is no surprise that small-scale fishers are angry about trawling.

Scientists now recognize that trawling is in itself also contributing to environmental deterioration, through habitat destruction and indiscriminate bycatches. As one fisher in Tamil Nadu explained: "Trawling ploughs the sea bottom, levels it, leaving nothing. Trawlers take even the smallest fish!" With this new knowledge, there is reason, in hindsight, to question the choices made by Indian policymakers at the start of the Blue Revolution. If environmental and socioeconomic aspects are taken along, was it actually the best choice? It is interesting in this regard to note that Sri Lanka had a different developmental trajectory, choosing not to introduce trawling but rather to intensify other fishing methods. The different choices made

by government authorities in India and Sri Lanka are now contributing to the Palk Bay fishing conflict, to which I shall return in a moment.

Socioeconomic inequality in fisheries is, therefore, not a direct result of environmental degradation, but an offshoot of the choices made in the fisheries development effort. This same development effort, however, has contributed, in important measure, to further degradation of the marine environment, and to reaching, and overreaching, the maximum sustainable yield (MSY). Just as in other parts of the world, like the

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North Sea, there seems to be an imperative in India not only for conserving, but for restoration of, the marine habitat, and thereby for a rejuvenation of its fisheries.

Trawl fishers in India often resemble the 'roving bandits' described by Berkes et al. in their 2006 paper, *Globalisation, Roving*

of informal fisher *panchayats* in Tamil Nadu.

What makes the case of purse-seining different from that of trawling, however, is that it is largely carried out by collectives of small-scale, village-based fishers. The members of these 'companies' pool capital and labour and are thereby able to compete with the trawling operations of harbour elites. Trawl owners dislike the purse-seining groups for a variety of reasons: (a) they compete with trawlers for the same schools of fish; (b) they compete for labour, which prefers to go purse-seining because the earnings are better; and (c) purse-seining catches cause fish prices to go down.

To recapitulate: purse-seining is taking place in a marine environment that is suffering from environmental degradation, and is pursued by small-scale fishers who see an unusual possibility here of making decent incomes. At the same time, some see purse-seining as contributing to further deterioration. In addition, not all small-scale fishers have the opportunity (money/labour) to participate in purse-seine fishing; in addition, many fisher *panchayats* have prohibited the use of purse-seines in their waters. The fisher *panchayats* are, however, seriously divided, with some in favour of purse-seines while others are against. Social struggle is, therefore, going on within the fisheries sector itself.

What does the government have to say about this matter? In response to fisher agitations, the government of Tamil Nadu prohibited the use of purse-seines in 2000, but does nothing to prevent them being used.

Environmental NGOs

This ambivalent attitude has contributed, for example, to the strange instance of the anchoring of a large fleet of purse-seine boats, for example, in Cuddalore town, which are not at all registered but go fishing nonetheless. Environmental NGOs have identified the problems of purse-seining in India and are

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Bandits and Marine Resources 2006), as well as the 'biosphere people' of Gadgil and Guha. Not depending on any particular fishing grounds, trawl fishers move from one area to another, displacing local, small-scale fishers and causing them hardship. We have documented this process within Tamil Nadu (where big riots occurred in 1979 in Madras), as well as between Chennai trawl fishers and Andhra fishers. The latest manifestation of this same process can be seen in the Palk Bay, whereby Tamil Nadu trawl fishers are making extensive use of northern Sri Lankan fishing grounds and preventing local small-scale fishers from recovering their livelihoods. The benefits accruing to one party result in losses for the other.

The purse-seine fisheries I have been studying lately along the Coromandel coast of Tamil Nadu illustrate some of the trends and dilemmas mentioned above. Purse-seine fisher 'companies' target the migratory schools of small and large pelagics that seasonally travel up and down the Indian coast and have always also sustained the small-scale fisheries. Purse-seining is highly disputed, for two reasons: (i) fishers fear the absolute depletion of fish stocks, as these gears are so efficient; and (ii) fishers say that purse-seining results in some fishers gaining all, leaving nothing for others. For these reasons, purse-seining is prohibited by a large number

concerned, as one of their members said, that “purse-seining signals a race to the bottom.” Scientists of the Central Marine Fisheries Research Institute (CMFRI) are investigating the state of the large schools of oil sardine that travel the Indian coast. They do not seem to have reached consensus on whether there is something to worry about.

I am convinced that the social struggles taking place in the coastal realm of India deserve more of our attention, not only for academic reasons, but for societal ones too. I view the crisis occurring in fisheries as part of an otherwise stagnating agricultural economy, and a problem of employment and social mobility. Fishers, even the better-educated ones of the newest generation, will not join the information technology sector, nor will they find ready employment in other professional fields. They are largely stuck in fishing.

The environmental problems of the coast are diminishing the size of their ecological niche, and defining their continuing position at the bottom of the larger Indian socioeconomic pyramid. At the same time, they are struggling for a piece of the pie that is generated within fisheries. This struggle is being exacerbated by institutional fragmentation, indecisiveness, and uncertainties of knowledge.

Fisheries is only one of the livelihood opportunities practised along the Indian coasts, albeit an important one. We, as social scientists, have a role to play in resolving the struggles that occur, if only to bring to the public attention that: social struggles over livelihoods and natural resources continue, also along the coast; these struggles take place over a diminishing ecospace, positing stronger against weaker social parties; unequal access and opportunity are core features of such struggles, and revolve around conceptions of ‘fairness’; ‘technological change’ is a factor contributing to diminishing ecospace as well as to unequal opportunity, and restrictions on technology are urgently required; and

the government needs to collaborate with user groups to define long-term coastal management plans that include reference to precautionary ecological principles as well as to the importance of livelihoods and sustenance of poorer citizens.

A concerted effort in facilitating an understanding of social dynamics in India’s coastal zone is of tremendous importance. Social justice is one of the aspects deserving attention. **3**

For more



open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0103394

Government-led development of India’s marine fisheries since 1950: Catch and effort trends, and bioeconomic models for exploring Alternative policies

eprints.cmfri.org.in/10796/

Marine fish landings in India 2015

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Sharing the fish ‘06—allocation issues in fisheries management’ conference, Fremantle, Australia, FAO Fisheries and Aquaculture Proceedings, CD-Rom, Rome: FAO, 17pp.