Social justice and fisheries in India

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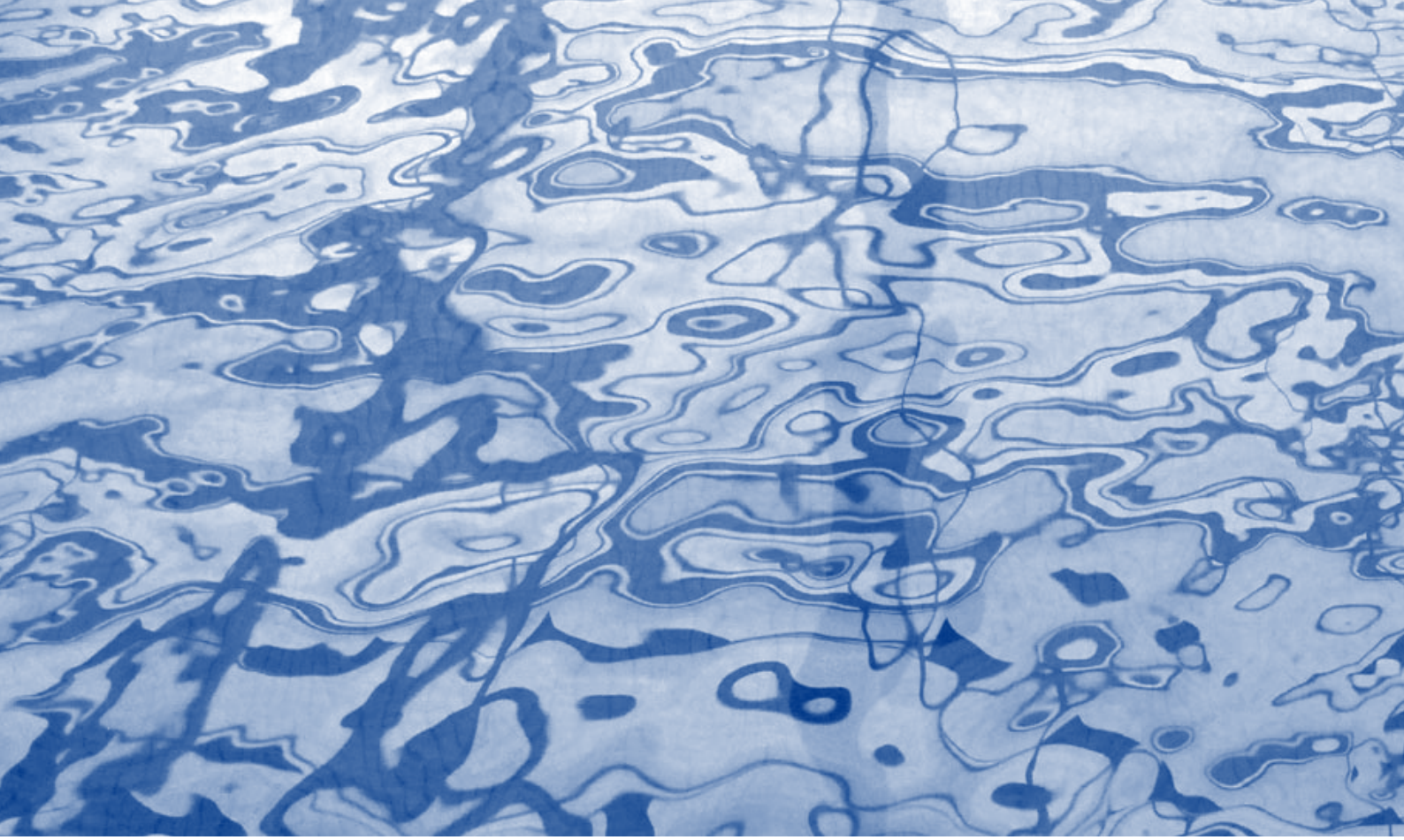

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Abstract

Indian fisheries are at a turning point. To date, Indian fisheries policies have emphasised production at the expense of allocation and, indeed, even effort restrictions. On the basis of original ethnographic data and secondary sources, we show how this has led to conflict between sectors and exacerbated pressures on marine living resources in the states of Tamil Nadu and Gujarat. We use a social justice approach to analyse this trend and to suggest possible alternative future paths of governance. These turn on the conviction that only with a new emphasis on allocation grounded in social justice can Indian fisheries governance foster fisheries that continue to sustain high levels of employment without further depleting their biological basis.

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Introduction

Indian marine fisheries are grappling at present with a series of problems resulting from the country's post-independence history of fisheries development. Indian fisheries policy has been dominated by the goal of enhancing production to the virtual exclusion of concerns for allocation or, indeed, resource management. Social justice, to the degree that concerns for it were voiced, was to be met through increasing the size and value of the total catch, benefits from which would filter down to all strata of the fishing population. Only in recent years, with increasing evidence of resource stress and the threat of upheaval in coastal fishing communities, has that balance begun to be reconsidered. A key question for Indian fisheries governance is thus to arrive at a new understanding of the relationship between production, distribution, allocation, and social justice. This paper offers a few observations and reflections in that regard based on the experiences of Tamil Nadu and Gujarat.

The central strategy for fisheries development in India has been labelled as the blue revolution[1], the forceful attempt by different levels of the Indian state to modernize Indian capture fisheries from around the mid-1950s onward. It was justified with recourse to the rhetoric of development: initially policy makers held that India's abundant marine resources could be marshalled to address the protein deficiency of the masses and later, as the economic value of shrimp became evident, that export earnings could stimulate the development of the overall Indian economy. Moreover, the blue revolution would help to uplift the country's poor fishing population and bring them into the development trajectory.

1 We refer to what is now known as the first blue revolution in capture fisheries, the second blue revolution taking place three decades later in aquaculture (cf. Stonich and Bailey 2000).

In terms of stimulating production in Indian fisheries, blue revolution efforts were very successful. This is shown by production figures: in 1950-51, marine fish production was 534,000 tonnes; by the late 1990s it had peaked in the range of 2.8 to 3 million tonnes (Yadava 2001: 145). As was the case in many other developing countries (Platteau 1989), state efforts led to the division of marine fisheries into two parts: a harbour-based trawler fishery, and a very sizeable small-scale sector spread out along the beaches. This division has become a major axis of conflicts and claims over social justice in Indian fisheries.

Fish catches in India flattened in the late 1990s, a trend which has been cited as evidence for an ecological crisis in the marine sector (Mathew 2000; Salagrama 2001). As the overexploited condition of fish stocks has become ever clearer, with the necessary implication that absolute fishing effort has to decrease, the allocation of returns from remaining stocks becomes critical. This is an issue, nonetheless, that policymakers in India prefer to sidestep because it so pregnant with possibilities for conflict and because fishers in India are generally marginal and thus rather easily ignored. Without a conscious and firm effort to incorporate well-formulated and explicit policies of allocation based on social justice, however, fisheries in India stand little chance of avoiding continued degradation and increases in social upheaval along the coasts.

Social justice and allocation in fisheries

From the perspective of social justice, it is important to use allocation in the sense of re-distribution rather than in the narrower sense of a non-interactive assignment of rights and benefits by authorities. Allocation takes place in the context of pre-existing fields of social relations and patterns of distribution that have to be recognised and incorporated into re-distributive processes for there to be social justice.

Given this understanding of allocation, what is the place of rights and responsibilities concerning resources that are being allocated, and what are the limitations on rights and responsibilities? Researchers have demonstrated that fishing societies, whether 'traditional' or newly established, design and enforce rules for fishing practice. As the marine living aquatic resources that fishers depend on are of fundamental value to their livelihoods, access to them is allocated according to formal and informal frameworks of rights and responsibilities. Rights from this perspective are socially sanctioned permission to withdraw a specified resource under specified conditions. Responsibilities are the conditions that the rights holder must uphold in order to maintain his or her access rights. The assumption of much research in this area is that as long as fishers operate within a common framework of rights and responsibilities, social justice issues are capable of being addressed and handled. There are three difficulties with this position. First, social divisions within a fishery mean that participants generally disagree over the allocation of rights and responsibilities and over conceptions of just fishing practice (cf. Charles 2001). Second, those social divisions point to differences in the capabilities of individuals and groups within the fishery to participate in decision making (Árnason *et al.* 2005: 21). Third, fisheries are embedded within and crosscut by larger social, economic, political, and other structures that represent alternative priorities and systems of identification which compete with local systems of rights and responsibilities.

Anthropology has developed the conceptual pair of emic and etic, which is useful in differentiating competing claims for socially just allocation in

fisheries. Emic refers to the culturally specific view, or the view from inside. Etic refers to the view of the outsider, often in reference to a supposedly more objective or value neutral position (Pike 1954). Recognition of the existence of these different viewpoints leads to the observation that justice varies from one society, and societal position, to the next. There is thus no 'true' or 'correct' meaning of justice (Campbell, 2001) – instead, there are many emic perspectives on it.

Nevertheless, such examples as the Code of Conduct for Responsible Fisheries (CCRF) indicate that there is common acceptance of the need to define 'universal' principles or criteria (cf. Kooiman *et al.* 2005: ch.13). The CCRF, for example, explicitly voices the principle of protecting small-scale fishers in its Article 6.18. Equally, there is general agreement on the principle of intergenerational justice in resource use (World Commission on Environment and Development 1987).

To these examples, other principles of social justice can be added that may serve as ways to judge allocation claims in fisheries. First, equity is important for allocation as a goal for distribution of access rights but also in the sense of participation in decision-making. Equity need not be precisely calibrated, but inequities in allocation and decision-making should not be perceived as disproportionate. Second, and related to this first point, allocation should be an inclusive process: marginalised or weak stakeholders who depend on the resource need special consideration and extra efforts need to be made so that they are able to participate effectively in decision making processes regarding allocation (Árnason *et al.* 2005: 25-26). In Amartya Sen's terminology, their fundamental social capabilities need to be ensured (e.g. see Sen 1999). Third, historical and cultural primacy should be observed. Peoples and groups who have long associations and close cultural connection to resources should be given priority of access. Fourth, the interests of the natural environment need to be strongly represented not only for sustainability but also out of the principle of respect for the inherent right to survival of non-human organisms. Finally, allocation should also strive for efficiency. While we recognise the coexistence of competing emic claims on resources in our two cases, these principles do offer a means to assess them, albeit imperfectly.

The remainder of this paper is based on the findings of long-term ethnographic fieldwork conducted by both authors in their respective regions. Arguments, where not substantiated by secondary sources, are derived from interviews, personal observations, and surveys. In Tamil Nadu, data were collected over the period 1994-96 and 2001-2005. In Gujarat, data were gathered in 1997-98 and in 2004-05.

The blue revolution and the creation of social injustice between sectors

Fisheries development in Tamil Nadu and Gujarat

Both Tamil Nadu and Gujarat are big marine fish producers: over the ten year period from 1989 to 1999, Gujarat contributed an annual average of 22.31 percent of the total Indian catch while Tamil Nadu produced 12.34 percent (calculated from Yadava 2001: 148). Both states also have long coastlines and extensive continental shelves. Gujarat's continental shelf is much wider, however, and therefore bigger in area. Making up part of the more productive west coast, Gujarat also possesses a richer fish fauna, both in terms of diversity and in abundance (Bhathal 2005:5). Gujarat's fisheries thus have a higher development potential and a lower propensity towards overfishing.

The figures in Table 1 demonstrate the greater size of Tamil Nadu's marine fishing population, and that there is more rivalry for marine resources in Tamil Nadu. The average amount of continental shelf area (>100 metre depth) available per fisher in Tamil Nadu is thus much lower, as is the average catch per annum. These are important facts that influence the relationship among fishing units regardless of other circumstances.

Table 1. Marine Fisheries of Tamil Nadu and Gujarat compared[2].

	Length of coastline (km)	Cont. shelf (km^2)	Active fishers	Fishers per km^2 Of cont. shelf	Average catch (mt) per fisher in 2000
TN	1076	41,412b[1]	194,470	4.67	1.94
Gujarat	1600	164,000	157,742	0.96	3.93

2 Except for the marked exceptions, the data for Tamil Nadu are calculated from Government of Tamil Nadu 2000. Data for Gujarat were obtained or calculated from Gujarat (2004). Catch data for Gujarat refer to the 2000-2001 season.

In both Tamil Nadu and Gujarat, the blue revolution in fisheries development began in the 1950s. In both cases, intensive efforts were made to modernise the state's fisheries, with the creation of the new trawling sector being the most far-reaching innovation in terms of both productivity and implications for social justice. Tables 2 and 3 give an insight into the effect of the blue revolution in both states. As they show, despite some predictions to the contrary (Bavinck 2001: 65, 67), trawlers did not come to supplant small-scale fishing. The small-scale sector in fact has continued to grow and innovate in both states. In both states, but in Tamil Nadu in particular, the new trawler sector did not move offshore and leave the inshore zone to small-scale fishers. This has resulted in intense competition between the trawler and the small-scale sectors, as well as in the large-scale destruction of gear.

Table 2. Vessels and catch in metric tonnes by sectors of the Tamil Nadu marine fishery, 1948 and 2000.

Sector	Vessel numbers 1948	Vessel numbers 2000	Total catch 1948	Total catch 2000	Catch 1948 per craft	Catch 2000 per craft
Small-scale	13,204	42,537	27,135	177,015	2.06	4.16
Trawler	–	9,896	–	200,468	–	20.25
Total	13,204	52,433	27,135	377,483	2.06	7.2

Source: Calculated from Government of Tamil Nadu 2000.
1 India 2000. *Handbook of Fisheries Statistics*. Dept. of Animal Husbandry and Dairying.

Table 3. Craft and catch in metric tonnes by sectors of the Gujarat marine fishery, 1960-61 and 1999-2000.

Sector	Vessel numbers 1960-61	Vessel numbers 1999-00	Total catch 1960-61	Total catch 1999-2000	Catch per vessel 1960-1961	Catch per vessel 1999-2000
Small-scale	3531	15861[2]	79412	193570	22.49	12.2
Trawler	–	6787	–	477381	–	70.34
Total	3531	18221	79412	670951	22.49	26.63

Source: Calculated from: Gujarat (2000).
2 This figure includes non-mechanised craft for all coastal districts, 5192 boats, outboard motor powered canoes, 6242 boats, and the inboard motorboat sector using gillnets and bag nets in which there are 4427 craft (Gujarat 2000: 35). Most of these latter vessels constitute arguably a middle range category, which our analysis does not distinguish.

The cumulative effective of the blue revolution on marine resources in Tamil Nadu and Gujarat has been negative for marine resource sustainability. This is supported by first hand reports from fishers across the spectrum of gear types in the two states and by secondary analysis (Bhathal 2005, Sanpath 2003:103, Sridhar 2005, Boopendranath *et al.* 2003, Johnson 2001, Mathew 2000).

Perceptions of social justice in the Tamil Nadu fisheries

From the emic perspective of small-scale fishers, they consider themselves to be the major victims of fisheries development in Tamil Nadu. Along this coastline, fishing is an old activity, resulting also in the development of special fishing castes. Left alone by government until the launch of the blue revolution, fishing communities themselves have taken charge of regulation. This resulted in a chain of preferential fishing areas, covering most of the inshore waters of the state, and a practice of banning, or regulating, harmful fishing technologies. Each fishing hamlet has its own council that decides on fishing matters and resolves disputes (Bavinck 2001).

The introduction of trawling threw these fishing communities into turmoil. Here was a new category of fishers that fish at will, paying no attention to the prerogatives of hamlet councils or to the rights and responsibilities prevalent in small-scale fishing. According to local perception, they behave like bandits, using their superior engine power to prowl the inshore seas, damaging gears, appropriating high-value shrimp, and disappearing into the night. This is experienced, to quote Sen (1999), as acts of 'intense injustice', and continuously protested as such. Such objections are voiced in court, via demonstrations and petitions, and frequently also via direct action, for example through the hijacking and ransoming of trawler vessels (Bavinck 2003, Sundar 1999).

For trawler fishers, the world of justice is constituted differently. They and their professional associations tend to remember that the Indian Constitution provides every citizen the right to work where and how he pleases, and that it was the Indian government that in fact urged their conversion to trawler fishing. They point out their economic contribution, the many difficulties of their trade, and their continuing efforts to settle the problems that arise with their compeers, the small-scale fishers. Finally, they note the many ways in which the government has been making their lives difficult: first of all through the Tamil Nadu Marine Fishing Regulation Act (1981), which designates the inner zone of three nautical miles out of bounds for trawlers, even though it is barely enforced. More recently, they bemoan the annual 'monsoon ban' of six weeks that the government has implemented for trawler fishing, presumably for conservation purposes. From a social justice standpoint they therefore emphasize that the trawler fishing sector has also been short-changed (Bavinck 2001).

An etic view of social justice in Tamil Nadu's marine fisheries might stress the employment and income-generating potential of small-scale fisheries in a societal context of poverty and job scarcity. It could highlight the historical rights of marine fishing castes to the occupation and the natural resources on which they depend. Finally, it could examine the extent to which small-scale fishers were and are capable of harvesting the resources presently captured

by trawler fishers. While supporting the position of small-scale fisheries, an etic perspective could also, however, emphasize the rights of trawler fishers to fair settlements.

The government of Tamil Nadu has wrestled with the heritage of the blue revolution ever since its real contours emerged. In the period between 1970 and 2000 its main concern has been with defusing the conflicts that occurred between the small-scale and trawler sub-sectors. This was the main intention of the Marine Fishing Regulation Act. As this act failed to fulfill its purpose, the authorities have instead built on agreements between the conflicting parties to establish very local, temporary settlements (Bavinck 2003).

Recently, however, conservation has become a point on the governmental agenda. It figures most clearly in what has become known throughout India as the 'monsoon ban', a closed season in Tamil Nadu of six weeks for trawlers, which is meant to enhance the recruitment of fish stocks. There is evidence, however, that this measure is disputed (Haastrecht and Schaap 2003).

Gujarat

The judgement by small-scale fishers of the social justice of the current situation in Gujarat is likely to vary regionally[3]. In South Gujarat and the Gulf of Kachchh regions, small-scale fishers are facing the loss of their livelihoods due to competition for coastal space and resources with industrial and agricultural development which, incidentally, pose a significant threat to coastal ecology (Hiraway 2000; Kizhakudan *et al.* 2003). In the ocean-facing area of peninsular Gujarat, small-scale fishers are more concerned about overfishing and point to trawlers as being the principal culprits. As in Tamil Nadu, small-scale fishers and trawler fisher operations overlap in coastal waters of up to about 40 fathoms in depth. Small-scale fishers are resentful of damage to their gear caused by trawling and the dangers that trawlers pose to small craft. The frustrations of the small-scale sector occasionally manifest themselves in incidents of boarding, violence, and boat capture directed towards offending trawler vessels, although this has been a less common and less organised phenomenon than in South Indian waters (cf. Bavinck 2001; Kurien 1991).

The trawler sector has been in a state of shock since the fishing crisis began in 1997-98. The rapidity with which the economic crisis has undermined their financial security has caused many to wish that they could leave the sector. Indeed, informal evidence is that a process of consolidation in the sector has been taking place, with fish traders buying the boats of their insolvent trawler-owning creditors. Leaders of the trawler sector are now talking about measures for conservation, and have accepted the 2004 government ban on

3 The basis for this paper is research conducted along the most important fishing area of coastal Gujarat from Navabandar to Okha. We have only secondary reports of conditions in other areas.

the construction of new vessels. They are clear, however, that the small-scale sector has to pull its weight also, and stop fishing in the monsoon, a practice that has increased in recent years. As yet the only sense of injustice voiced by trawler fishers is against the licenses granted by the Indian government to industrial fishing boats for operation in Gujarat's waters.

Major tensions over social justice between the sectors have not yet emerged in the Gujarat fishery. This may reflect the common experience of generalized development and growth and the now generalized depression that all sectors have faced. As Table 1 demonstrates, there is also comparatively more space per fisher in Gujarat due to its large continental shelf, which reduces inter-sectoral conflicts. Finally, Gujarat's fishers and the fisher owners of trawler vessels[4] are linked through economic and caste relationships, which may defuse conflicts.

By supporting growth in all motorized sectors, the state Department of Fisheries implicitly pursued a strategy based on equality of opportunity. It had the good fortune to implement its policies in a context of an under exploited fishery with abundant resources which brought economic success across the board, with low levels of conflict, even if the trawler sector got the largest share of the resource. The crisis since 1998 has shaken the Department of Fisheries into a more proactive role, a major success of which has been to finally get the Gujarat Government to pass the Gujarat Fisheries Act in 2003. The act includes explicitly conservationist and redistributive provisions. First, it prohibits the catching, processing, and sale of juvenile and "under-sized" fish and lists a number of protected species. Second, it prohibits bottom trawling within a nine-kilometre zone from shore and, in Chapter III, regulation 21, it calls upon fisheries officers to "protect the interest of traditional fishermen such as country crafts or canoes." These provisions could make the fishery more sustainable and equitable. They would necessitate a good deal of adjustment and financial hardship for the dominant class of trawler owners, however, as they stand the most to lose in such a re-equilibrating of the fishery. As this group is so powerful in the main fishing zones of Gujarat, they are unlikely to abide by the provisions of the act unless the state is able to convince them of its necessity and its utility for them.

Despite the very different contexts, an etic perspective on justice in the Gujarat fishery could come to similar conclusions as those for Tamil Nadu about the preferability of strengthening the small-scale sector at the expense of the trawler sector. The same caveat applies, however, that the trawler fishers will need fair settlements. It is important also that destructive gears in the small-scale sector be eliminated and efforts continue to be made to

4 In the trawler-dominated areas of Saurashtra and Kachchh, trawler crew, however, are hired in large numbers from elsewhere, of which the main sources are South Gujarat and Andhra Pradesh.

build their capacities to diversify their livelihoods away from dependence on fishing.

The current fisheries management challenge in Tamil Nadu and Gujarat
The fisheries of Tamil Nadu and Gujarat are in similar positions at present: both are facing stagnation and possible decline due to overfishing and other threats to their marine ecology. At the heart of their difficulties is the legacy of India's blue revolution: the promotion of growth-oriented fisheries development policies with relatively little attention to issues of conservation and distribution. Primary in both cases was the promotion of export-oriented trawler fisheries which have come to dominate fisheries production in the two states. At the same time, the pattern of development in the two states has differed in ways that could become significant for future ecological conditions and inter-sectoral relations in each state.

The first major difference between the two states is the degree to which fishing has been integral to social, economic, or even mental space. While in both states fishers have low social status, in Gujarat fishing was historically marginal to the point that the fishery had a domestic export orientation even prior to modernization (Johnson 2002: 121-123). This meant that fishing in Tamil Nadu in the 1950s was relatively more economically and institutionally developed than in Gujarat. Most notably, the small-scale fishing sector had developed a system for management and resource allocation. The historical marginality of the Gujarat fishery has left a relative, though not complete absence, of such institutions (see, e.g. Kizhakudan and Kizhakudan 2005) but also a freedom from having to cope with outsiders moving into the fishery. Gujarat's fishery has also not faced the intensity of inter-sectoral conflict over allocation rights as in Tamil Nadu. The cost in social justice terms for Gujarat's fishers, however, of that their social-cultural marginality within the state has been that their recent concerns about the ecological impact of coastal industrial development have largely fallen on deaf ears in the state capital of Gandhinagar.

The second major difference between the development histories of Tamil and Nadu and Gujarat has been the role of the state fisheries departments. The Tamil Nadu department has had to focus its energies on inter-sectoral conflict management, an issue that has been much less present for the Gujarat department. Since the end of its leadership position as fisheries developer in the 1970s, the Gujarat Department of Fisheries has acted primarily as provider of subsidies, issuer of registrations, and collector of data. There is a parallel between the institutional histories of the departments in the two states, however, in that both settled into relatively passive roles in relationship to their fisheries after initially strongly interventionist periods. Neither department has been proactive in regards to allocation, something that now will have to change.

Fisheries in Tamil Nadu and Gujarat are now both facing the stark reality of stagnating catches, few new possibilities for expansion, and rapidly growing coastal populations. For the two states, this is a key period of fisheries transition during which hard choices will have to be made in order to reconcile conservation with employment and livelihood needs. How vulnerable stocks will be allocated to meet those aims has now become a pressing question. Each state has blue revolution legacies, and particular, institutional, socio-cultural, political, and economic realities that shape their room for action. In both states, fishers and their organisations have power and legitimacy that state organisations lack. At the same time, however, fisher populations are fragmented along lines of caste, class, sector, and religion and their position has been shaken by the current ecological crisis. Should the state be able to rise to the challenge, these conditions present an opportunity for charting a new course for fisheries management in Tamil Nadu and Gujarat.

Evaluation

In both Tamil Nadu and Gujarat, evidence would lead us to argue that a technocratic approach to management is most likely to inform policy making in the near future. State departments of fisheries do seem to be moving beyond trying to ignore the problem of management, even if many of their members would still prefer to preserve the institutional status quo. More proactive approaches that would explicitly engage the thorny problems of allocation seem unrealistic under current conditions. Trawler owners in both states are more than powerful enough to block any proposals of an outright ban on trawling. The numerous and entrenched divisions between fisher groups make highly unlikely their pushing for a greater share in management. In any case, the Tamil Nadu government is not at all in favour of devolution and there is little to indicate a more favourable policy in Gujarat. On an informal level, however, consultations within a framework of, for example, responsible fisheries might be held as a way of opening a dialogue on building more innovative management processes. A more inclusive process would have to face the barrier of the deep-seated social divisions in both fisheries, however.

In Gujarat, the most compelling evidence for an acknowledgement of the need to change is the new Fisheries Act. It recognises that there are limits to fishing and contains some promising elements in terms of allocation and social justice. Nonetheless, the main regulatory thrust of the document is technocratic rather than institutionally innovative. It advocates a host of technical restrictions on fishing such as mesh size limitations, the banning of fishing with electricity and explosives, licensing, and area restrictions, and lays the foundation for a possible future quota management system. The degree to which these regulatory elements will be implemented remains to be seen and depends a great deal on their acceptance by fishers. Area zoning, for example, while a laudable initiative, has no support amongst fishers except possibly among bag net operators. The Fisheries Department itself is insufficiently staffed and motivated to push through such contentious changes on its own.

In Tamil Nadu, representatives of the Fisheries Department are now orally acknowledging that there are major environmental problems to be addressed. There is some movement towards technocratic solutions that attempt to make changes by introducing a closed season for trawling; promoting the shift of trawlers to longlining; targeting new species; prohibiting specific extremely deleterious gears such as purse seines and pair trawling; declaring a marine park in Ramnad district mainly for biodiversity reasons; and, together with trawler owner associations, limiting the number of new trawlers. There are also some smaller programs for awareness building on the need of small fishers to move to other occupations. All this is occurring in the context of a department that is suffering cuts in budgets, and has lost a lot of its earlier lustre and motivation. It is not yet poised for a larger and more substantial policy shift.

Conclusion

The long-term legacy of the blue revolution in Tamil Nadu and Gujarat has now become evident with serious problems of overfishing due in large measure to powerful trawler sectors in both states. An ecologically sustainable future for these fisheries that also meets distributional equity criteria would require reversing the trend to ever-intensified production that the blue revolution has triggered. Fundamental to this is to re-examine the primacy of trawling at the expense of the small-scale sector which best matches the criteria for socially just fisheries in India. Small-scale fisheries are employment intensive, locally rooted, and are generally more sustainable. In the final section of our paper, we have indicated why it is unlikely, however, that any such re-allocation between trawler and small-scale sectors will take place. It is useful, nonetheless, to put forward the possibility of alternative management configurations, as in pushing the bounds of the possible they may create more room for action in practice.

Realistically, the political, economic, and social constraints on radical state and fisher action mean that, at least under current conditions, technocratic solutions are likely to dominate fisheries policy in Tamil Nadu and Gujarat. It should be remembered that these are an improvement over past regimes premised on limitless growth and they should be supported to the degree that they effectively relieve ecological pressure while supporting livelihoods and employment. At the same time the clear limits of technocratic policies for addressing the causes of overfishing and social injustice provide a strong rationale for intensified efforts by researchers, fishers and their leaders, NGO workers, and concerned government officials to develop new, innovative, and inclusive ways of allocating vulnerable stocks consistent with conservation and social justice. Urgent efforts also have to be made to defend fisheries from external threats to their livelihood base. Without doing so, the important income and livelihood supporting capacity of Indian fisheries will be further eroded, with ecologically and socially disruptive effects.

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