



Two failed states: politics, access and institutions in Gangetic river fisheries

The life of a fisher-boatman on the Ganga River is hard. Seven years ago, an old fisherman had touched his sun-singed forehead and told me, “There are many wrinkles, but no future. Depending on river fishing in the Ganga and her tributaries for eking out our livelihood has become a curse today. We used to be the masters of the river, now we are scavengers. How would you feel if you got robbed almost every day when you returned from work?” The physical hardship apart, he explained, they had to feed whole families from the poor fishing returns, while facing threat to life and risk of robbery. They begged for an answer to the question: “How did we, the fishers to whom tradition bequeathed the fruit of the Ganga waters¹, reach this state?”

It would help to put this serious issue in context right at the outset. Uttar Pradesh (UP) and Bihar are the two Indian states with the largest populations of traditional fisher communities, including the Mallah, Nisad, Majhi, Keut, Bind and allied castes in the Gangetic plains². Most members of these communities are landless and dependent almost entirely on river fishing through the year³. River fisheries across India is considered an underperforming economic sector on account of continuously falling production and the Gangetic basin that supports nearly 10 million people is no exception⁴. Despite both historical and contemporary importance of the Ganges for fisher livelihoods, policy neglect of Gangetic fisheries has compounded in recent times. As a result, many fishers have left fishing due to poor incomes and from fear of conflicts.

Resource scarcity is thought to lie at the heart of conflicts on the Ganga. Dams, altered flows

¹ In Bengal, fish are called ‘Ganga Phal’ or “fruit of the Ganga water”.
² Mallah and other fisher castes have taken multiple identities over the course of time, but are regarded mainly as Dalit Hindu castes (although Muslim Mallahs are recognized too). However the so-called ‘upper’ castes will take water from their hands. The Mallah have variably stated their identity as a Shudra affiliation with Brahmin or Kshatriya lineages.
³ Many fishers also work as farm laborers, rickshaw-pullers, divers, construction workers in urban areas and boatmen at pilgrimage centers to augment their incomes.
⁴ Most commercially valuable fish species (large carps, large catfish, Hilsa etc.) have shown declines in the range of 70-100% over the past 40 years. Trash fish (gobies, minor catfish and minor barbs), which nobody touched before, are now bought at over INR 100 for a kilogram.

and pollution have resulted in a collapse of fish population stocks⁵. But over and above scarcity, the complex political history of access and rights needs to be understood to identify causes of continuing conflict in the fisheries of UP and Bihar. Whatever little fish resources remain have been rendered worthless by ambiguous property rights, undefined tenure and the politics of access. This is linked to the inherent problem of water tenure in the dynamic alluvial rivers of the Gangetic plain: rivers keep changing their courses with every flood season, remapping land and water through erosion and deposition⁶. Hence it becomes nearly impossible to know, for fishers, over how much water and how much time their stakes truly lie. This uncertainty forms the substrate for the politically powerful to reinforce their authority. In the highly feudal and stratified societies of these states, fisheries conflicts are often colored by violence and bloodshed.

Despite broad similarities in the geography, hydrology and anthropology of fishing, political history has yielded disparate resource access regimes in the states of UP and Bihar. UP has a system of private contracts over river segments of variable lengths, which are leased to contractors through periodic auctions who in turn employ traditional fishers as fishing labour. In contrast, all flowing water in Bihar can be fished open-access, i.e. fishery is ‘free-for-all’ by state decree. These private and open-access systems have now existed in parallel for the last 20-25 years (c.1990-present)⁷, having diverged from a shared colonial past. The rest of this article will discuss how these seemingly divergent systems of resource access have in fact produced the same effects on the lives of fisherfolk.

⁵ Despite the numbers, there is no viable market for river fish produce, which according to a conservative estimate may not account for more than 10% of the market share across northern India; of this 90% is accounted for by “Andhra carp”. The boom and market capture by Andhra Pradesh carp culture production and export has been so influential that it has almost become a brand name. The reported estimate is based on; see reference list below.

⁶ Erosion and deposition processes are strongly governed by flooding patterns, which in turn are a very complex outcome of Himalayan tectonics, geology, local hydrology, climate change and glacial melt and human modifications of river channels through dams, barrages and embankments. It is still unclear what factors have the most significant impacts.

⁷ UP fishers also mentioned that contracts attained their present structure and process in the late 1980s.

The Jalkar or Panidari system in Bihar, the riverine counterpart of feudal Zamindari (landlording), was fortified by land tenancy acts passed by the British colonial administration in the late 18th century. Though the British were aware that such ‘permanent’ settlement was a paradox given the dynamic floodplain, they nevertheless did so to consolidate long-term revenue earnings. Zamindari establishments could sublet water areas for fishing to smaller entrepreneurs who would hire traditional fishers to work the fishery. This came about through the exercise of English riparian law, which allowed ownership of any water body adjoining a landowner’s estate. The ‘right to fishery’ was thus aligned with private land-based property rights, leaving landless fisher folk without any stakes. Writings by British officials serving in eastern Bihar (erstwhile Bengal) resonate the worry that fishers would overharvest and destroy the rich fishery of the Ganges if not for privately owned and regulated river stretches. Although the colonial administration grappled constantly with the problem of river channel changes on the one hand and poverty and equity on the other, this did

not result in actual dilution of powers vested in the Jalkar owners and lessees.

The Panidari control became brutal and coercive over the years. Though Zamindari abolition happened in independent India (in 1952), Panidari continued in the Bhagalpur district of Bihar till 1991. Only after a fisher-supported movement, the Ganga Mukti Andolan, which got political mobilisation at a fisher settlement called Kagzi Tola in the Kahalgaon block, was the fishery freed from the Panidari’s clutches. The new ruling socialist party seized the opportunity provided by the movement to reach out to lower caste vote bases and made fishing ‘free for all’. This symbolic breaking of ‘private’ boundary was portrayed as a victory of the ‘oppressed over the oppressors’ but in reality, it did little to secure livelihoods. Instead, due to open-access fishing, the absence of any settlement of fishing rights, and the resulting weak institutions, a fishery mafia gained influence. Even today, criminals use highly destructive fishing practices causing serious declines in fish recruitment and powerful people enforce these



Axolotl

practices through violence and threat to local fishers. The last three decades have seen several brutal massacres of fishers through these conflicts and fish grabbing by criminals is common.

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As fishers in Bihar admit today with shame - they did not see the writing on the wall in 1991. Given the current situation where 'non-traditional, opportunistic, destructive fishers' and criminals rule the roost without any sanctions, even the oppression of Panidari is described as though it were a blessing.

"We worked under the Panidar (waterlord) for a long time. It was bonded labour. Often we would get meager payment for our work, whereas our fish would be taken away since it belonged to the Panidar. Even the river stretch we fished between Sultanganj and Pirpainti, belonged to them. As workers we faced years of oppression. Our community united in the late 1980s and overthrew this oppressive regime. Phir Gangajee mein machhli marna Lalu ne firi kar diya (Then Lalu Yadav, the erstwhile Chief Minister of Bihar, made fishing in the Ganga river free for all). This change we ushered in was also our biggest mistake. The Panidar was our oppressor but also our protector within his domain. Now any Rangbaaz (criminal or thug)

comes with a gun and loots away the fish. We fish in fear. We hope that the good days of the Panidari will return. (sic)"

- Fisherman in Bhagalpur, Bihar (2012)

The fisheries in UP shared a common history with Bihar with the Zamindari having major influence on control of fisheries. In the late 1980s, the contract system was introduced and the Thekedar (contractor) obtained lease rights to fish through government auction schemes. Today, fishers complain that contractors exploit them by paying poor wages and make them work in fixed areas as laborers⁸. This exploitation easily moves on to fish grabbing, as the 'contractor's friends' can descend on the fishing stretch and order fishers to give them fish for free. These friends are often government officials (police, irrigation departments, fishery departments etc.), who help the contractors win auctions in the first place. Leases are typically short-term and may be sold for huge amounts. What is more, investment recovery is ensured through highly destructive and overfishing practices.

"Thekedar haraami hain (the contractor is a cheat). He will make us work for 12 hours everyday and pay only 100 Rupees each, and will also take all the fish. When the contract system came, we entered it stupidly. But now we are repenting, as we are poor and don't have any other means than fishing. And fish are disappearing from the Ganga anyway. All we can do is hope that somebody gets rid of these wretched Thekedars and free the river for fishing. (sic)"

-Fisherman in Banda, Uttar Pradesh (2012)

As the above narratives from the two states suggest, fishers are suffering, no matter what the resource access system. The UP fishers demand a river free of contracts, and the Bihar fishers desire to go back to private ownership of river fishery⁹.

⁸ Note that under the Uttar Pradesh Fisheries Act, many stretches on the Ganga River in particular are not allowed to fisheries because of their religious importance (Hindu pilgrimage sites).

⁹ Along the Ganga River in UP, a few river stretches can still be fished in an open-access manner while some are privately controlled. Similarly, a few stretches in Bihar are still perceived to be under private control (although this is ambiguously defined), whereas almost all other flowing water bodies are open-access. I asked fishers from both regimes in both states about what they would prefer as an alternative (this design allowed a good comparison of preferences). Up to 70% of fishers (n=117) working in private contracts in UP said that this was a problem and they would like to have fishing made 'free-for-all'. On the contrary, 63% of fish-



Albino axolotl

Kadambari Deshpande

These narratives are hopeless: they swing between the sinister ends of bondage and release, enclosure and the false promise of liberty. Underlying this hopelessness is the institutional failure, reflected by the failed property rights arrangements, that has aggravated the collapse of Gangetic fisheries. This has become a 'cycle of doom' with endless transitioning between private and open-access fisheries in UP and Bihar over time. It calls for an empirical investigation of the effects of these two regimes – on fishery productivity, livelihood security, incomes and perceptions. The urgent concern is: which one is better? Market economics tells us that private ownership is more efficient than open-access under any circumstances; the latter is expected to bring about a tragedy of the river commons. But is this true? How do property rights regimes affect incomes and other benefits to traditional fishers? What are the implications for fisher membership of the regimes? What could be alternative regimes of resource use – is there ground between these two states?

ers (n=110) in Bihar clearly preferred the privately owned fishery of the past as a solution to problems facing their fishing livelihoods.

These questions kept coming back at me all the time, when I travelled in 2012 across the Gangetic basin for a study on fisher livelihoods. I wanted to understand the factors underlying declining fisheries-based livelihoods and biodiversity in the Gangetic plains. I spent over 6 months interviewing over 200 fishers in several settlements along the Ganga River and also 12 of its tributaries flowing through UP and Bihar¹⁰. These interviews allowed me to understand what the fishers perceived as problems and possible ways out. What I report here is similar to the results of a poll.

The major finding was that both resource regimes – private contracts and open-access – have

¹⁰ To answer these questions I will use my own data from an interview and focal group discussion-based survey of fisheries and fisher perceptions in Uttar Pradesh and Bihar, which I conducted in 2012 (n=227 fishers across 40 settlements (informal community groups)). Analysis involves a comparison of fishing methods practiced in both regimes based on an evaluation of classical indicators for evaluating fisheries: e.g. size- and species-specificity, use of destructive fishing gear and seeding of invasive food fish species. Incomes and savings of fishers working in both regimes are compared and proxy monetary values to other costs and benefits they incur are assigned using standard economic valuation tools. Ideas about alternative regimes provided by fishers are summarized.

performed rather poorly in terms of effective management of fish resources. This was counterintuitive - diametrically opposite property rights regimes were causing the same problems. But indeed, there were almost no differences in fishing practices in UP and Bihar: 60%-90% of fishers across UP and Bihar lamented the use of highly indiscriminate methods which caught fish of all sizes and types. These destructive methods (involving mosquito-nets, seines and poisoning of river channels) cause mass killing of fish fry, eggs and spawn¹¹. As per the fishing acts of both Bihar and UP, such destructive fishing is illegal, but no ground action is being taken to improve this condition. Due to the 'managed' fisheries of UP, fungicides for fish are used rampantly, leading to the death of aquatic plants and insects (pers. obs.), and invasive food fish species (e.g. Chinese Carp, Tilapia) are increasing in numbers and spreading, affecting native fish diversity. Fish selling prices have increased nearly fivefold in UP and fourfold in Bihar in the last decade.

The socio-economic benefits and costs to fishers were also very similar in both the regimes. Monthly incomes of fishworkers in UP and Bihar averaged around INR 2500 (\pm 1500 SD) per month, with the fishers managing to save only one-fourth of this¹². In addition to this poverty, were constant threats to social security (fish grabbing, criminal extortion, contractor oppression and caste-based violence), which nearly 75% of fishers in Bihar and 60% in UP reported as their gravest concerns¹³. Fishers also stressed the hard physical labor they had to put in everyday to get enough fish for the day's meal¹⁴. Overall, fishers wanted to move away

¹¹ This study. The prevalence of these practices was 62-76% in the private contracts in UP and 68-88% in the open-access fishing of Bihar.

¹² Incomes are given in INR per fisher household per month. Monthly savings were calculated at INR 650 \pm 605 for UP fishers and at INR 1000 \pm 575 for Bihar fishers, but better estimates are needed.

¹³ Costs to secure fishing was calculated based on frequencies of cited instances of fish grabbing and threat to life from contractors (UP) or criminals (Bihar). These costs can be understood as opportunity costs in terms of 'money lost from loss of fishing opportunity' in Bihar, or 'cuts in wages given by contractor' in UP. Thus, a 65% loss of fishing opportunity is treated equivalent to INR 65 being lost per INR 100 to which the fisher was entitled. Fifty to seventy-five percent of the interviewed fishers in UP and Bihar perceived 'high risk while fishing' from contractor oppression or criminal grabbing.

¹⁴ In terms of physical labor for fishing effort, Bihar fishers invested

from current regimes because of the rampant destructive fishing practices, risk, oppression and injustice¹⁵.

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Given these failures on several counts, are there suitable alternatives? With the failure of state-led cooperatives, answers seem difficult to come by. The governments of both states formed fisher cooperatives in the 1960s and 1970s. However, these have run down into elite capture, generating serious conflicts with local fishers, and are largely disused today. Fishers from Bihar and UP stressed that cooperatives need to be revived for channeling benefits to local fishers (currently 10%-15% of the cooperatives are functional in these states). Recent new schemes in Bihar¹⁶ have been aimed at reviving the cooperative structures to meet their

thrice as much effort (7.5 km, 13 hours per day) than UP fishers (2.75 km, 11 hours per day). Bihar fishers have to keep moving also because of the risk of exclusion from fishing mafia and criminals and 'lathais' (musclemen) who work for landowners still illegally claiming 'Panidari' rights.

¹⁵ In UP, dependence on fisheries might be lower than in Bihar due to more alternatives (e.g. from boat-ferrying at religious sites as a part-time job). Land ownership by the Mallah castes has come about marginally in UP, but in Bihar most fishing castes are still landless.

¹⁶ COFFED: Co-operative Fisheries Federation, Bihar. URL: <http://www.fisheries.org.in/contents/en/about>

original concerns. The failure of both private and open-access resource regimes suggest that alternatives in community-based management deserve their due, through processes of bottom-up political organization. It is assumed that political organization of mobile resource users (e.g. herders, fishers) is inherently weak because of their transient livelihood earning practices. There is a need for emergence of local fisher political identity that gives the community control over fishing areas to sustain what is leftover of the fisheries today.

My personal opinion is that river fisheries management that marries customary tenure with community ownership will be worth experimenting with. Defining tenure, even tentatively, will inevitably lead to parceling of the river among local fisher groups, but there does not appear another way to balance the articulation of diverse interests within fisheries (Dey, S. pers. comm.). For example, Mallah fishers allege that 'non-traditional' fishers of 'other castes', unaware of the fine-nuances of traditional low-impact fishing, use destructive fishing methods. This represents the making of a new boundary that might lead to the demand for exclusive rights to traditional fishers, a legitimate demand in its own right, albeit a caste-based political assertion. Effective adaptive management of water tenure through continuous dialogue remains necessary for cooperation among fishers. Today, the "two states" of Gangetic river fisheries highlights the need for strengthening community identity and locally situated institutions. If community-based fishing rights and access are created, their long-term sustainability will require restoration of fish stocks and improvement in the ecological condition of rivers. Inland fisheries policy in India needs to address these complex issues urgently to safeguard the livelihoods of millions of fishers.

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References

1. Payne, A.I., Temple, S.A. (1996) 'River and Floodplain Fisheries in the Ganges Basin. Final report R.5485.' Marine Resources Assessment Group Limited, Overseas Development Administration, London, 1996.
2. Vass, K.K., Mondal, S.K., Samanta, S., Suresh, V.R. & Katiha, P.K. (2010) The environment and fishery status of River Ganges. Aquatic Ecosystem Health & Management, 13, 385-394.
3. Kelkar, N. (2012) Fishing for Scrap: Sustaining River Fisheries in the Face of Ecosystem Degradation, Socio-political Dynamics and Poverty in the Gangetic Basin. A Brief Report on the Status of River Fisheries: Causes of Decline, Conflicts and Potential Alternatives. Report submitted to the Parliamentary Committee on Fisheries, Department of Agriculture (branch), Government of India. 38 p.
4. Kumar, A., Katiha, P.K. & Joshi, P.K. (eds.) (2003) A profile of people, technologies and policies in fisheries sector in India. Proceedings Series 10 p. 170. National Centre for Agricultural Economics and Policy Research, New Delhi, India.

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