

PRADIPSAHA *Kakdwip*

It is October, 2004. In the Supreme Court (sc) in Delhi, there continues a 2-year-old case that has become a clash of imperatives: protecting the environment — a fragile mangrove ecology — versus people's livelihood: a sustainable style of fishing. But let us turn away from the hectic atmosphere of a court hearing. Let us go to the delta that lies at the fag-end of the Gangetic Plain, off West Bengal.

Here the brute solidity of the sub-continent's landmass gives way to water, uneasily. Here, pockets of land mulishly poke out of an immense expanse of water: the landmass refuses to give way, and the Bay of Bengal refuses to let go. In this region that is water but also land, October signifies the beginning of a four-month fishing season. And here, this year, more than 10,000 *jaila kaibartyas* — a south Bengal caste of traditional fisherfolk — wait with hardly concealed desperation to set out to sea. But they won't.

They can't. Why?

In November 2002, Wildlife Protection Society of India director Belinda Wright shot off a letter to the Centrally Empowered Committee (CEC; it advises the Supreme Court on all cases related to forestry). The letter complained of 'encroachment' by fisherfolk in mangrove-forested Jambudwip — an island 5 km south of the mainland, CEC issued a letter to the chief secretary, West Bengal, to take action; subsequently, on August 25 2003, sc passed an interim order that "no trawler or mechanised boat shall enter the water adjoining Jambudwip Island until further orders".



*Unapproachable:
Jambudwip island
looms in the horizon*

The problem is fisherfolk use a part of Jambudwip to dry the fish they catch 15 km south, in the sea. What, now, is the point of fishing if the fish can't be dried there?

It is a complex case

In the report CEC submitted post-complaint, fish-drying is categorised as a non-forest activity. According to the Forest Conservation Act, 1980, such activity, if not approved by the Union ministry of environment and forests, must be banned. The 10,000-odd fisherfolk are illegal users, for the use of a reserve forest for a non-forest purpose has not been cleared.

This is where complications occur. Jambudwip was declared a reserved forest as long ago as 1943. Yet, older fisherfolk remember the island being used to dry fish since the 1950s. A seminal 1967 field study by anthropologist Bikash Raychaudhary — published as *The Moon and the Net* by the Anthropological Survey of India — also testifies to a time-honoured activity. Indeed, fish-drying on

Jambudwip continued even after the 1980 act was promulgated. As Kiranmoy Nanda, West Bengal's fisheries minister, maintains, "All along, these fishermen were given seasonal permits by the forest department." Nanda adds, "The Wildlife Protection Act and the Coastal Regulation Zone under the Environment Protection Act protect the customary rights of fishermen". This statement further complicates the picture: Jambudwip is an uninhabited island; arguably, therefore, people have no rights here.



Sukhlal Das was once a bahardar (master of the fleet). Now, he's jobless

What happens to Moti Das?

Moti Das is a dryfish businessman. Half-heartedly repairing his boats, he says he did a bit of business in 2002. In 2003, he could not operate in Jambudwip. So, he shifted fish-drying to Namkhana. "But we got a very low price," he says. "Namkhana is not the right place to dry fish, there is too much sand in the air. More than that, there are constant fights with Namkhana locals. We have no alternative to Jambudwip."

Why Jambudwip? First:

Transient fishing (locally called *sabar*) is one of the few traditional methods of fishing still practiced in the world. Fishing takes place for 150 days between October and February. Its sustainable essence is not the kind of boats they use,

but net design and method. A *behundi* (local name for a stake net) is designed such that its holes are larger at the beginning and become tinier towards the end. It takes almost 300 person-days to prepare a *behundi*; its architecture allows fishlings to swim through. Only adults get caught. In approximately 400 sq km of tide-determined water flow, 1000 *behundis* are fixed.

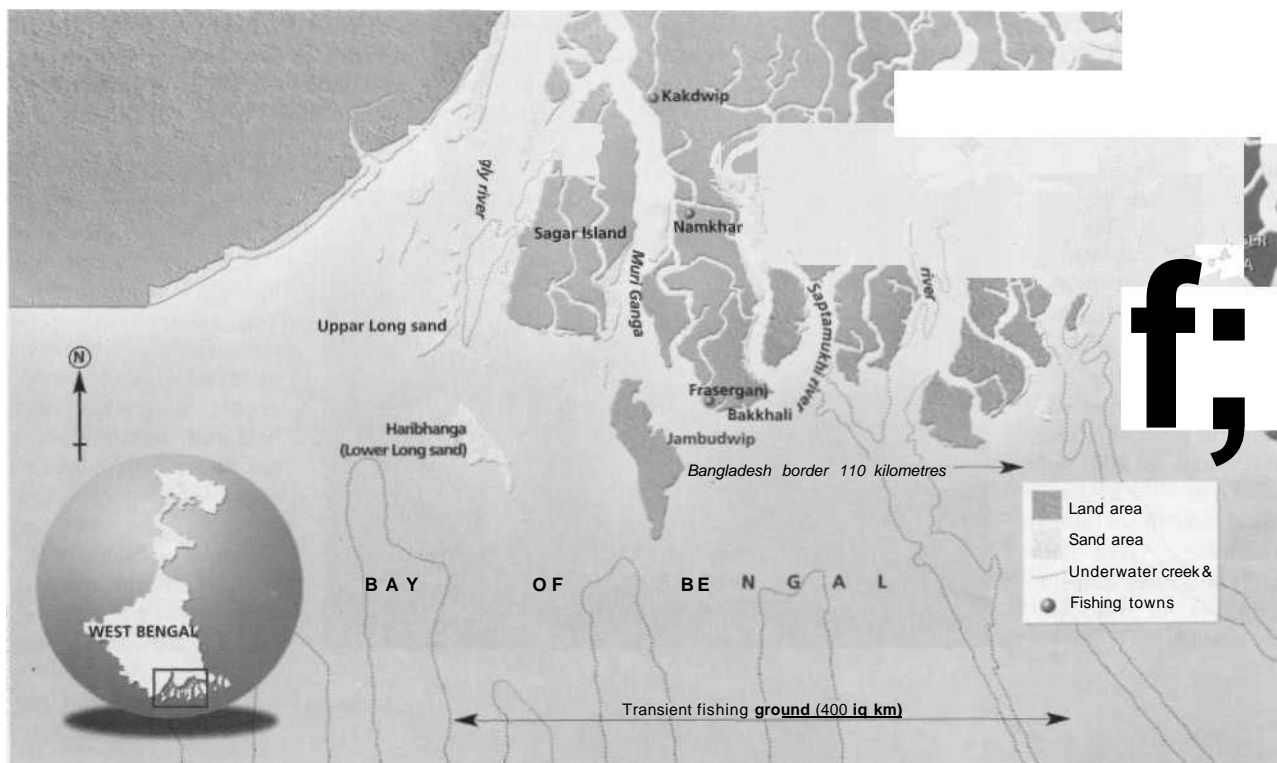
Each net is 60-70 feet wide, fixed with bamboo poles rammed into the sea-bottom, facing the tide. The nets are placed where underwater creeks exist, where deltaic rivers deposit nutrients, thus attracting fish. Such a demand turns *buhundi* placement into an art, fine-tuned through years of keen observation and practice. Unlike unsustainable fishing practices that indiscrimi-

nately swathe through the seabed — gill nets, typically what trawlers use — transient fishing uses stationary nets. But here, boats are used only to reach the place, fix nets and haul the catch.

The catch has to be hauled, then nets turned to face the turning tide, in about 7 minutes. A tide pulls the net to the bottom; the fish follow the flow, and so get caught. For a few minutes before the tide turns, the net surfaces. Now the catch must be unloaded into the boat; then quickly, the mouth is reversed. Work stops on MI moon and moonless days; on these days the tide is too strong, the net doesn't hold. For 120 days in 5 months, the fisherfolk work the creeks. An entire team stays at sea.

What they catch is sent, in a round-the-clock operation, to Jambudwip.

E y e O f t h e S t o r e Poised between landmass and sea, Jambudwip is critical to transient fishing operations



A matter of origin

Fishing infiltrates the entire delta

Most of the fisherfolk that fish in the sea around Jambudwip came over from Bangladesh between 1950 and 1970. Shishu Ranjan Das came to Kakdwip, West Bengal, when he was 23. He has been going to the sea since he was 7 with his father, when they used to stay in Chittagong. Interestingly, most of the transient fisherfolk in Bangladesh hail from Chittagong and come all the way east, in coastal Khulna, to operate: the right kind of island to dry their catch exists in Rangabali, in Bangladesh-controlled Sunderbans.

Why Jambudwip?

In Jambudwip, in a parallel operation, fish unloaded from boats are dried and sent to the mainland. Since the interim order, there has much talk of an alternative site. But fisherfolk assert this island's unique: it is the only one between the fishing area and the mainland that has a natural creek navigable during high tides, which fisherfolk use to unload their catch. Also, only Jambudwip has a flat land without sand, ideal for drying fish. Kiran Das, a fisherman, pointed out the need for a place such as Jambudwip: "The fish has to be

Tarini Bhattacharya believes tree-felling continues at Jambudwip



put to drying before they start rotting and smelling. If we have to transport the raw fish over longer distances, refrigeration will increase our cost." The distance, 15-20 km, is covered using a 30-45 horsepower boat in 3-4 hours.

Fisherfolk involved in drying stay in Jambudwip in makeshift shelters. Fish are strung on bamboo bars, or laid on a bed prepared with a thick layer of straw and mosquito nets on top. The straw helps air flow under the fish.

The fisherfolk use the dry winter north breeze — and plenty of sunshine — to quick-dry fish naturally. This is probably why the season ends by February: after that, the southern wind is moist. "It is not a wonder why Jambudwip dryfish attracts the best price in the market", explains Nanda.

Jambudwip is also the only island that, natural creek apart, has a forest where fisherfolk can shelter during cyclones or rough weather.

Rolling credit

Over time, transient fishing has become capital intensive. In all, at least 10,000 people get directly employed — in fishing, drying and net-making — and another 7,000 in the backward supply chain of implements and the forward chain of transport and fishmeal processing in piggeries and poultries. Interestingly, local 'traders' who control the operation are part of the fishing community. They are called '*bahardars*' (roughly, 'master of the fleet'). All *bahardars* were once fishermen; all fishermen aspire to be a *bahardar*. Fishermen work for a *bahardar* for a salary of Rs 6,000 to Rs 20,000 for the season (the range is related to skill), 60 per cent of this salary is paid before the fisherfolk set out to sea. A typical *bahardar* owns at least 25 nets, each costing Rs 20,000. He employs at least 150 people — 100 for fishing and another 50 for drying — and has to provide food, shelter or medicines.

A 25-net operation requires at least 5 small boats (called '*phatphati*', a boat powered by a 3- 5 hp diesel motor) and 2 large boats (powered by 30-45 hp engines; the engines are only for propulsion, its power depends on how far into the sea it travels). *Bahardars* either own these boats, or hire them in a season.

Says *bahardar* Sukhlal Das, "The total Rs 40 lakh that has to be invested



Scenes from a capital intensive past:
On top: A behundi (stake net).
Fisherfolk turn net around (middle);
fish-laden boats moored in
Jambudwip creek (above)

for a season looks very large. But we live on rolling credit. I can start my operation with Rs 7-8 lakh. The point still remains that I'm responsible for all the people I employ, irrespective of what I make." In fact, a *bahardar* usually borrows money. "And like most other business in India, the wholesale buyer in Kolkata or Sheoraphuli is the moneylender," explains Harekrishna Debnath, chairperson, National Fishworkers' Forum. "He enjoys the guarantee of getting the product from the borrower at a lower rate than the market value".

It isn't surprising moneylenders run the show: institutional loans for fishing all over India are weak; insuring a boat commands a very high premium. Most *bahardars* are absolutely clear it is better to borrow from a moneylender — with whom they have business relations — than to have a fixed deposit, or mortgage property with a bank for a loan.

But in the last two years, this rolling credit economy has badly floundered. Wholesale buyers, who would flock to the area September-onwards, have stopped coming. Supply is now begin-

ning to trickle in from Andhra Pradesh and Orissa. And consumers from as far as the northeast, where dry fish is a delicacy and a staple source of protein, have begun complaining of poor quality.

Alternative?

The West Bengal forest ministry has touted the idea of using Haribhanga, a sand bar in the mouth of river Hooghly — also known as Lower Long Sand as the alternative site for fish drying. But, as the chief secretary pointed out in an affidavit to the sc, Haribhanga has certain basic problems. It has no creek or shallow; so boats cannot dock and unload catch. Moreover, it is a bald patch of sand flats and dunes. It is difficult to access Haribhanga: this correspondent had to change to a smaller boat mid-sea and wade through chest-deep water. Lack of vegetation makes it useless to shelter in Haribhanga during a cyclone. Gunodhar Das, a *bahardar* who has become a pauper today, used to be a labourer in the 1970s; a cyclone devastated Haribhanga, and Das survived after floating for 3 days up to the Andhra coast. Now, with no work, he has turned labourer again.

Nevertheless, some operators are using Haribhanga, a clear sign of desperation. The situation is fraught: every new place fishermen try out puts them at loggerheads with locals, for most places they go to are populated, and locals resent their intrusion: fish-drying requires huge, open land. But such spaces are simply not available.

Fish strung out to dry at Jambudwip island; today, the drying grounds resemble a wasteland



Back to Jambudwip?

The question is: what will happen to the mangrove forests on the 1950-hectare Jambudwip island if the fisherfolk go back there? CEC's worry is the fragile mangrove ecology will get decimated. In court, it has shown satellite maps indicating a large part of the mangrove has been destroyed 1980s onwards. But the fact still remains that these fishermen have been using the island since the 1950s. Satellite imagery shows approximately 200 hectares have been destroyed. Point is: did the fisherfolk do that? Says Nanda, "No fishermen in the sea, with any sense, will destroy tree cover — their only shelter. In fact, the mangrove will stay if they are there, for fishermen know that the mangrove is where fish breed."

Should it not be taken into account that, after 50 years of operation, a mere 200 hectares out of the total 1950 hectares have been felled? What about the felling that occurred in the last two years, since the fishing stopped? Says Tarini Bhattacharya, wife of the priest of the temple in Jambudwip, "Trees are being felled, but I cannot risk my life by telling you who has done it. I stay here alone with my husband." Reports last month in a Bengali daily talk of illegal felling in the island. Further, the forest department, which wishes to protect the

Out of the net

Towards a win-win situation

What is the way out of the Jambudwip impasse, keeping both ecological protection and people's livelihood in mind?

Clearly, the issue is to find ways to demarcate a portion for fish drying, such that the mangrove forest is not affected.

If 100 hectares of forest in the island is diverted for drying fish, as proposed by the state government, MoEF should

- create an example by asking for 200 hectares of afforestation in Bhangankhali
- plant only mangrove, for which help can be sought from researchers at the National Institute of Oceanography
- undertake satellite imaging right away to ascertain the current situation, and make it public
- undertake strict monitoring
- restrict the number of fishworkers. Let the forest department issue permits for transient use
- fees from this should be used only to plant mangrove in the island
- put a cap on the size of the boat that can enter the creek in the island

mangroves, have strangely enough been planting casaurina on the island.

"I am sure fishermen will not indulge in destroying the mangrove, but if the place is open to them, it may attract other people who may destroy," says Ashok Gupta, chief secretary, West Bengal. This is a real fear: although the images CEC showed in court do not indicate clear-felling, their worry on this count isn't misplaced, and calls for strict monitoring. In their affidavit, West Bengal has proposed diverting 100 hectares of forest land in Jambudwip for fish-drying, an area that will be fenced and monitored.

To compensate, the government will go for plantation over 100 hectares in Bhangankhali in the Sunderban area.

This proposal of the West Bengal government is now with the Union ministry of environment and forests, awaiting clearance. And the fisherfolk will now have to wait until the first week of November, 2004, when the ministry will inform sc about its decision. Will this case show that environmental protection, and the imperative of people's livelihoods, go hand in hand?