

Traditional Fishers in the Sundarban Tiger Reserve

A study on livelihood practice under protected area

*Study supported by International Collective in Support of Fishworkers
(ICSF)*

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*This study is dedicated to
the small fishers
who are struggling for
their fishing rights
and
upkeep of the fish stock
in the difficult waters of STR.*

**We are shocked at the untimely and unfortunate death of
Sri Shekhar Mondal,
a fisher and a respondent of the survey undertaken for the present study.**

Shekhar was returning from a fishing sortie in the waters of Sundarban Tiger Reserve in the morning of 22nd December 2008 when dense fog made navigation almost impossible and his boat got stuck in the shallows. He and other crews of the boat tried to push back the boat into deeper waters getting down in the shallow. It was then that the tiger suddenly emerging from the dense fog pounced on Shekhar and took him away in a whiz. His remains, if any, are yet to be located or recovered.

The Team

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Acknowledgement

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Pradip Chatterjee

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Introduction:

Sundarban is unique.

Sundarban is the largest prograding delta on this planet formed at the estuarine phase of the Ganga-Brahmaputra river system¹.

Sundarban is intersected by a complex network of tidal waterways, mudflats and small islands of salt-tolerant mangrove forests, and presents an excellent example of ongoing ecological processes.

Sundarban is the largest estuarine mangrove forest and the only mangrove tiger land on the globe.

Sundarban is spread across areas of Bangladesh and West Bengal, India, forming the seaward fringe of the delta. The forest covers 10,000 sq. km of which about 6,000 are in Bangladesh.²

Sundarban mangrove forests constituting more than 60% of total Indian mangrove cover, is the the largest nursery for fish and shell fish and are responsible for the coastal fishery of whole of eastern India.³

Sundarban boasts around 172 species of fishes, 20 species of prawn and 44 species of crabs including two species of edible crabs. A large population is dependent on fishery activity and capture fisheries are treated as the backbone of Sundarban's economy.⁴

The promulgation of Sundarban Tiger Reserve (STR) in the Indian part of the Sundarban entailed a restrictive fishing regime in the area. Since then problems and prospects of both conservation of natural resources and protection of livelihood practices dependent on those have acquired a distinct dimension and frame of reference in the area. The present study is intended to trace major effects of this regime on the livelihood practice of traditional fishers.

Study Objectives:

General –

to focus on various issues of relevance to/impacts on small-scale fishing communities, especially due to the declaration Sunderban Biosphere Reserve, Tiger Reserve and National Park under the Wildlife (Protection) Act 1972 (WLPA 1972).

Specific –

- to document the history of fishery-related activities in areas that are currently under the Sunderban Biosphere Reserve, Tiger Reserve and National park.
- to document the impact of Sunderban Tiger Reserve on fishing communities, (document difficulties faced by the community in accessing fishing grounds, and other issues faced by the community (both men and women))
- to document the various conflicts in the region due to the declaration of the Tiger Reserve
- to document various community driven initiatives for conserving and management of marine resources in the area
- to document the traditional knowledge of communities and other recent community driven conservation /management initiatives undertaken in the area
- to document various other activities that are currently undertaken near/within the Sunderban tiger reserve (tourism related activities, other threats to the area, industries in the region)
- to document the initiatives taken by the Department of Forest in implementing the WLPA 1972, including community participation, and the existing management plan for these areas from the various departments (Department of Forests, Department of Fisheries and other related departments involved)
- to suggest ways and means to meet the objectives of Sunderban Tiger Reserve without displacing fishing communities and without disrupting sustainable fisheries

Study Methodology:

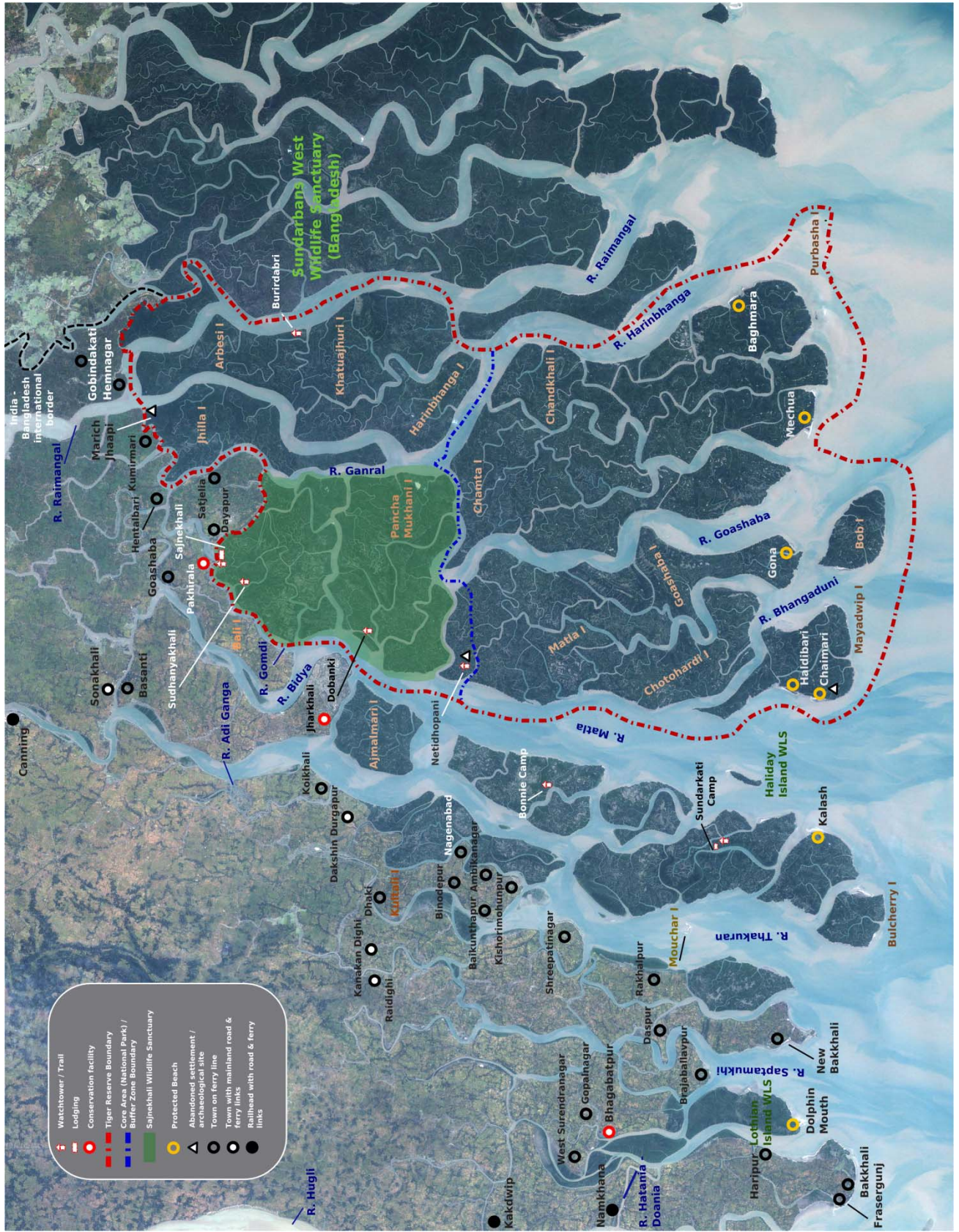
The study has drawn upon

- Government notifications, management plans from the Forest Department, Fisheries Department
- Discussions with Forest Department, Fisheries Department, fishing communities, (small-scale and others), NGOs, trade unions and other organizations
- Published information
- Focussed discussion with fishing communities in 9 villages situated at different places in the fringe area of the Tiger Reserve spread over both the North and South 24 Parganas Districts.

Location:

The **Indian Sunderban** (Latitude 21° 32'-22° 40'N, Longitude 88° 22'-89°0'E) on the north east coast of India occupies 9630 Km² out of which 4266 Km² is Mangrove forest, and is bounded by the River Hooghly in the West, River Raimangal in the East, Bay of Bengal in the South. In the North the boundary of the Sunderban has been somewhat artificially defined by the imaginary Dampier Hodges line. There are 56 islands of various sizes and shapes in Sunderban and these are separated from each other by a network of tidal channels, inlets and creeks, some of which act as pathways for both freshwater discharge from upland and the tidal movements of ebb and flow.⁵

The **Sundarban Tiger Reserve** is bounded in the East by the international boundary with Bangladesh marked by the rivers Harinbhanga, Raimangal and Kalindi. On the South lies the Bay of Bengal. The Western border is along the Matla river. The North-West is bound by rivers Bidya, Kapura, Korankhali. The Core Area is bounded in the East by the river Harinbhanga, in the West by the river Matla, the Bay of Bengal in the South and in the North by the Buffer Zone and Sajnekhali Wildlife Sanctuary.⁶



Location of Sundarban Tiger Reserve in the delta

Brief History of Sundarban:⁷

Early History

The Sunderban, as we know it today, has a fairly recent history. Much of the present tidal delta only stabilized as late as 5th – 7th century AD. When India collided and penetrated into the Eurasian plate in the middle Eocene, all of what later became the largest delta in the world, covering 65,000 km², lay below sea level. The formation of the lower delta plain started during the middle Holocene and most of the presently occupied area of 10,017 km² in India and Bangladesh was formed over the course of the last 6,000 years.

First inhabitants

The Bengal Delta was originally occupied by vast stretches of grassland filled with saline marshes and tropical wetlands containing one of the worlds' largest stretches of biodiversity-rich forests – the Bengalian Rainforest. These forests were one of the richest wildlife areas of the world, teeming with elephants, tiger, gaur, leopards, wild buffaloes, three species of rhinoceros, seven species of deer and a wide variety of other fauna.

The first human settlers, who may have been the "Veddoids", appear to have arrived in the delta by 5th Century BC, though the first archeological evidence of human civilization dates to around 400-300 BC.

Civilization flourished in the delta during the reign of Asoka (273-232 BC) and in subsequent Hindu periods. The indigenous inhabitants were the 'Pods' and the 'Chandals' who were fishing tribes. The process of human settlement continued unabated till the 11th century, when shifting river channels and epidemics seemed to have forced settlers to abandon the area for a while.

Sultanate years

Post 1200 AD, and beginning with the reign of the Bengal sultanate (1204-1575), the history of the Sundarban is one of continuous conversion of forest tracts to wet-rice cultivation under the influence of pioneers professing an Islamic Sufi identity. By the mid-fifteenth century, the reclamation process had brought the southern extent of cultivation to the edges of south Jessore and northern Khulna.

Mughal years

The process of bringing virgin forest under cultivation continued unabated in the Mughal era (1575 – 1765). During this time the Ganges changed course from the original Hooghly channel to combine upstream with the Brahmaputra. As a result, most parts of the 24 Parganas Sundarban faced increased salinity and this gradually affected the flora and fauna of the area. The era also witnessed devastating cyclones, like the one in 1584, which is reported to have claimed about 2,000,000 living creatures.

At the end of the Mughal rule, settlers had successfully pushed back the northern boundaries of the Sundarban forests to the very edges of Kolkata.

British era

The British East India Company set up their headquarters at Calcutta in 1757 at the edge of the Sundarban. The forests at that time stretched uninterrupted for 19,200 km² and retained much of their splendor and diversity.

British rule started in India in 1765 and over the next century the British Government would relentlessly pursue a policy of deforestation and extension of cultivation in the Sundarbans.

In 1828 the British Government assumed proprietary rights to the forest and, in 1830, began leasing out tracts of the forests for reclamation ~ a process which continued until 1875-76. This period saw a great decline in the diversity of large mammals. Increasing regular revenues from the so-called 'Sundarban waste land' was the main inspiration behind the all out attack on the forests.

Post independence

Bangladesh's economic dependence on the revenues from the Sundarban and the ability of their forests to regenerate swiftly meant that they could continue with a policy of harvesting the produce. The Indian forests in the 24 Parganas had by then been seriously denuded from years of felling and the lack of adequate fresh water. India was also not dependent on the revenues from the produce of the Sundarban and as a result commercial felling reduced and even completely stopped in many parts of the forest. However, the pressure of humanity had its last say on the Indian Sundarban in 1963 and 1973 when refugees from East Pakistan (and Bangladesh) were allowed to clear reserve forests for agriculture and settle in areas like Jharkhali and Herobhanga islands.

The Shrink:⁸

Current history registers a horrific shrink of Sundarban forest cover. Records about the Sundarban (including the portion in Bangladesh) show that the total area of the forests was taken about 20,000 Km² by Clarke in 1895, 17,500 Km² by Prain in 1903 and only about 10,000 Km² by recent estimate of which hardly about 4,200 Km² of forests are included in West Bengal.

Conservation History:

The first call to preserve the forests was made by Dr. Brandis, the Conservator of Forests in Burma 1862. Based on his recommendations, additional reclamation grants were stopped, but deforestation continued, irrespective. By 1873, 5,100 km² of forests had been converted into agricultural land and the Sundarban area forest cover had been effectively reduced to about 14,100 km².

It is only post 1873-1874, when faced with dwindling forest produce, the rulers started reviewing the policy of transformation of all available wetland forest to taxable agricultural land in the Sundarban. The economics of exploitation had changed in the last century and forest produce had become scarce and more valuable than agricultural produce. No longer was it considered profitable to clear the forests for cultivation as much greater revenues could be collected from farming the forest itself.

In 1875-1876 the government declared un-leased forest reserved, and placed them under the jurisdiction of the Forest Department– a move which created today's Sundarban forest.⁹

A variety of wildlife still survived till the latter part of the 19th century despite the rapid depletion of habitat. Hunter records " *Tigers, leopards, rhinoceros, wild buffaloes, wild hogs, wild cats, barasinga, spotted deer, hog deer, barking deer, and monkeys are the principal varieties of wild animals found in Sundarban*"¹⁰ in 1875. But the events of the next few decades led to the near complete destruction of the grasslands and rainforests, which coupled with the increase in salinity spelt the death knell for the Javan rhinoceros, leopard, wild buffalo, swamp deer and hog deer – all of which were either teetering at the brink of extinction or were lost forever from the Sundarban by the turn of the century. The tiger, wild pig and spotted deer survived the mass species extinction because they had learned to adapt to a life in the deep tidally active mangrove forests spread. This was land unfit for cultivation and difficult to access and exploit.

Encroachments continued despite reservation and 1,200 km² of the protected forest were deforested over a ten-year period ending in 1903-04. The 'Lloyd Plan' and the 'working plan' of Mr. Heinig covering the period 1903-04 to 1907-08 were the basis of forest administration until 1913. But these steps did not reverse or reduce reclamation.

The first real conservation step in the Sundarban was taken with the implementation of Trafford's working plan which was drawn up in 1911 and was in effect for two decades 1912-13 to 1931-32. No land lease was allowed and the whole forest was declared as Reserve Forest. In 1926, boundaries of the remaining forest were fixed.

But this was too little too late. The nature and extent of the Sundarban forest area and the mix of its fauna had changed forever by then. What was left for the wildlife of the Sundarban were island based tidal forests towards the south of the Sundarban – a habitat not suitable for sweet water dependent grazers like wild buffalo, rhino, swamp deer. They were simply pushed over the edge and into extinction. Overall, during the course of a century from 1880 to 1980, about 8,270 km² of wetlands, and woodlands were lost forever in the Sundarban.

From the early 30's of the 20th century, the Sundarban forests were managed using Curtis's working plan which focused on scientific harvesting. This plan was in effect when partition divided the administration of the Sundarban between East Pakistan (now, Bangladesh) and India. Both countries continued to protect the area after independence.¹¹

Post independence

From 1970s India strived to consolidate its share of the residual 4,265 km² of natural mangrove forests of the Sundarban through a series of initiatives. Till then, in 35 years of post independence period, precious little was done in terms of conservation. The management plan of Tiger Reserve in Sundarban West Bengal established in 1973, admits "Till now no serious attempt has been made for conservation of nature in the deltaic zone".¹²

Sundarban Tiger Reserve (STR) was constituted by Government of India (GOI) under **Project Tiger** scheme, in 1973. Sundarban is the only mangrove forest in the world which is the home of tigers and is claimed to have the highest tiger population in the world. At the same time, the management of Bangladesh Sundarban began to be regulated under the provisions of Bangladesh Wildlife (Preservation) Order, 1973.¹³

In 1977, GOI declared Sundarban a **Wildlife Sanctuary** and elevated parts of it to the status of a **National Park** on 4th May 1984.

As part of the **Man and Biosphere Programme (MAB)**, accepted in the general conference of the UNESCO in 1970, the Ministry of Environment & Forests, Govt. of India adopted the National MAB programme and declared the entire 9630 sq. km. of Sunderban as the **Sundarban Biosphere Reserve (SBR)** in 1989, through a notification to establish a formal mechanism for coordinating and integrating diverse activities of conservation, research and training for creating a better situation of harmony between man and environment. **SBR** was recognised by UNESCO in November, 2001.

Sundarban National Park, forming the core area of Sundarban Tiger Reserve, received recognition as **World Heritage Site** by UNESCO in 1985.²² It has also been nominated by GOI for recognition as **Ramsar Site** (a wetland of international importance).¹⁴

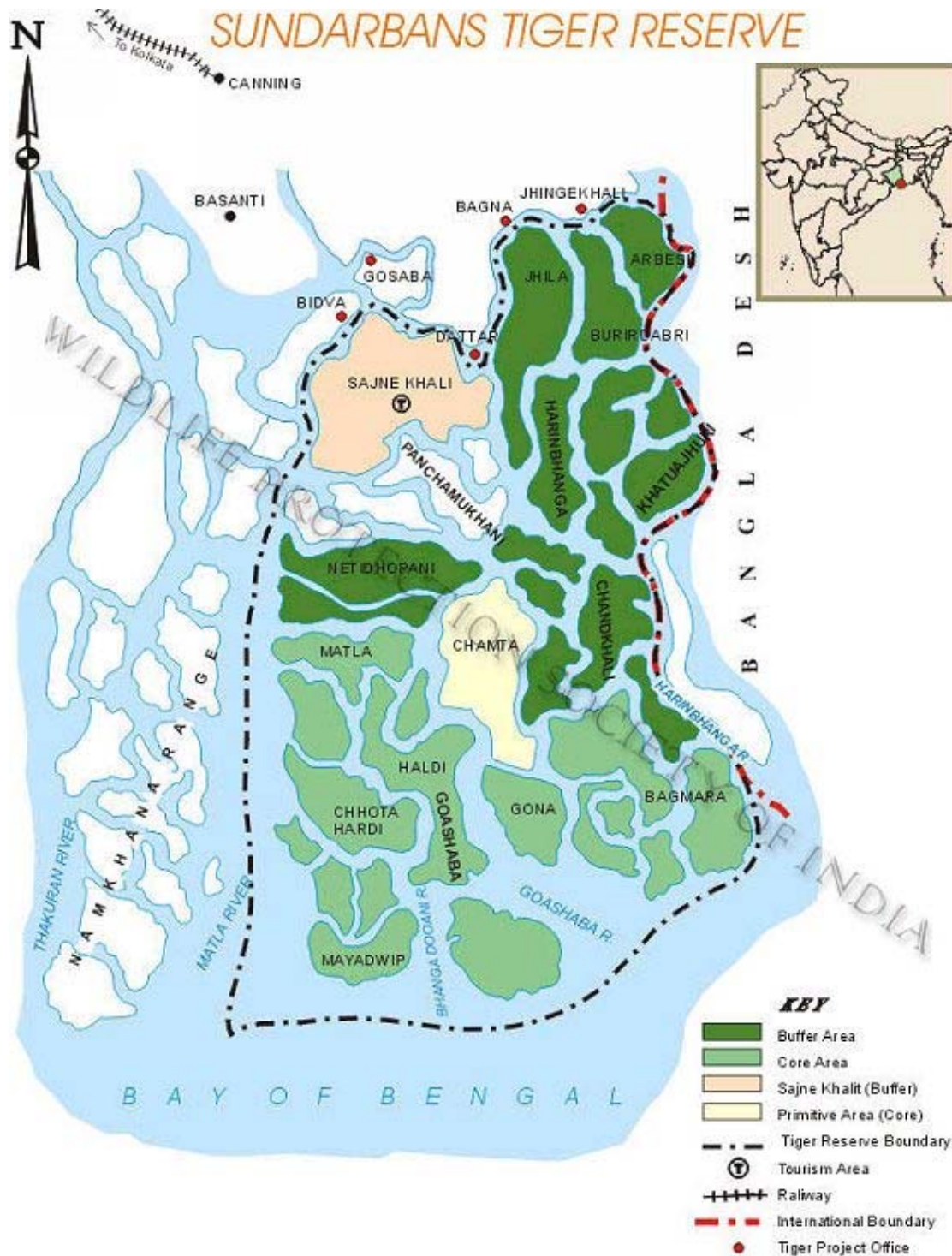
As of today **Sundarban** in India harbours a National Park, Tiger Reserve, Reserve Forest, UNESCO World Heritage Site and a Biosphere Reserve.

Some Physical Data on Indian Sundarban

1.Sunderbans Biosphere :9630 sq km.	10.District: North 24 Parganas .
2. Inhabited Area : 4493.6 sq km.	a)Police Station :5 .
3.Reserve Forest Area: 4263 sq km.	b)Blocks :6
	c) No. of Gram Panchayats :50
4.Tiger forest Area (Core + Buffer) : 2585 sq km.	11.District: South 24 Parganas.
5.National Park (Core Area) : 1300 sq km.	a)Police Station :11 .
	b)Blocks :13 .
	c) No. of Gram Panchayats :140
6.River embankment : 3500 km.	12.Total number of mouzas:1080
7. Total cultivable Area : 310562 ha.	13.Number of inhabited mouzas:1064
8. Under irrigation :35041ha (11.28%).	14.Number of islands :54
9. Under second crop: 52233ha (16.82%).	

Local Human Population:

There is no resident human population within the tiger reserve. In 1981, the population in the fringe area was 2.5 million, but by 1991 had increased to 3 million. Some 35,330 people work in the forest annually, of which 4,580 collect timber and firewood, 24,900 are fisherman, 1,350 collect honey and 4,500 are involved in other activities.¹⁵



Ecosystem:

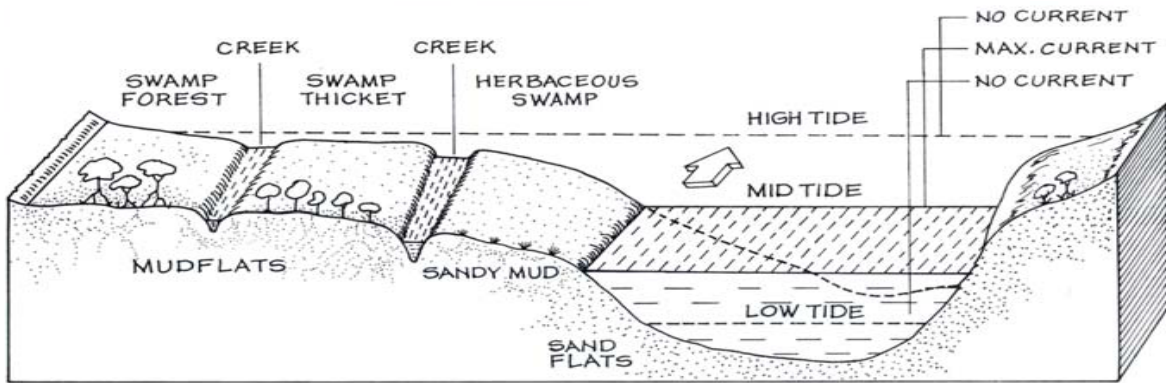
Sundarban, the largest pro-grading delta on the Globe slopes towards South as well as West to East. Harboured a tropical estuarine swamp forest the tract is in a state of perpetual flux as a result of tidal rhythms. The forest is compact but criss-crossed by rivers, creeks and channels of varying widths and depths.

The sources of all the rivers in the western Sundarban are being progressively silted up leaving hardly any passage for fresh water, with the result that the rivers are getting more brackish and shallow year after year.

The close network of rivers, channels and creeks has formed innumerable flat islands many of which are submerged completely during high spring tides and partially during ordinary high tides. Thus giving rise to vast mud-flats.

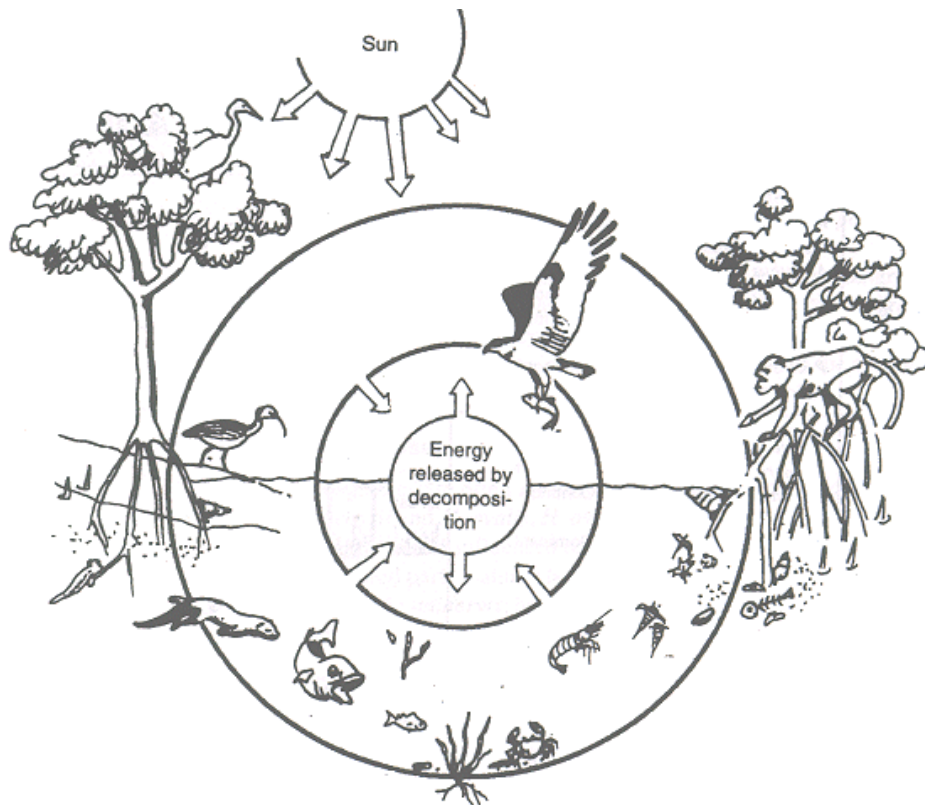
The eco-geography of this area is totally dependent on the tidal effects. There are two flow tides (inflow) and two ebb tides (outflow) within 24 hours and tidal range varies from 3m to 5m rising up to 8m in normal spring tide. The tidal action of the sea inundates the whole of Sundarban in varying depths. Due to the tidal action, the silts carried down to the sea are pushed back to the channels and get deposited there. The bed of the channel thus gets steadily raised ultimately blocking the flow of water and gradually forming a small island. This is the basic geo-historical account of the origin of innumerable islands of the region.²⁵

Mudflat Morphology: The Sundarban Mudflats are typical of the estuaries and deltaic islands where low velocity of river and tidal current occurs. The flats are exposed in low tides and submerged in high tides, and thus the unstable mudflat changes morphologically even in one tidal cycle. The interior parts of the mudflats are the magnificent homes of luxuriant mangroves. The morphology of the swamps is characterized by the occurrence of saltpans, ditches and banks with a thick mud substratum of decomposed organic matter. The spring tides submerge the swamp floor and the ebb tides affect the slope of the floor with lateral erosion and gradually form a new creek, which is further lengthened by the quick flow of the splitting tides. The Sundarban mudflats provide for the large mangrove habitat and thus control the food chain in the estuarine mangrove ecosystem.¹⁶



MUDFLAT MORPHOLOGY

Mangrove Ecosystems are open systems which exchange matter and energy with adjacent marine, freshwater and terrestrial ecosystems. The extent of wave and tidal coping between mangrove and offshore marine biotopes controls the intensity of interaction between the systems. These ecosystems are effective in storing large amounts of inorganic and organic nutrients which are washed into mangroves from the rivers and continental drainage.²⁷



MANGROVE ECOSYSTEM

They also process huge amounts of organic matter, dissolved nutrients, pesticides and other pollutants which are dumped into mangrove areas due to anthropogenic activities. These ecosystems occur on coastal lowlands of tropical and subtropical intertidal region and near river mouths.¹⁷

The estuarine mangrove forests are excellent nursery grounds for a variety of commercially important prawns, crabs and fin-fish, as they provide abundant food and shelter for these organisms. These ecosystems provide food, roosting and nesting site and shelter to a large variety of birds. The evergreen canopies of mangroves are inhabited by several insects, reptiles, birds and mammals. The mangroves support many trophic levels of aquatic and terrestrial organisms, by enriching the fertility of estuarine waters for production of planktons.

The mangrove ecosystem provides a variety of ecosystem services; their economic value, if calculated, would be staggering. These services include prevention of coastal erosion, barrier against typhoons, cyclones and hurricanes, protection of coral reefs from siltation, and soil accretion. Indirectly, forests are responsible for extension of islands. These systems act as biological waste-water treatment plants, lowering the biological oxygen demand (BOD), and possibly performing bioremediation by removing toxic elements. These forests also provide breeding, nursery and feeding grounds for harvestable marine fauna. Pecuniary benefits include wood for fuel, furniture and construction, green leaves and fruits for fodder, source for charcoal, tannin, paper, dyes and chemicals, thatch, honey and incense.¹⁸

A Threatened Habitat: Mangrove forests are one of the most productive and bio-diverse wetlands on earth. Yet, these unique coastal tropical forests are also among the most threatened habitats as experts' fear they may disappear more quickly than inland tropical rainforests because of lack of public notice. The Sundarban too is no exception to this. The threats to the Sundarban mangrove eco-system are arising partly due to biotic pressure from the surrounding environment and, partly due to human induced or natural changes in the upper catchments.

The major types of human intervention¹⁹, which are detrimental to the Sundarban biosphere along with the mangrove ecosystem have been identified as follows –

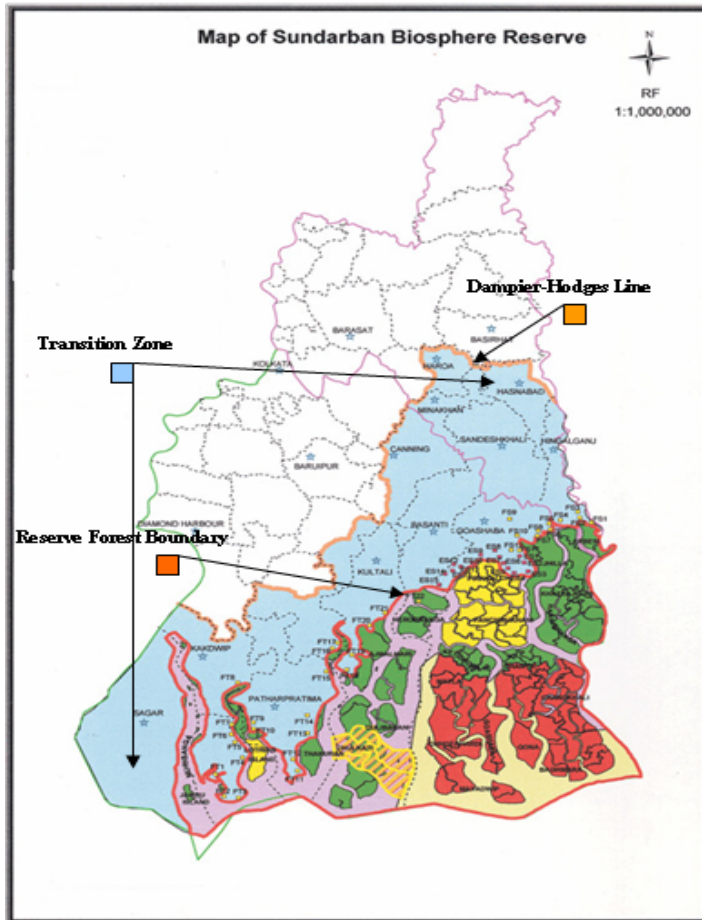
- Land reclamation by people for agriculture and human settlement destroying forest area over the centuries. During the last two centuries, more than 5000 sq km of the mangrove forests in the Indian part of Sundarban were reclaimed.
- Construction of a series of irrigation and drainage canals, which interferes the natural gradients and blocks freshwater inflow into the delta

- Setting up of fisheries in rivers, canals, creeks and estuary, raising embankments along the major river systems against insurgence of saline water
- Forfeiting large areas of the forest for establishment of shrimp ponds contributing to water pollution
- Regular practice of collecting tiger prawn seeds using fine-mesh nylon nets (mosquito nets) which are dragged along the river banks. In this process, mangrove seedlings and many species of fish are destroyed. This has been destroying the possibility of regeneration of mangrove along the river banks and the food chain of the ecosystem. A survey conducted by the S.D. Marine Biological Research Institute of the district in 1994 revealed that for collecting 519 prawn seeds, at least 5103 gm of other seed varieties of different categories of fish are destroyed .
- Excessive exploitation of mangrove forest such as timber and fire wood.
- Poaching of animals of commercial importance.
- Oil spill from old and defective launches and boats is a potential threat, which causes immense damage to aquatic fauna and the mangrove vegetation.
- Though the mangrove has an enormous capacity for absorbing industrial effluents and other forms of pollutants, dumping of excessive pollutants affects the ecosystem adversely.

Apart from the anthropogenic stressors some natural processes also have considerable negative impact on Sundarban's ecology²⁰ –

- Geomorphic stress caused by the neo-tectonic tilting of the Bengal basin
- Recurrent coastal flooding due to climate change (global warming), changes in sea level (rise in sea level)
- Huge silt deposition, biodiversity loss and regeneration problems of obligate mangrove plants
- High salinity, low water table and acidity problem, loss of soil fertility, coastal erosion.

Biosphere Reserve with a neglected transition zone:



from the restrictive regime in the core, buffer and reserve forest areas, there is almost *no restriction* on human activities in the vast areas belonging to **Sundarban Biosphere Reserve** (South of the Dampier-Hodges Line), that constitutes the landward inhabited '**Transition Zone**' holding between the forest and the rest of the land. These areas are reeling under the impact of massive population growth with 'developmental efforts' like roads, buildings, aquaculture, oil driven tourist launches and transport boats notwithstanding all the

Biosphere Reserve guidelines regarding sustainable development and ecosystem approach.²¹ [ANNEXURE – I]

The Management Plan for Sundarban Tiger Reserve:²²

Before we start examining the impact of STR on the traditional fishers of the area the Place of Fishers in the 'Management Plan of Tiger Reserve in Sundarbans West Bengal' calls for special mention:

The management plan for Sundarban Tiger Reserve, prepared on its declaration in 1973 is *astonishingly silent* about the largest community of people that work in the Sundarban forests for livelihood – the fishers. Not to mention other lesser communities of wood or honey collectors.

Thus it introduces the aim of the management plan in the following words, "A management plan is prescribed here, with a view to ensure a viable population of tigers in the reserve area. The aims and objectives already outlined in the Project Tiger, 1972, are not only to achieve the target of providing the tigers inhabiting this area with optimum living conditions conducive to their successful and perpetual existence, but also to create facilities for interested

persons to have an access into the region to pursue their intellectual, aesthetic or scientific vocations.” And goes on to state that the proposed “measures are intended not only to ensure preservation and continuity of the tiger population in the delta, but also to stimulate scientific research, and tourism.” Measures for tigers are obvious, scientific research and tourism also deserve stimulation, but what about the indigenous people and their livelihood practices dependent on the forest land and waters? The authors of the management plan did not seem to bother.

The only mention of fishing appears in the chapter that gives a description of the tiger reserve – “Fishing is allowed free in tidal waters provided the fishing boats are registered in the forest directorate on payment of the usual registration fee and the royalty for dry firewood to be consumed on each fishing trip.”

For the poverty stricken indigenous people of Sundarban the management plan has only one solution – tourism. “The Sundarbans is an underdeveloped area with acute economic distress. Development of the tiger project will create scope for economic betterment of the people in the area with increased avenues of employment and trade because of expected increase in flow of tourist traffic.”

This betrays a very poor and one sided conception. The governance of the tiger reserve was, from the outset, conceptually unequipped to deal with and link up the livelihood practices dependent on natural resources with their conservation.

Another point deserves special mention. The management plan deals with matters related to zoning of the reserve and its protection with required logistics and even devotes one chapter for development of tourism but it has not even a single reference to the severe problems caused by well known stressors that operate from and through immediate neighbourhood, like pollution from agriculture, industry and aquaculture; encroachment and destruction of mangroves; bunding; plying of oil driven passenger and cargo vessels etc. To the authors of the management plan the STR seems to be an area so much detached from its surrounding environment so that no reference of the latter is called for.

The Comptroller & Auditor General (CAG) of India in his Report No.18 of 2006 remarked that in the Sunderbans Tiger Reserve (West Bengal) – Management Plan (MP) for the period 2001-10 “Physical targets under various activities were not depicted. Similarly analysis of strengths, weaknesses, opportunities and threats for the Tiger Reserve area were not addressed in the MP”²³.

Legal Status of STR: An Imbrolio

The Sunderban Tiger Reserve was established on an area of 2585 Km² by a Govt. Order dt. 23.12.1973²⁴, under the “Project Tiger” Scheme of Ministry of Environment and Forests. The area had been under Sundarban reserve forest established under Notification No. 15340-FOR, dt.09.08.1928²⁵.

Prior to the establishment of STR fishermen, wood and honey collectors continued with their livelihood practices in the Sundarban Reserve Forest with permits and registration certificates issued by the forest authorities. “Fishing is allowed free in tidal waters provided that the fishing boats are registered in the Forest Directorate on payment of usual registration fees and the royalty for dry firewood to be consumed on each fishing trip” – indicated the first Management Plan of Sundarban Tiger Reserve²⁶.

The establishment of STR initiated division of the area in two distinct zones –

- I. Wilderness Zone covering 1330 Km² area, and
- II. Buffer Zone covering the remaining area.

The ‘Wilderness Zone’ was to be kept almost absolutely free of any human interference and treated as a ‘no take zone’. The ‘Buffer Zone’ was to be opened for restricted activities.

This is to be noted that these restrictions were imposed through a government order alone and exclusively through administrative exercise. There was no question whatsoever of local peoples’ participation in settling their rights in the tiger reserve, let alone in determining the management policies of STR.

The Wilderness Zone, thus created, was later made to be concurrent with Sundarban National Park, the core area of Sundarban Biosphere Reserve and World Heritage Site declared subsequently. These subsequent declarations somewhat added to the legal and management status of STR.

Only recently the Wild Life Protection (Amendment) Act 2006 empowered the State Government to notify an area as a tiger reserve on the recommendation of the Tiger Conservation Authority.[Sec.38V(1)]²⁷

But for this the State Government would require to prepare a Tiger Conservation Plan that would ensure, among other things, ‘the agricultural, livelihood, developmental and other interests of the people living in tiger bearing forests or a tiger reserve.’ ‘...wherein the limits of such (Tiger Reserve) areas are determined on the basis of scientific and objective criteria in consultation with the concerned Gram Sabha and an Expert Committee constituted for the purpose. [Sec.38V (4)]²⁸

The same Act goes on to direct – ‘Save as for voluntary relocation on mutually agreed terms and conditions, provided that such terms and conditions satisfy the requirements laid down in this sub-section, no Scheduled Tribes or other forest dwellers shall be resettled or have their rights adversely affected for the purpose of creating inviolate areas for tiger conservation unless- (i) the process of recognition and determination of rights and acquisition of land or forest rights of the Scheduled Tribes and such other forest dwelling persons is complete; (ii) the concerned agencies of the State Government, in exercise of their powers under this Act, establishes with the consent of the Scheduled Tribes and such other forest dwellers in the area, and in consultation with an ecological and social scientist familiar with the area, that the activities of the Scheduled Tribes and other forest dwellers or the impact of their presence upon wild animals is sufficient to cause irreversible damage and shall threaten the existence of tigers and their habitat; (iii) the State Government, after obtaining the consent of the Scheduled Tribes and other forest dwellers inhabiting the area, and in consultation with an independent ecological and social scientist familiar with the area, has come to a conclusion that other reasonable options of co-existence, are not available; (iv) resettlement or alternative package has been prepared providing for livelihood for the affected individuals and communities and fulfils the requirements given in the National Relief and Rehabilitation Policy; (v) the informed consent of the Gram Sabha concerned, and of the persons affected, to the resettlement programme has been obtained; and (vi) the facilities and land allocation at the resettlement location are provided under the said programme, otherwise their existing rights shall not be interfered with.’ [Sec.38V (5)]²⁹

Furthermore ‘The Scheduled Tribes And Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006’ states under ‘Section 3. Forest rights of Forest dwelling Scheduled Tribes and other traditional forest dwellers’.-

‘(1) For the purposes of this Act, the following rights, which secure individual or community tenure or both, shall be the forest rights of forest dwelling Scheduled Tribes and other traditional forest dwellers on all forest lands, namely:- (d) other **community rights of uses or entitlements such as fish and other products of water bodies**, grazing (both settled or transhumant) and traditional seasonal resource access of nomadic or pastoralist communities;’³⁰

On July 25 2008 the minister of forest of West Bengal, Mr Ananta Ray informed the state legislative assembly that the state government has established critical tiger habitat zone in both Sundarbans and Buxa Tiger Reserves under section 38V of the Wildlife (Protection) Act.³¹

No such exercise to consult the local people and protect their livelihood rights, as required under the *Wildlife (Protection) Act 2006* and subsequent *'Guidelines to notify critical wildlife habitat including constitution and functions of Expert Committee, scientific information required and resettlement and matters incidental thereto'*³² issued by MoEF, has been undertaken.

The provisions of *'The Scheduled Tribes And Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006'* regarding the rights of the local people over forest resources have also not been complied with.

It may be noted that the Sundarban population has 6.38% Scheduled Tribes (ST), 20.34% Scheduled Castes (SC) [ANNEXURE-VIIB] and a large percentage of Other Backward Classes (OBC). Almost the whole of the fishing community belongs to these backward strata. This calls for not only the invocation of *'The Scheduled Tribes And Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006'* but also and more importantly a socially responsible attitude and policies to protect their livelihood rights.

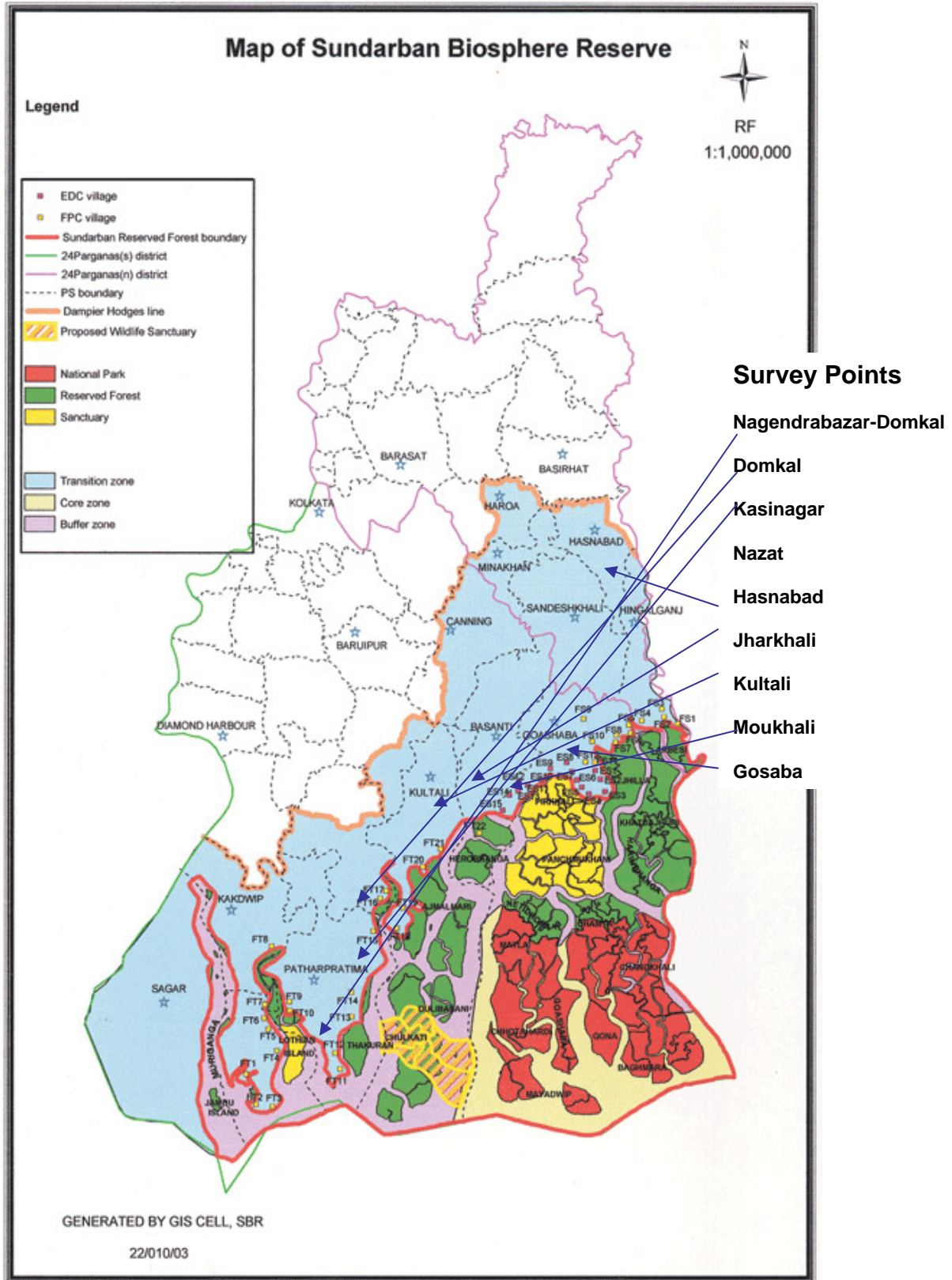
This gross violation of statutory duties on the part of the state government not only raise questions regarding their worthiness to discharge constitutional responsibilities but also makes the legal status of Sundarban Tiger Reserve extremely vulnerable.

More importantly, it betrays a deplorable mind set that robs the indigenous people of their traditional and customary right over natural resources and vests the right to protect natural resources solely in administrative chieftains in absolute exclusion of the local communities.

The sections to follow carry discourses on issues important to the lives and livelihood practices of the traditional and small fishers of Sundarban. The discourses embrace the perceptions of the fishers themselves, collected through interviews. These include –

- *The Fishers Interviewed*
- *Fish Catch*
- *Of Dacoits and Tigers*
- *Fishing Crafts and Nets*
- *Nature of Contracts*
- *Legal Rights and Restrictions*
- *Conservation Practices*
- *Fishers' Opinion Regarding Restrictions*
- *Harassment and Punishment*
- *Redressal of Complaints*
- *Organisation of Fishers*
- *Fisherwomen of Sundarban*
- *Forest Department's Understanding of Peoples' Participation*
- *Recommendations*

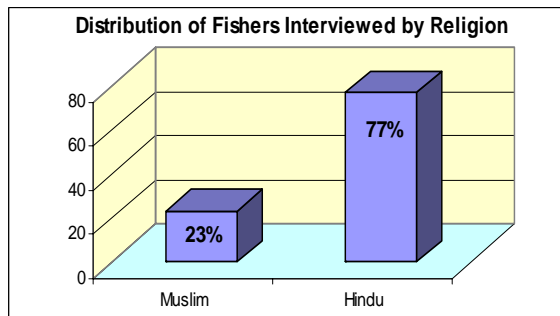
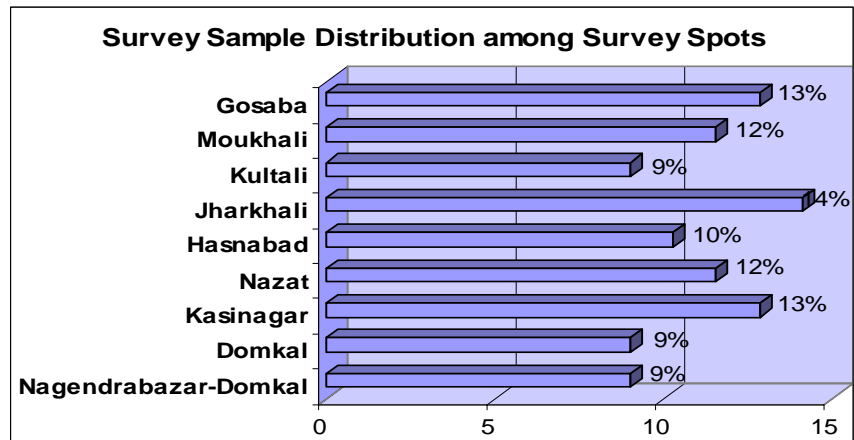
Where the fishers were interviewed



The survey was conducted at fishers' agglomerates bordering Sundarban Tiger Reserve.

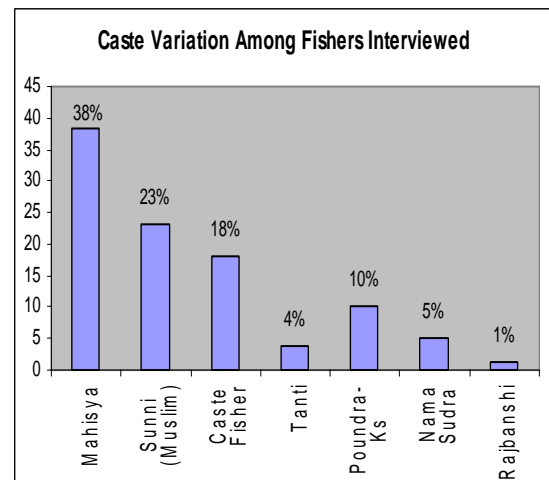
The Fishers Interviewed:

The survey was conducted at 9 places in 9 different blocks adjacent to the Sundarban Tiger Reserve (STR). Sample size ranged between 7 and 11 at one place of survey.

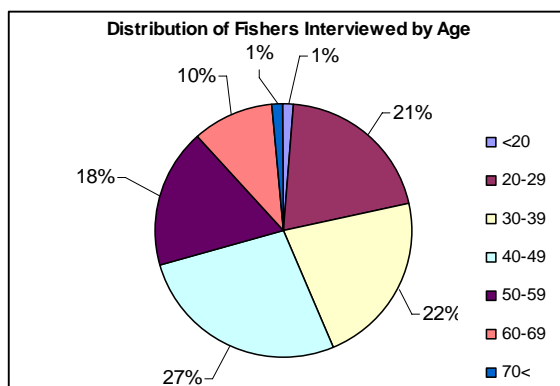


The fishers interviewed were both Hindu and Muslim. Hindu (77%) and Muslim (23%).

By caste the fishers interviewed exhibited wide variation. All the Muslim fishers (23%) belonged to the Sunni sect. Among the Hindus 38% belonged to the Mahisya caste, which is traditionally an agricultural caste. 18% belonged to fisher castes. 10% were poundra khatryo. Namasudras were 5% and Rajbanshis were only 1%.



98% of the fishers interviewed were between 20 to 69 years of age. The

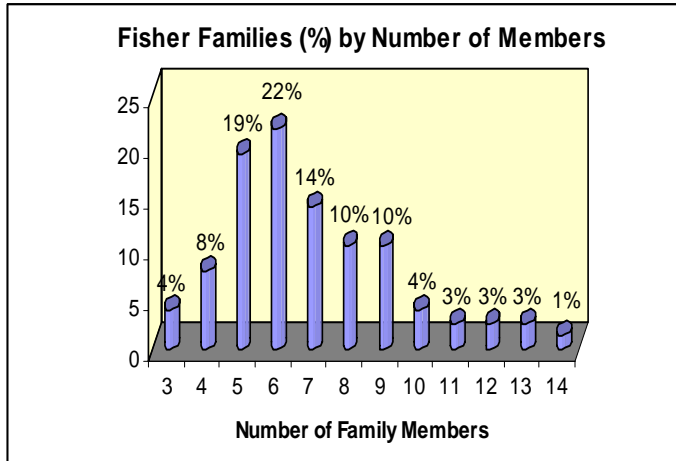


largest age group (27%) was of 40-49 years. Next largest group (22%) was of 30-39 years. The group belonging to 20-29 years was the third (21%). The next group was of 50-59 years (18%). The group of 60-69 years was the fifth (10%). Fishers of below 20 years and above 70 years of age were very few (1% each).

It is to be noted that the religion, caste and age variation indicated above pertains to the survey locations and fishers interviewed and do not necessarily present a fully balanced general picture of Sundarban's demography.

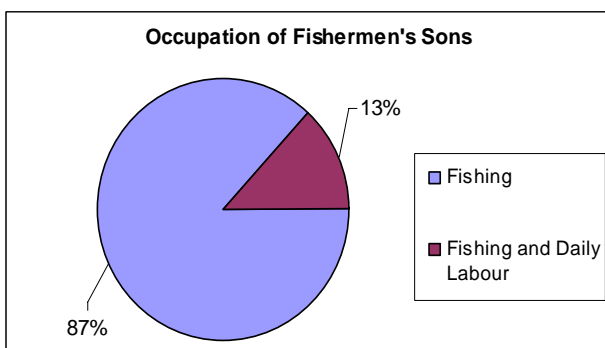
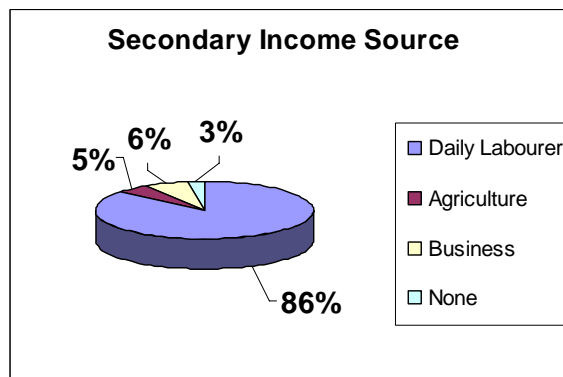
A Glimpse of the Fishers' Families:

Number of Family Members: Fishers having family of six members were the single largest group (22%). The group with five family members was the second largest (19%). Next (14%) was the group that claimed to have families of seven members. Families with eight and nine members were 10% both. Families with eight and nine members were 10% both. Families with four members were 8%. Categories of families having ten and three members respectively claimed 4% each. While families having eleven, twelve and thirteen members represented 3% each of all the families surveyed. Families having 14 members were of the lowest (1%) percentage.



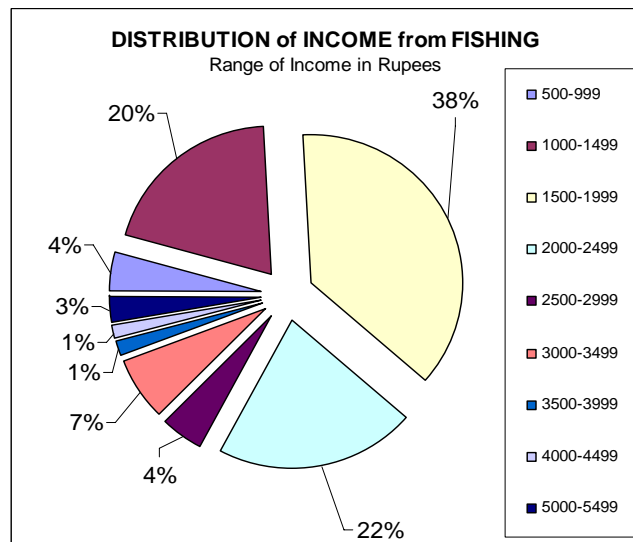
Families having four members were 8%. Categories of families having ten and three members respectively claimed 4% each. While families having eleven, twelve and thirteen members represented 3% each of all the families surveyed. Families having 14 members were of the lowest (1%) percentage.

Occupation: Fishing being largely a seasonal option of earning, the fishers have to have secondary livelihood sources. Working as daily labourer has been by far the largest secondary livelihood option. 86% of fishers mentioned it as their secondary livelihood source. Small business was secondary livelihood source for 6%, while agriculture was mentioned by 5%. For the rest 3% there were no secondary source of livelihood. It shows that fishers are, mainly, a non-agricultural community in Sundarban.

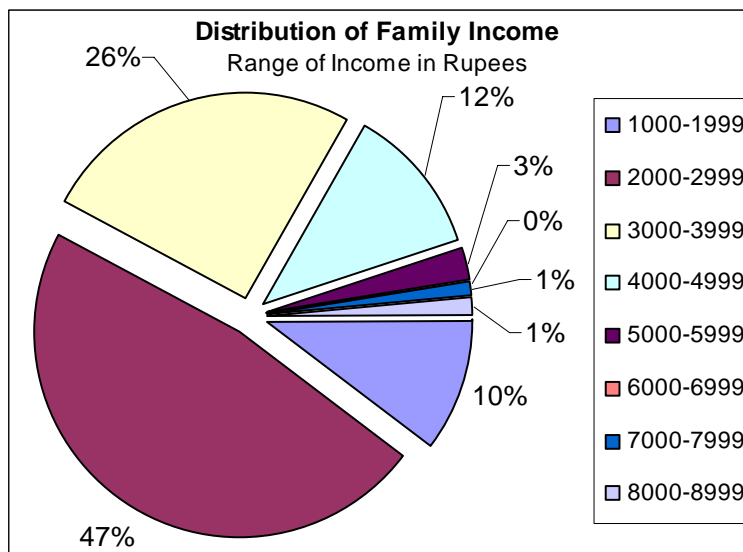


The survey shows that all the fishers' sons have largely taken up fishing as an occupation. For 87% it is exclusively fishing and for the rest 13% it is fishing and working as daily labour. Thus fishing appears to remain a profession for next generation as well.

Income: Income from fishing exhibited wide variation. It appears that fishers earning from Rs.1,500/- to Rs.1,999/- per month from fishing has been of the largest percentage (38%). The next largest group (22%) earned from Rs.2,000/- to Rs.2,499/-. 20% of the fishers fell into the income range of Rs.1,000/- to Rs.1,499/-. Thus it appears that 80% of the fishers have monthly income from fishing within the range of Rs.1,000/- to Rs.2,499/-. 7% of the fishers earned between Rs.3,000/- to Rs.3,499/-. 4% earned between Rs.2,500/- to Rs.2,999/-. The income groups of Rs.3,500/- to Rs.3,999/- and Rs.4,000/- to Rs.4,499/- had only 1% each. While the highest income group, Rs.5,000/- to Rs.5,499/-, was represented by 3%. The lowest income group, Rs.500/- to Rs.999/- had 4% of the fishers.

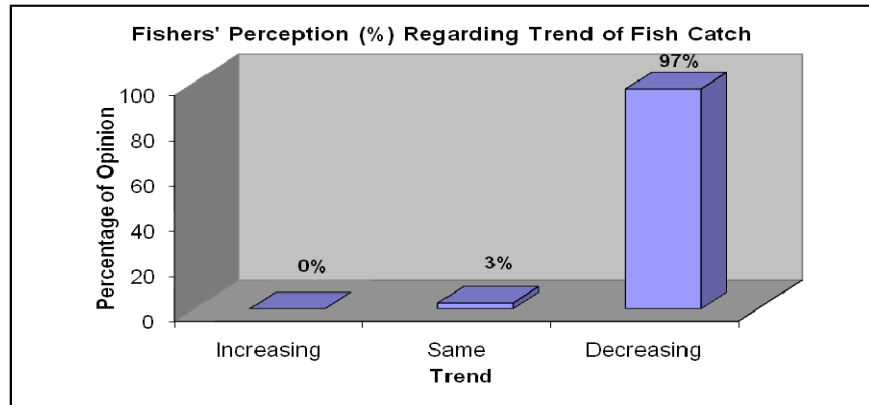


Family income of a fisher, i.e., income of all members of a fisher family from all possible sources exhibited a wide range of variation. The largest percentage (47%) of fisher families belonged to the Rs.2000 – Rs.2999 monthly income group. 26% fell in the Rs.3000 – Rs.3999 and 12% in the Rs.4000 – Rs.4999 monthly income group. 10% had a monthly income in the range of Rs.1000 – Rs.1999. Thus it appears that great majority (95%) of fisher families have earnings in the range of Rs.1000 – Rs.4999. The rest 5% families have their income Rs.5000 to Rs.8999.

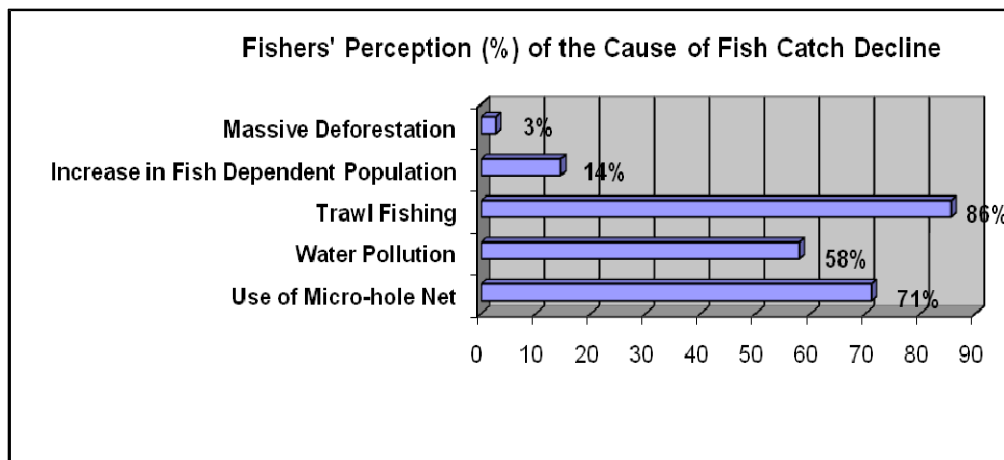


Fish Catch:

Overwhelming percentage (97%) of fishers observed that the fish catch is dwindling. Only 3% were not sure of the decline and felt that the catch might be the same.



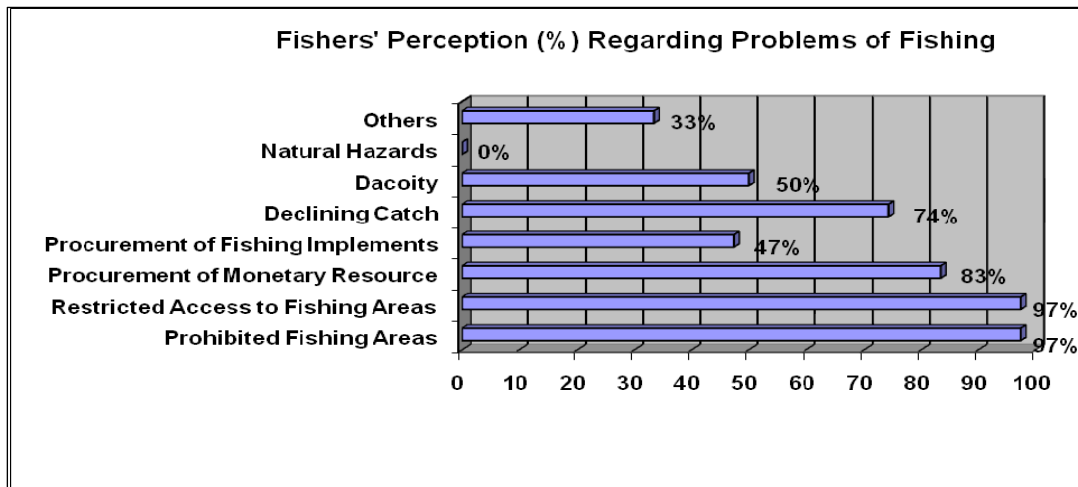
The Fisheries Department of GoWB does not maintain separate data for inland capture fisheries for either Sundarban or the districts of North and South 24 Parganas abounding Sundarban. As such it has not been possible to examine the official data.



86% of fishers who observed that fish catch was declining, when asked to reflect on the probable causes, held **trawl fishing** in adjacent waters as a cause. Use of **micro-hole (mosquito) net** was a cause indicated by 71%. **Pollution of Sundarban waters** was held as a cause by 58%. **Increase in fish dependent population** and the resultant depletion of fish stock was pointed out as a cause by 14%. **Massive deforestation** was mentioned by 3% as a cause for fish catch decline.

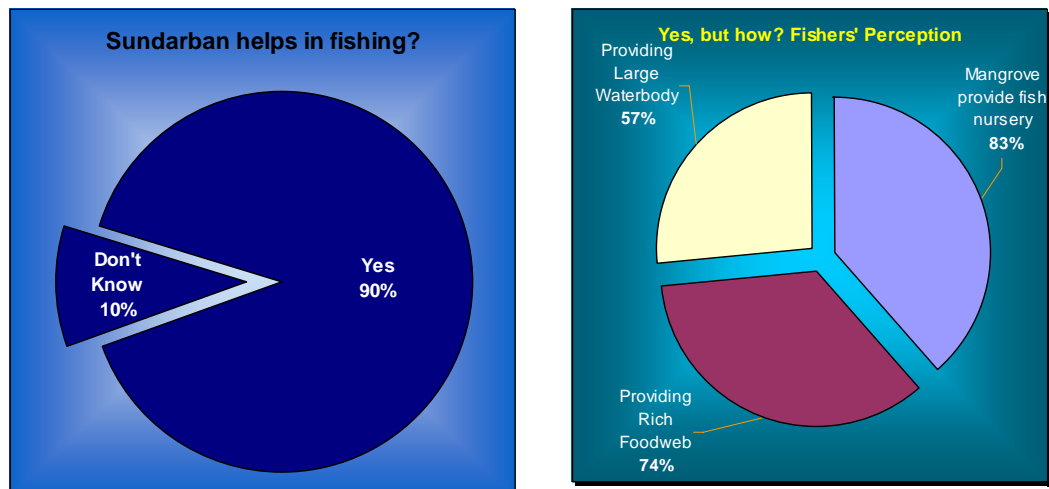
Most of the fishers (97%) mentioned **denial of access to prohibited fishing areas and restricted access to other areas** as problems confronting fishing in the STR waters. **Difficulties in procurement of monetary resources** for fishing were cited by 83% as a problem. **Declining catch** was mentioned as a problem by 74%. For 47% **procurement of fishing implements** was a mentionable problem. 50% of fishers interviewed stated that **attack and loot by dacoits** was a grave problem for fishing in Sundarban. Problems like

intrusion of tourists in the fishing waters and **oil spill** from the boats were mentioned by 33% of the fishers under survey.



90% of the fishers observed that Sundarban helps in fishing.

83% of fishers who observed that Sundarban helps in fishing held that it is because mangroves provide fish nursery. 74% mentioned the rich food web provided by Sundarban as how it helps fishing. Sundarban's large waterbody was mentioned as its contribution to fishing by 57%.



Sundarban is fast losing its most important livelihood option – fishing. Fresh water inflow is getting lesser and lesser, pollution load is increasing, mangrove forests are going down both in quantity and quality, prawn seed collection by mosquito nets and other destructive fishing practices are wiping out juveniles and fish habitats. In this situation of depleting fish stock two things are happening –

- (i) more and more people are taking to destructive fishing to eke out a living from whatever stock is left and accessible, and
- (ii) more and more the fishers are drifting towards the core area where the fish is better available both in terms of quality and quantity.

Of Dacoits and Tigers:

The story of fishing in the Sundarban is inseparable from the dacoits and the tigers that make soft targets of the fishers.

Piracies and water-borne dacoities are daily occurrences in the Sundarbans. Apart from being vulnerable to the vagaries of nature and wild animals, the fishermen face attacks from pirates, who sometimes capture their trawlers and boats, seize their catch and hold them hostage. The ransom the pirates demand ranges from Rs.30,000 to over Rs.1 lakh. On an average around 60,000 fishermen go out into the estuarine, inshore and offshore waters every day. The abductions usually take place when they return with the catch. In a number of cases, the pirates hail from Bangladesh. According to media reports, a senior government official submitted, "The riverine border shared by India and Bangladesh in this region has practically no checkpoint or Border Security Force (BSF) outpost, floating or otherwise, up to 70 km. This makes trans-border piracy all the more easy."

However, most of the piracy is carried out by local gangs. "It is very difficult to distinguish one trawler from another. Sometimes a gang of pirates may be operating from an ordinary fishing trawler so that they can get close to the unsuspecting fishermen and capture them," an informed source said.³³ The pirates usually send a few of their hostages away with instructions to the families of the others to arrange for ransom. The money-prisoners swap usually takes place at Canning, Dakghat or Jharkahali. The local villagers even identify some villages as villages resided by dacoits.

Inaccessibility of riverine Sudarban coupled with pitiable inadequate security arrangement have made it a heaven of a hunting ground of pirates. The piracy is also linked with poaching and illegal logging.

Tiger attacks also frequent the fishing parties.

When people and tigers roam in the same area conflicts are natural. The level

Shekhar Mondal, a fisher respondent of the survey done for the present study has been a most recent victim of tiger attack.

of tiger-human conflict in the Sundarbans, however, is the highest in the world because here many of the tigers are man-eaters. People are either deliberately or accidentally killed by tigers, whereas some tigers

are killed by people either because those tigers started attacking humans and cattle or just to poach it for economic gain. "Between 1975 and 1989, 521 people were killed by tigers in the Indian portion of the Sundarbans.

....fishermen are found to account for 70 percent of the total number of people entering the reserve and 82 percent of the total casualties.³⁴

The causes of tiger attacks on humans in general and on the fishers in particular, as guessed by the experts, are many. They include³⁵ –

- a. Lack of fresh water to drink – a possible irritant
- b. Tidal wash does not allow territorial marking by tiger's urine and scat – causing aggressive physical domination
- c. Unfavourable predator-prey balance – scarcity of food
- d. Easy hunting of humans working in the forest
- e. Global warming induced loss of habitat
- f. Storm induced loss of habitat

Tiger attacks on fishers and tiger infiltrations in human habitations in the fringe of STR have markedly increased in recent times.

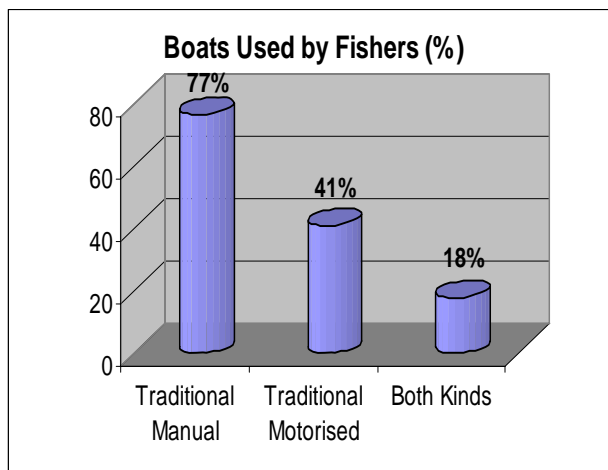
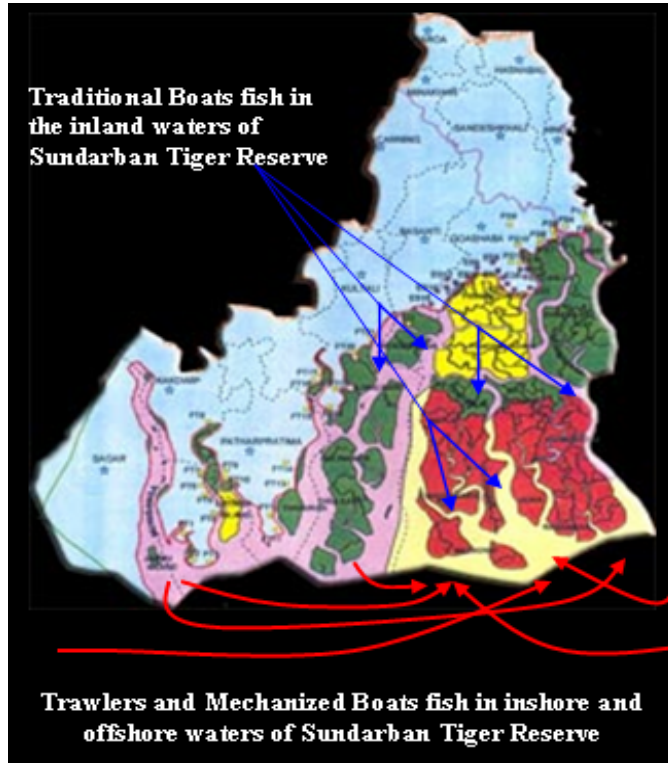
It is to be noted here that the fisher victims of these attacks, most of the times, get no compensation or insurance claim, as more often than not they are attacked while working in the prohibited zones.

Fishing Crafts and Nets:

In the inland waters of STR fishing belongs exclusively to traditional manual fishing boats fitted with radars, oars and sails.

But in the inshore and offshore waters south of STR, the picture is just the opposite. These waters are dominated by trawlers and mechanized boats along with smaller motorized boats.

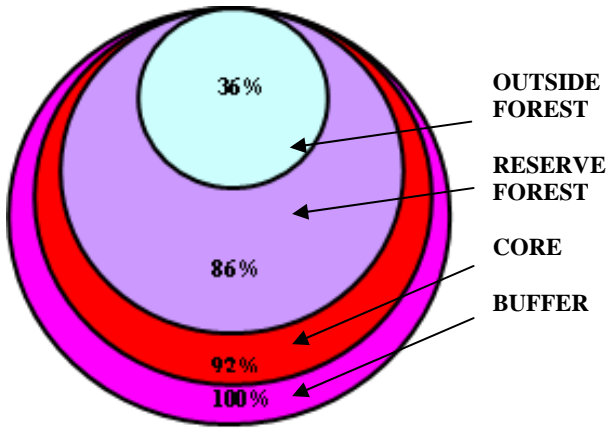
The extensive and intensive fishing undertaken by mechanized boats and trawlers in and near the mouth of the estuaries severely affects fish stock and fish habitat which snowballs in diminishing the catch of the traditional fishers in the inland estuarine and deltaic waters. This is in blatant violation of the *West Bengal Marine Fishing Regulation Rules* made under the *Marine Fishing Regulation Act, West Bengal* which stipulates that for ‘Vessel fitted with engine of more than 30 horse power’ the ‘Specified area of fishing’ is ‘*Territorial waters beyond 15 kilometres*’.³⁶ This accounts for the traditional fishers’ wrath against trawlers (to a common fisher ‘Trawler’ generally means large mechanized fishing boat and is not necessarily associated with trawl net fishing).



Returning to the confines of our study on fishing in STR we find that 77% of the fishers interviewed use traditional manual boats, some 41% use traditional boats fitted with low horse power engines and 18% use both manual and motorized boats. Use of motorized boats by traditional fishers is a modern development induced by competition. Though, in the STR

fishing is undertaken by manual country boats, many fishers are now opting for motorized ones to fish outside the forest waters.

Areas opened for fishing in Sundarban Tiger Reserve is the area out side National Park and Sanctuary – which is the buffer zone. But fishers’ statements regarding the areas they fish present an alarming picture – while all the fishers said that they fish in the buffer, 92% of them said that they go for fishing forays in the core area. The waters of reserve forest outside the STR are fished by 86%. And 36% reported

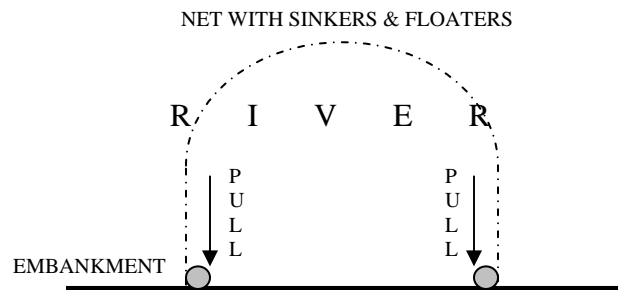


fishing in waters outside the forest. This testifies a drift in fishing concentration from areas outside the forest towards the core, presumably because availability of catch is more in the core or near core areas.

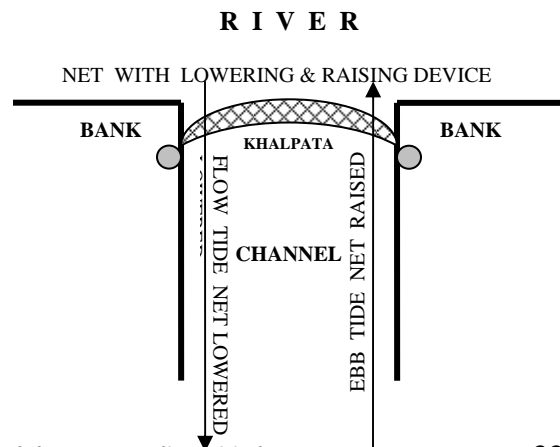
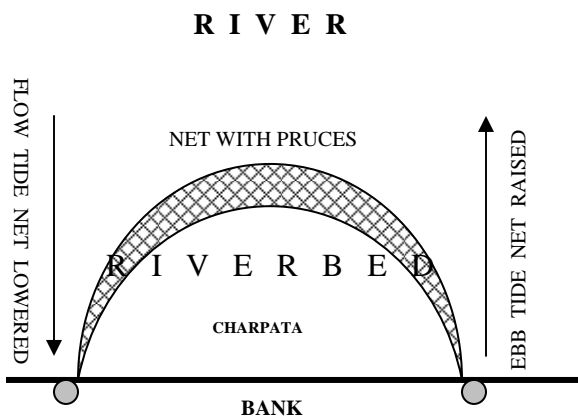
The catch crunch has its effect on use of nets as well. The most commonly used nets are as in the following –

Berjaal (Drag Shore Seine):

Fishers say that this is the oldest kind of net used in Sundarban. These nets extend to thousands of feet in length and 12 to 20 feet in width. The mesh size is of 10-15m.m. Two ends of the net are anchored at a distance on the river bank. Boats take the net with sinkers and floaters deeper into the water. Then the net is gradually pulled to the bank. Earlier these nets were not used to be of such length. Advent of monofilament nets and scarcity of catch has brought about this development.



Charpata and Khalpata (Fixed shore and channel seine): These are also older varieties of net commonly used to take advantage of high tidal water level variation in the Sundarban. Used either on the river bed (Charpata) or on



the mouth of a channel or creek (Khalpata) these fixed nets are lowered in the flow tide and raised in the ebb tide. Thus catching fishes flowing out with the receding water. These nets extend from a few hundreds of feet to even thousands of feet in length. The mesh size normally is within 20mm to 40mm.

These nets are now experiencing lesser mesh size. In some places even micro-hole (10mm-15mm) nets are being used.

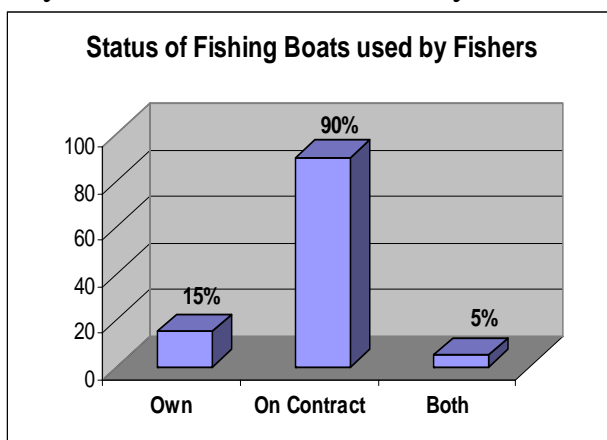
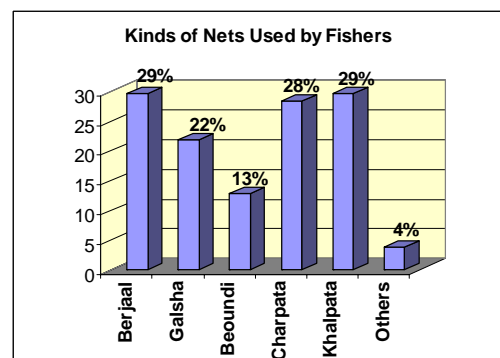
Galsha (Gill Net): Galsha or gill net was introduced in Sundarban in early seventies and are used to catch big fishes. Made of chord net these are used in two variants - fixed and floating. The fixed ones may extend to a few hundred feet and the floating ones to a few thousand feet. The width is normally 22 feet and the mesh sizes are 6 to 10 inches.

These nets are also experiencing transformation into monofilament, popularly called 'monofuli' enabling lengthier nets.

Beoundi (Fixed Bagnet): Generally Beoundi is one of the oldest varieties of nets used by fishers, but in the waters of STR the introduction of Beoundi does not date back more than 20 years. These bagnet are of 10mm to 50mm mesh size and extends 40ft to 200ft in length.

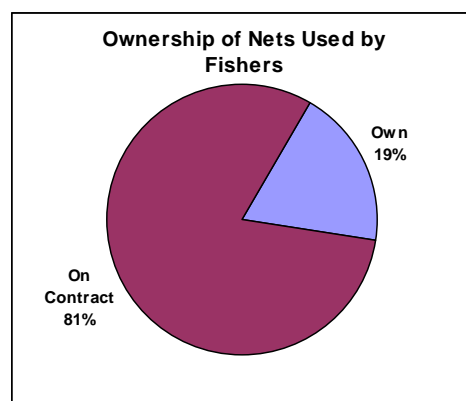
Other devices used, not very commonly, include cast net, footnet, hook and line etc.

Among the fishers interviewed Berjaal was reportedly used by 29%, Khalpata by 29%, Charpata by 28%, Galsha by 22%, Beoundi by 13% and other varieties by 4%.



Great majority (90%) of the fishers under survey fished with boats taken on contract. 15% had own boats for fishing. While 5% said that they fished with boats both own and taken on contract.

19% of the Fishers surveyed had their own nets while 91% procured nets under contract.



The Nature of contracts:

Nature of contracts under which the fishers operate is interesting. A fisher procures boat and nets, as required, from owners of boats and nets, on payment of money. This money, which amounts to Rs. 25,000 to Rs. 45,000 depending on the size of the boat and the size, nature and number of nets procured, is advanced by the Aratdar (fish depot owner). Besides this the Aratdar advances another sum of Rs. 2000 to Rs. 2500 to the fisher towards the cost of ice, permits, on board food & fuel, family upkeep of members of fishing party for fishing days. In return the fisher delivers all his catch to the Aratdar. The Aratdar arranges marketing of the catch. Of the sale proceeds the Aratdar gets 20%, 10% as marketing cost and 10% as his share. The rest 80% goes to the fisher, 40% as payment of crews / co-fishers and 40% as his share. Details of contractual payment are tabled below –

- Rental paid by the fisher to owner of boats and nets

For	Amount (Rs)
Boat & Net	25000 - 45000

- Advance paid to fisher by Aratdar

For	Amount (Rs)
Boat & Net	25000 - 45000
Cost of ice, permits, on board food & fuel, family upkeep of members of fishing party for fishing days	2000 - 2500

- Share of the sale proceeds

For every Rs.100 of the sale proceeds		
Rs.10	Goes to Aratdar	As Marketing Cost of Catch
Rs.10	Goes to Aratdar	As Aratdar's share
Rs.40	Goes to Fisher	As payment to crews / co-fishers
Rs.40	Goes to Fisher	As Fisher's Share

The money advanced by the Aratdar is normally not returned by the fisher and the fisher goes on working for the same Aratdar with the same advance year after year. But in the event he opts for a new Aratdar or leaves the profession the advance amount is supposed to be returned. In the first case the old Aratdar is paid by the money advanced by the new Aratdar and in the second the fisher himself has to arrange for the money.

The fisher owning boats and nets gets the advance made by the Aratdar himself.

Legal Rights and Restrictions:

In Sundarban fishers' right to fish involves three categories of legal status:

1. **Recognition as Fisherman:** The Fisheries Department issues **Identity Cards** to fishers recognizing them as fishermen and entitling them to (i) fish in the waters under its jurisdiction and (ii) benefits of various welfare and insurance schemes conducted by the Department.
2. **Recognition of right to fish in the area under reserve forest but outside the Tiger Reserve area:** The Forest Department issues **Boat Licence Certificate (BLC)** to boat owner fishers. This entitles the boat owner fishers along with his crews to enter and fish in the waters falling under the **Sundarban Reserve Forest** but outside of the Sundarban Tiger Reserve.
3. **Recognition of right to fish in the tiger reserve area:** The Sundarban Tiger Reserve Authority has issued fixed number (942) of **Boat Licence Certificate (BLC)** to boat owner fishers. This entitles the boat owner fishers along with his crews to enter and fish in the waters falling under the **Sundarban Tiger Reserve** up to the buffer zone. Fishing in the core area is prohibited. There is a provision of innocent passage through the core.

How the rights operate in the STR:

The Management Plan for STR (2001 – 2010) mentions the following points regarding fishing in STR:

- Fishermen are allowed to fish within the *permit areas* of Sundarban according to existing legislation applicable to the area. They should not in any case disturb the habitat and the wildlife.
- No permission is given for *mechanized boat* for fishing purpose.
- Areas opened for fishing in Sundarban Tiger Reserve is the area outside National Park and Sanctuary – which is the *buffer zone*.
- The license for fishing is *non transferable* and only mutated in favour of blood related kin and / or to genuine fisherman.

After the establishment of STR in 1973 the project tiger authorities put up notices at forest offices in the Sundarban to register all fishing boats that used to fish in STR. The registration certificate accorded was called **Boat Licence Certificate (BLC)** and was issued for one boat per owner fisher. Veteran fishers say that the period for application was only of one month. Given on the one hand the remoteness of places of their residence and low level of

awareness regarding impending restrictions on the other, many fishers did not register. As a result, only 914 BLCs were issued in an area where almost every family fished for subsistence – as food or earning. [ANNEXURE-II]

The BLCs issued by STR authorities carried the name and address of the owner and a description of the boat. The BLC numbers were to be inscribed on the body of the respective boats.

The annual registration charge of BLC is fixed according to the capacity of the boat according to the following norm³⁷ – [ANNEXURE-III]

- | | |
|------------------------------|--------------------------------|
| • 10 Qt. Boat = Rs. 15 | • 120 to 200 Qt Boat = Rs. 50 |
| • 10 to 20 Qt. Boat = Rs. 20 | • 200 to 400 Qt Boat = Rs. 100 |
| • 20 to 40 Qt. Boat = Rs. 25 | • Over 400 Qt Boat = Rs. 150 |
| • 40 to 120 Qt Boat = Rs. 30 | |

A fisher having a BLC has to get a pass to fish in the STR area for the fishing season (August to March) at a charge of Rs. 40/-.

Person fishing or trading in fish is charged at the rate of Rs. 5 per person per week. For overstaying, the rate for 1st four weeks is Rs. 6 per man per week, for next two weeks Rs.10 per man per week, for next four week Rs. 15 per man per week.

Fisherman catching crab is charged for Rs. 10 per equipment per trip.

A fisher having a BLC and a seasonal pass for fishing in the STR has to get a fishing permit before fishing in the STR. This permit is usually issued for 42 days on payment of the cost / charges for firewood to be taken on the boat and has the following information inscribed on it – [ANNEXURE-IV]

- i. Name and addresses of the crew members accompanying the holder of BLC on the boat.
- ii. Life insurance policy number of the fisher (Life insurance is a must for getting permit, usually the life insurance is for a sum assured amount of Rs.25,000/- at an annual premium of Rs.25/-).
- iii. Description and number of fishing gears and other equipments carried with the boat.
- iv. Amount and cost of the firewood taken on the boat by the holder of BLC from STR authorities.

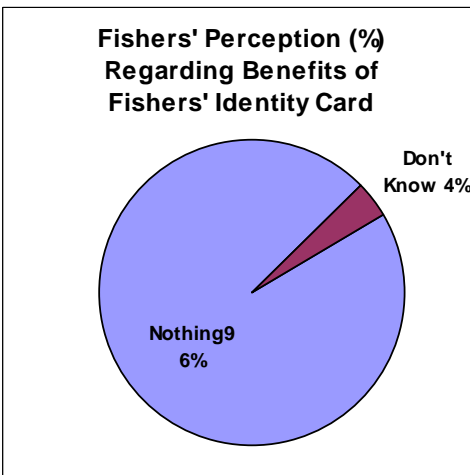
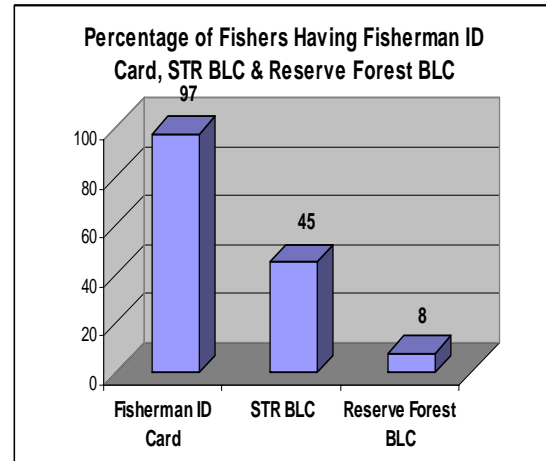
The costs / charges (around Rs.6/- per bundle or as fixed by STR authorities from time to time) for the firewood are to be paid by the BLC holder to the STR authorities.

It is to be noted that there has been no recognition of individual fishers by the STR authorities other than as temporal crew members tagged with specific BLCs.

Fishers' Perspective:

Fishers residing on the fringe of STR fish mainly in the STR waters. Among the fishers interviewed 97% had fisherman's ID card, 45% had STR BLC and only 8% had Reserve Forest BLC.

Almost all the fishers have fisherman's ID card issued by the Fisheries Department, less than half are in possession of BLC issued by the STR authorities and only a few have the Reserve Forest BLC.

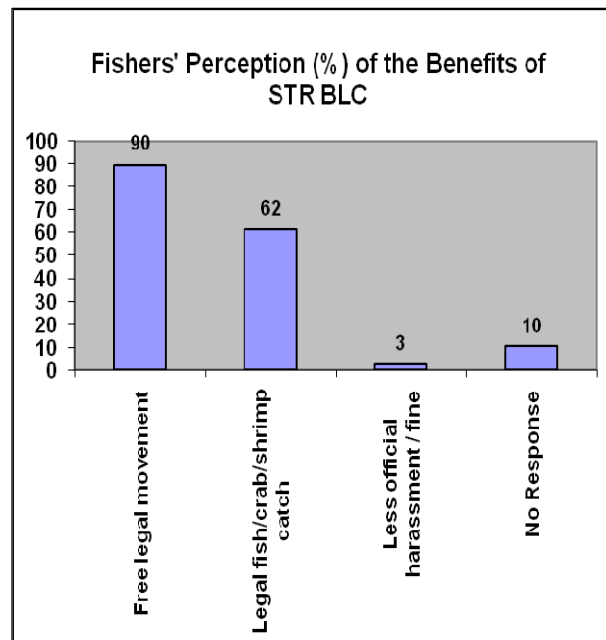


Fishers' response to the question regarding benefits of having fisherman's ID card was very disappointing. 96% said there was no benefit at all, while 4% said they did not know.

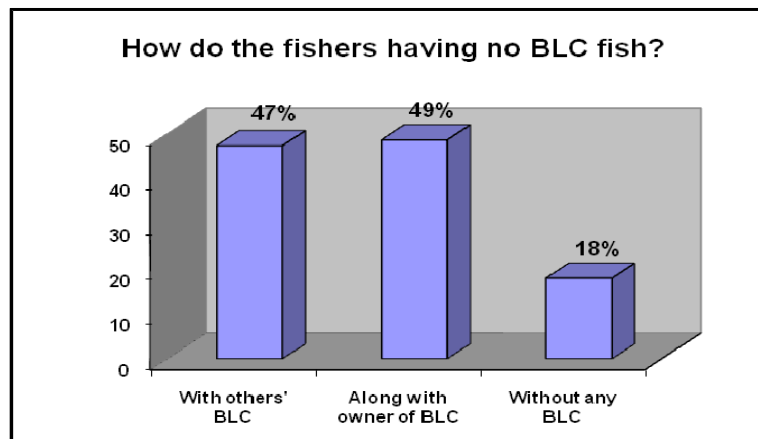
It indicates that though the coverage of fishers' ID card issued by the Fisheries Department has been very good, benefits of schemes like 'relief and savings' and insurance did not reach them.

By contrast, and perhaps because it involved their daily livelihood practice, the fishers were very conscious regarding the benefits accruing from the BLC provided by the STR authorities.

90% of the fishers said that BLC provides them with free legal movement in the buffer. For 62% BLC was an instrument enabling the fishers to legal fish/prawn/crab catch. 3% noted that BLC possession helps in lessening official harassment and fine. There was no response from 10%.



49% of the fishers who did not possess BLCs said that they go fishing in STR with owners of BLCs. 47% reported that they fish with others BLCs and 18% admitted that they fish without any BLC.



Some more issues regarding BLC:

BLCs were issued after the establishment of STR in 1973. Old fishers recall that consequent upon the announcement of STR a public notice was put up in the forest offices in Sundarban asking all fishing boat owners who fish in STR to register with the STR authorities. The notice was put up for a short period, may be one month or more. Given both the remoteness of fishers dwellings from the forest offices and the utter ignorance of people regarding the nature and enforcement of restrictions that were to be associated with STR, many boat owner fishers did not or could not participate in the process. Now more than 30 years after the advent of STR BLC it is found that only 734/709 BLCs are still active. [ANNEXURE-II] Death, old age, change of profession, having no heir to fish etc. are considered as causes behind the rest BLCs becoming inactive. The questions that naturally cropped up and put to STR authorities were –

1. How can one ascertain that post 1973 declaration of STR, at the time of issuing the BLCs, there were only 914 boat owners fishing in STR waters?
2. How can one ascertain that today, after 35 years, those 914 BLCs or, more exactly remaining 734/709 active BLCs account for all the boats that fish in the STR? Has there been any need assessment in this regard?
3. Has there been any assessment of fish stock in the Sundarban to ascertain the amount of sustainable catch and thereby indicate optimum number of BLCs / fishing permits that could be sanctioned?
4. Why the inactive BLCs are not being offered to active fishers?

There was no clear answer to Q.1.

Regarding Q.2 there was a general admission that the need for BLCs had increased, but there has been no need assessment.

Regarding Q.3 it was reported that no such exercise was undertaken.

Regarding Q.4 the STR authorities said that they are contemplating to re-issue the inactive BLCs. But there was a controversy regarding the recipients. STR authorities, it appeared, preferred EDC members, while fishers' organizations were demanding issue of these BLCs in favour of genuine fishers recommended by them.

Position of Fishers' Organisations towards the Restrictions:

Two distinct positions are discernable among the fishers' organisations regarding the restrictions imposed on fishing in the STR.

- i) *United Fishermen's Association*, an organisation with a major political influence of SUCI demands that there should be no restrictions for fishing in the STR for fishermen registered with and licensed by the state Fisheries Department. This means a free for all fishing by all kinds of fishing crafts and gears including mechanised boats and trawlers in the whole of STR including its core area.
- ii) *Sundarban Matsajibi Joutha Sangram Committee* (Joint Committee for Struggle of Sundarban Fishermen), a federation of fishers' organisations which are either independent or operate under the influences of different political parties, demands that both the core area and the restrictions on fishing should be decided in consultation with the fishers. They also demand that the real causes of mangrove destruction and fish stock depletion should be addressed without putting all the blame on poor fishers.

A capricious order and the backlash:

With a view to further restrict entry into the STR as well as to develop scope for monitoring, the STR authorities issued an order instructing each BLC holder to notify the names and addresses of the respective fisher crews of his boat. Thus it attached a number of fishers to specific boats. The number of fisher crew specified for a boat could vary from one to twelve and it was not either necessary or possible to take all of the specified twelve crews in a fishing sortie. But there were two binding conditions –

- i. The BLC holder was to employ crews only from among the fishers specified for his boat / BLC, and,
- ii. The fisher crews, once earmarked or specified under a particular BLC, could not change to other BLC holders.

To execute this the tiger reserve authorities went ahead with issuing ID cards in respect of every active BLC with the names and photographs of the fisher crews specified for that BLC including those of the holder of the BLC.

This was a bad order. It had hit both the BLC holders and the fisher crews. In Sundarban there are localised pools of fisher crews. These fisher crews, according to the number necessary for the fishing operation, attach themselves to one BLC for fishing in the STR waters. The fisher crews choose and change the BLC under which they work according to their convenience. Sickness, family problems and other exigencies, more often than not, compel a change of crew or BLC holder. Besides, since their identity were attached with that of a particular BLC holder, even if a BLC holder takes the crews necessary for a fishing sortie from the fishers specified for his BLC, other fishers specified for the same BLC would have to sit idle. They would not be legally eligible to go with other BLC holders.

But, as the saying ‘every cloud has a silver lining’ goes, this bad order had a very important factor of advantage for the fishers in STR. For the first time, through these STR ID cards, the authorities were going to **officially recognize the individual fishers and their fishing practices** in the STR. This would go a long way in protecting the fishers’ right to life and livelihood.

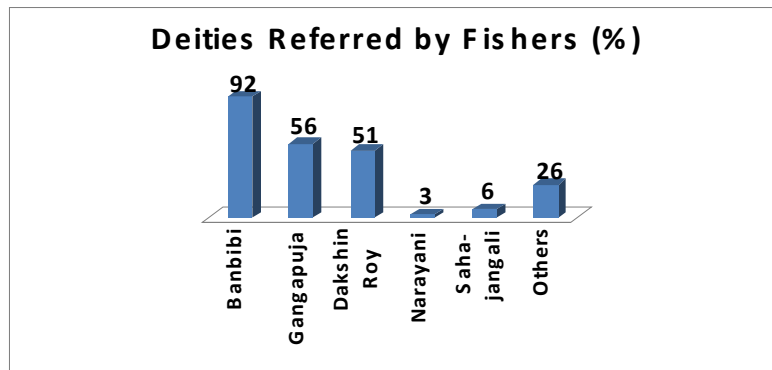
In this backdrop two distinct lines of opposition, as in the case of restrictions, have been observed in the fishers’ movement. One line opposes any kind of photo identity card (*United Fishermen’s Association*), the other opposes clubbing of photo ID cards of fishers with that of the BLC holder fisher and demands individual ID cards (*Sundarban Matsajibi Joutha Sangram Committee*).

Mass deputations, hunger strikes and other agitations followed. Finally the STR authorities had to admit the problem and decided to issue individual ID cards to all the fisher crews.

Conservation Practices:

Traditional livelihood practices dependent on natural resources relate to conservation in diverse ways.

Beliefs and Deities: The Sundarbans were incorporated into the popular religion and that too acted as part of the common property management system that was evolving. “So vast and terrifying a region has, indeed, evoked its own ideational representations.”³⁶ Inaccessibility of Sundarban coupled with associated dangers generated a kind of fright among the people and led them to deify and worship the sources of danger. Thus came the incarnation of Banabibi (Goddess of the Jungle), Dakshin Rai (Lord of the Tiger), Ganga (Goddess of the Water), Saha-Jangali (King of the Jungle) etc. This deification of natural resources led to practicing a kind of self restraint on the part of the inhabitants of Sundarban, particularly the fishers and wood and honey collectors, who had to undertake regular forays into the forest.

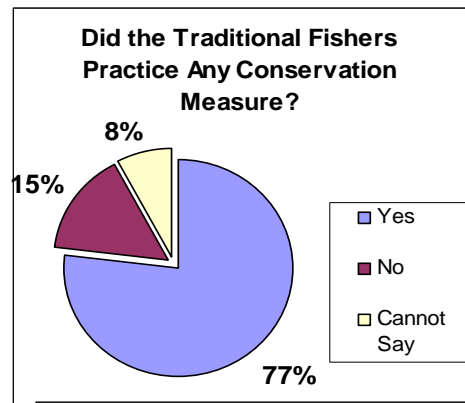


Asked to identify the deities related to Sundarban the fishers response was as in the following –

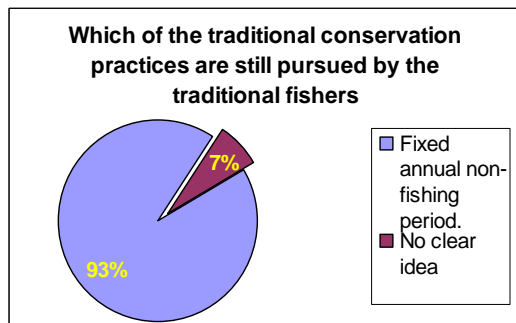
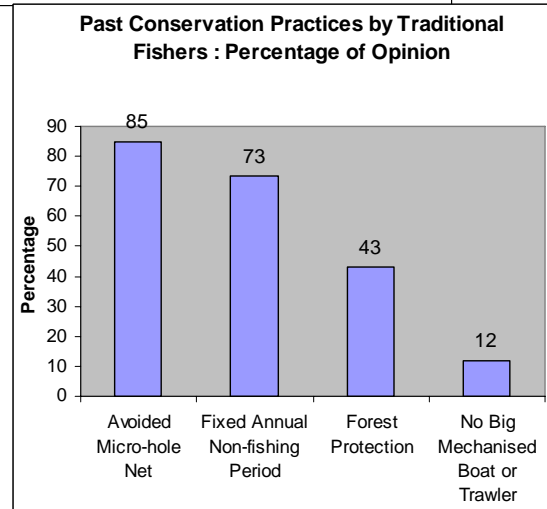
Banabibi – the jungle goddess has been by far the most popular, 92% of the fishers referred to her. Goddess **Ganga** – the deity of water, was cited by 56%. **Dakshin Roy** – lord of the tiger was referred by 51%. **Saha Jangali** – deity of the jungle was mentioned by 6% and 3% mentioned **Narayani** – the goddess of welfare. Other less referred deities were cited by 26% of the fishers. Most interestingly, these deities are community neutral in the sense that they belong to both Hindu and Mohammedan religions and their worshippers also cut across caste, creed and religion. These deities owe their origin to the powers, mysteries, threats and boons of Nature and not to any established religious cult.

Another factor that facilitated conservation practices might be the necessity of traditional people to understand and relate to nature's ways of things to harvest the maximum from its bounty. Abstention from fishing in breeding season, not to eat certain species of fish in certain period of the year are examples.

Asked if the traditional fishers observed any conservation practices in the past, big majority of the fishers (77%) replied in the affirmative. For 15% the answer was negative and 8% pleaded ignorance.



Asked about the nature of conservation practices followed by traditional fishers in the past 85% said that micro-hole nets were avoided in earlier times. 73% said there was annual fixed non-fishing period that synchronized with the breeding season of most of the fish species in Sundarban. It may be noted that that the present officially notified non-fishing period is not concurrent to the past period of abstention. 43% opined that fishers had high regard for forest and never did anything harmful to its flora or fauna. 12% of the fishers said that in the past fishing in Sundarban was solely done by manual crafts and gears – no motorized or mechanized boats or trawlers were used for fishing.



Asked to indicate which traditional conservation practices they were still pursuing, 93% of the fishers could mention only the fixed annual non-fishing period while the rest 7% had no clear idea.

A gradual transformation of the belief systems under the undeniable commercial influence of traders and moneylenders linked with the traditional dwellers is evident. The power of the gods who, if propitiated, may have at one time helped humans against the dangers of the forest has become associated with successful exploitation of the forest. From primarily being protectors of the forest and its dreaded animals the deities role has undergone a subtle change to protectors of the successful fishers, cultivators and other users of Sundarban's resources.³⁷

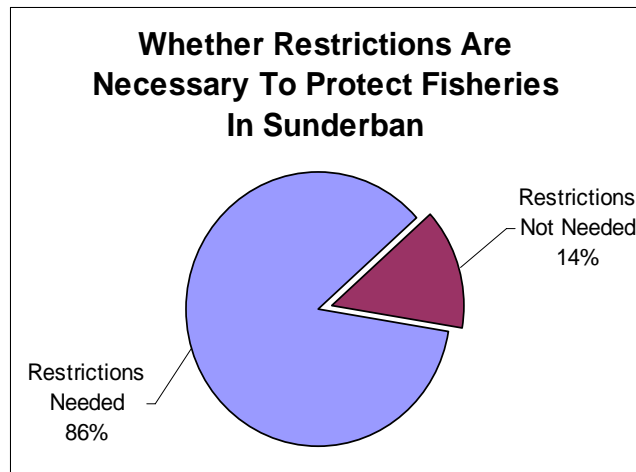
It was reported that traditional fishers knew from childhood when the different species were not to be caught. If such fish entered the nets, the practice was to

release them. The use of otters to catch fish for instance represents one of these non-intrusive methods of fish catch, which was practiced by specialized fisher folk. It is now a dying trade. With the growth of commercial fisheries, the entry of outsiders, non-fisher castes from further away, as well big fishing trawlers belonging to traders and moneylenders, any kind of traditional practices with regard to fisheries have long been abandoned.³⁸ The indigenous techniques of fishing also were “perhaps the least technologically intrusive economic activity in the Sundarbans.”³⁹ Some seventy species of fish were commonly available and fishing was an important ‘home industry’.

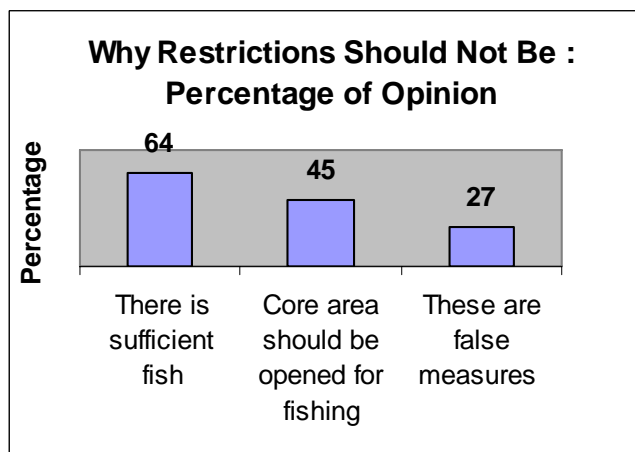
Traditionally fish were harvested from the estuaries, rivers, khals (creeks), and bils (marshlands) at no cost except the traditional home spun nets and boats of fishers.

Fishers’ opinion regarding restrictions:

86% of the fishers interviewed think that restrictions were necessary to protect the fisheries in its waters. While for 14% believe that those were not necessary.

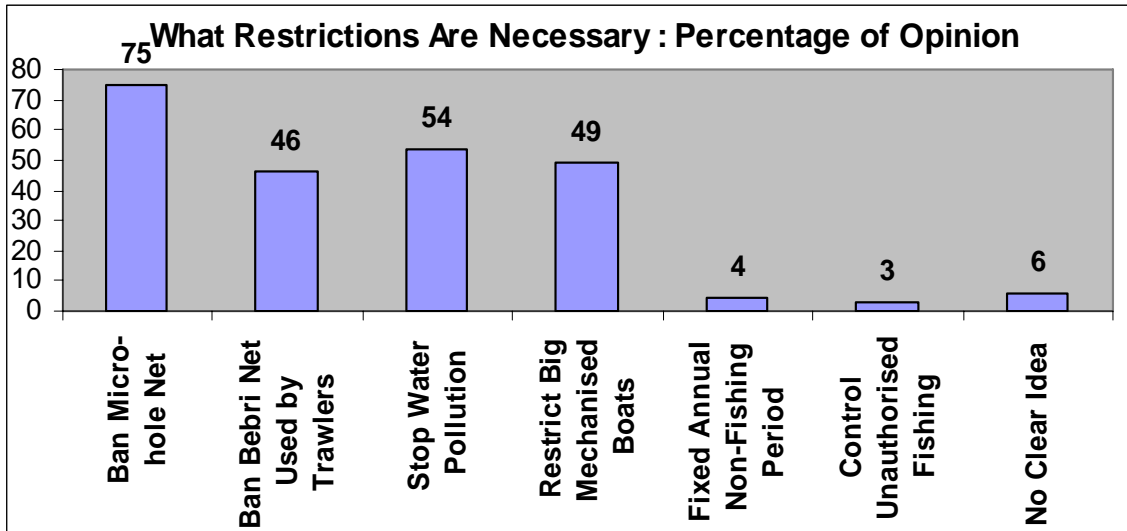


The fishers who held that restrictions are not necessary were further asked to explain why. 64% of these fishers said that restrictions were not necessary because there is sufficient fish in the restricted areas for fishing. 45% said that core area should be opened for fishing and that is why there should be no restrictions. 27% opined that restrictions should go as they are false measures to protect Sundarban.



Fishers who opined in favour of restrictions were asked to indicate the nature of necessary ones. 75% of them said micro-hole nets should be banned, 54% asked for stopping water pollution, 49% were for restricting mechanized

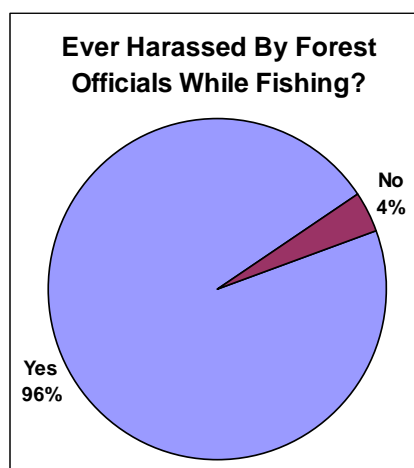
boats, 46% wanted ban on trawl nets, 4% wanted the fixed annual non-fishing period to be strictly implemented and 3% wanted control over unauthorized fishing.



Harassment and Punishment:

Harassment of fishers at the hands of forest guards and officials is very common. “Were you ever harassed by the forest guards or officials?” To this question 96% replied in the affirmative.

When asked about the nature of harassments they had undergone most of the fishers interviewed (86%) said that they had to pay unjust fines. They complained that the fines were unjust either because they were not fishing in the prohibited area or because the amount fined was too big.



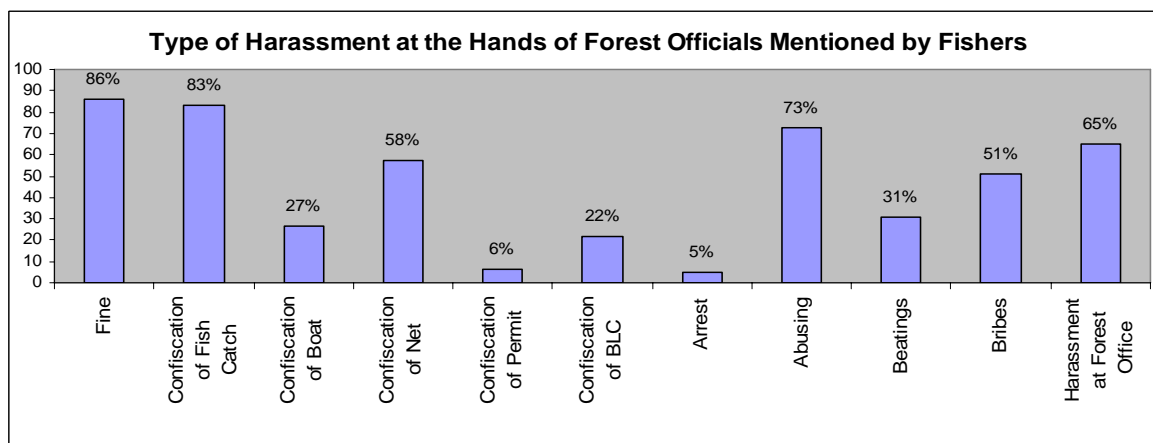
Next most mentioned harassment was confiscation of fish catch. Fishers (83%) complained that the forest officials mercilessly took away the best of their catch.

Use of filthy language and abuses by the forest officials was mentioned by many (73%) fishers, while slightly less than a third (31%) of the fishers interviewed reported physical assault.

27% of fishers interviewed complained of unjust confiscation of their boats and 58% reported unjust confiscation of nets.

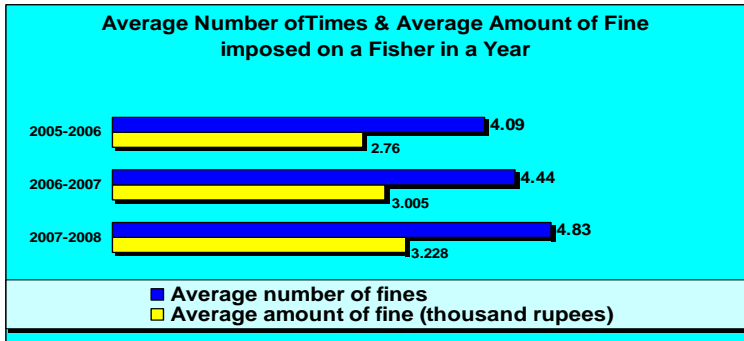
6% of fishers interviewed reported that their fishing permits were wrongfully confiscated by the forest officials, while 22% spoke of such confiscation of BLCs. Confiscated fishing permits and BLCs had to be released on payment of a good amount of money.

5% of the fishers said that they were arrested by the forest guards. 51% of the fishers said that they had to pay bribes to the forest guards and officials. And 65% complained of harassment at the forest office – inordinate delay, rough and insensitive behaviour.



Fines (Compensation):

Fine is the most frequent penalty faced by a fisher. Average number of times a fisher is fined in a year is around 4 and the average amount of fine collected from a fisher is around Rs.3, 000. It is observed from the account given by the fishers that the frequency and amount of fine, collected from a fisher on the average, are showing upward trends.

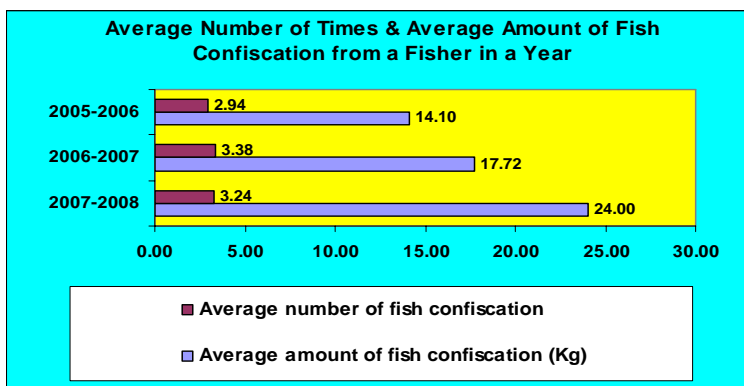


The malpractice associated with the procedure of spot fine is worth mentioning. Visiting forest officials ask for the permit / BLC and inscribe on it the name of the place where they intercepted the

fisher. In most cases the name of the place is inscribed in English and as such the concerned fisher fails to know and, if needed, contest what was written on the BLC. [ANNEXURE-IV] Once he goes to the forest office for renewal of his fishing permit he is told that he was caught somewhere in the core area and have to pay hefty **compensation** (fines) for breaking the law. The receipt also bears 'compensation' as the cause of the money taken. [ANNEXURE-V] **But the extent of damage for which the compensation is charged is never mentioned by the authorities, nor is there any prescribed rate of compensation/fine.** Sometimes the amount is fixed through bargaining.

Confiscation of Fish:

Confiscation of fish from fishing boats, after fines, is the next most frequent harassment reported by the fishers. While the average number of times a fisher has to face such confiscation is around 3, the average amount of fish confiscated from him has been steadily on the rise in last three years. An



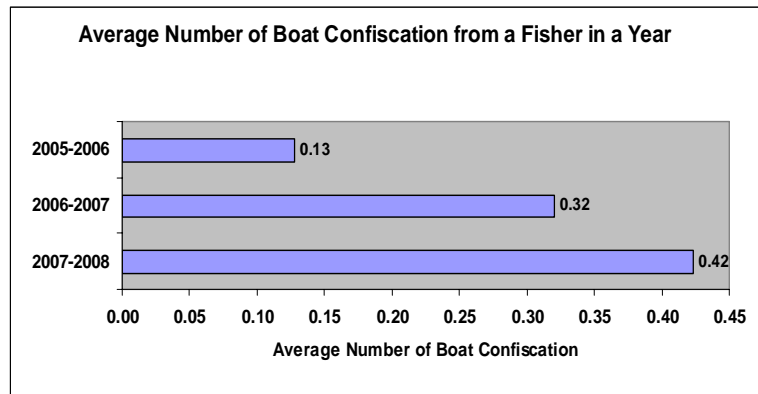
average of about 24 Kgs of fish has been confiscated from a fisher in 2007-2008. The forest officials and guards forcibly take away the catch. There is no question of providing any receipt for the confiscated catch.

*1. Fine, to an ordinary fisher, is money confiscated. It may or may not be taken against proper receipt.

2. Even when receipted, the money taken is not indicated as 'fine' but as 'compensation'.

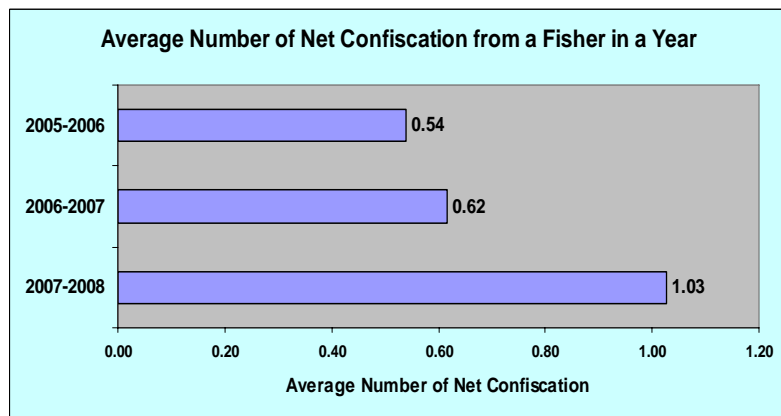
Confiscation of Boat:

Confiscation of fishing boats too is not a very infrequent phenomenon. Last year (2007-2008) one in every three fisher experienced confiscation of his fishing boat. And the occurrence of such experience is also on the rise. Confiscated boats have to be released from concerned range offices on payment of fine. Besides this, loss of fishing time, catch, damage to implements and harassments at forest office are additional associated hazards.



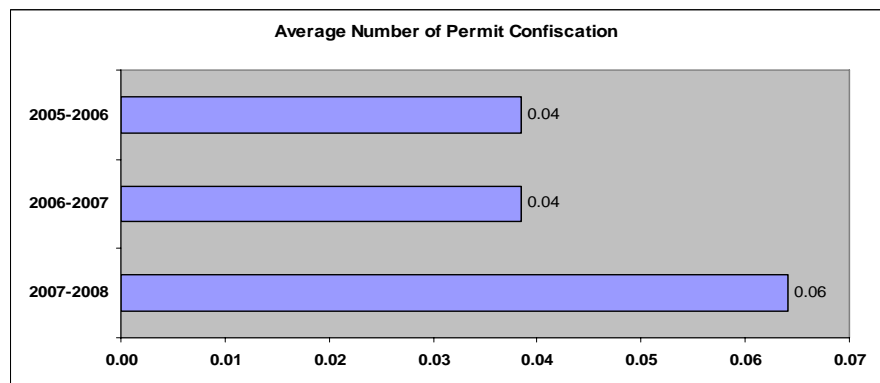
Confiscation of Net:

Incidents of confiscation of fishing nets are more frequent than that of boats. Last year the fishers interviewed had their fishing nets confiscated at least once on the average. The frequency of such incidents is showing a marked upward trend over the last three years. Confiscation of fishing net, as in the case of boat, entails loss of fishing time and, more often than not, damage to the net. Let alone the harassment at forest office.



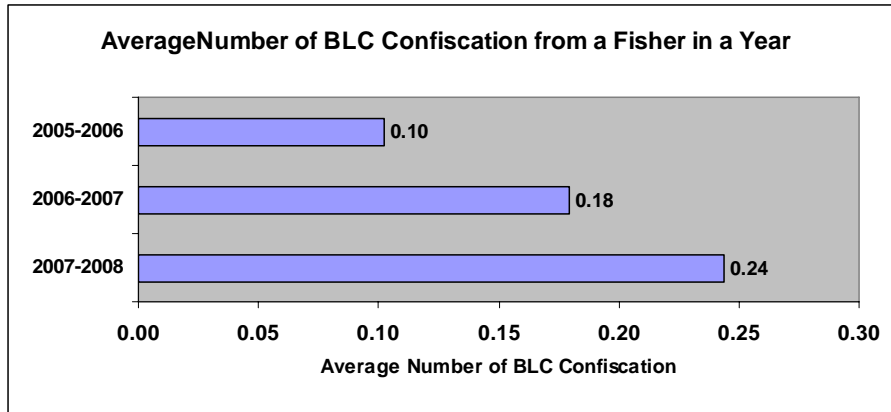
Confiscation of Fishing Permit:

Though less frequent, confiscation of fishing permit is another form of harassment. Once confiscated it means that the fisher cannot fish for the remaining period of fishing time sanctioned by the permit. He has to apply for issuance of a fresh permit on payment of fines. Refusal and delay to issue fresh permit are associated hazards.



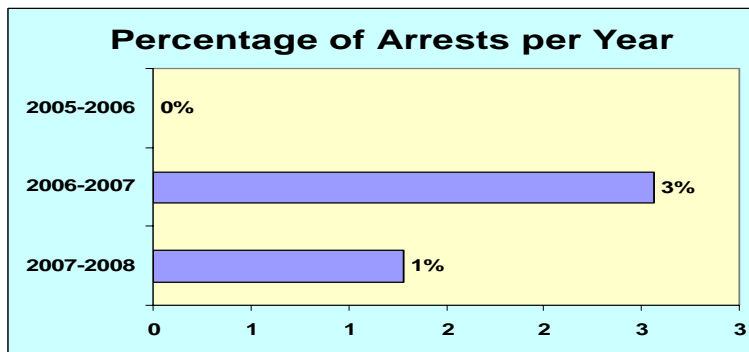
Confiscation of BLC:

Confiscation of BLC is yet another form of punishment and it is observed to occur more frequently than confiscation of fishing permit. As revealed by the fishers' survey incidents of confiscation of BLC have doubled over the last three years. Once confiscated it means that the fisher cannot fish for the remaining period of the season or until it is released. Release of BLC entails fine and sometimes refusal and delay.



Arrests:

Arrest of fishers by the forest guards is not frequent. And while the fishers surveyed did not report any arrest in 2005-2006, the survey revealed that in 2006-2007 there was a sudden rise in arrest. 3% of the fishers interviewed were arrested that year. But in the last year the number of arrests declined. Only 1% of the fishers under survey were reportedly arrested.



Arrests entail days of confinement and harassment of protracted judicial procedure.

Abuses, physical assaults by inspecting forest officials and

harassment at tiger project / forest offices are regular phenomena. The forest guards and officers, almost without exception, behave as if they are the unquestionable owners of the Tiger Reserve area and the fishers there are trespassers and pilferers. At the forest offices fishers and other indigent people of the area have to wait for hours that may even extend into days to meet an officer. Complaints regarding abuse, assault and bribery are rife. But most deplorably, majority of the fishers accept this abusive and derogatory behaviour without any protest. The situation negates the possibilities of custodianship of natural resources by traditional users, i.e. fishers.

The information presented by STR authorities regarding violations / offences committed and steps taken: The STR Annual Report 2005-2006 has provides data on offences/violations and punishments from 2003-2004 to 2005-2006 as in the following –

SI No.	FOREST OFFENCE	2003 - 2004	2004 - 2005	2005 - 2006
1	POR (in number)	22	12	14
2	COR (in number)	679	983	1462
3	UDOR (in number)	173	149	150
4	No. of Persons Arrested	55	37	40
5	Incidences of Firing by Staff (in number)	36	54	18
6	No. of Offender Died	Nil	1	Nil
7	No. of Offender Injured	Nil	Nil	Nil
8	No. of Forest Staff Killed	Nil	Nil	Nil
9	No. of Forest Staff Injured/Assaulted	Nil	Nil	2
10	Total Compensation Realised (in Rs.)	338816	525974	801914
11	Quantity of Timber Seized (Sawn & Log)	26.134m ³	33.412m ³	5.5219m ³
12	No. of Vehicle Seized	Nil	Nil	Nil
13	No. of Dingi Seized	127	86	63
14	No. of Mechanised Boat Seized	6	9	11
15	No. of Cattle Seized	Nil	Nil	Nil

NB: POR – Prosecution report /charge sheet cases.

COR – Offence Compounded

UDOR – Offence Detected Offenders not found

In a recent communication the Field Director, STR has added some more information –

SI No.	FOREST OFFENCE	2006 -2007	2007 -2008
1	POR (in number)	14	13
2	COR (in number)	2427	2086
3	UDOR (in number)	121	82

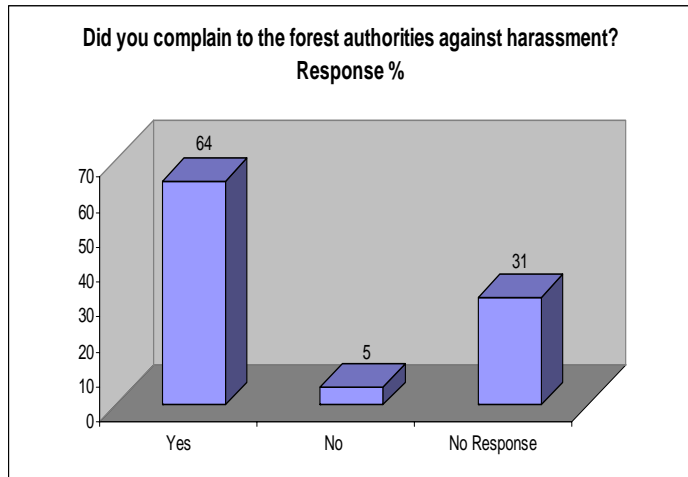
It is to be noted that the offences in official record do not relate to the fishers alone, they refer to poachers, wood collectors / tree fellers, honey collectors and many others. The alleged offences also are different in nature and gravity. But some important indications and points come out of the above information:

1. Though the fishers maintained that confiscation of fish catch was a frequent harassment perpetrated by the forest staff, the official data has no place for such confiscations. It appears that these fishes are forcibly taken away from the fishers and misappropriated.
2. Number of ‘Offence Compounded’ (COR) is incomparably high from the numbers of ‘Prosecution report / charge sheet cases’ (POR) and ‘Offence Detected Offenders not found’ (UDOR). This indicates that negotiations are very common in settling charges against offenders.

3. The next, and perhaps the most important point is raised by the term ‘Compensation’. Wildlife Protection Act has provisions for imposing fines of different amount depending on nature of offences. But there is no direct reference for ‘Compensation’. Besides, the term compensation relates to damage done which itself needs assessment. ‘Compensation’, as it turns out, is an arbitrary amount imposed on the fisher without any kind of assessment of the damage for which it is claimed.

Redressal of Complaints:

We have seen that 96% fishers said that they faced harassment by the forest officials. But, asked if they complained to the authorities against harassment, they appeared to be not so affirmative. 64% said they complained, 5% said they did not and 31% preferred not to respond. (see figure 10)

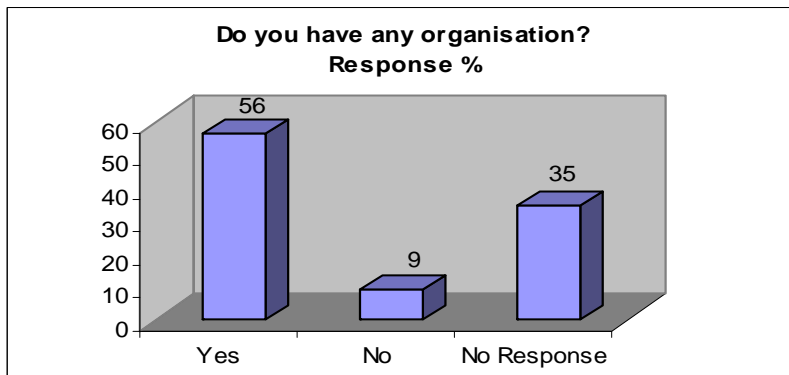


One possible reason for this fractured response might be the following –

The fishers who said to have lodged complaints to the authorities reported, one and all, that nothing came out of their complaints. **There was absolutely no redressal.**

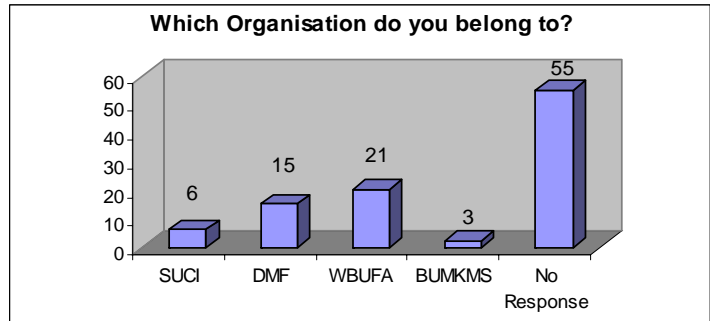
Organisation of Fishers:

Organisational status of the fishers who fish in STR appears to be very weak in terms of physical association, level of awareness and protection.



To the question ‘Do you have any organization?’ 56% replied in the affirmative, 9% in the negative and the rest 35% preferred not to answer.

Asked to identify the organization he belongs to, 55% of the fishers under survey did not respond. Four (4) organisations were mentioned by the fishers as their organizations. 6% held SUCI as their organization, while 15%, 21% and 3% mentioned Dakshinbanga Matsyajibi Forum (DMF), West Bengal United Fishermen’s Association (WBUFA) and Bon Upokul Mach Kankra Samity (BUMKS) respectively as their organization.



No clarity among the fishers regarding the demands of their respective organizations has been a marked feature. None of the fishers, claimed to have been belonging to one organization could spell out the main demands of that organization. But it was indicated by the fishers that the attitude of the organizations towards restrictions ranged from no restriction on fishing (SUCI) to negotiated and acceptable restrictions in the present ‘No Fishing’ (Core Area / National Park) and ‘Controlled’ (Buffer) Zones.

The fishers, in general, were not enthusiastic about the role of their organizations towards redressal of their grievances. Only 4% felt that the organizations concerned actually moved against the harassments, while 17% held that, if active, the organizations might bring about positive changes in the situation.

Fisherwomen of Sundarban:

The household drudgery and penury coupled with gender discrimination at home and in society is common to the fisherwomen of Sundarban as in other areas. But the harsh and demanding livelihood conditions associated with the fishers in Sundarban weigh them down with extra burden.

- ❖ Lack of earning avenues force them to take up highly labourious jobs with severe health hazards like prawn seed collection.
- ❖ Anxiety and trauma due to the risks associated with their husbands’ fishing ventures in the Sundarban forests that in many cases cause untimely deaths to their husbands.
- ❖ Sexual abuses and assaults that result from their poverty and lack of protection during absence of their husbands.
- ❖ Severe lack of drinking water, basic sanitation and health facilities.

Worst is the condition of women widowed by tiger or crocodile attacks on their husbands. Poor health, physical disabilities, mental disorders with attempted and commitment of suicides entail them.⁴⁰

Forest Department's Understanding and Practice of Peoples' Participation in Management – EDCs and FPCs

The following is the response of Forest Department Authorities of South 24 Parganas to queries filed under the RTI Act.

Question: *“Has there been any initiative to develop and lay down the administrative policies of Sunderbans Tiger Reserve, Sunderbans Reserve Forest and Sunderbans Biosphere Reserve through peoples' participation?”*

Answer: “Yes, there is a lot of initiative to develop and lay down the administrative policies of the Division (24 Parganas South Forest Division) through peoples' participation.”

Question: *“If yes to the above then what are the initiatives?”*

Answer: “Initiatives taken in this division are as follows:

- a. As per Forest Department Resolution No. 8556-For. Dt.15.11.1991 covering the Sunderbans, FPC and Self Help Group has been formed in this division. Here we are not only conserve / develop the forest and wildlife we are also think to develop the livelihood of the people who live in the forest fringe area. Therefore our effort is to create “another livelihood option”, for this target groups and dilute the biotic pressure on the ecologically fragile mangrove eco-system. Whatever development funds are made available for the development of forest as well as villagers of forest fringe areas will be utilized for creating resources through the process of micro-level planning and participatory implementation. For alternate livelihood we have already started Duckery, Piggary, Poultry, Goatery, Agro-cropping, Rice trading, Agriculture development etc. among the forest fringe population of this division.
- b. In order to prevent straying of tiger into village, nylon net as well Garan Chitta fencing are being erected along the forest villages interface, side by side, we always get villagers co-operation for tiger straying duty, which is a part of capacity building initiatives to tackle tiger straying into the villages, and result of that man-animal conflict has been reduced.
- c. Community Developmental Project has been taken up through peoples' participation.
 - I. Construction of irrigation canals for rain-water harvesting.

- II. Construction of sweet water ponds for irrigation as well as fresh water Pisciculture.
- III. Construction of village brick paths to improve communication.
- IV. Construction of jetties.
- V. Digging of tube-wells for drinking water supply.
- VI. Supply of solar light.
- VII. Organising regular medical camps in remote areas.
- VIII. Construction of embanks for protection of villages.

d. All development scheme like

- I. Conservation and Management of Sundarbans Biosphere Reserve in West Bengal.
- II. Conservation and Management of Sundarban Mangroves in West Bengal
- III. Conservation and Management of Sundarban Wetland in West Bengal
- IV. State Plan (Annual Plan)
- V. N.R.E.G.S.

All above scheme are being implements in this division through peoples' participation." [Language of statements under quote is original]

The response of Sundarban Tiger Reserve Authorities to similar queries filed under the RTI Act has been more revealing. To the query regarding the initiatives, if any, taken to develop and lay down the administrative policies of Sunderbans Tiger Reserve through peoples' participation, the reply was –

“A number of initiatives have been taken to reduce the dependence of people and also as a goodwill measure through the agency of EDCs and FPCs. These can broadly be divided into –

a) Community-based initiatives:

- Construction of irrigation canals for rainwater harvesting.
- Construction of sweet-water ponds for irrigation as well as fresh-water Pisciculture.
- Construction of village brick paths to improve communication.
- Digging of tube-wells for drinking water supply
- Supply of Solar lights.
- Organising medical camps
- Construction of embankments around villages for protection
- Distribution of seedlings.

b) Individual beneficiary oriented scheme:

- Apiary
- Piggery, duckery, poultry and goatery.
- Development of Self-help Groups.
- Training of tailoring etc.

All the activities are generally formulated through need-based planning/micro-planning at the grass-root level.” [Language of statements under quote is original]

The submissions show that the EDCs and FPCs constitute the sole initiative of the Forest Department towards developing and laying down the administrative policies of the protected forest areas with peoples’ participation.

Three points here seem to be most disturbing and deserve consideration –

1. The Forest Department holds that development and laying down of administrative policies of the forest protected area with peoples’ participation only means development of alternate livelihood or infrastructure through FPCs or EDCs.
2. Even this is a sequel to Forest Department Resolution No. 8556-For. Dt.15.11.1991. And the first EDC or FPC was formed in the area only in 1998 – a long 7 years afterwards. But the Sundarban Tiger Reserve was constituted in late 1973. So for the intervening 25 years there was not even that so called initiative for peoples’ participation.
3. It is reported that to date 14 EDCs and 11 FPCs have been formed around STR. And it is also claimed that these 25 EDCs and FPCs represent 8548 families. Is it at all adequate? [See ANNEXURE–VIII(A) for number of families in Sundarban] It means about 342 families per EDC/FPC. Also what is the quantum of man hour generated? Can one EDC/FPC generate even 50% employment for the families it claims to represent?

The fishers interviewed during the survey submitted, in general, that EDCs and FPCs are known to them but the livelihood benefits accrued from those are either very inadequate or do not reach them at all. They also complained about political favouritism in allocation of jobs.

In real terms EDCs and FPCs are units organized by forest department with its resources and are aimed at assisting the foresters in some developmental work. Other than poultry, duckery, piggery, goatery and participation in some infrastructure development work like constructions of brick road, jetty etc. they have no say in policy matters.

Recommendations:

Following recommendations are made with a view to protect the natural resources of Sundarban and the livelihood practices of traditional small fishers dependent on those resources :-

- A. A basic policy change is called for regarding conservation of Sundarban comprising of –
 - i. Shift of emphasis from policing to addressing anthropogenic stressors like pollution, diversion of fresh water, harmful development projects in the transition area of SBR.
 - ii. Dealing with communities dependent on Sundarban's natural resources, like traditional fishers, not as unwelcome pilferers, but as potential custodians of natural resources with traditional and customary rights over those resources.
 - iii. Helping the indigenous communities dependent on natural resources, especially fishers, build up their capacity to function as the custodians of natural resources.
 - iv. To develop and maintain restriction regimes (a) in consultation with and with participation of the communities dependent on the natural resources, and (b) basing on scientific assessment of sustainable yield, carrying capacity etc.
- B. The forest department should take immediate and effective steps to discharge its obligations and responsibilities towards identifying and safeguarding the interest of local communities having livelihood interests and rights in the tiger reserve as enshrined in the constitution of India and different legislations, particularly the Wild Life Protection (Amendment) Act 2006 and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
- C. The forest department should immediately restrain its officials from all malpractices and misbehaviours. It should take immediate and effective steps to ensure transparency, equity and justiciability.
- D. Special efforts are to be taken through Panchayats to support women in claiming their social and economic rights involving awareness and motivation, counseling, group formation and income generation. Women's security should also get priority consideration.
- E. All concerned Ministries in the Government of India and Departments in the Government of West Bengal should come together in developing and implementing a conservation of natural resources and livelihood protection plan in the Indian Sundarban in consultation with and participation of the indigenous communities.

- F. The forest and police departments should strictly implement bans and restrictions on destructive fishing practices like prawn seedling collection by mosquito nets or trawling / mechanized fishing in near shore areas.
- G. The forest and police departments should take strong and effective measures to protect the natural resources of Sundarban as well as the lives and livelihoods of the indigenous people from recurrent decoities and piracies.

ANNEXURES

ANNEXURE – I : Directive Policies of Biosphere Reserve

Nominated by governments, biosphere reserves are areas of terrestrial, coastal or marine ecosystems that are internationally recognized under UNESCO's MAB Programme.

Each biosphere reserve is intended to fulfill three complementary functions.

- A. Its conservation function is to protect those genetic resources, species, ecosystems and landscapes which require protection.
- B. Its development function is to foster sustainable economic and human development compatible with the first function.
- C. Its logistic function is to facilitate demonstration projects, environmental education and training, research and monitoring in support of the first two functions.

General criteria for an area to be qualified for designation as a biosphere reserve:

1. It should encompass a mosaic of ecological systems representative of major biogeographic regions, including a gradation of human interventions.
2. It should be of significance for biological diversity conservation.
3. It should provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale.
4. It should have an appropriate size to serve the three functions of biosphere reserves, as set out in Article 3.
5. It should include these functions, through appropriate zonation, recognizing:
 - (a) a legally constituted core area or areas devoted to long-term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives;
 - (b) a buffer zone or zones clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place;
 - (c) an outer transition area where sustainable resource management practices are promoted and developed.
6. Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and carrying out the functions of a biosphere reserve.
7. In addition, provisions should be made for:
 - (a) mechanisms to manage human use and activities in the buffer zone or zones;
 - (b) a management policy or plan for the area as a biosphere reserve;
 - (c) a designated authority or mechanism to implement this policy or plan;
 - (d) programmes for research, monitoring, education and training.

ANNEXURE – II: List of BLCs in STR

The then Conservator of Forests & Field Director Sundarban Tiger Reserve under his Memo No.1891(9)/FD/2M-39/06 dt.18.07.07 forwarded a list of Active and Inactive BLCs by Range that gave the following numbers –

Range	Number of Active BLCs	Number of Inactive BLCs	Total
Sajnekhali Wildlife Sanctuary Range	282	11	293
Rampura Patrol Range	73	16	89
Basirhat Range	163	91	254
Headquarter (Canning) Range	217	61	278
Total	735	179	914

However, in a more recent communication dt.30.08.2008 he cited the following account of BLCs –

NAME OF RANGE	ACTIVE BLC	INACTIVE BLC	TOTAL
BASIRHAT	204	92	296
SWLS*	416	62	478
HQ/CANNING	89	10	99
BLC UNDER CONSIDERATION			41
GRAND TOTAL			914

* SWLS - Sajnekhali Wildlife Sanctuary

ANNEXURE – III : Facsimile of a BLC Registration Certificate

West Bengal Form **WB/BG 204993** (56)

FORM NO. 25

C. B. Item No.

Dated: 8/6/05

FOREST DEPARTMENT, WEST BENGAL

Division: *DE 21/406*

Permit No.

Name: *Sri. K. K. Haldar*

Residence: *1, Andanari, Gostaba, 29 lbs. G.*

Forest	Date of expiry of grant	Description of timber or other produce	Number or quantity	Amount			Remarks
				Rs. টাকা	Rs. টাকা	P. পয়সা	
		<i>৪.৭০x১.৪৫x০.৬০ম</i>				<i>4000</i>	<i>Assessment of Boat Carriage</i>
		<i>Registration fees</i>				<i>25.00</i>	<i>Annual Registration Fees</i>
		<i>Registration fees</i>				<i>25.00</i>	

Received Rs. *1800* P. only. *06*

Forester: *[Signature]*

Station Officer: *[Signature]*

Ganning Revenue: *[Signature]*

Sunderban

-539/2000

ANNEXURE – IV : Fascimile of a Permit

BLC
Number

Converted into P.T. Book
dt 5/7/05 N 29069/46

Bengal Form No. 1703. dt 5/7/05

Permit
C.B. Item No.....
FORM No. 15. Dated...20/7/05

FOREST DEPARTMENT, WEST BENGAL
DIVISION.

Name and address of the crew

① Jabil Jamoder s/o Roup = 005071
② Ananda Kati s/o Brajen = 005035
③ Tapan Kati s/o Brajen = 005036
④ Krishna Haldar s/o Karmadhar = 005037

Insurance Numbers

all of Gopal Nagar p.s. Khatia

Date of expiry of grant	Description of timber or other produce	Number or quantity	Rate	Amount	Remarks
তার	কাঠ কিম্বা অন্য প্রকার উৎপন্ন	সংখ্যা কিম্বা গুণন	টাকা	টাকা	বন্দ্য
	BAC/FM - 4MX6WC	5f		= 120.00	
	① P-MEI			ST = 10.00	
	② C-MEI			AST = 2.00	
	③ V-MEI				
	④ Thatch - 2				
	⑤ Saw - 2				
	⑥ 9-Box - 1				
	cg/f - 280			132.00	

Description of gears

Fuel Charge

Other Charges

Received Rs. 132-00 only.
Ref - one file Truly
TWO only.

TED.....
20/7/05

Forester
Division.

P-A 1606-1972-73-240-72-000

Station Office
Article 105, 6th Edition,
Canning Revenue
Sanitised Paper

Front side of permit

Checked at fishing dig another side
Joint Entry doing fishing in the reserved area
Geonba - 3 Compft,
Geowa Tharia - 140 Ro.
on dt 20/8/05 at about 10 A.M.

K. Giri
F2
Haldipasi
20/8/05.

Violation
noted in
English
by Forest
official.

Back side of Permit

ANNEXURE – V : Fascimile of a Receipt for Fine

Ref. No. 294805/623 02
 West Bengal Form No. 1702. 19/11/05 WB/G 130100
 Financial Rule Form No. I.C.

RECEIPTS FOR PAYMENTS TO GOVERNMENT
 (See Rule 2B, B.F.R.)

28/11/2005
 28/11/2005
 C.B. ITEM NO.
 FORM NO. 14
 Dated 28/11/2005

FOREST DEPARTMENT. WB
 DIVISION STN
 DEPOT C.P.

Received from Shri. B. Chatterjee of the
 sum of Rupees 1000.00 being price of
 bought by him as detailed in Bill No. in part payment.
of 26 cu ft. gum gharol
 No. Cubic ft.
 Logs..... at Rs. 296.00
 Sleepers..... 12 at Rs. 12.00
 Firewood..... kgs. at Rs. per kg. Rs. 1000.00
Compensation
 Total Rs. 1108.00

28/11/05 - 10
Comp one round one
hundred eight of
C.P.

Dated.....
 The 28/11/2005

539/2000

Attn:
Station Officer
Planning Revenue
Bandarban Tiger Reser

Fine received as
 'Compensation'
 Without indicating
 the damage done

ANNEXURE – VI : List of EDCs and FPCs

LIST OF FOREST PROTECTION AND ECODEVELOPMENT COMMITTEES OF S.T. R.

Sl. No.	Range	Beat / Station	Name of EDC / FPC	Registration No. & Dt.	Number of families				Protected Forest Area (Ha.)	Name of PA	
					GC / OBC	SC	ST	Total		Block	Compartment
..... :: ECO DEVELOPMENT COMMITTEES ::											
1	SWLS	Sajnekhali	Dayapur	1/EDC/FD/STR, dt. 4-5-98		319	7	326	960	Pirkhali	1
2	SWLS	Sajnekhali	Pakhiralaya	2/EDC/FD/STR, dt. 4-5-98	76	441		517	480	Pirkhali	1 & 2
3	SWLS	Sajnekhali	Dulki	5/EDC/FD/STR, dt. 4-5-98		189		189	640	Pirkhali	1
4	SWLS	Sajnekhali	Sonagaon	6/EDC/FD/STR, dt. 4-5-98		68		68	700	Pirkhali	2
5	SWLS	Sajnekhali	Jemspur	7/EDC/FD/STR, dt. 4-5-98	1	346		347	650	Pirkhali	1
6	SWLS	Dattar Station	Lahiripur-Chargheri	3/EDC/FD/STR, dt. 4-5-98		328		328	2000	Jhilla	4 & 5
7	SWLS	Dattar Station	Bidhan Colony-Luxbagan	4/EDC/FD/STR, dt. 4-5-98	12	197	18	227	520	Jhilla	2 & 3
8	SWLS	Dattar Station	Lahiripur-Santigachhi	8/EDC/FD/STR, dt. 4-5-98		328		328	2400	Panchamukhani	2
9	SWLS	Dattar Station	Enpur-Rajatjubilee	9/EDC/FD/STR, dt. 4-5-98		155		155	700	Panchamukhani	1 & 2
10	NP(W)	Bidya Station	Bijoy nagar	10/EDC/FD/STR, dt. 5-5-98	76	389	6	471	680	Pirkhali	2
11	NP(W)	Bidya Station	Mathurakhand	11/EDC/FD/STR, dt. 5-5-98	62	419	38	519	550	Pirkhali	4
12	NP(W)	Bidya Station	Satyanarayannpur	12/EDC/FD/STR, dt. 5-5-98	5	554	21	580	800	Pirkhali	2
13	NP(W)	Bidya Station	Amlamethi	13/EDC/FD/STR, dt. 5-5-98	24	138	8	170	500	Pirkhali	4
14	NP(W)	Bidya Station	Bally	14/EDC/FD/STR, dt. 5-5-98	72	176	10	258	770	Pirkhali	2

..... ::FOREST PROTECTION COMMITTEES::.....											
1	Basirhat	Bagna Station	Hentalbari	1/FPC/FD/STR, dt. 6-5-98	2	374		376	500	Jhilla	2 & 3
2	Basirhat	Bagna Station	Kalidaspur	3/FPC/FD/STR, dt. 6-5-98	15	539	18	572	300	Jhilla	3
3	Basirhat	Bagna Station	Emlibari	4/FPC/FD/STR, dt. 6-5-98		331		331	580	Jhilla	2 & 3
4	Basirhat	Bagna Station	Bhuruliapara	5/FPC/FD/STR, dt. 6-5-98	12	394	50	456	567	Jhilla	1
5	Basirhat	Bagna Station	Adibasipara-Kumirmari	6/FPC/FD/STR, dt. 6-5-98	5	332	23	360	875	Jhilla	1
6	Basirhat	Bagna Station	Mitrabari	7/FPC/FD/STR, dt. 6-5-98	16	347	62	425	360	Jhilla	3
7	Basirhat	Bagna Station	Bagnapara	9/FPC/FD/STR, dt. 6-5-98	2	361	26	389	500	Jhilla	2
8	Basirhat	Jhingekhali Stn.	Samernagar	2/FPC/FD/STR, dt. 6-5-98	32	203	38	273	2584	Arbesi	1
9	Basirhat	Jhingekhali Stn.	Kalitala-Perghumti	8/FPC/FD/STR, dt. 6-5-98	74	331	12	417	1544	Arbesi	1
10	Basirhat	Jhingekhali Stn.	Hemnagar	10/FPC/FD/STR, dt. 6-5-98	11	235	20	266	4174	Arbesi	2
11	Basirhat	Bagna Station	Gobindapur	11/FPC/FD/STR, dt. 10-12-02		195	5	200	860	Jhilla	2
				TOTAL :-	497	7689	362	8548	25194		

ANNEXURE-VII: Family, Population, Scheduled and Non-Scheduled Communities in Sundarban

A
Average mouza-size by family and population in the Sundarbans blocks of India

Block	Inhabited mouza	Family	Population	Average mouza size	
				Family	Population
Canning I	59	28716	162391	487	2752
Canning II	62	25854	151635	417	2446
Basanti	65	40478	226974	623	3492
Gosaba	50	37042	200514	741	4010
Jaynagar I	71	31715	185271	447	2609
Jaynagar II	49	29140	177335	595	3619
Kultali	43	25684	156450	597	3638
Mathurapur I	96	25076	141888	261	1478
Mathurapur II	27	29793	172982	1103	6407
Patharpratima	88	40753	245601	463	2791
Kakdwip	39	32973	190088	845	4874
Sagar	44	24638	154202	560	3505
Namkhana	37	23323	134354	630	3631
South 24-Parganas	730	395185	2299685	541	3150
Haroa	99	31496	182645	318	1845
Minakhan	64	18341	105816	287	1653
Hasnabad	86	33646	184283	391	2143
Sandeshkhali I	30	20900	120539	697	4018
Sandeshkhali II	24	21677	118895	903	4954
Hingaljanj	31	21132	109123	682	3520
North 24-Parganas	334	147192	821301	441	2459
Sundarbans	1064	542377	3120986	510	2933

B
Population concentration of Scheduled and non-Scheduled communities in the Sundarbans blocks of India

Block	All community population	Population concentration (%)			
		Scheduled community			Non-Scheduled community
		Caste	Tribe	Total	
Canning I	162391	53.71	1.66	55.37	44.63
Canning II	151635	28.61	7.15	35.76	64.24
Basanti	226974	41.75	6.00	47.75	52.25
Gosaba	200514	65.04	9.82	74.86	25.14
Jaynagar I	185271	43.95	0.01	43.96	56.04
Jaynagar II	177335	41.07	0.48	41.54	58.46
Kulatali	156450	50.27	2.82	53.08	46.92
Mathurapur I	141888	40.58	0.21	40.80	59.20
Mathurapur II	172982	30.88	1.64	32.52	67.48
Patharpratima	245601	24.72	0.78	25.51	74.49
Kakdwip	190088	35.14	0.59	35.74	64.26
Sagar	154202	28.05	0.35	28.40	71.60
Namkhana	134354	26.97	0.43	27.40	72.60
South 24-Parganas	2299685	39.42	2.59	42.01	57.99
Haroa	182645	30.59	8.74	39.33	60.67
Minakhan	105816	29.23	6.53	35.76	64.24
Hasnabad	184283	33.25	5.34	38.59	61.41
Sandeshkhali I	120539	33.09	27.18	60.26	39.74
Sandeshkhali II	118895	44.95	24.21	69.17	30.83
Hingaljanj	109123	69.57	4.81	74.38	25.62
North 24-Parganas	821301	38.64	12.11	50.75	49.25
Sundarbans	3120986	20.34	6.38	26.71	73.29

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