

## FISHING AS FOREST BASED LIVELIHOOD IN SUNDARBAN, INDIA

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### **Abstract**

The world heritage site Sundarban is the largest contiguous mangrove forest in the world. Department Of Sundarban Affair, Government of West Bengal estimates nearly 0.5 million are engaged in fishing. In this paper I investigate the livelihood strategies of fishers and crab collectors in three villages of the Sundarbans. These are river side villages where most of the people depend on fishing for their livelihood. Data were collected using questionnaires and informal interviews with key informants. Increasing population pressure and rural infrastructure development causes rapid depletion of biodiversity and degradation of natural resources in Sundarbans. Present paper exhibits emerging livelihood problems and socio-economic uplift of fishing community in Indian Sundarbans.

**Keywords: Fishing, Boat-license certificate (BLC), Livelihood, Core Area, Forest**

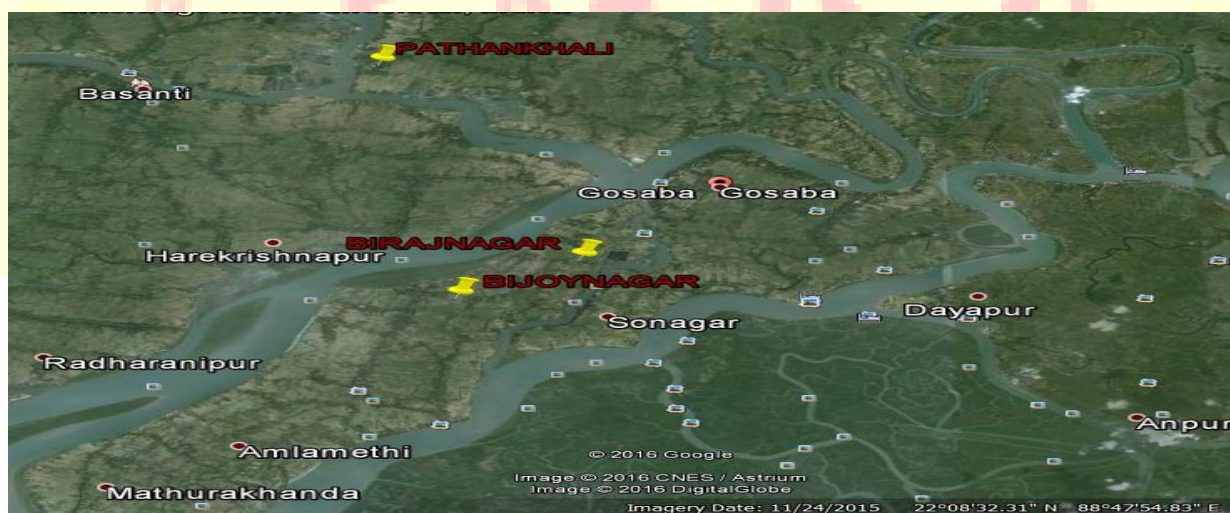
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## Introduction

The Sundarban Biosphere Reserve is home to 4.4 million people (Census 2011). Most of the marginal people of Sundarban depend on forest for livelihood. It is a great concern that most of the environmental policies in India highly accentuates on environmental sustainability compared to the economic sustainability of the areas of conservation. This concern was resonated in the words of former Prime Minister of India, Smt Indira Gandhi in Stockholm (1972) that when the nation is not in a position to provide employment and purchasing power for the daily necessities to the tribal people and those who live in and around the forest, “we cannot prevent them from combing the forest for food and livelihood: from poaching and from despoiling the vegetation. When they themselves feel deprived how can we urge the preservation of animals?” (Mistri, Das 2015)

The mangrove forest of Sundarban is valuable because of its rich biodiversity, which are commercially exploited particularly, the Non Timber Forest Produce (NTFPs) which is one of the epitomes for the livelihood of many forest fringe dwellers. (Bhattacharya, 2004) The NTFPs collected from mangrove of Sundarban includes tannin bark, golpata, honey, bee wax, fuel wood and small poles and boles, fishes, prawn, crab, shrimps. Fishing was allowed in tidal water provided the fishing boats are registered in the Forest Directorate in payment of usual registration fees plus royalty for dry firewood to be consumed in each fishing trip. (Singh, et al., 2010)



**Fig: 1** Satellite Image of Study Area at Gosaba Block, Sundarban

## Materials and methods

The Sundarban is a natural region comprising southern Bangladesh and a small part in Eastern India. The forest covers 10000 square kilometres (3900 square miles) of which 6000 square kilometres (2300 square miles) are in Bangladesh. It became inscribed as a UNESCO world heritage site in 1997. The Indian part of Sundarbans is estimated to be about 4110 square kilometres (1590 square miles) of which about 1700 square kilometres (660 square miles) is occupied by water bodies in the forms of river, canals and creeks of width varying from a few metres to several kilometres.

Relevant research concerning livelihood of fishermen in Sundarban was revealed by searching the literature or article reviews published in different peer review journals during a period of last two decades for primary research material. Both primary and secondary data were used for analysis of fishing as forest based livelihood in Sundarban. A household survey has been conducted at Bijoy Nagar, Biraj Nagar and Pathankhali G.P of Gosaba Block of Sundarban, South 24 Pargana district during December 2015. According to Census 2001, there were five forest dependent villages present at Gosaba Block. Out of them these three villages are selected for household survey as these are located beside river Bidya where most of the villagers depend on fishing or crab collection for their livelihood. I have selected fifty fishers from each village as respondents for the questionnaire. The primary data were collected through structured and open ended questionnaires. Informal interviews with key informants as a form of “life story telling” were also used as another source of primary data.

## Results

The average size of surveyed households of Biraj Nagar G.P (Gram Panchayet) is 4.28, Bijoy Nagar G.P is 5.53 and Pathankhali G.P is 5.6. Most fishers live in poor housing conditions. Most of the houses of Biraj Nagar, Bijoy Nagar G.P are kutcha and materials used for dwelling units are mud, straw and tin. Some houses of Pathankhali G.P are semi-pucca and building materials used are brick and tin. Most of the kutcha houses were severely damaged by natural catastrophes such as Aila. As a relief they got Rs.10000 for reconstruction of houses. Some of the families did not get Aila relief as they do not have registered BPL card. On the other hand name of some villagers sanctioned for Aila relief but ultimately got transferred to other people

by Rs.6000. (As stated by a villager of Birajnagar G.P). Actually a large number of people live on Khas (government owned land) known as Chargheri. With the shifting of river they also move on from one place to another. Picture is different in case of Pathankhali G.P where some villagers got sanctioned amount as Indira Abas Yojona. They also got Aila relief from Government for the reconstruction of destroyed houses. As an evidence of that door of their houses were marked by government authority after Aila. (Appendix III).

For the purpose of catching fish using of Boat License Certificate(BLC) from Forest Department is must. For that reason only 4716 BLCs were issued by Forest Department in 1980.After that no new BLC is being issued. Due to scarcity of BLCs illegal entry to forest is increasing day by day. Seasonal permit costs Rs.100 to Rs.130 and registration for whole seasons cost Rs.60000 to Rs.70000. Making of boat costs Rs.40000 and cost of making net for catching fish is Rs. One Lakh to Rs.1.5 Lakhs.

#### ➤ **Fishing As Forest Based Livelihood**

Fishermen of Sundarban usually catch fish forming a group of five to six people. If they make profit of Rs.45000 to Rs.50000, owner of forest permit will get at least two third i.e. Rs.30000 to Rs.33000 of it. Rest will be distributed among five to six fishermen. For entering Core Area at the time of catching fish Rs. 5000 will be charged as fine from fishermen. They usually spend 7 to 10 days at a time at boat for catching fish. In compare to fishing crab collection is much more profitable. Because rate of selling of per quintal crab is Rs.15000 to Rs.20000 and while collecting crab they usually form a group of three people. After making profit owner of forest permit will get only a part of it .But it is more risk prone, because while entering the creeks chance of tiger bite is very much frequent. They can catch either fish or crab using a single permit.

#### ➤ **Fishing And Money lending**

Sometimes fishers depend on Bandhan Bank for loan. But they give loan below sixty years of age and repayment of loan is done on weekly basis which is not possible for poor fishers. Hence, Informal sources of credit play vital roles in rural economies

➤ **Human-Tiger Conflict**

Human –Tiger conflict is regular phenomenon in forested area of Sundarban. There are provision of compensation from Government for the families of fishers killed by tiger. But fishers do not have BLCs or illegal fishers do not get compensation even after tiger attack. Moreover, to collect compensation marriage registration certificate must be shown, which sometimes becomes difficult to the above stated helpless fishers. In case of Tiger bite one time compensation for each family is Rs.75000 to Rs.100000. But they have to pay at least Rs.20000 to Rs.30000 to Tiger Range Office like Sajnekhali, Canning, and Police Station of Sundarban Coastal at the time of collection of compensation.

**Discussion**

A biological product that is harvested from a forested area is commonly termed a “non-timber forest product” (NTEP). (Shackleton and Shackleton 2004). The Sundarbans was declared a reserved forest under the Forest Act of 1927, so entry into the forest is restricted by the Forest Department. (Banik, 2004)

The Sundarban region has overlapping protected area (PA) designations under the wild Life (Protection) Act (WLPA), 1972, (as amended in 2002 and 2006) Core or Critical Tiger Habitat (2007), National Park (1984) and Wild Life Sanctuary (1976). It was earlier declared as the Sundarban Tiger Reserve (STR) in 1973. Other special designations are the World Heritage Site and the World Heritage Site and Biosphere Reserve (SBR) in 1989.

Extractive activities including fishing are prohibited in the Critical Tiger Habitat, or the core of both STR and the SBR. Non-motorized crafts, with Boat License Certificates (BLCs), seasonal passes and permits for using dry fuel are permitted to fish in the inter-tidal waters that form the buffer zone of the STR. (Patel, et al., 2008). According to a survey report in 2011-2012 a single BLC costs Rs.16000, in 2012-2013 it raises to Rs.20000, in 2013-2014 it raises to Rs.30000 and in 2014-2015 it costs Rs.35000. (Pramanik 2015)

Since 2007, seasonal pass has been issued only for nine months, from August to March instead of the whole year. From April to July is declared as the closed season for fishing on ground that

it is the breeding period of fish. But the strong argument is that how the fisherman will maintain their livelihood during these three months.(Mistri, Das 2015)

### **Conclusion**

The Sundarbans, a unique ecosystem is an important breeding ground of fish. Livelihood options are limited and fishing is one of the most important sources of livelihood. One of the main issues highlighted by fishing communities is that the number of BLCs has remained fixed since 1980. Fishers point out that the process for distribution of BLC was problematic in the first place. Fishers were required to register within a month of notification. Many fishers, particularly those in remote villages, were unable to do so and were thus not issued BLCs. Informal arrangements exist within villages for active fishers who wish to fish, to lease BLCs from the owners, thus making the BLCs a “leasable property”. Fishers who cannot afford to pay the lease amount have little option but to fish illegally in the permitted areas, given that there are few other livelihood choices available.(Patel, et al., 2008)

### **Recommendations**

According to Wild Life Protection Act there should be provisions for alternative packages for the livelihoods of marginalized people of Sundarban. People living here remain marginalized due to low priority assigned to their problems. It is important to improve access to basic services, such as health, education, training and capacity building and basic infrastructure. This would help in developing other skills and in reducing pressure on natural resources in the long term. (Patel, et al., 2008)

The pressure on the resource utilization can be eased to the extent where alternative livelihoods are available. This is a challenge for both governmental bodies and NGOs providing education, microcredit and access to markets.(Chowdhury.Md.T.A.,2010).Last but not the least livelihoods of fishers can improve only if policy makers focus on practical livelihood problems like lack of alternative income generating activities during bans on fishing, money lending system and serious lacks in infrastructure for health and sanitation.(Sarker).

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Appendix I



Fig: 2 Boat License Permit

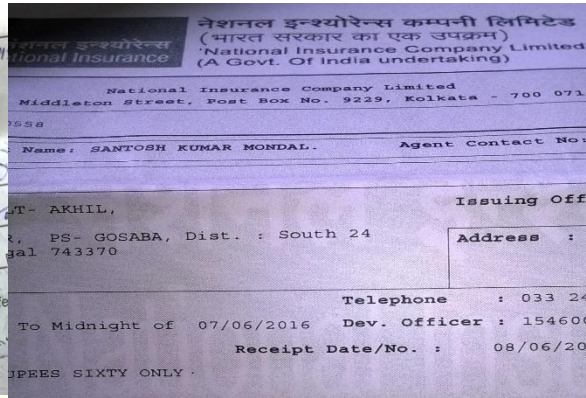


Fig: 3 Insurance Scheme of Fishers

Source: Primary Survey 2015 at Bijoy nagar G.P of Gosaba Block, Sundarban, South 24 Parganas

Appendix II

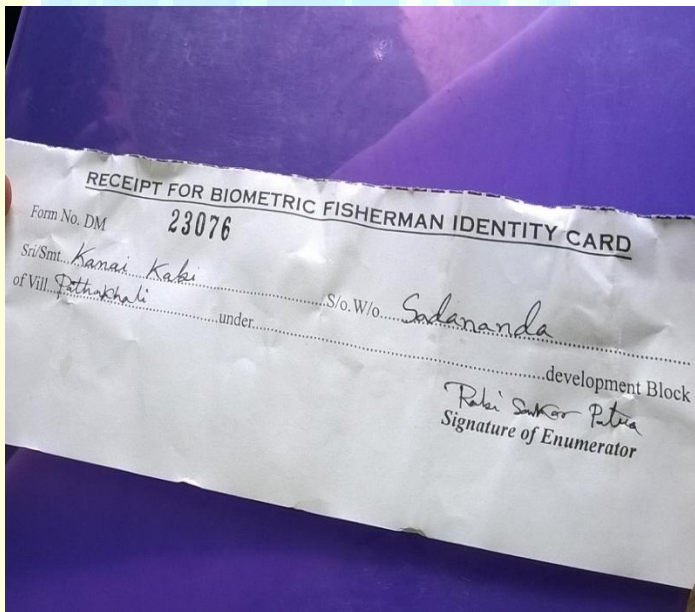


Fig: 4 Marginalized Fisherman of  
Fisherman



Fig: 5 Acknowledgement of Biometric

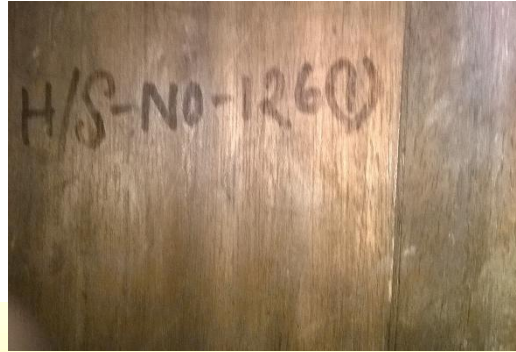
Biraj nagar G.P of Gosaba Block  
Sundarban, South 24 Parganas

Identity of a Fisherman of Pathankhali G.P of  
Gosaba Block Sundarban, South 24 Parganas

Source: Primary Survey 2015 at Biraj nagar and Pathankhali G.P of Gosaba Block,  
Sundarban, South 24 Parganas



Appendix III



**Fig: 6 Household number given by Government Authority after reconstruction of houses as post Aila relief**

**Source:** Primary Survey 2015 at Pathankhali G.P of Gosaba Block, Sundarban, South 24 Parganas

