

Socio-Economic History in Sundarbans

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Abstract:

Susceptible to frequent cyclones, floods and storms, Sundarbans Biosphere Reserve is a vulnerable ecosystem. The study realistically analysed SBR impeccable socio-economic vulnerability. In order to measure the exposure, the average storm surge, slope level, flooding, near drainage and drainage density were employed, while the sensitivity and adaption of data collected from the extensive field survey of 570 SBR families were studied. The analysis revealed very high sensitivity and high susceptibility of the Blocks of SBR in Basanti, Gosaba, Kultali, Namkhana and Patharpratima. Continued exposure to cyclones and storms, frivolous infrastructure, poor social structure and loss lamenting are important obstacles to overall socio-economic upliftment. Consolidated infrastructure structures, an efficient early warning system, disaster surveillance centres, improved connected transit within isolated islands, and better livelihoods, education, and awareness can improve communities' socio-economic conditions. The Pragmatic approach has helped to comprehend the consequences of climate change in a coherent manner and has identified adaptation solutions and steps to mitigate the SBR coastal society. Therefore, the technique has shown beneficial in analysing the socio-economic impact of dangers caused by climate change on coastal communities. This study is a critical analysis of the socio-economic history of Sundarbans.

Keywords: Livelihood, Sundarbans, Agriculture, Migration, Fishing, Tourism.

Introduction:

The Sundarbans are a natural area of Bangladesh and Eastern India in the Bengal region. It is the world's largest block of halophytic tidal mangrove forest. The Sundarbans comprises about 10,000 square kilometres, with the remaining 60 percent in Bangladesh and India. Length: 21° 55' 59.99" N, Length: 88° 50' 59.99" E. The region of Sundarbans is one of West Bengal's salty and backward areas. In Sundarbans's life following the disastrous cyclone Aila in 2009, there has been a huge transformation. The level of the sea is becoming high, farming disrupts. Immigration begins under this condition. The households adapt their land from sea level into higher regions. Their lifestyles and sorts of employment have also changed with this intermigration. Males aged between 15 and 60 from nearly every household start migrating to cities for life-support as multi-purpose labour following their loss of farming opportunities. And they rarely visit their homes even if they do not spend a lot of time seeing their families. Sometimes masculine individuals don't frequently send money. As a result, remaining members of the family can hardly survive and it is the next time it is necessary, respectively, that young women are the husbands of their males [1].

Since the residents of Sundarbans rely on agriculture and the activities of natural resources. The "Aila effect" caused soil and water to be salty after 2009. In fact, the level of salinity for which farmland has degraded in many sections of the coastal district of south 24 Parganas has risen at sea, tidal waves, tidal wave and storms. Workers are therefore urged to migrate to better employment prospects. Some ladies in the region knew their agriculture in their farmland quite well. As a young lady, as a mom, daughter and baby's daughter, she feels her immediate responsibility and is at home to the public. They take several money-making initiatives, for example housemen, farmer, home, crab, fishing, etc. There have been endeavours by the central and state governments to make women autonomous but inadequate.

The region of Sundarbans is one of West Bengal's salty and backward areas. It is a delta plain physiographically with an extensive network of streams and is ravaged by natural disasters every year, e.g., by bay depressions. Sundarbans's locals generally participate in agriculture (single cropping because of increased salinity), aquaculture and the harvesting of non-wood-built forest goods. So, in Sundarbans there is a deep feeling of sorrow about shadows. The long exodus, particularly for male workers, has begun in the form of migration. People go from an operating setting to a better-quality operating setting. It is often one of the key paradigms in the changing socio-economic situation of an area, which affects the population socio-economic composition in the two places. The population size, population growth and population redistribution are determined in an area. Rural people are often at greater risk of poverty and lower incomes than urban places [6]. An important technique to reduce environmental and non-environmental stress vulnerability is also included. Labour migration is an all-encompassing element of economic growth [7]. The normal aspect of agricultural and industrial activity is population mobility for temporary or permanent working objectives. In rural areas, individuals migrate to urban regions to gain more job chances, higher incomes, better pay and improved facilities due to fewer job opportunity, poor pay, drought, lack of basic utilities, landlessness and societal norms. Labour exodus from rural areas has a major effect on regional development, particularly migrant family welfare.

Migrant workers' scholastic status is very poor, and they often labour in the illiteracy fields of semi-skilled or untrained job.

Study Area:

SBR is situated between 21°40 to 22°40 N and 88°03 to 89°07 in the east, and has a huge variability in its biodiversity. 4264 square kilometres is covered in the mangrove forest, 2195 square kilometres is covered by wetland and 5 366 square kilometres are under construction. SBR is made up of 19 blocks, spreading over the north and south of the districts of West Bengal. The SBR comprises of 24 blocks. The spectacular deltaic habitat supports a wide diversity of mangrove species. With 102 islands (48 inhabited and 54 unoccupied), the SBR is experiencing a tropical wet climate with short dry spells between November and April. A reserve with strong rainfalls during the monsoon season is experiencing high relative humidity and temperatures throughout the year. The temperature fluctuates from 2 to 4 degrees C and in March the temperature range is as low as 43 degrees C. The yearly mean precipitation ranges from 150 cm to 200 cm. The most typical phenomenon of the mountain is tropical cyclones, storms and flooding (Figure 1). The major rivers in the research area include Hooghly, Ganga, MuriGanga, and Ichamati. As a result of the extensive deposition work of the Ganga and Bay of Bengal, SBR owes its recent geneological origins (6000–7000 years earlier). The fragile delta comprises 4.37 million people and offers huge livelihoods. Agriculture is the cornerstone of economy, while the other key economic activities in SBR include prawn farming, fishing and sweet collecting.



Figure 1: Location of SBR

Ecosystem of Sundarbans:

Sundarban landscape is dominated by deltaic structures including a network of water channels, salt marshes, tidal sandbars, and islands. The Sundarban islands are mixed with tidal waters. Tides contribute significantly to the sculpture of the physical elements of the land and the countryside continues to change from high to low tide. However, the Sundarban landscape does not form the intricate interaction between tides, current, sediments, and organic matter by just one element alone. The system involves tides. The Sundarban is constantly altering and evolves through the biotidal accretion and erosion processes. Sundarban's natural resources management concentrates on plant and wildlife protection rather than habitat conservation in both countries, and misses spatial progressions and interconnections across the entire ecosystem. These interconnections between a range of factors, some of which existed outside of the physical boundaries of the forest and affect the ecosystem, prevent accurate analyses and hence lead to poor or minimal progress in planning and management of resources. Thus, if Sundarban management is to capture such interrelationships, it needs to widen its geographic and material bounds.

In the last few 5000 years biotechnological processes and marine and atmospheric agencies have been forming much of the present Sundarban region. Erosion of the edges of the estuary and changes in the sea surrounding the deposition of silt and riverbanks occur simultaneously. This shapes the country's masses (such as beaches, dunes, marshes etc.) in the area and causes water canals to alter direction. These changes can be accelerated by efforts to recover land and increase the sea level as a result of climate change. The region needs to be planed for natural and man-made change and strike a balance between nature preservation and people's demands. Approximately 30 percent of the Sundarban is watered and unique ecology is formed by rivers, canals and tidal streams in this mangrove forest. The distributors of the Ganga River system fuel the rivers of the region. The intake of freshwater from these rivers contributes to the salinity generated by Bengal's maid seas. However, in recent decades, salinity has risen and moved further inside the area because of the reduced freshwater flow due to the di version and dams produced by man and the sea level.

The Sundarban's sensitive ecosystem is also exposed to tropical cyclones, storms, erosion, flooding, drought, frequent flooding by high tide which causes loss and disruption of life and livelihood and is sometimes irreversible or long-term harm to the ecosystem. Their environment has become fragile [8]. However, studies demonstrate that mangroves can address such risks and, in most circumstances, recover from damage.

Empowerment of Males and Females:

Since the 1980s, empowerment of women has grown popular in the field of development. Women's empowerment is clearly recognised as crucial to sustainable economic growth and poverty reduction in emerging countries. Women, like men, are an integral component of society and society cannot move without them. Men and women in every culture fulfil various roles. In one way or the other, migration affects these roles. The impacts on the lives of migrants but also the family left behind are influenced by migration. The role of other members changes a lot with the absence of the family leader. This movement influences women's life. She has to perform the double part in home activities, especially as a spouse migrates, and in lack of a father, she must also play a father's function. It is also necessary that the women do more work and more work. In addition to the duties of the household, she also needs outside activities. This dual position either increases or boosts their decision-making capacity.

A survey of the research on the effects on families of male migration shows two kinds of affects, the one on the autonomy of women, because the absence of spouses pushes or free them to take on duties they usually do not do. The other sort is financial issues and increased women's duties. Furthermore, in some circumstances a sense of responsibility outside the home might increase the strain for women. In a study, the empowerment of women left behind seemed evident in three areas: (a) decision-making at the household level; (b) access to and control over income; and (c) mobility. The economic decision-making capacity of women at the home level is increased by paywork and education. The study indicates that relatively few women wage workers have the utmost economic decision-making powers. However, for big household purchases women prefer to ask consent from their husbands since they are 'bread labourers' when decisions are decided on low-priced items or things required on a frequent basis. Not only is women's increased capacity good, but it also has implications for society as a whole. The absence of a male enhances women's freedom and independence and changes the life of every other person involved with the female. One of the important indicators in empowerment research is child-related decision-making. The main priority and challenge for left-wing women is frequently recognised as child health and education. The literature shows that the woman is unable to address the dilemma relating to her children because of her husband's absence. Regardless of migration, women in nuclear families have complete access to money. But the management of husband's revenue depends on such aspects as marital span, marriage style, parental household socio-economic level and membership in a social group. This dimension is somewhat related to economic decision-making as economic decision-making is one of the most important indicators for controlling revenues. A number of additional studies have found that male migration does not impact the role of gender or the standing of women. Finding that the impact of male migration on women's decision-making or mobility was not significant. Male migration does not alter the position of women much, despite an increasing burden of employment and obligations, in a qualitative research in Armenia and Guatemala. On the other hand, they found that while the workload for migrants was considerably higher, they had more household-based decision-making authority.

Women in agriculture are old, although its nature and scale have changed throughout time and geography. In recent decades, however, women's participation in agriculture became more evident due to better data gathering and greater involvement of women in agriculture. 4 This trend is known as agriculture's feminisation.

Women are both engaged in artisanal and business fisheries in Sundarbans. They often do most of the tasks involved with collecting and processing finfish and other fish. Women engage in various fishing and allied activities such as fish and fish seed collection, pre-or post-harvest, net repair and preparation, fish drying for daily work, household activity, various organisational activities such as SHG and Fodder activities, food, forage, timber, fuelwood collection [2]. Food, fuelwood and other fish and fish collection activities. One of the poorest sections of the country is in particular the Sundarbans and this "fringing zone." Instead they are unpredictable, albeit they have plentiful natural resources.

An SHG is a community groups with 10-20 members. An SMS is a community-based group. They are mostly women with similar social and economic origins, who all get together willingly to regularly save little amounts of money. For numerous reasons, a single phenomenon is made, and in every instance, the same is always true here, even when it is in the name of a movement. The leading motive for the formation of SHG is savings in 69 percent of cases while only 2 percent say they can be empowered. They all receive loans and try to maintain relationships with the adjacent bank. Benefits resulted in empowerment, because the measuring of benefits must be linked to if there is any prospect of creating changes in the presence of a community [4]. It is easy to see that the community will violate the name of the impoverished if benefits are provided. The ability to

decide and decide on others means how strong a specific community is; it is here that this decision-making power is increased.

In addition to cooking, taking care of the family and keeping its mud-huts smooth, they are now joining forces to plant mangroves in the neighbourhood to build green slums that would be vital for their livelihoods and their livelihoods local ecosystems as well. It was the ladies who took responsibility for protecting their quickly crumbling coastline. Awareness of the environment and a greater understanding undoubtedly have impacted views in this area. “Some people never scared to enter deeply into the woods to survive and nobody understands the value of protecting the forests better than they do, Professor Ashish Ghosh, an environmentalist and director of the Center for Environment and Development, remarked. They know today more than ever that they themselves must fulfil that task.”

Impacts of tourism development:

The impact of tourism on the Sundarbans Tiger Reserve local community of India is very efficient. Tourism has a positive impact on the opportunities for jobs, the development of infrastructure, increased revenues, environmental costs and education [9]. Tourism development has also been proven to have negative effects on price rises and a neutral effect on cultural development. Environmental costs except. It also concluded, as shown by responsible tourism at Sundarbans Tiger Reserve, India, that tourism developments have not increased pollution, increased unlawful practise like smuggling, overcrowding and congestion and increased litters and rubbish in the region. Sundarbans Tiger Reserve’s tourist traffic is quite modest compared to other Indian reserves, such as the Jim Corbett Tiger Reserve, the Ranthambore Tige Reserve, and many other, because this can have a low detrimental impact on the surrounding ecology. Another argument is that less transport, entertainment and food facilities for the tourist can have a low influence on the ecosystem of the reserve compared to other reserves. The study also showed that men and women are statistically significant in other tourism development areas except for rising income and increasing price levels. In other words, the impact of tourism on employment opportunities, infrastructure development, the cost of the environment, development of culture and education is different from the perception of both men and women, but they share a similar perception of the impact of tourism development on increased revenues and price levels [5].

The Socio-Economic Landscape:

The Sundarbans mainly focus on conservation and management efforts on biodiversity and habitat protection. So far, in India and Bangladesh, planning and strategy are a reflection of the economic value for people living in the vicinity of the forest. These people are one of the poorest in the area, and on both sides of the border, confront identical socio-economic problems [3]. The forest is their main source of livelihood, fuel, food, medicine and materials for construction. In Bangladesh, for example, more than 350,000 people are employed in Sundarban, which works as jaleys (fishermen), bawalis (woodcutters), mouals (honey collectors) and fry, crab, nipaleaf and stulk-grazers. Nearly 2 million people live in India, mostly from the fishing, crabof, honey, beeswax and alliance activities (Table-1). The Sundarban is connected to the Sundarban.

Agriculture and fishing and shrimp fry, crab and shrimp gathering are the common means of gaining a living in the Sundarban by the restriction on wood harvesting in both countries. Modern living opportunities have also gained appeal in recent decades including tourism and brackish water shrimp farming. In the recent decade, people in India’s Sundarban Biosphere Reserve have showed continuous population growth, as they have decreased in regions around the Bangladesh Sundarban Reserve Forest. A persistent source of worry and vulnerability for people in the Sundarban region is the risk of natural dangers combined with the unpredictability of land and water. The main reason for this movement is the region’s fragile ecosystem, the threat of natural disasters, environmental degradation, the scarcity of drinking water caused by rising salinity and insufficient development of infrastructures in peripheral areas which reduce livelihood alternatives.

Practices of management and conservation The inhabitants of the Sundarban area live in intimate contact with raw environment, and their traditional traditions, religious beliefs, rituals, folklore, arts and crafts support the preservation and harmony with environment. In the British era the first appeal to save forests was made in 1862 when scientific management of the Sundarban mangrove forest was established. In 1875–1876 colonial rulers decreased forest production and controlled resource extraction using the government licences system, including parts of Sundarban declared restricted forest in 1875-56 under the Forestry Act (1855). Despite this, standing resources of other trees decreased in the 1930s as a result of unregulated falling, and the Curtis plan was therefore put into force in 1931, based on a rigorous scientific inventory. The Curtis plan continues to be the last coordinated forestry evaluation for the whole Sundarbans. Then, Sundarbans, which focuses primarily on their side of the forest, were relevant legislation, policies and management plans.

MajorProfessions	AnnualIncome(INR)	Lifetime Income(18-65 Years)(INR)
Agriculture	44,378	20,85,719
Touristhelper	24,050	11,28,000

Shopkeeper(TouristZone)	80,000	37,60,000
Pet breeding	36,000	16,92,000
Apiculture	16,000	7,52,000
Collection of fishing, crab & honey	74,283	34,91,257
Boatowner	2,00,000	94,00,000
Hotelowner	3,00,000	14,100,00
DailywageNREGAUnskilled	15,150	7,09,700
NREGASemiskilled	19,650	9,16,500
NREGASKilled	26,000	12,22,000
Ifdiesat40yrsduetotigerattack		16,34,204

Table-1: A comparison of annual and lifetime profits shows how it’s beneficial to depend on forests financially despite the risks associated.

Conclusions:

Although the Sundarbans must clearly be seen as one ecosystem, the problem is how this joint effort can be implemented. Bangladesh and India are separate countries, which requires the participation and authorisation of their respective governments in each interaction. However, the Sundarbans is directly involved with West Bengal state government. Therefore it is vital to participate. Lastly, on both sides of the border, governance rules and problems differ. This complicates it.

Regional platforms must be formed and expanded to operate together with other regional platforms through sectors and with change drivers in various rivers and reservoirs. The combined Sundarbans region has the prospect of sustainably being developed and managed as one ecosystem through several agreements between the two nations. Several common bodies for the conservation of the Sundarbans were set up in recent years by the governments of India and Bangladesh. In order to maintain climate change dynamics and increasing socio-economic needs, the present degree of collaboration is not enough.

Building a consensus in collaborative environmental conservation and management initiatives starts with national objectives, including economic development, security, local population concerns and requirements. Therefore, it calls for trust and political will, conversation and openness platforms, knowledge and information, capabilities and instruments to integrate competing demands, and mutual benefit identification. Successful Sundarban management will involve the creation at various levels of effective institutions to offer incentives and disincentives. More significantly, the institutions must be genuinely representative and must contain systems that encourage interaction with stakeholders. Accords will only work on the ground if stakeholders are involved and supported and local politics are considered. Regional platforms must be included in national agendas and international dialogues to catalyse and mobilise them.

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