

Unveiling the Tiger-widows of Sundarbans in India: analysing the factors behind the incidence

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ABSTRACT

A major portion of population from the fringe villages of Sundarban Reserve Forest depends upon the forest resources as their livelihood activities. Thus, proximity of human settlement and Tiger Reserve and expedition to the forest for resource collection made Human Tiger Conflict (HTC) a regular event in Sundarbans. Most of the forest-goers are landless poor people, husband being the only earner of the family, and his untimely death in tiger attack hurl the widow into deep poverty and hardship. The study attempts to analyse the factors that lead them to such incidence and their coping strategy to overcome such situation. The study focuses on 264 households of tiger widows spreading over 11 villages that are near to the forest having greater population of tiger-widows, i.e. Kultali and Gosaba block of South 24 Parganas. Both primary and secondary data are being used for the study.

Keywords: *Tiger-widows, human-tiger conflict, livelihood, forest-resource, livelihood strategy, ostracize.*

1. Introduction

Along the Sundarban coastal areas, where the dense forest passes into the mangrove swamp, especially the southern region is enclosed with scores of wild animals and estuaries filled with crocodiles which are virtually uninhabited. This area acts as the last preserve of Royal Bengal Tiger and site of tiger conservation project and considered as a 'World Heritage Site'. During 2011-12, about 81 tigers were trapped by camera trap analysis conducted by World-Wide Fund for Nature (WWF) and Wildlife Institute of India (WII). However, the latest tiger census, 2022 indicates that the Indian Sundarbans has a population of 101 tigers which is a steady trend of increase from the 88 tigers in the 2018 census. Another encouraging fact that is emerging through ongoing census, 2025 that the

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number of endangered species along with tiger are gradually increasing in South 24 Parganas.

This apex predator requires about 5-10 square kilometres to roam around and 7.5 kgs of meat every day. Aquatic life acts as the preliminary source of about 17.5 per cent of the tiger's food supply (Naha et. al, 2016). Wherever wild tiger populations survive, and encounter landscapes dominated by humans, conflicts happen specifically in the surrounded areas of the Sundarban Reserve Forest. Natural disasters like cyclone, sea-level rise affect the forest and the wildlife in Sundarban detrimentally, as a result the tiger moves closer to village in search of food (Bhattacharya, 2012). Sometimes the tiger's invasion into the villages causes massive threat to the localities and the cattle become easy prey. Often wood-cutters, fishermen and honey collectors fall prey to tigers as they venture deep inside the forest for their livelihood. This livelihood dependence on the forest resources, intersects the incessant human tiger conflicts (HTC) worsening the risks for indigent communities. These intersects are intensified by climate change, governance restrictions and socioeconomic pressures, creating vicious cycle where habitat loss drives tigers into human spaces, while hardship pushes people deeper into forests.

The recent, increasing conflicts between human and tigers are due to remarkable growth of human populations in the forest is one of the reasons (Chatterjee, 2023). Human deaths due to human-tiger conflict (HTC)¹ are fluctuating from a few per year to potentially over 36 (Naha et al., 2016), though many attacks go unreported to authorities, making actual count difficult. Post 2020 cyclones like Amphan, Yaas united with COVID-19 induced reverse migration, have increased forest-dependency and HTC. HTC has resulted in 664 deaths from 1985-2008 with 31 deaths post 2020, mostly in forests (Pathak et.al., 2025). Conservation policies like Sundarban Reserve Forest restrict access, charges fines varied from INR 300 to 4,000 and deny compensation for entries without permits, criminalising livelihoods and fostering under-reporting and trespassing.

After the death in tiger attack the family of the victim hurls into deep poverty and hardships as men typically serve as the sole-earners, engaging into high-risk activities like fishing, crab-collection, honey-collection etc. in the forest. Their widows face a triple blow- locally stigmatised and ostracised as tiger widow (Bagh-Bidhoba) or husband eaters (swami-khejo in Bengali); sudden loss of the breadwinner resulting immediate loss of income and lack of support or no support

from the government pushes the families into deeper poverty forcing children into same high-risk forest dependency.

These conflicts also create a threat of trauma, and stigma to the tiger widows who face the divine curse of Bonobibi, causing isolation, higher stigma scores (65.90 vs. 35.86 for normal widows) and mental health issues (44% diagnosed and 14.8% major depression, 5.5% PTSD) (Chowdhury et al, 2016).

This landscape requires holistic interventions that view Sundarban as an allied human-nature system prioritising equity to reduce conflicts and build resilience.

So, the study focuses on:

1. What are the locational factors leading to such human-tiger conflict resulting into deep hardship of their widows?
2. What are the socioeconomic factors leading them to the incidence of becoming a tiger widow?
3. What are the strategies they adopt to survive in the situation or for betterment of their condition?

2. Objectives

1. To identify the locational, social and economic factors behind the incidence of tiger widows (TW)²
2. To identify the strategies adopted by them to survive in the vulnerable situation.

3. Methods

Based on a pilot study conducted on April 2023 several villages were visited (Table 3) afterwards. A structured questionnaire has been used as a tool to conduct the survey. The questionnaire has covered the required domains that are needed to answer the research questions. 264 Households from 11 villages out of Kultali and Gosaba block interviewed along with interviews of some key informants. Selection of the households for the purpose of the interview are only those who were willing to participate.

3.1 Data sources

Both primary and secondary data sources are used for the study. Secondary data sources that include various departments of the state and

central government, Panchayati Raj Institutions (PRIs), Block Development Offices (BDOs), forest ranger offices and published and unpublished reports, articles, thesis to different non-governmental organizations (NGOs). The major sources of secondary data are as follows in the details:

- Census of India 2001 and 2011, Office of the Registrar General of India (ORGI), National Statistical Office (NSO) (Migration in India 2020-2021) and Village Directory.
- District Statistical Handbook of South 24 Parganas, Bureau of Applied Economics and Statistics (B.A.E. & S.), Department of Statistics and Programme Implementation, Government of West Bengal: The B.A.E. & S. gathers wide range of data sets from socioeconomic infrastructure to climatic data from different governmental sources and publishes a handbook for all districts of West Bengal. A handbook of South 24 parganas district provides data up to Community Development (C.D. Blocks) levels.

Along with these, other important sources are Department of Sundarban Affairs (DoSA), Government of West Bengal; 19th and 20th Livestock Census, Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare, GoI.

Primary data are collected through field investigation. Structured questionnaire schedule are used to collect data. A total of 264 households (HHs) are surveyed. The survey was conducted in three phases: in April 2023; August 2024 and in June 2025.

3.2 Sampling design:

Sundarbans is the largest deltaic region in the world and fringed over 105 islands with a labyrinth of rivers, rivulets and creeks. The Indian side of Sundarban is the southernmost part of the delta mainly in the coastal districts of West Bengal namely South 24 Parganas and North 24 Parganas (Arbesi Block only). The Dampier-Hodges line separates Sundarban from rest of the state.

The North 24 Parganas Sundarban shared the international border with Bangladesh, separated by rivers like Kalindi, Raimangal and Harinbhangha. A small portion of the reserve lies in North 24 Parganas (Arbesi Block) while the most of it is in South 24 Parganas.

So, the sample for the study focuses on South 24 Parganas.

Table 1: Protected Area (National Park) of South 24 Parganas

Protected Area (National Park)	Area (in Sq.Kms.)	Flagship Species	District
Sundarban National Park	1330.10	Tiger	South 24 Parganas
Sajnekhali Wildlife Sanctuary	362.40	Tiger	South 24 Parganas

As per Census Data 2011, the South 24 Parganas district administrative profile is divided sub-division wise that includes five major sub-division of South 24 Parganas like Alipore sub-division, Baruipur sub-division, Canning sub-division, Diamond Harbour sub-division and Kakdwip sub-division.

C.D. blocks in accordance with the sub-divisions which are near to forest having greater population of tiger-victims were selected for the study.

Table 2: District Administrative Population (Census, 2011)

Sub-division	C.D. Blocks	Mouzas	Inhabited Villages	No. of Households (HHs)
Baruipur sub-division	Kultali	46	43	45099
Canning sub-division	Gosaba	51	50	58197

Census villages are considered as a least geographical unit of sampling, and a respondent in a household within a census village is considered as a least social unit.

11 villages from these two C.D. Blocks were selected for the study based on proximity to the forest and increased number of tiger attacks as presented in the news from where 264-household data of the tiger attack victims have been collected to conduct the study. These villages are:

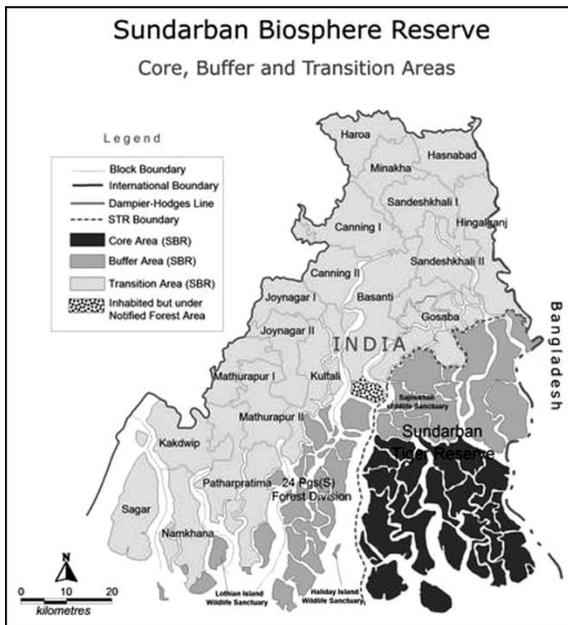
Table 3

Blocks	Villages	Nearest Town	Distance from Nearest Town (in Kms)	No. of Household (Surveyed)
Gosaba	Lahiripur	Canning	120	33
	Pakhiralay	Canning	49	12
	Kumirmari	Canning	107	35
	Chhota Mollakhali	Canning	90	39
	Satjelia	Canning	76	31
Kultali	Deulbari	Jaynagar	33	46
	Katamari	Jaynagar	30	8
	Kaikhali	Jaynagar	40	3
	Purba Gurguria	Jaynagar	37	25
	Gopalganj	Jaynagar	35	14
	Dakshin Durgapur	Jaynagar	31	18

Source: Field Survey

The no. of HHs surveyed out of the total affected HHs (tiger attack victims/ tiger-widows) is considered in the study.

Plate 1



Source: Geographical Review. 105. 10.1111/j.1931-0846.2015.12101.x.

4. Discussions

Factors behind the incidence of Tiger-widow

In rural India, agriculture forms the main livelihood option making this the backbone of the economy (Kumar & Parappurathu, 2013) and Sundarban is no exception to it. However, the natives often face consequential challenges based on their socio-economic conditions and geographical location. The rural locales have a substantial lack of access to clean water, sanitation and healthcare services. This leads them to the poor health conditions creating hindrance to engage in rural activities. Also, they encounter difficulties in utilizing economic opportunities (Saif-Ur-Rahman et al., 2018).

The communities residing in the delta always infiltrated forest to gather forest resources for survival. Many people residing in the rural areas of Global South, forests are intricately woven into their social cohesion, their livelihoods and their well-being. Estimates of forest depended people's count vary but Food and Agriculture Organization (FAO) of the UN report that around 1.3 billion people (FAO, 2014) are dependent on forest or forest products for their livelihoods; whereas world bank puts this figure at 1.6 billion (World Bank, 2001) which includes 350 million people who depends on dense forest for their daily means (Miller & Hajjar, 2020).

Such grazing leads to frequent human-animal conflict and many lose their lives in tiger attacks. Even though the deaths by tiger attacks have increased, the full extent of the problem is unknown. A large proportion of such deaths go unreported because of a legal conundrum. Access to the Indian Sundarbans is dependent on permits issued by local forest officials. However, many locals are forced to enter the forest illegally because they cannot afford these expensive permits. To avoid being harassed by forest guards, families of tiger victims who entered the forest illegally refrain from officially reporting the mishaps.

Women who lose their husbands to tiger attacks become 'tiger widows'. They are believed to be ill omen and are ostracized as '*swami khejos*' (Jalais, 2004) (husband eaters in Bengali). Tiger attack widows (*bagh bidhoba*) are often prevented from undertaking the traditional occupations of the islands—agriculture, fishing and crab collection. To make matters worse, those who had entered the forests without permission, if they get killed by the tiger attacks, it disqualifies the family from availing financial compensation from the government.

Consequently, the widows face the immediate blow of societal as well as financial traumas.

So, the study tried to find out the economic, social and locational factors which led them to the incidence of tiger widow.

4.1 Locational factors

Several accidents happened in those villages which are nearer to the Sundarban Reserve Forest, the closer the proximity to the forest the more the likelihood of human-tiger conflict. These remote villages have limited opportunities, making people heavily dependent on natural resources of the forest including fish, crab, honey, and firewood. So, interactions between humans and tigers are frequent, resulting in fatalities.

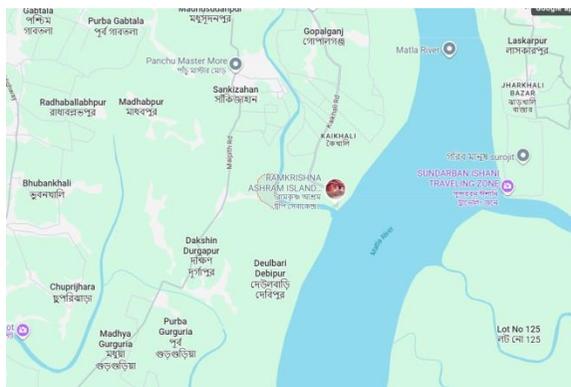
Kultali block

Kultali CD block is situated in the central part of the Indian Sundarbans region and bordered to the south by the Sundarbans National Park and the South 24 Parganas South Forest Division. Multiple villages like Deulbari-Debipur, Purba Gurguria, Dakshin Durgapur near the Ajmalmari Forest Block of South 24 Parganas. These villages are separated from the forest by a narrow creek called Makri.

Kaikhali, Katamari and Gopalganj village contain the Dorabagda Mangrove Patch which is part of the larger mangrove ecosystem that forms the Sundarbans.

The villages studied from Kultali Block:

Plate 2



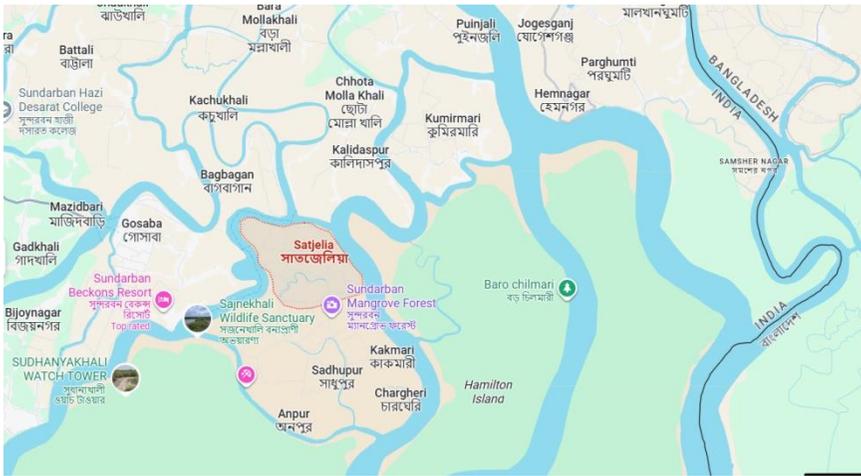
Source: Google Earth; Field Sites in Kultali Block.

Gosaba block

Gosaba block within the Sundarban forest is difficult terrain because villages in the Sundarbans are spread across numerous islands and are in constant flux due to changing river channels and land erosion. The proximity to the forest makes residents of these villages vulnerable to natural disasters and human-wildlife conflicts, such as tiger attacks.

Based on their geographical location the key villages which shares the border with the dense forest are Kumirmari, one of the last frontiers of the human habitation before the core area starts; Lahiripur and Satjelia are located near the border; Pakhiralay situated in the Satjalia gram panchayat area, this village is a well-known destination for ecotourism, is on the edge of the forest also a part of the buffer zone area which is the part of this study.

Plate 3



Source: Google Earth; Field Sites in Gosaba Block

4.2 Economic factors

The economic factors considered here are family income of the households, land holding by the households, work and work status and number of dependents.

Table 3: Family income

Family Income (Annual)	Code	Percentage	Frequency
<12000	1	1.14	3
12000-36000	2	32.58	86
36000-60000	3	41.67	110
60000-120000	4	13.64	36
>120000	5	10.97	29
Total		100	264

Source: Field Survey

The monthly income of the households varies from minimum of Rs.1,000 to maximum of Rs.10,000. The median income or point of income distribution, gives a more accurate representation of average monthly income of the family. Almost 41.67% households earn Rs.3000 as monthly income and only 10.97% households earn more than 10,000 as income. The rural areas of South 24 Parganas having estimated monthly income in the year 2011-12, more than Rs.10000 is 29.30% (indiastat.districts); 29.36% having monthly income less than Rs.5,000 whereas in the sample survey it shows 75.39% of the households having monthly income less than Rs.5,000.

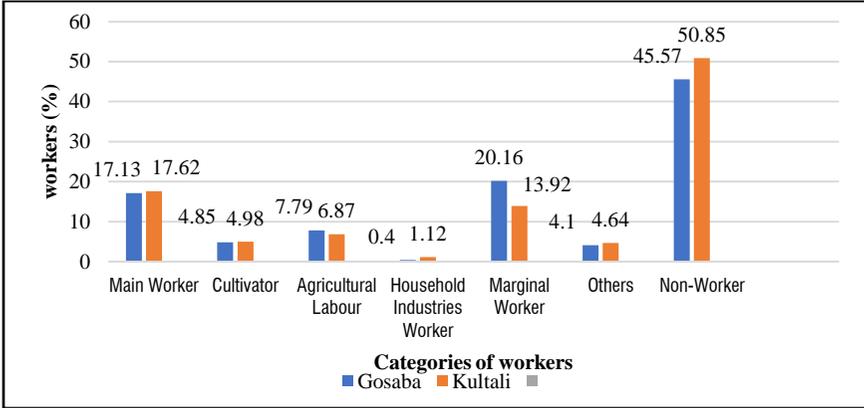
This infers that the HHs surveyed are highly vulnerable in their income status.

Worker and work status:

According to Census 2011, the total number of workers in Sundarban is 1.7 million and the work participation rate (WPR) is 38%, whereas the national and West Bengal (WB) averages are 39.8% and 38.1% respectively. About 59% of workers are engaged in farming (Census, 2011) and 33% are engaged in fishing (B.A.E. & S, 2013) in Sundarban.

Within the total population of Sundarban Kultali and Gosaba block the work force distribution looks like:

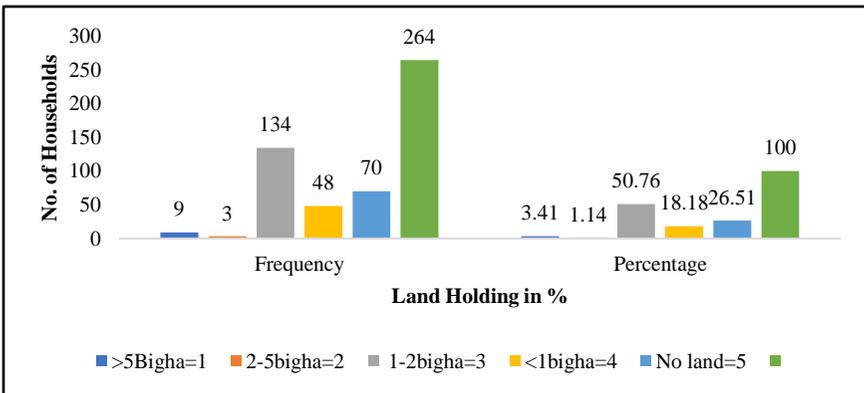
Table 4: Classification of workers in Gosaba and Kultali (Census, 2011)



In the sample of 264 households, it has been seen that 14.68% are agricultural households including both cultivator and agricultural labour whereas, 53.79% were marginal workers and 18.56% were dependent on fishing and farming for their livelihoods.

Also, landholding in Sundarban is primarily marginal in size class 63% distributed among the 86% owners. The increasing population in Sundarban from 3.8 million in 2001 to 4.43 million in 2011 at a geometric growth rate of 1.65% each year, resulting in huge pressure on cultivable land, affecting conversion in settlements, aquaculture (Hazra et al., 2010). Also, due to river erosion cultivable lands were lost (Ghosh, 2012), hence the net cultivable area is decreased. The landholding distribution of the sample looks like:

Table 5: Landholding percentage



Household size: Household size indicates the family burden on the earning member. Various studies (Massey 1990, Stark and Lucas 1988) suggest that large families diversify the labour portfolio through migration. In developing nations more siblings put the responsibility on the elder. The median household size of the sample is 6, whereas the mean household size of West Bengal is 4.6 (Census, 2011). In India, men are the main earner of a family, and their death pushes the widow and children in hardship and suffering.

Dependency ratio: This ratio indicates the economic burden on the country's current working population (aged 15-60 years). A high ratio reflects slow economic growth and placing a greater strain on the working class. In India this ratio will be approximately 543 in 2026, which means the number of dependents on every 1000 working age individuals (Saha, 2025). Whereas, in West Bengal that has been projected as 478 for 2026, implying a better ratio in comparison with the whole of India.

But in the household sample of 264, the median ratio has come out as 2000 which denotes that every working individual carries the responsibility of at least two people, making the scenario much worse.

Livestock: Livestock plays a crucial source of livelihood globally, providing food, income and employment opportunities especially for rural communities and acting as a vital safety net and asset for the poor. Women's substantial involvement in dairy production underscores the sector's importance in gender inclusion and economic development (Priyadarshini et al., 2024). Overall, the livestock sector is vital for increasing farmer incomes, supporting agricultural practices, and providing diverse socio-economic benefits in India.

Like many South Asian and Sub-Saharan countries, India uses Tropical Livestock Unit (TLU)³, a standardized unit to measure and compare between different livestock species (Rothman-Ostrow et al., 2020). Specific conversion coefficients are applied which allows the livestock population into a single comparable unit. TLU has been determined as:

$$\text{Tropical Livestock Index} = (0.7 * \text{Cattle}) + (0.1 * \text{Sheep}) + (0.1 * \text{Goat}) + (0.01 * \text{Chicken}) + (0.03 * \text{Duck})$$

The latest data about livestock in West Bengal is available from 20th Livestock Census, conducted in 2019 where it has seen an increase of 23% in livestock population in West Bengal from the 19th Census,

making it the State having the highest increase in livestock population in India.

Whereas in the sample HHs in Sundarbans have the median TLU score of 0.06 and around 36.74% HHs not having any livestock. Mere 9.84% HHs have TLU score of more than 1.

4.3 Social factors

Social factors lead people to access to quality education, access to healthcare services and safe housing, sanitation and access to drinking water. These factors influence a person's overall well-being by shaping their access to resources and affecting their opportunities. Here, the focus given to access to educational and health facilities as these two are acting as core social determinants of health (SDOH). With the help of these two factors people can foster improved socioeconomic status, enhance health literacy, promote social cohesion and ensure more equitable access to opportunities.

Access to educational facilities

Kultali Block has two government high schools across 43 inhabited villages.

- i. Jamtala Bhagaban Chandra High School (H.S.)
- ii. Baikunthapur High School (H.S.)

In 2005, Dr. B.R. Ambedkar College, the only college in Kultali Block, was established.

Gosaba Block also have two Government sponsored schools:

- i. Gosaba RR Government Sponsored Institution UP [Upper Primary]
- ii. Kumirmari High School

In 1961, Sundarban Hazi Desarat College was established in Pathankhali.

According to the 2011 census, the total number of literate persons in the Kultali CD block was 134,101 (69.37% of the population over 6 years) out of which males numbered 78,601 (79.01% of the male population over 6 years) and females numbered 55,500 (59.14% of the female population over 6 years).

The gender disparity (the difference between female and male literacy rates) was 19.86%. Kultali CD block had the lowest female literacy and highest gender disparity among all CD blocks of South 24 Parganas

district. Whereas literacy in South 24 Parganas district was 77.51% and literacy in West Bengal was 77.08% in 2011.

- The literacy rate of Deulbari Debipur village is about 56.90%, with male literacy at 64.64% and female literacy at 48.60% and out of the widows interviewed in the village 28 are illiterate making literacy rate of the sample as 39.13%.
- The literacy rate of Katamari village is about 52.31%, with male literacy at 61.44% and female literacy at 42.52%. But out of samples of 8 widows 5 were illiterate making literacy ratio as 37.5%.
- The literacy rate of Kaikhali village is about 56.25%, with male literacy at 68.25% and female literacy at 43.73% and out of the widows interviewed in the village all are illiterate making literacy rate of the sample as 0%.
- The literacy rate of Gopalganj village is about 55.49%, with male literacy at 65.36% and female literacy at 44.99%. In the sample the literacy rate remains as 28.57%.
- The literacy rate of Purba Gurguria village is about 70.98%, with male literacy at 79.12% and female literacy at 62.33%. In the case of this village the literacy rate is a bit better among the tiger widows (sample) at 52%. It is because the overall female literacy rates in this village are better than other sample villages in Kultali Block.
- The literacy rate of Dakshin Durgapur village is about 55.97%, with male literacy at 63.34% and female literacy at 48.37%. In the sample the literacy rate remains as 44.44%.

As per the 2011 census, the total number of literates in Gosaba CD block was 172,781 (78.98% of the population over 6 years) out of which males numbered 96,642 (86.40% of the male population over 6 years) and females numbered 76,139 (71.22% of the female population over 6 years).The gender disparity ratio (the difference between female and male literacy rates) was 15.18%.

As per 2011 Census India, literacy in South 24 Parganas district was 77.51%. Literacy in West Bengal was 77.08% in 2011.

- The literacy rate of Kumirmari village is about 71.05%, with male literacy at 79.14% and female literacy at 62.65%. In the sample the literacy rate remains 42.86%.
- The literacy rate of Lahiripur village is about 77.52%, with male literacy at 82.92% and female literacy at 71.95%. In the sample the literacy rate remains as 33.33%.out of the sample of 33 widows only 11 were able to read and write.

- The literacy rate of Pakhiralay village is about 68.09%, with male literacy at 74.53% and female literacy at 61.47%. In the sample the literacy rate remains as 8.33% because only one tiger widow interviewed had the primary level of education.
- The literacy rate of Satjelia village is about 71.60%, with male literacy at 77.75% and female literacy at 65.13%. In the sample the literacy rate remains as 45.16%.
- The literacy rate of Chhota MollaKhali village is about 68.63%, with male literacy at 75.08% and female literacy at 62.11%. In the sample the literacy rate remains as 57.14%.

Access to a lesser number of schools and colleges affecting the literacy rates and the distance between the sample villages and the schools are quite pronounced, hindering the prospect of education level.

Access to health facilities

In 2014, the Kultali CD block had one rural hospital at Jamtala having 25 beds which is the major Government facility for the block (District Statistical Handbook 2014 South 24 Parganas).

- Four primary health centres and 2 NGOs/ private nursing homes with a total of 62 beds and 10 doctors (excluding private bodies).
- There is only one maternity and child welfare centre which is 10 kms away from Purba Gurguria Village. Consequently, villagers face troubles to access the basic healthcare facilities.
- Twelve villages have medicine shops.
- Seven villages have no medical facilities.
- Out of the sample villages only two villages Katamari and Kaikhali are having primary healthcare units. So, other four sample villages not having that facility making them more vulnerable.

In 2014, Gosaba CD block had one rural hospital, two primary health centres and 1 NGO/ private nursing home with a total 71 beds and 7 doctors (excluding private bodies) (District Statistical Handbook 2014 South 24 Parganas).

- Only three villages have primary healthcare centres.
- Nine villages have maternity and child welfare centres but none of these are in the sample villages.
- Only 19 villages have medicine shops in the Gosaba Block out of 172 inhabited villages.
- Two villages have no medical facilities.

Due to these disastrous medical facilities available, natives are heavily dependent on quack practitioners in the sample villages or else they must travel to Kolkata for any kind of medical emergencies. Specially, in case the villages sharing borders with the forest lack of medical facilities make them more vulnerable.

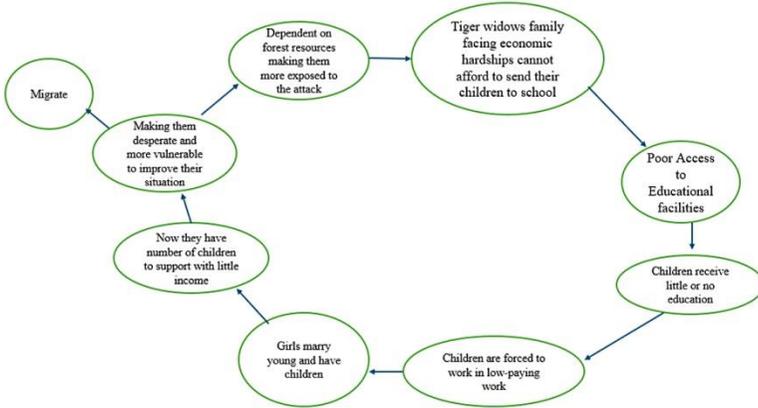
After discussing on the locational disadvantage and the socio-economic conditions it is evident that due to unavailability of opportunities or basic facilities, they are forced to go to forest to collect resources for their sustenance. Environmental income contributes to poverty prevention, through support to current consumption and sometimes through gap filling and functioning as a safety net (Velded et. al, 2007). For the tiger widows the dependency to forest resource-based income increases after they lost their husbands. With not much education, skill and opportunity left they compel to choose 'jongol kora' (forest-based living) as their profession.

Out-migration is one of the most prominent outcomes as their strategy to cope with their situation. Out of the survey approximately 65% households are such wherefrom any member of the household has migrated in search of their livelihood. Three widows in my study, moved to Kolkata in search of work and currently they are working as house help or as a cooking assistant in hotel, and their children are in custody of their maternal grandparents.

Remarriage is not at all encouraged as they are held responsible for their husband's death. In some cases, they are so attached to their deceased husband that they do not want to replace that with someone else. In my study, out of all those who have been interviewed only two young widows who were in their mid-20s married again, to a widowed man who also have children from his deceased wife. So, the chance of remarriage is rare (less than 1%).

To cope with this crisis, they instigated their children to discontinue their schooling and send them to work for the survival of the family. This had led to high rate of dropouts from school and increase in child labour. Many tiger widows will arrange their daughters' early marriage (sometimes at the age of nine) not only to secure their financial condition but also to ensure their social security (Chowdhury et al. 2014). It has been reported that the Sundarban girls are at risk, especially of being trafficked to other states of India (Gupta, 2010).

Plate 4: Vicious trap of the incidence of tiger-widow



5. Conclusion

The Sundarban is environmentally fragile region. Its remote location and habitation of socioeconomically backward people demand a significant role by the Government for the development of the region. Equitable access and distribution of resources, employment opportunities and protection of people are essential prerequisites for this region, then only it would be possible to hinder them from going to the forest. Sundarban is a world biosphere reserve having a global exposure; thus, various non-governmental organisations at national and international level relentlessly work for the development of the region.

NGOs have started up schools for the children of tiger victims and skill development training programmes for the locales. Government has also taken initiatives for creating livelihood options by providing them with livestock and conducting training programs like, building artificial bee hives or fishing in ponds etc. whereas, rural livelihood security programmes like MGNREGA, falls flat on face.

Government also announced one-time compensation of INR 5,00,000 for the tiger-widows and employment of any family member if the deceased had the permit to enter the forest; still only one widow have received the compensation while two widows have got a job in the forest department. Others were entangled in the process of getting it.

Nature Environment Wildlife Society (NEWS) developed SAIME⁴ (Sustainable Aquaculture in Mangrove Ecosystems) model for Sundarban which earns FAO recognition as this model will benefit the

community by promoting climate-adaptive approaches and fostering empowerment, including women's cooperatives. Beyond promoting livelihoods, the model contributes to carbon isolation and overall mangrove conservation. It also focuses on improving market access through branding, certification and farmer institutions leading to substantial increase in their profits. But again, the problem lies in the implementation and monitoring of the model.

All these make them attached to their primary activity as livelihood strategy which is forest dependency, no job diversification and maximising tolerance limit. These lead them to stay in the loop of the victimhood.

Notes

1. HTC is a situation where there is an overlap between human populations and tiger territories. In Indian side of Sundarban increase in the number of tiger as well as human population increases the chance of conflict even more.
2. Tiger Widow (TW) are those women who lost their husbands in tiger attacks and faces social ostracization and hurl into deep poverty.
3. TLU is a standard measure to compare different types and sizes of livestock in tropical regions which has been proposed by FAO and National Livestock Mission (India) also uses TLU as a measuring unit to provide veterinary support and feed subsidies.
4. SAIME is model earned global recognition from FAO which blends mangrove conservation with profitable, sustainable shrimp farming, ensuring 5-30% mangrove cover in ponds, using natural mangrove litter for feed boosting coastal resilience along with farmer's profit by 100%.

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