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SOCIO-ECONOMIC CONDITION OF SHRIMP COLLECTORS IN SUNDARBANS REGION, SPECIAL REFERENCE- HINGALGANJ BLOCK.

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Abstract- Sundarbans region is one of the backward, saline affected region of West Bengal well as India. A large number of people depend on natural resource and forest lack of other alternative likelihood. The study was conducted on the socio-economic approach of the shrimp collectors in Hingalganj block. The survey was conducted on five villages of Hingalganj block which are situated in Sundarbans region. Over exploitation of wild shrimp has resulted in a decline of this resource alarmingly in the coastal region. The average family size of shrimp collectors is 5.1 and average age level was 31 years old. Male and female both are engaged with shrimp collect. More than 2 lacks people out of 44 lacks people are engaged in this livelihood. Their socio-economic condition is very mean and their literary rate is very low. Although government and some N.G.O. are work to develop their condition but this steps not enough .

This paper wants to attempt to investigate socio-economic condition of shrimp collectors.

Key Word- Sundarbans , Wild Shrimp , Livelihood, Aquaculture, Socio-economic.

Introduction- Saline water and tidal river created favorable condition for shrimp farming and it play a vital role to alleviation poverty, farming foreign exchange, created job opportunity etc. in topical and sub-topical region. (Md.M.I. Abdulla-Al-Asif et al. 2005). Total West Bengal coast line length is 180 km. and Sundarbans coastal length is 130 km. (Mondal et al. 2014). Indian Sundarbans region population growth at alarming level in 1951 total population was only 11 lacks and in 2011 total population is almost 44 lacks. (Census of India). More than 300000 people os Sundarbans region is engaged with prawn seed collection and it's a harmfull process for environment. (GR. Chowdhury. 2007). West Bengal government has benn banned the fry collection (Roy Chowdhury et al. 2017). In 2015-16 total sea-food export value near about $4.68 billion and 70% constitute shrimps. West Bengal is one of the big shrimp producer and seafood exporter (U.Sarkar 2017). Lack of other alternative livelihood they have to depend on nature to lead their life.(Al.Asif. 2015). The bagda fry (local name) collector using dragnets and shoot net. (G.K. Das 2006). Shrimp farming has benn identify as a bigger threat of environment in Sundarbans region by Asian Development Bank (S. Bandhoyopadhyay 2002). Many shrimp farming still depend on shellfish and bagda prawn seed. (ME. Hoq. 1999).

Location of the study area:- The area of the study area is 230.4 Sq. K.M. Numerous number of unknown creeks have bifurcated the study area. The study area situated between N 20^0 $10^{'}$ $50^{''}$ to 22^0 $10^{'}$ $50^{''}$ latitudes and E

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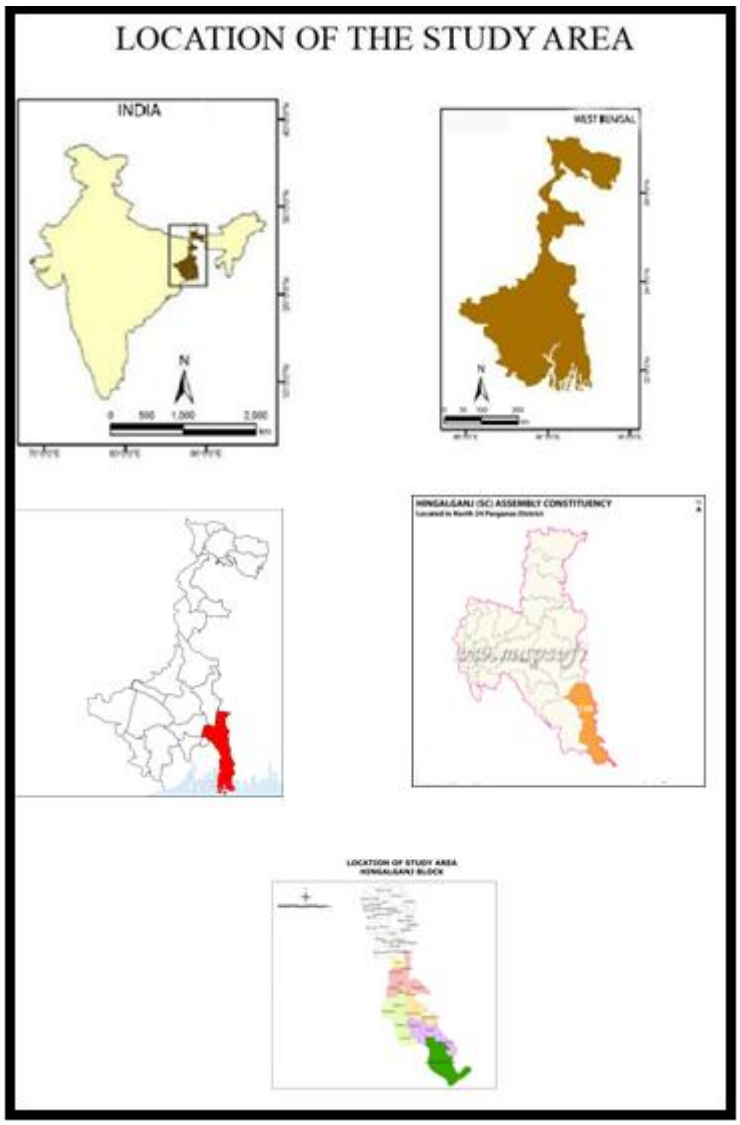
88^0 57` to $89^0$ 4` 30`` of latitude. Icchamoti-Raimongal river situated at eastern part of the study area, Hasnabad block situated at North, Sandeshkhali-I, 77 situted weastern, canning-II Sundarbans Biosphere reserve is situated Southern part of this block. Total area of Hingalganj block is 230sq.km. and its south part cover with dense mangrove forest. Dasa river situated weastern part of Hingalganj. Total population of the hingalganj block is 119630 (2011 Census Data).



Methodology:- Selected 5 village of Hingalganj block just adjacent of river bank -1.Icchamoti 2Dasa river 3.Gouraswari river 4.Raimongal 5. Kalindi. Use questioners methods to collect data by pre-tested questioners. Randomly selected (30 person/village) 150 shrimp collector as a sample survey. Vital secondary data and information was collected from various journal and web-site on Sundarbans and aqua culture. Use Arc G.I.S software to create location map of the study area and use Microsoft Office to present various data and information.

Objectives:-

i) To discuss about demographic condition of shrimp collectors.

ii) To discuss about educational qualification of shrimp collectors.

iii)To discuss about health condition of shrimp collectors.

iv) To discuss about economic condition of shrimp collectors.

Demography of the Study area-

Population:- The survey was conducted at five village of Hingalganj block into 150 people were participated in interview. Total family member of 150 people were 765 and their average were 5.1/family. Out of 765 members 390 was male and rest 375 was female. Their average male and female ratio is male: female 1.04:1.

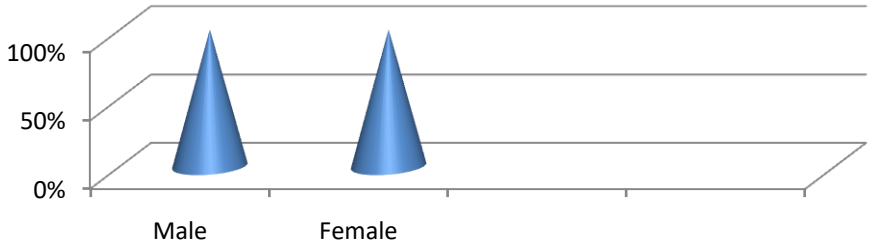


Fig- 1: Demography of shrimp collector family.

Age structure:- The average range of those respondents was 31 years old and their range below 15 to above 55 years. In five village, Barunhat, Durgapur, Hemnagar, Samsernagar, Bhandarkhali, 34 % age between 15-30 tears and 31% average between 30-45 and rest 30% age between 45-60 years.

Table 1: Age structure of shrimp collector of different village.

Village name	Age Structure (Years)		
	15-30	30-45	45-60
Barunhat	11	13	6
Durgapur	9	11	10
Bhandarkhali	10	9	11
Hamnagar	12	12	6
Samsernagar	13	9	8
Total	55	54	41
Percentage	39	31	30

Sex structure of shrimp collectors:- Out of the total 150 respondent 68% is male population and rest 32% is female population. The present study was shown male population percentage gradually decrease cause of various government restriction on shrimp collection and they have alternative income source. Many children engaged with shrimp collection due to high poverty.

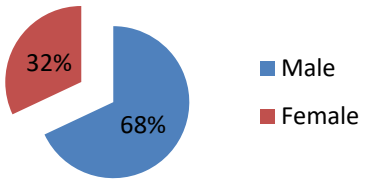


Fig- 2: Sex Structure of shrimp collector.

Religious:- In the study area_Hindu , Muslim and Christian are engaged with this profession without any conflicts. There are several types of tribal community with engaged with this profession like Munda, Bedia, Santal, Mahils etc. Out of 765 people 82% people are Hindu and rest 16%
are Muslim and 2% are Christian.

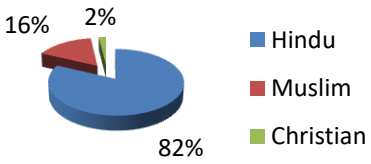


Fig-3: Religion profile of the Shrimp collectors.

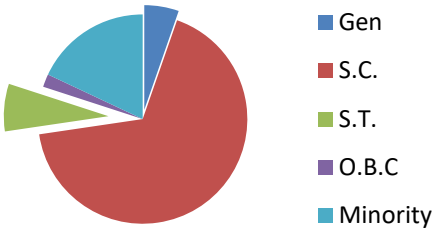


Fig-4: Caste wise profile of Shrimp collectors.

Education:- Education status is an indicator of the awareness of the people . According to survey data 34% was literate and 66% shrimp collection was illiterate. Literacy rate was 36 % male and 32 %female respectively. Among them 16% people only sign their name, 9% complete primary education 5% complete upper primary level rest 4% complete madhayamic level.

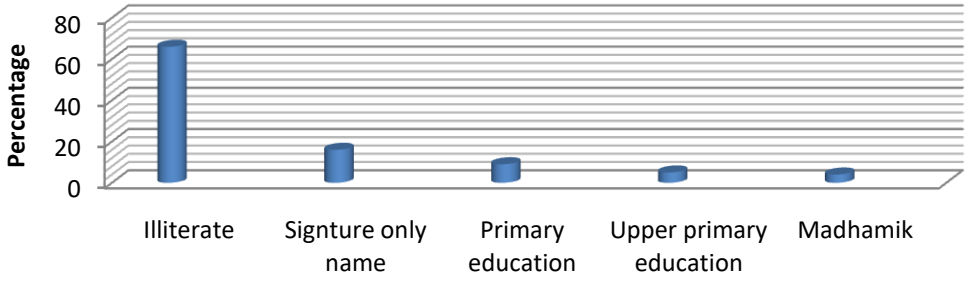


Fig-5: Education qualification of shrimp collector.

House condition:- In the study area almost 59% shrimp collector live in mud walled with straw shed house and 12% live with tine shed house, 8% live with semi pacca house well collected with electricity grid and 11% with solar power and 9% have no electricity facility. Almost 52 % people live in 2 rooms and only 17% have 3 rooms and rest 31 have 1 room only. asbestos

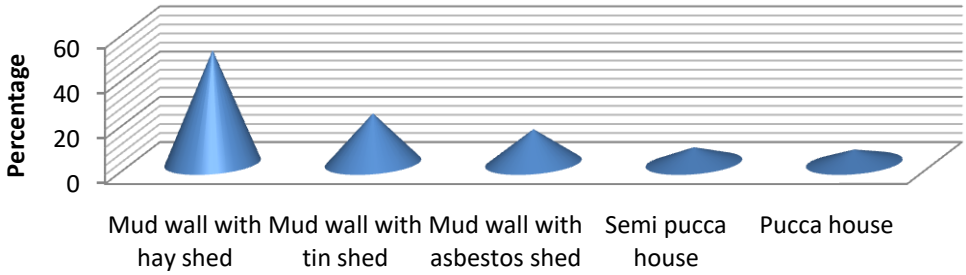


Fig-6: House hold condition of the shrimp collectors.

Health condition:-

Health and Diseases:- The fry collectors cannot access resource and health facilities properly. Most of the shrimp collectors have been suffering from mal-nutrition and under wait problems. Long time stand in cold salty water using pull/push nets for 6-10 hour a day can expose women and children to Malaria, Dengue and Diarrhea , Skin Diseases. Tiger prawn seed selection is a very difficult procedure and it create huge pressure on eyes and some time create eye problems.

Table-2: Common diseases among the shrimp collector.

Diseases	Response
Fever	39
Eye problems	19
Malaria	04
Diarrhea	26
Skin diseases	31
Dengue	01
Gastric	19
Back pain	09
No diseases	10

Table3: Main sources of health service.

Source of medicine	Response
Quacks	89
Homeopathy	19
Hospital	25
Sub health centre	12
Traditional medicine	5

Sanitation:- Almost 51% shrimp collector have to access to sanitary latrine, 47% of the household use to the non-sanitary latrine rest 2 % do not have latrine facilities. Out of the 98 % latrine users almost 51 % used semi pacca latrine, 11 % used pacca latrine and rest 30 % used kutcha latrine.

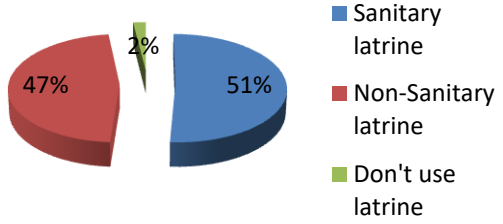


Fig-7:Percentage of latrine user.

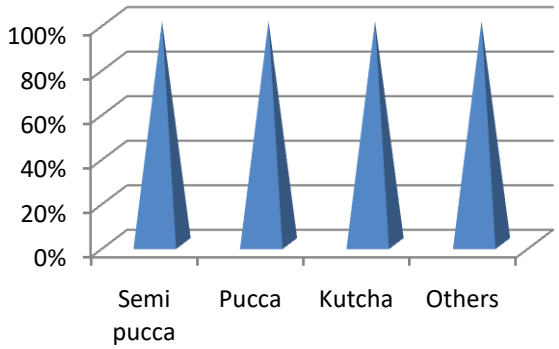


Fig-8: Sanitation system of shrimp collectors house.

Source of water:- This is a highly saline contaminated area. They do not have access to safe drinking water; they have to cover a long distance to collect fresh drinking water. They have to cover a long distance to collect fresh drinking water. They use pond water as washing and bathing purpose.

Table- 4: Drinking water source distance from their house.

Water source distance from house	Response
<100 Meter	71
100-200 Meter	22
200-300 Meter	23
300-400 Meter	20
>400 Meter	14

Table-5: Drinking water source.

Source of Water	Response
Hand pump	63
Running water	39
Community Tube well	33
Other's source	15

Earner of the fry collector's family:- The study shows that near about 16% of the fry collector's families have one earner , 70% have two earner , 10% have more than three earner and 4% have more than three earner . Almost all the shrimp collectors collect shrimp as a alternative occupation during November- May and others time engaged with other job.

Table-6: Number of the earners in family. collectors.

Income earners	**Response**
Sole	24
Two earning member	105
Three earning member	15
More than three earning member	6

Table-7: Others sources of income without shrimp

Others source of income	**Response**
Agriculture	71
Agricultural labours	39
Daily lsbours	13
Migrated worker	12
Others	15

Table-8: Average and most common monthly expenses for a family three adult and two child.

Average monthly expenses monthly	**Rupees**
Daily purchase of milk and vegetables.	2000
Regular provision	800
Medical expenses	300
Education fees	400
Eating out	100
Expenses towards habituated behaviors	400
Average of total living expenses	4000
Occupational expenses	100
Total expenses	4100

Season and tine of fry collection:- The peak season of shrimp seed collection is in the month of November to May. The shrimp seeds are more abundant in the beginning of the season and decreased its number end of the season. Price level is also high at the beginning of the season and low at the end of the season. Shrimp seed are more abundant during the time of new moon and full moon. Low tide is suitable time for shrimp collection.

Table-9: Daily income in peak season.

Rupees	**Response**
<300	28
300-400	89
400-500	20
>500	13

Table-10: Daily income in dull season.

Rupees	**Response**
<30	28
30-50	51
50-70	23
>70	48

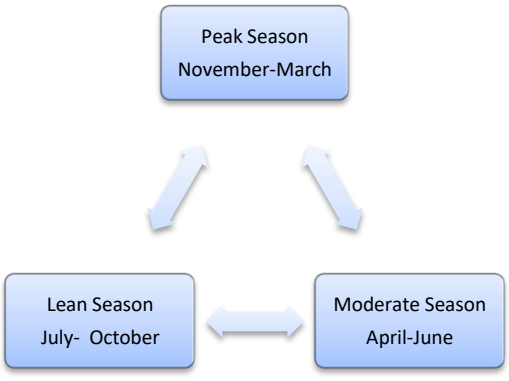


Fig-9: Season wise distribution of Shrimp collection.

Yearly income of the fry collector's family:- At the beginning of the season they collect 1000 to 2000 shrimp seed and they earn Rs. 300 to 600/day. End of the season they earn Rs. 60-80 per/day only. The shrimp collector's family's average income is Rs. 41000-110000/year. Low tide is suitable time for shrimp collection. Although Galda shrimp seed value is height , Bagda seed value moderate and rest others shrimps value is low. They choose shrimp seed collection is a second source of income.

Table -11: Yearly family income of shrimp collectors.

Yearly Income	Response
<45000	19
45000-60000	37
60000-75000	61
75000-90000	21
>90000	12

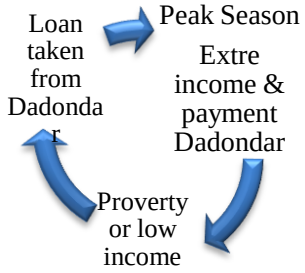


Fig-10: Poverty circle of shrimp collector of the study area.

Bank Account:- Only 58% shrimp collectors operate their bank account and rest 42 % has no bank account . Near about 35 % operated their bank account in Gramin bank and 23 % in commercial bank. Almost 21 % shrimp collector save their money in chit fund in regular and monthly basis.

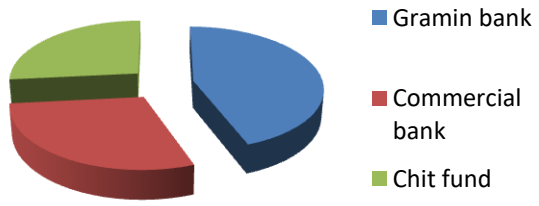


Fig- 11: Main source of deposit money.

Migration:- After 'Aila' and banned on shrimp collection influenced migration toward South India as unskilled labour. Migration is an important factor in Hingalganj block and unskilled labour earn higher than a shrimp collector as a result shrimp collector number gradually decrease. Some time women have to migrate to collect shrimp seed.

Discussion:- The average family size of the interviewer is 5.1 which almost similar with West Bengal average family size 5 (According to 2001 census data).The dependency ratio of the interview family is 701.3 which almost similar with West Bengal total dependency ratio 677.8 (According to 2001 census data). West Bengal average per capita income Rs. 100000/year, though the shrimp collectors average income is much lower than West Bengal average income (2015-16 data). Shrimp seed collection is a common profession in Sundarbans region and it also a deep impact on socio-economy of Sundarbans region. Gradually reducing traditional activities and low job opportunity, they have to depend on shrimp collection. According to 2011 census data in Hingalganj block 87.97 % of total population are Hindu , 11.82% are Muslim and others are 0.12% which is almost similar with my study where I found that 82% Hindu, 16% Muslim and 2% Christian. Census report 2011 shows that literacy rate of Hingalganj block is 62.70% , which is lower than my study ,Where it was found 66% literate people. This survey result is almost similar with census report. According to 2011 census report in Hingalganj block 51 % of total

population are male , 49 % are female , which is not match with my study . Where I found that 68% fry collectors are male and only 32% are female.

Conclusion:- Indian Sundarbans region is one of the back ward region of West Bengal as well as India and this region also adversely affected by climate change and warming because of salinity affected by climate change and global warming. Because of salinity problem, traditional agricultural system could not match with this situation. Commercial aquaculture and shrimp seed collection could not fulfill people job demand. Wild shrimp seed supply was the main input of shrimp farming but at a present many commercial hatchery supply good quality shrimp seed. Some shrimp seed collector also very interested in aquaculture and they want to convert their pond, agricultural land as shrimp farming. After 'Aila' Sundarbans region soil salinity cross its threshold limit as a result agriculture productivity has almost nil consequent from three to four year. So, they have to convert their agricultural land into aquaculture land into aquaculture farm for more return than agriculture. For the huge demand of bagda seed collection from the river has now become occupation in Sundarbans region. But they need other sustainable occupation opportunity and other alternative income source to change this region socio-economic condition.

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