



Employment Opportunity In Crab Hunting And Cultivation In Sundarbans With Special Reference To Deulbari Village Of Kultali Block, West Bengal.

Prof. Jyotirmoy Sen

Pritilata Halder

Seacom skills University, Bolpur.

Abstract:

Aim- The present paper aims to understand the employment opportunity in crab hunting of Sundarbans with special reference to Deulbari village of Kultali block, South 24 parganas district, West Bengal.

Methods- Listening to the problem of the study area from a relative, start literature review and collect data on crab hunting. At first, depend on local information, data are collected through random sampling surveyed and explain with cartographically.

Results- The study explains about crab hunting and employment opportunity in Sundarbans with special reference to Deulbari village of Kultali block, West Bengal. According to primary survey data on Deulbari village, there are more earning opportunities in crab hunting than cultivation. About 30% people engaged with only crab hunting with seasonally, 40% to 50% people engage with both paddy cultivation and crab hunting.

Conclusion- In spite of having agricultural land, most of the people of Sundarbans are not engaged with cultivation. Being their life at risk from tiger, they involve with crab hunting. The study may help to review the different types of crab hunters and their livelihood in Sundarbans specially in Deulbari village of Kultali block.

Keywords: Employment opportunity, crab hunting, livelihood, life risk,

Introduction- Sundarbans of West Bengal is the largest delta of the world. Once upon time, the settlement of Sundarbans economically grew up on the basis of its natural resources like - land, crab, honey, fish etc.. But, next time, the civilization of Sundarbans rises and falls for the different times of natural calamities. In spite of natural vulnerabilities, most of the people of edges Sundarbans spend their lives on the basis of primary activities like - honey collection (mouli), crab hunting, fishing and cultivation. Within these primary activities, crab hunting occupation takes many lives (near about 6-7 person/year). Yet, they will go for crab hunting with obliging and high profit than paddy cultivation. Mud crab is a high cost sea food in every

where. So, in spite of more earning, the crab catchers are not economically developed in their own as they indulge their earned money in different malpractices.

Crab hunting and cultivation- Coastal regions of Bengal Sundarbans are natural habitat of crab. The maximum production of crab 1247.15MT was estimated from Sundarbans. Sundarbans is an old practice of crab hunting and cultivation. Generally, crab catchers used to harvest crabs using hook(sik) and rope (don). Since 1990s, crab hunting was practiced in Sundarbans with licensable.

Research Gap- In Sundarbans, there is no target condition to improve the crab hunting employability. There is no idea about sustainable development of crab hunting employment opportunities. No research observe on employment opportunity in crab hunting and no promoting policy.

Problems of work- To search the crab hunting system there occur some problems. i) Most of the crab hunters did not want to give proper information about their crab hunting system as sometimes they break the government rules to catch the crabs. ii) Most of the crab hunters catch the crabs without license which are permit only for river not for land or deep forest area.

Objectives of the work- i) To understand the present crab hunting frame-work seasonal amount income. ii) To calculate earning gap between crab hunting and paddy cultivation.

iii) To identify the obstacles and life risk of crab hunting.

Data and Methods- The present study was carried out through three stages of data collection.

i) Pre-field- At first review different literature i.e. journal, book about crab and sundarban crab hunting and also cultivation related information.

ii) Field-survey- After literature review, Deulbari village is selected for a case study area as there 30% people are engaged with crab hunting. In Deulbari village, there are total 1569 houses and 100 (10% random sampling) houses survey through demography and occupation base questionnaire.

iii) Post-field- After collection the data and information, tabulate the data, draw cartographic image and analysis. Showing the result of study area, some decisions are taken.

Study area- Deulbari village is located in Kultali block of Sundarbans, South 24 Parganas district, West Bengal, India. It is surrounded by Matla river in East, Kaikhali village in North, Shyamnagar village in West and Lot-121 in south. This village is under Deulbari Debipur Gram panchayet which is 759.91 hectares area. There are total six villages in this Gram panchayet- 1. Deulbari 2. Shyamnagar 3. Kantamari 4. Dakshin Durgapur 5. Durgapur and 6. Madhabpur. Under this Gram Panchayet Deulbari village remains more crab catcher than other villages. Total population of this village is 3569 (data from Deulbari Debipur Gram Panchayat).

Geographical background- This village is situated in the Gangetic delta in Sundarbans and physical features are those common to deltaic land, little raised above flood level. In the time of high tide then this village lies in below sea level. Only for river embankment it is established. It is an eastern most village of Kultali CD block in Sundarbans. The deltaic morphology of this village is controlled by the river Matla to the east. The total area of this village is 759.91 hectares or 7.59 sq. km. The latitudinal and longitudinal position is 22.0029°N and 88.5976°E,

LOCATION MAP OF THE STUDY AREA

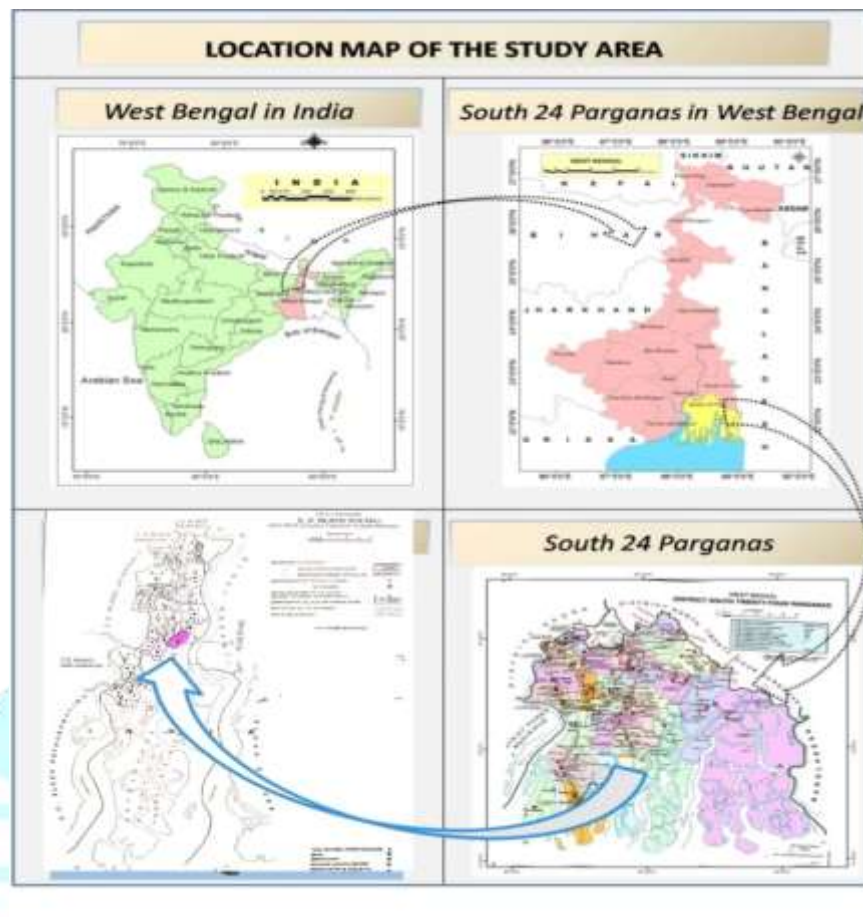


Fig-1: Location map of study area

This village belongs in tropical monsoon climate. It has humid sub tropical climate with main three seasons ,i.e, hot summers (March to May,30°C -40°C),monsoon (June to August,100cm – 200cm),little cool short period winter(December-January),rest parts of the year are changeable depend on weather change. There is mainly composed of alluvium soil by Matla rivers and its tributaries. The range of salinity is 3.96 – 4.85 ppt and range of pH is 7-7.9.The eastern part of this village is covered with mangrove forest mainly geon, goran, hogla, golpata etc. Many time,from this side the man eater (tiger) entrance in locality. In the middle of habitat the tropical deciduous tree (mango, coconut, jhau, eucalyptus etc.) are observed. It is a high damage risk zone by seasonal cyclones and storm surges during the Monsoon months of June to August.

According to Deulbari Debipur Gram Panchayet, there are total population 3586 (2024).Total population in surveyed houses are 498 where are 292 male and 206 female population. There are 263 working population(53%) and 206 dependent population (47%).Within working population,148 (56%) for male and 115 (44%) for female. There is more schedule caste and schedule tribe (70%) population than General (30%).Literacy rate is medium to low percentage on the basis of total population.Only for mid-day meal (v to viii) mobile phone (Taruner swapno in class xi),Kanyashree-1 and kanyashree-2,up to higher secondary most of the children are interest for education but higher education is not sufficient for lack of nearest college.

Crab catching system and occupation- There are near about 70000 people engage in crab catching in Sundarbans.Mainly,the crab catchers live in fringe area of Sundarbans. Near about 150 villages like Gosaba,Hingalganj,Sandeshkhali,Basanti and Kultali where about 30000 people engage in crab hunting. The only weapons of hunting crabs of the crab catchers in Sundarbans- iron rod and don(nylen thread).

Those who hunt crab from the hole, use iron rod which is bended at the end and is shaped like the English alphabet 'J'. They use this weapon of different length according to the depth of hole.

A team of 3 or 4 persons set out for hunting crabs with a fishing boat. Again those who go out for hunting crabs, they do not go out for fishing. If three persons go out then selling price is divided into 4, because the boat itself demands a share. If the owner of the boat himself takes part in hunting then he will also get a share of profit. So the owner will claim to share, one for his boat and another for himself as a labour. In every month they set out for hunting for seven or eight days at the time of ten days or eleven days of a full moon or new moon in every month and they return in the third day or fourth day from full moon or new moon. Hunting crabs is prohibited from 15th April upto 15th June because this is the time of breeding of crabs and fish. In those months, hunting crabs is illegal. Though, they engaged in cultivating Aamon in March to June.

Now, we will discuss about the amount of crabs, price and profit. Comparatively, production of crabs is more in Monsoon than winter but price is much lower in Monsoon than Winter. The price of crabs depends on size, weight and quantity of ghee presence in the crabs. So, income is variable according to season.

Seasonal crab hunting and profit- There are 11 species of crabs which have economic value found in Sundarbans. Among these 5 species are edible i.e. skyla, cereta, portunam pelgicas, sartoriana spinijera etc. Crab hunters generally catch skyla cereta from the saline water in Sundarbans. Except breeding season, crab catchers go for hunting in Monsoon, Autumn and Winter. The details of seasonal profit of crab catching is given below-

Monsoon- The amount of crabs is 80-90kg/boat in Monsoon. Then the price of crabs is Rs.400/kg approximately. Then the gross income will be 400×80 to $90 =$ Rs.32,000 to 36,000. So, In that time their share of profit will be 32000 or $36,000 \div 4 = 8000$ or 9000 for 7 or 8 days. As they go twice in a month, their profit will be $8000 \times 2 = 16,000$ or $9000 \times 2 = 18000$. So, in Monsoon their average per capita income from catching crabs will be 17,000/ month. As Monsoon season covers upto August, then their income from June 15th to August 15th will be $17,000 \times 2$ months = 34000/person.

Autumn- The amount of crabs is 70-80kg/boat in Autumn. Then the price of crabs is 400/kg, same as Monsoon. But the amount of crab is much lower than monsoon. Then the gross income will be 400×70 to $80 \text{ kg} =$ Rs. 28000 to 32000. So, in that time the share of profit will be 28000 or $32000 \div 4 = 7000$ or 8000 for 7 or 8 days. As they go twice in a month each of their profit will be $7000 \times 2 = 14000$ or $8000 \times 2 = 16000$. So, in Autumn, their average per capita income will be 15,000/month and income for 4 months (August 15th to December 15th, 8 times) will be $15,000 \times 4 =$ Rs.60000/person.

Winter- The span of these season is 15th December to 15th March(3 months) .In this time the price of the crabs is much higher than previous seasons. But the amount of crabs is lesser than the two seasons mentioned earlier. Then the production of crabs is 70 kg/boat and price is Rs.900/kg. The gross income will be $900 \times 70 \text{ kg} =$ Rs. 63000. So, their per head income will be $63,000 \div 4 =$ Rs.15,750. Total income in Winter will be $15,750 \times 6 = 94,500$ /per head.

Data and information collection- On the basis of household survey in Debipur village, some data about crab catcher and cultivators are shown in below.

Table-1: Crab catching season and amount

Seasons	Time	No. of months	Crab catching times*1	Amount in kg
Monsoon	15 th June-15 th August	2 months	4 times	80-90 kg
Autumn	15 th August -15 th December	4 months	8 times	70-80 kg
Winter	15 th December-15 th March	3 months	6 times	70 kg
Total in a year	-	9 months	18 times	220-240 kg

Source-Primary survey

*1: As , in every month, on the basis of gon(time) of new moon and full moon, hunting crabs.

Table-2: Price and income from crab

Seasons	Amount of crab (average)	Price	Income of every person*2	Monthly income
Monsoon	85 kg	400/kg	$34000/4=8500$	$8500 \times 2=17,000$
Autumn	75kg	400/kg	$30,000/4=7500$	$7500 \times 2=15,000$
Winter	70kg	900/kg	$63000/4=15,750$	$15750 \times 2=31500$
Total in a year	230kg	-	Rs.31,750	Rs.63,500/year

Source: Primary Survey

*2: In a boat, there are 4 crab catchers and total crab price will be divided into 4 share.

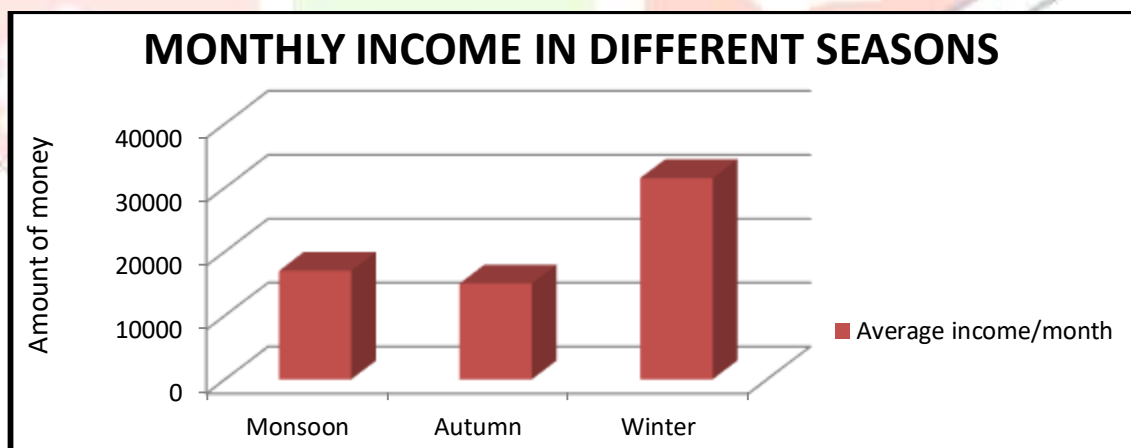


Fig-2: Bar graph showing the seasonal monthly income

Table-3: Occupation structure

Occupation	No. of people	Percentage
Crab catcher	79	30%
Cultivators	75	29%
Agricultural labour	68	26%
Green farmer	23	9%
Others	18	7%

Source: Primary survey

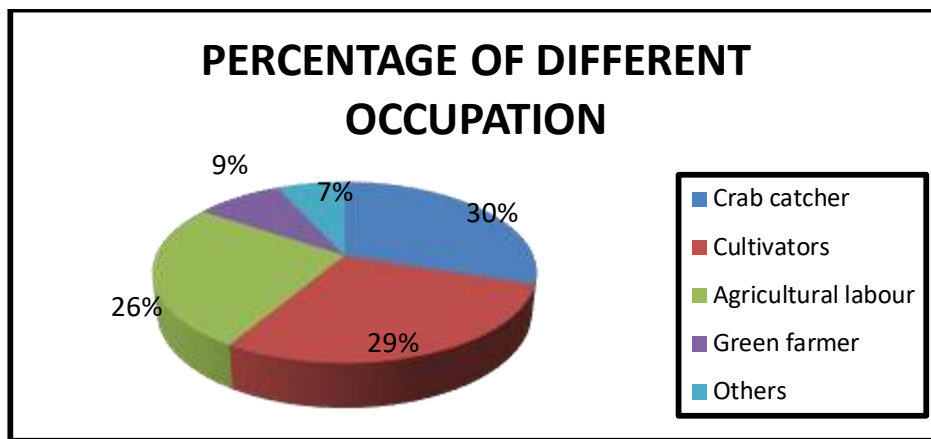


Fig-3: Pie graph showing the different types of occupation in Deulbari village



Crab in net



Crab catching by Don.

Findings- From the above primary survey data and information from local people of Deulbari Debipur village in Kultali CD block of Sundarbans it is noticeable that-

- Most of the people of Deulbari village, depend on cultivating vegetables, catching crabs, fishing and cultivating mono cropped type paddy.
- For low literacy rate and also for natural hazards they are unable to choose the appropriate occupation.
- Seasonal crab hunting is more profitable than cultivation of paddy or vegetables but their addiction in alcohol, ganja, hanria, lottery, satta through mobile etc do not give them economic stability.
- Most of the lands are mono-cropped (mainly Aamon) because of low profit from khoro cultivation (December to April).
- Green farmers loss their vegetable field due to seasonal heavy rainfall and climatic hazards in every year.

Problems of the work- Actually the crab catchers are provided a *Pass* or Permission from the forest Department only to catch crabs with the *Don* (a long threads tied with baits) .But most of the crab catchers violate the rules and try to catch the cabs in different techniques using net and iron sticks going into the deep forest. As a result, some of crab catchers are hunted by the tigers. It is reported that two or three crab catchers are taken away by the tiger every year. In this context, hunting crabs with the help of net does not mean the hunting crabs in mid river, actually the crab catchers bound a small coastal area with the help of net in the time of high tide and when the water level goes down in time of low tide, the crabs are captured in that net. After catching crabs, small crabs should be picked up and free them in the river.

Mainly, crabs are found more in the island namely Netadhopani, Burirtat, Kalibera etc. Yet, these area is more afflicted with Royal Bengal Tiger. So, these area is strictly prohibited. In spite of prohibition, crab catchers take risk to enter that area illegally for more income they confront death. No boat is allowed without BLC (Boat License Certificate) to enter into the reserve forest. Without BLC every fisherman has to collect PASS for Rs.40 from forest department for whole season. According to crab catchers BLC is not issued at present. So, they illegally go for hunting crabs without BLC for their livelihood. As a result if they were died by attacking tigers, the victims are deprived of government compensation.

Suggestions- From the above discussion about crab catching and employment in Deulbari Debipur village, some necessary steps are need for development. Such as-

- There should be need crab catching in scientific way.
- Need a training/year about crab as well as fish for crab catchers.
- Government will be give license to crab catchers keeping the balance of ecosystem.
- There should be strictly prohibited with law and order of illegal crab catching.

Conclusion- Still now, in coastal area of Sundarbans, crab hunting remains traditional employment. From crab catching, a crab catchers earns sufficient money but they do not save their money for their unconscious life. There will be increase the main worker except pseudo worker if crab catching occupation increases with proper plan in the gap of paddy cultivation.

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