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Socio- Economic Condition of the Fish and Prawn Gher Farmers at Dakatia Beel in Khulna, Bangladesh

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Abstract

The consequence of water logging on Beel Dakatia fisheries, the adaptability of people in terms of occupation with the new situation arisen and present livelihood conditions of fish and Prawn/ Galda (*Macrobrachium rosenbergii*) Gher farmers at Beel Dakatia in Dumuria, Phultala and Daulatpur thana under Khulna district were surveyed from April to September 2013. From the survey the community indicates that 21-40 age groups made maximum strength and majority of them were Muslims (58%). It was found that 16% of them can sign and the percentages of school going children were high (86%). In the study area, it was found that 62% of people lived with nuclear families and highest households were 5-7 people/family. Highest incomes of the people (44%) were 10,000 to 20,000 BDT. About 62% people lived in Katcha house and the construction materials were Golpata and Mud, 72% could be use electricity. Majority of the people (52%) % used others tube well water for drinking, 56% used closed semi pucca latrines. In any disease mostly preferred place were upazila hospital (52%). Thus to achieve better social structure, the Government and its development partner needs to re-orient their programmer and implementation an affirmative action for the fish and prawn gher farmers. It is also essential to improve the necessary training facilities with institutional and organizational supports, credit facilities and extension services for sustainable fish and prawn production and livelihoods of gher farmers.

Key words: Beel Dakatia, Fish, Gher farmers, Prawn, Socio-economic condition

Introduction

Fish and Fisheries sector play an important role on the socio-economic development of Bangladesh from time immemorial and it is the part of our cultural heritage. The role of fisheries sector to national economy has always been significant and main source of animal protein, employment opportunities, food security, foreign incomes and socio-economic improvement (Siddiq *et al.*, 2014). This sector contributes 4.39% to GDP and 22.76% to agricultural GDP. Fish supplements to about 60% of our daily animal protein intake. About 10% of the population is dependent directly and indirectly on the fisheries for their living (DoF, 2013). It has already been renowned as a vital income and employment-generating sector in Bangladesh, cheap sources of healthy food for the population of the country (Ali *et al.*, 2014). Total fish production in our country during the 2011-2012 was about 3.26 million metric tons of which 2.68 million metric tons were produced from freshwater including culture fisheries and 0.05 million metric tons from marine water including shrimp (DoF, 2013). Beel is one of the best natural habitats for the indigenous fishes of different food habits of Bangladesh. Most of the aquatic species specially the fish and prawn enter in the inundated areas of the beel from the adjoining rivers and canals to feed and grow during the monsoon months (Akteruzzaman *et al.*, 1997). Beel Dakatia is one of the very large saucers like water bodies of the coastal area of Bangladesh (Rahman *et al.*, 2010). It is located in the southwestern region of the country covering gross area 11,609 hectare (Rahman, 1995). It lies between longitudes 89°20'E and 89°35'E and latitudes 22°45'N and 23°00'N under the administrative boundaries of Dumuria, Phultala and Daulatpur upazilas of Khulna district (Banglapedia, 2004). Until the 80s, Beel Dakatia was a place of green peace with its flourishing Agro-based economy and colorful socio-cultural enrichment. All around the year with crops in the field and fish in the adjacent canals and ponds and overall steady assurance of wage, people of Beel Dakatia wear a look of satisfaction. But unfortunately their good days did not last long. The numbers of fish and fish species in the open water bodies in the Beel Dakatia area have declined since water logging became an acute problem. Agriculture suddenly stopped. Most people have changed their main occupation and turned into fishermen. Men and women from wealthy families started fishing in the Beel with its limited fish stock. The shrubs and bushes were the breeding grounds of fish. With the intrusion of saline water, these have been destroyed. Therefore, the fish stock has not increased, but more people have now become fishermen. So more fishes are caught reducing the fish stock. In addition, the quality of water in the Beel has been deteriorated recently. Diseases, sometimes leading to epidemics have attacked fish (Atiur, 1995). In recent years, shrimp culture is introduced in the Beel Dakatia area and the practice of the culture is increasing day by day in the area. Now (2014) this area is prominently in

favor of shrimp culture and it has emerged as dominant income of the local people of the area. Integrated culture is much benefited. The production is possible through proper management, so the livelihood status like education, sanitation, housing condition, health condition, earning activity is possible to increase through proper management. Therefore, considering the above mentioned facts, the present study was designed to find out the factors affecting the people's livelihood pattern in terms of income, primary and secondary occupation, health and sanitation and to find out the participation people in fish and shrimp aquaculture and other activities in economic development.

Materials and Methods

Study area

The study was conducted at the Khulna district in the south-west of Bangladesh. It is located in the southern area of Bangladesh and situated on the banks of the Rupsha and Bhairab River. The River port of Khulna is one of the oldest River port in Bangladesh. It occupies an area of 4395 sq. kms. The total population in Khulna district is 2378971 (BBS, 2010). But Beel Dakatia is located in the southwestern region of the country covering gross area 11,609 hectare (Rahman, 1995). It lies between longitudes 89°20'E and 89°35'E and latitudes 22°45'N and 23°00'N under the administrative boundaries of Dumuria, Phultala and Daulatpur upazilas of Khulna district (Banglapedia, 2004). For the study of the livelihood status of the Shrimp Gher farmers in the Beel Dakatia under the Phultala and Dumuria upazila of Khulna district were selected for the present study (Figure 1). Data were collected from 50 fish and prawn Gher farmers randomly covering the selected study areas.

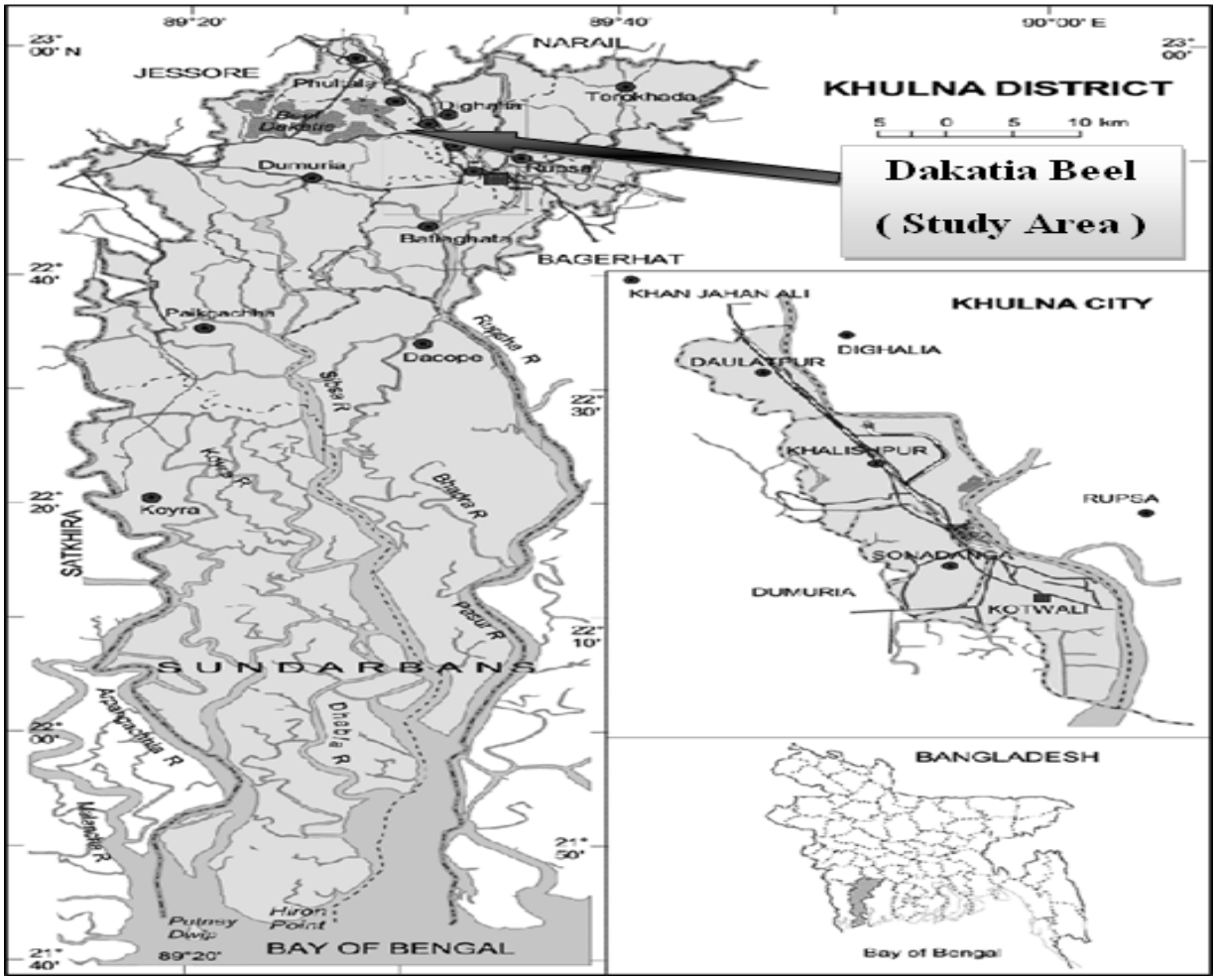

Fig. 1. Map of the study area

Data collection

The present study was based on field survey where primary data were collected from farmers who are involved in Gher farming. For collecting data both individual and group interviews were also applied with different degree of effectiveness of the farmers' information. The data were collected from May to October 2013. For questionnaire interview, simple random sampling method was followed for fish farmers. Data were collected through questionnaire interview. The questionnaire was designed with both closed and open form of questions. The farmers who have pond were mainly considered to collect personal information and fish

farming information. Though the questionnaires were prepared in English but the farmers were asked the questions through face to face interview in Bengali during the interview. In this research, Focus Group Discussion (FGD) was used to get an overview of particular issues such as existing fish production system, constraints of fish farming and farmers' socio-economic condition. A total of 5 FGD sessions was conducted where each group size of FGD was 5 to 7 farmers. FGD session was held in front of village shops, under the big trees, farmer's houses and school premises. After collecting the data through questionnaire interviews and FGD, crosscheck interviews were conducted with Upazila Fisheries Officer, Assistant Fisheries Officer and fry traders at their offices or home.

Data analysis

The collected data were coded, summarized and processed for analysis. Tabular technique was applied for the analysis of data by using simple statistical tools like averages and percentages. Collected data has been analyzed by Microsoft Excel.

Results and Discussion

Age group

The distribution of fishers of the Dakatia beel according to age structure ranged from 10 years to above 61 years. From the questionnaire interview, it was found that 2 people (4%) age group between 10-20, 31 people (62%) belong to age group between 21-40, 11 people (22%) were between 41-60, 6 people (12%) were 61 and more than 61 age group (Figure 2). From the study it was found that the highest numbers of people age were 21 to 40 (62%) and lowest (4%) were 10 to 20. Ahmed (1996) in Tangail and Ahmed (1999) in coastal region reported 66% and 70% under 40 years age respectively.

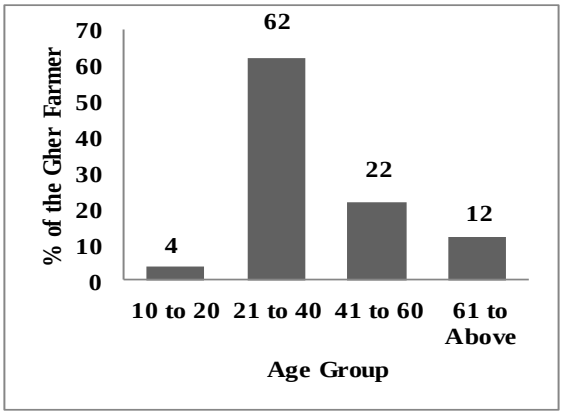

Fig. 2. Age Distribution of the Gher farmer

Religious status

In the present survey, it was found that Muslims were featuring as the absolute majority (58%) of the fishermen and the minorities of them were Hindus (36%) and Christian 6% (Figure 3). In the study of Chantarasri (1994) and Rabbani & Sarker (1997) in Sundarbans Reserve Forest also stated that most fishermen were Muslim. Ahamed (1999) studies in coastal area and showed that majority of fishermen were Muslim (68.33%). Hassan and Mahmud's (2002) studies on the coastal fishing community in Kuakata showed that the majority of fishermen were Muslim (93.94%). Hindu fishermen were found at (32%) at Sundarban (Ahamed, 1999).

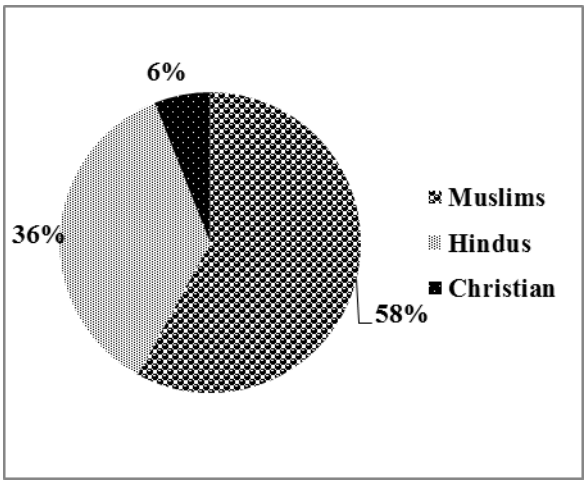

Fig. 3. Religious status of the Gher farmer

Educational status

On the basis of education score of the fishermen, they were classified into five categories (Table 1). Most of the people were illiterate. However, ability of writing name was considered as literate (16%). There were minimum people who had passed primary (26%), 36% had passed secondary, 14% had passed higher secondary and only 8% are as graduate. Literacy rate was evidently maximum in the communities in Beel Dakatia. Literacy rate was evidently maximum in the communities in Beel Dakatia. The percentages of school going children were high in this area. Ahamed's study (1999) in Sundarbans and Mahbubullah (1986) in the polder and areas obtained literacy rates 25% and 23% respectively.

Table 1. Educational level of the Gher farmer

Level of Education	No. of the Gher Farmer	% of the Gher Farmer
Illiterate/ Can Write Name	8	16
Primary	13	26
Secondary	18	36
Higher Secondary	7	14
Bachelor	4	8

Family type

In rural Bangladesh, families are classified into two types. Nuclear family- married couples with children, and Joint family- group of people related by blood or by law. In the study area, it was found that 19 (38%) of people lived with nuclear families, and 31 (62%) lived with joint family (Figure 4).

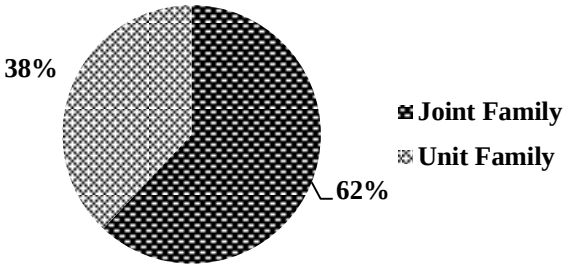

Fig. 4. Family type of the Gher farmer

Family size

On the basis of family size the fishermen were classified into four categories: Small family (2-4), Medium family (5-7), large family (8-10) and very large family (above 10). The highest percentage was obtained in the 5-7 members' family (54%). The lowest percentage was obtained in the above 10 members family (4%). 14% people lived in 2-4 members family, 28% people lived in 8-10 members in family (Figure 5).

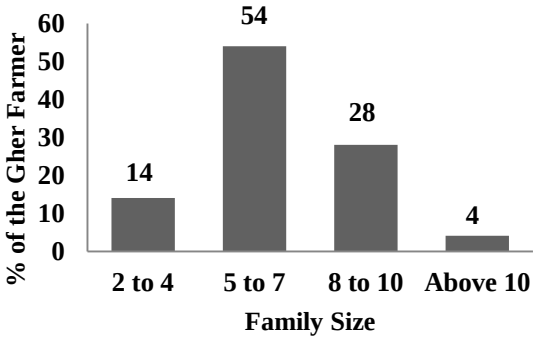

Fig. 5. Family member of the Gher farmer

School going children

It has been found that the maximum children were going to school because of getting various facilities. The findings of the survey showed that out of total school going children 86% (43) and 14% (7) were no school going children (Figure 6). The percentages of school going children were high in this area. The economic condition of the people was so poor that they cannot often offer to educational expense of their children.

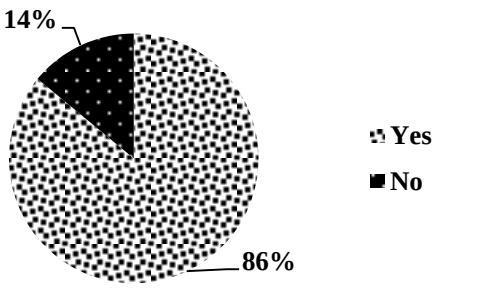

Fig. 6. School / College/ University going children of the Gher farmer

Monthly income

The monthly average income of the people community was observed from the collected data and information that most of the people earn monthly. The study revealed that 30% (15) earned 5,000 to 10,000 taka per month, 44% (22) earned 10,000 to 20,000 taka, and rest 26% (13) earned above 20,000 taka per month (Figure 7). Rabbani and Sarker (1997) notated that income of the majority of the fishermen ranged from 2,000-3,500 taka per month. This result is more or less similar to the present study. Mahabubullah (1986) reported that 71% earned 400 taka or above per month. DoF (1993) stated that average income of majority of the fishermen were 15000 Taka/ year.

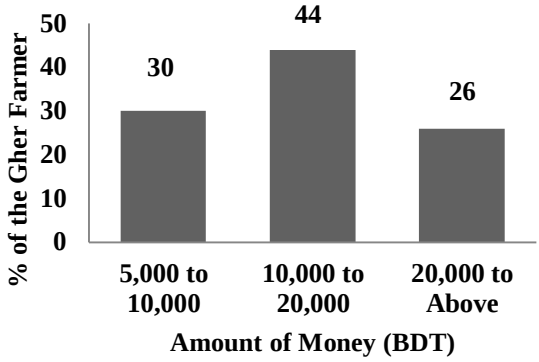

Fig. 7. Monthly average income of the Gher Farmer

Housing condition

The nature of house was indicated the social status of the people. During the survey attempts were made to find out the condition of living house of the people. It was found that 12% were live in Katcha house, 36% were live in Tin shed house and 42% were live in half building and 10% were live in Building. The construction materials are Goalpata, Tin, Mud and Brick. Samima (2000) in Gallamary fishing community reported most of the fishermen's floor materials (94%) were Katcha (Figure 8).

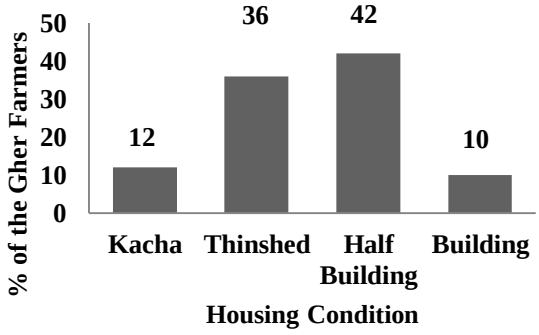

Fig. 8. Housing Condition of the Gher Farmer

Sanitation condition

Most of the people in Beel Dakatia, sanitation facilities were medium. The findings of the survey revealed that on the average 6 (12%) household used kacha latrines, 28 (56%) household used semi-

pucca latrines and 16 (32%) household used pucca latrines. As awareness of proper sanitation is closely related to ability and education. CPP (1996) in Tangail obtained 4% fishermen household had no latrines (Figure 9).

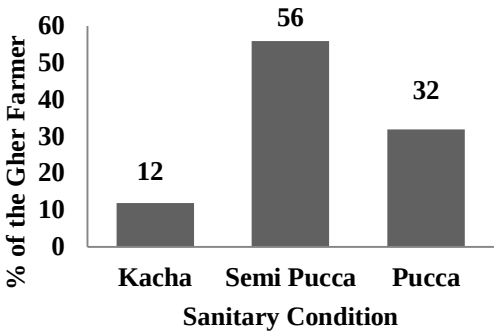

Fig. 9. Sanitary condition of the Gher farmer

Health facilities

The health facilities of the fishermen were moderately poor and it was found that 10% of the fishermen households were dependent on village doctors who did not have any understanding and knowledge of medical science. 38% of the fishermen got health service from union hospital and remaining 52% got health service from MBBS doctors in the upazila hospital (Figure 10) which was more or less similar to the findings of (Ali *et al*., 2009).

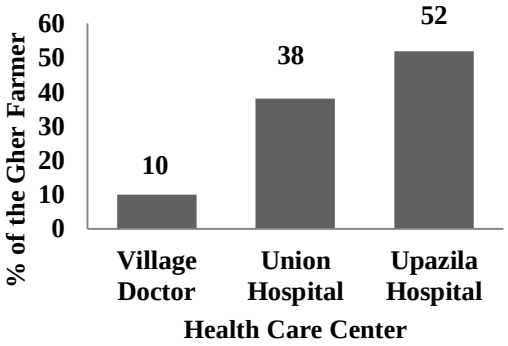

Fig. 10. Health facilities of the Gher farmer

Sources of drinking water

During the study period, it was observed that 100% fishermen used tube-wells water for drinking purposes (Table 2). As potable water, 10 (20%) people used own tube well. 26 (52%) used shared tube well and 14 (28%) collected water from government tube well in school. There were no people to use the river water for drinking purposes. The Government public health department usually promotes the use of tube wells in the villages. Some NGO's workings in the area also help in giving tube wells to the people. Water bodies such as ponds, beels etc. are used for cleaning, washing and bathing. Livestock's are also bathed, cleaned in the same water. Mahbubullah (1986) noted that 41% fishermen used tube well water for drinking, cooking, bathing and washing.

Table 2. Drinking water facilities of the Gher Farmer

Source of drinking water	No. of the Gher Farmer	% of the Gher Farmer
Own Tube well	10	20
Shared tube well	26	52
Government tube well in school	14	28

Use of electricity

In the survey it was found that majority percentage of households had electricity connection (72%) and minority (28%) percentage of households had no electricity connection (Figure 11). DoF (1993) reported from "Third Fisheries Project" that 2% fishermen household used electricity. Samima (2000) reported that 20% used electricity in Gallamary fishing community, Khulna.

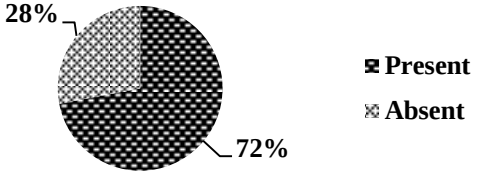

Fig. 11. Electricity facilities of the Gher farmer

Conclusions

Gher farming in the Beel Dakatia plays a great role in providing animal protein in order to meet the problem of malnutrition of the nation. The livelihood circumstance of the people were presented in terms of religion, family sizes and composition, educational status, health and sanitation facilities, housing pattern, monthly average income etc. Beel Dakatia is one of the conspicuous examples of manmade disaster. But it was his previous calamitous situation. Long ten years of inhuman suffering and structure has changed the total mode of the life of Beel Dakatia's people who had never thought of leaving their lush green villages are now crowding and streets and industry sites of the town for work. Villagers of Beel Dakatia are very much striving. They have shown their performance after the construction of the embankment and a stair of the struggle also found. They are now lead more or less better life by encompassing multiphase activities besides involving in farming. They thought that, it makes their life peaceful. They also face opportunity and threat by living in this area. So they require a solution to these problems. Again they want to make a changed living pattern by involving themselves alternative activities and they also want to use the natural resource of Beel Dakatia. But they don't know the appropriate procedure to use. So there is a requirement of proper administrative involvement to make proper guideline for the proper use of resources by the communal people to safeguard their livelihood pattern.

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