Socio-Economic Conditions of Fishermen: Evidence from Hakaluki Haor of Bangladesh

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ABSTRACT

The study explores the socio-economic conditions of fishermen in Hakaluki haor of Moulvibazar district. The main information was used in this regard to measure the poverty incidence such as family size, annual income, expenditure of food and non-food items, education level, etc. The study also estimates the poverty level by using CBN method. About 42 and 68% haor fishermen were below the lower and upper poverty lines respectively. The study suggests that the Government should take haor based policy to reduce poverty level of fishermen.

Key words: Haor Fishermen, Food-basket, Fisheries Resources, CBN Method, Poverty Incidence

1 INTRODUCTION

Bangladesh is a densely populated country of 147570 km2 with 142.3 million people (BBS, 2011). It has extensive water resources in the form of ponds, low-lying natural depressions or haors and beels, oxbow lakes/baors, canals, rivers and estuaries covering an area of 4.64 million ha (DoF, 2009). Haor is, therefore, a highly productive natural source of livelihoods that support millions of poor people and plays a crucial role in supplying protein. Particularly, fishing communities secure their livelihoods from haor fisheries related activities such as capturing fish, fish trading, fish drying, aquatic life and net weaving.

In this study, Hakaluki haor is the largest haor, it covers administratively two district (Moulvibazar and Sylhet) and five upazila (subdistricts- Kulaura, Barlekha, Fenchu-gonj, Juri, and Golapgonj), with a complex system of more than 80 inter-connected beels which extends over 18,000 ha during the rainy season (IUCN, 2005), but during the dry season, the total area of beels becomes approximately 4600 ha and remains underwater for up to five to six months. The total area of the Hakaluki haor is 41613.83 ha (CWBMP-DOE-CNRS consortium 2005) composed mainly of wetland and the surrounding hillocks, reserve forest, planted forests, tea states and rubber plantations with 70000 ha floodplain area. In recent years, as a direct consequence of agricultural land expansion, haor area have shrunk or disappeared (Nishat, 1993).

The study area was covered in Kulaura Upazila under Moulvibazar district where flash floods, remoteness, infrastructure facilities are important factors of poverty. Along with these constraints, population pressure increases the landless household in the haor area (Khan and Islam, 2005). Haor fishermen are also more vulnerable due to ecological degradation, unsafe drinking water and sanitation, deforestation, lack of education institutions and communication facilities, inadequate livelihoods opportunities, and overall poor service provision (Anika, 2010). Christophe (2003:951) indicates as fishermen 'they are poor because they are fishermen and they are fishermen because they are poor' because they are characterized by overcrowded living conditions, low level of education, lack of alternative employment facilities, lack of skills, and politically powerlessness, etc.

The main purpose of this paper is to examine the socio-economic conditions of the haor fishermen. It also determines the factors of poverty by measuring the incidences of poverty by using the Cost of Basic Needs method. Finally, it suggests policy recommendation for improving socio-economic conditions.

2 MATERIALS AND METHODS

This research focuses on place-based case studies of a *haor* in Bangladesh, named *Hakaluki haor.* The study was conducted in Kulaura Upazila under Maulvibazar district. A multi-stage random sampling technique was considered. Two villages (i.e. Kandigaon and Radhanagar) and total 100 fishermen (50 haor fishermen from every village) were selected from this upazila. Structure and semi-structured interviews were conducted. Questionnaires, focus group discussions and key informant interviews were the main components of my tools which include various socio-economic factors such as literacy rate, landholding, occupation, family size, sanitation, etc.

Cost of Basic Needs (CBN) method as the standard method was used for estimating the incidence of poverty. CBN entails a basket of food items based on consumption patterns and a reasonable allowance for non-food consumption. In this method, two poverty lines were estimated; a) lower poverty line and b) upper poverty line. For this, it is estimated with three variants such as poverty

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head count (p_0) which is a process of counting the poor on the consumption expenditure threshold in percentage term, poverty gap (p_1), and severity index (p_2). The data obtained from the field level, were analyzed by the using MS Excel, as per objectives of the study.

3 FINDINGS AND DISCUSSION

3.1 SOCIO-ECONOMIC CONDITIONS OF HAOR FISHERMEN

Socio-economic characteristics of haor fishermen are affected and influenced profoundly the development of individual behaviour and personality. It was obtained at individual level, variable comprises of age, education, main fishing activities, living condition, ownership of land (cultivated and homestead), etc. The family and its composition are related to fishing activities. Table 1 show that the average family size of fishermen was 6.13 persons, with 2.87 males and 1.91 females. It appears to be higher than the national average of 5.48 persons (BBS, 2009). The highest number of fishermen (28.5%) was from 30 to 40 years age group but only 5% was above 50 years old.

Among the sample fishermen, 32% had no education. In the study, illiteracy rates were higher in poor fishermen compared to non-poor fishermen. Considering all the respondents, 57 and 11% had primary and secondary level of education. The fishing activities around Hakaluki haor were full time fishing, fish trading, fish drying and net making, where 59, 24, 7, and 10% of respondents were full time fishermen, fish traders, fish dryer and fish net makers respectively (Fig.1). In terms of sanitary facilities, about 18% fishermen were using ring sanitary latrine. The source of lighting, only 30% had access to electricity and the large majority uses kerosene. All fishermen were using drinking water from tubewell but only 31% collected water from ponds, canal, and rivers for others household work (i.e. cooking, washing cloth, etc.). The ownership pattern of land (cultivated and homestead) was not well-off in the study area.

Table 1: Socio-Economic Characteristics of Haor Fishermen

Characteristics of Respondents	Villages		Average
	Kandigaon	Radhanagar	
Family Size (No.)	5.47	6.78	6.13
Adult size of family member (No.)			
Male	3.17	2.56	2.87
Female	1.93	1.89	1.91
Age (No.)			
30-40	24	33	28.5
41-50	19	14	16.5
50 and above	7	3	5
Dependency Ratios	66	54	60
Marital Status (%)			
Married	68	54	61
Unmarried	18	38	28
Divorce	10	8	9
Others	4	-	2

| Education level (%)			
Illiterate	24	40	32
Primary	62	52	57
Secondary	14	8	11
Fishing Activities (%)			
fishing	50	68	59
Fish trading	26	22	24
Fish drying	10	4	7
Net making	14	6	10
Sanitary Facilities (%)			
Sanitary	20	15	17.5
Slab	80	85	82.5
Lighting (%)			
Electricity	30	42	36
Kerosene	70	58	64
Water (%)			
Drinking water	100	100	100
others	38	24	31
Ownership of cultivated land (%)			
Landless	70	68	69
Own	30	32	31
Ownership of Homestead land (%)			
Landless	78	82	80
own	22	18	20
Roof Material of Dwelling House			
Straw/Leaves/Grass	38	34	36
Tin/Brick	62	66	64

Source: Field survey, 2012
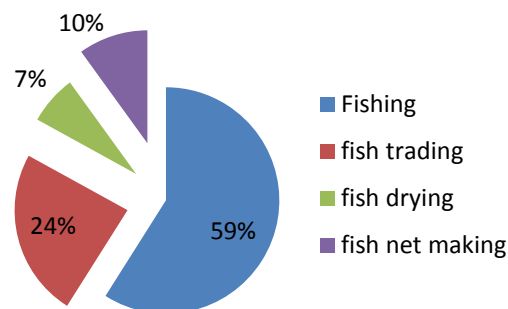
Fig.1: Main Fishing Activities in the Study Area

Table 2: Poverty Status of Haor Fishermen based on Annual Income

Poverty Status	Annual Income (Tk.)	Percentage (%)
Very poor	Less than 40,000-75,000	31
Poor	80,000-140,220	53
Non-poor	156,000-2,00000	16

Source: Field survey, 2012

In the study area, fishermen's income mainly depend on haor fisheries resources. In terms of annual income, Table 2 shows that 53 and 16 % of respondent were poor and non-poor respectively. Of the former, 69 and 80% respondents were landless. It implies that all landless fishermen were not poor.

Table 3: Poverty Status of Haor Fishermen based on Monthly Expenditure

Poverty Status	Monthly Expenditure (Tk.)	Percentage
Poor	936.98	73
Non-poor	1535.76	27

Source: Field Survey, 2012

From Table 3, per capita expenditure of poor and non-poor were 73% and 27% respectively, whereas per capita expenditure of the poor is Tk. 1064.92 at national level (BBS, 2010). It is estimated that per capita expenditure of poor is higher at national level.

3.2 INCIDENCE OF POVERTY

The monthly per capita 'maximum' and 'minimum' food expenditure had been estimated as Tk. 554.83 and Tk. 409.93 respectively. The most of the fishermen had monthly expenditure between Tk. 3000 to Tk. 12,000 where the share of non-food expenditure was only 22.7%. It was, therefore, found that monthly expenditure of food consumption were higher than non-food items, which includes clothing, housing, medicine, fuel, lighting and education, etc.

Table 4: Incidence of Poverty by CBN Method

Poverty Measures	Lower Poverty line	Upper Poverty Line
Head Count Ratio (Incidence of Poverty)	42.52	68.17
Poverty Gap (Depth of poverty)	11.53	20.14
Square Poverty Gap (Severity of Poverty)	3.90	3.59

Source: Field Survey, 2012

For the study, the incidence of poverty line was estimated by CBN method. About 68.17% was Head Count Ratio, the depth of poverty (P1) and severity of poverty (P2) were 20.14% and 3.59% (Table 2) respectively. Moreover, there were no significant difference between estimated the poverty line and the incidence poverty curve (Fig. 2). It was a positive relationship between per month expenditure and cumulative percentage of population.
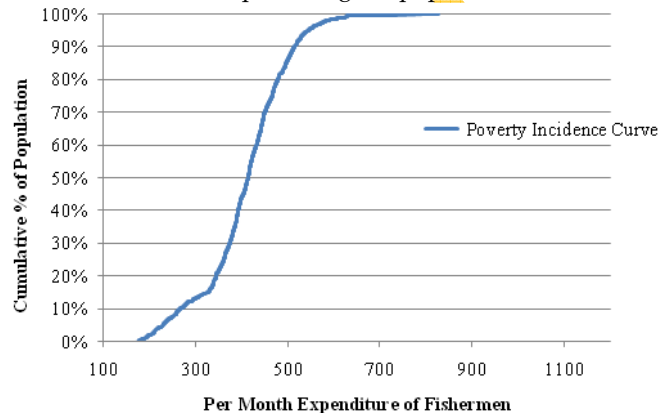

Fig. 2: Measurement of Poverty Line

4 CONCLUSION

These findings lead to establish a number of the following implications for sustainable livelihoods in haor area; I) to build a more effective institution, local institutions need to co-operate and work closely with haor fishermen. More specifically, local institutions should enhance their providing support services, understanding of the linkage between articulation and access to resources, and improving mediating role like information method, financial support, technological knowledge, leadership and gender focus; II) the government needs to come forward to ensure economic safety nets, and improve management policies of the haor resources. Moreover financial support of respective department will be influenced on small-scale business, diverse farming and specific haor based off-farm activities.

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