



## **Report on Third Round Livelihood Impact Assessment of Beel User Group Members'**



**Haor Flood Management and Livelihood Improvement Project  
Local Government Engineering Department  
WorldFish Bangladesh**

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## Acronyms and Abbreviations

ASA	Association for Social Advancement
BBS	Bangladesh Bureau of Statistics
BDT	Bangladeshi Taka
BKB	Bangladesh Krishi Bank
BMC	Beel Management Committee
BRAC	Bangladesh Rural Advancement Committee
BUG	Beel User Group
BRDB	Bangladesh Rural Development Board
BWDB	Bangladesh Water Development Board
CBO	Community Based Organization
COVID-19	Coronavirus Disease 2019
GB	Grameen Bank
HFMLIP	Haor Flood Management and Livelihood Improvement Project
HH	Household
IGA	Income Generating Activity
JICA	Japan International Cooperation Agency
LGED	Local Government Engineering Department
MS Access	Microsoft Access
NGO	Non-Government Organization
POPI	People's Oriented Program Implementation
SIS	Small Indigenous Species
SPSS	Statistical Package for the Social Sciences
UP	Union Parishad

## Executive Summary

Third round study of Beel User Group (BUG) member's household's livelihood status was conducted in 2021 to assess the overall impact on fisher households under the fisheries promotion component of the Haor Flood management and Livelihoods Improvement Project (HFMLIP) funded by JICA. Haor area has endowed with the enormous fisheries resources; however, poverty still persists in the North Eastern five districts of haor basin of Bangladesh, project working area. The Project has been providing support to participating fisher community to improve their livelihoods. Households dependent on fisheries are most vulnerable to poverty in haor basin, sometimes, other people; in the community also suffered by natural calamities have to depend on fishing. In order to address these issues, HFMLIP has launched integrated rural development activities to reduce poverty through establishing access rights to natural resources. Current report summarizes the livelihood situation of Beel User Group (BUG) member's households on a sample basis. BUG member's livelihood survey questionnaire covers a wide range of indicators considered to observe the situation of household's economy. This study aimed to collect quantitative information with all livelihoods indicators that will allow understanding the changes of the BUG member's socio-economic condition over the project period. The current report covers the following objectives:

- To quantify changes in livelihoods among project target beneficiaries;
- To understand the causes behind these livelihood changes;
- To analyze the periodical impact on the BUG members over the project period.

Third round survey questionnaire captures same set of indicators used in first round BUG survey; livelihood monitoring explores aspects of the population profile, income, occupation, landholding, assets, food security, daily protein intake, women mobility, institutional involvement and credit utilization.

Beel User Group (BUGs) have been formed from 2016-17 after the waterbodies handed over to HFMLIP. Current study shows that membership status among participants into BUG is positively correlated with the involvement of executive committee. The project management tried to maintain male/female ratio at 70/30 from the very beginning of CBO formation (BUG) except in few sites. The study data shows 28% members belong to executive committee, which is higher than baseline study (18%); rests (72%) belong to general members in BUG. Women representation in the total BUG memberships is 27.2 % among sample (125) households, project targeted women representation is about 30%. Women of participating households are going to other institutions like hospitals/clinics, union parishad, upazila head quarter and project waterbodies. Due to COVID-19 pandemic and consecutive countrywide lockdown situation, women mobility outside homestead reduced while it had increased significantly in second round study.



Literacy rate in haor basin is lower than the other region of the country, this is due to lack of ability in utilizing increased number of services and can possibly be associated with better involvement in service providing agencies. Study data showed the level of education (and presumably literacy rate, population above 7 years) in general in project area was 59% in first round, 60% in second round and it has become 62% in third round study. [Table 3](#) shows that the percentage of illiteracy rate in the project area declined to 16.33% in third round study while it was 22.38% in first round study. In the first and second round study, 18.79% and 20.49% peoples could sign only, while, third round study result shows increased ability of signing (21.35%). National statistics for literacy rate of population (7yrs+) is 74.70% (BBS 2021) where it is 62% in HFMLIP working districts.

Third round survey showed that average homestead land per household is 4.8 decimals, which is higher than homestead land first and second round study, total operated land (own cultivated land and sharecrop in land) increased from 202 decimals to 211.7 decimals third round. Pond size also becomes 3.7 decimals in third round from only 2 and 2.8 decimals in first and second round survey.

No significant difference found in average number of dwelling houses, in first round it was 1.75 while, in third round number stand to 1.82. Study data also revealed average dwelling area per household was 300 sqft in base year while, it has increased to 318 sqft in third round. The third round survey also reflected the financial capacity of sample households increase; for house maintenance in first round survey average household expenditures was 3681 BDT, in second round amount stand to 4146 BDT which become 7898 BDT in 2021. Study showed that participating households are increasingly using tin (corrugated iron) in building new houses. In 2018 and 2020, 94% and 96% households had houses built roof with tin (corrugated iron), remaining 6% households used bamboo, grass and straw leaves into the roof. Slight difference shows in third round, 94% household's uses tin (corrugated iron), 5% used concrete and remaining 1% households used grass and straw leaves into the roof.

In project working area, more than 90% household drink tube well water set up by different person or agencies. About 30% tube well were owned by respondents, followed by 41% set by neighbor and remaining 29% set by the government and NGO in first round study while, in third round 58% tube-wells set by own households, 20% set by neighbor and remaining 22% set by the government and NGO.

The project people are under risks of water borne diseases as the area located in low laying floodplains. Earlier most households used hanging latrines set up near the flowing river adjacent to their residence. Due to different government and NGO intervention, this situation has significantly improved. First round livelihoods data showed that 52% households had water-sealed latrine, 32%

has sanitary latrine and 16% households hanging latrine. Whereas, current study shows 59% households has water-sealed latrine, 33% has sanitary latrines and only 8% households are using hanging latrine.

Combinations of household's income expenditure profile can serve as indicators of households' economic power of a given period. Comparison among different round of studies for household's durable assets ownership shows that assets such as wooden furniture, fishing nets, solar panel, mobile phones, boats, ornaments, sewing machine, televisions, and bicycles commonly held by households. The first round survey data shows sample households possess 94% beds, fishing nets 88%, solar panel 21% and mobile phone 70% while, in current survey shows beds 99%, fishing nets 89%, solar panel 41% and mobile 95%. Data indicated a positive change of valuable asset ownership from first tends to enhanced purchasing power of households.

Financial condition positively correlates with the household's expenditure and access to other finances. In this study, households were asked to estimate their income from different sources for the 12 months prior the survey. Yearly average income of each HH was BDT 111450, 154400 and 243321 in three round studies respectively. In third round study, the gross household's income increased by about 138% compared to baseline study. The first round data shows prime source of household income are from fishing across all categories (49.69%) followed by agriculture labor (15.59%), non-agriculture labor (6.6%), business (4.05 %), service (3.28%) (NGO and Government) and rest are sale of livestock, petty trade, sale of land and remittances while, third round study, highest annual income also derived from fishing (38.33%) followed by sale of livestock (10.76%), agricultural income (10.16%), agricultural labors (9.8%) and non-agricultural labor(8.83%) and the lowest percentage of annual income came from driving boats (0.18%). There are significant differences in category-wise annual income among first round, second round and third round study. Project interventions created diversified income options for other member of the participating households; as a result, income from other sources also increased compared to fishing. It means diversification of occupation reduced population pressure on to fishing. Yearly expenditure of per household found as BDT 109,774, 150135, and 229886 in three round studies respectively. Three round survey results showed, households used 63%, 54% and 41% of total household's expenditure on food items whereas, used 37%, 47% and 59% on non-food items respectively in 2018, 2020 and 2021. Among the food items, highest expenditure is on rice/wheat followed by vegetables, betel leaf/tobacco etc. Education occupied the highest expenditure on non-food item and followed by clothing, loan repay etc.

HFMLIP has no provision of micro credit facilities for participating households; however, credit always plays a vital role to the small farm holders. Normally community people receive informal credit generally on a short-term credit basis from friends, relatives, kin members, landlord,

neighbors, shopkeepers, large farmers, marketing intermediaries, village moneylenders and other local income groups. Despite the dominance of micro credit institutes, informal sources of credit played a vital role for the sample households. In first round survey, was found, participants took short-term credit from moneylenders (50.73%), bank loan (15.30%), relatives (13.18%), loan from local samity (11.77%), loan from others 7.85% and 1.18% from fish trader. Highest number of loan utilized for purchasing fishing gears (61.11%), followed by meet daily needs (20.83%), purchasing livestock (11.11%) business/petty trade (5.56%) and cultivation (1.39%). In third round study, household's dependency on moneylenders still persist to 54.46% households, fish traders to 1.71%, loan from relative to 19.27% and loan from other no-interest sources to 11.81% while, dependency on commercial bank and local societies declined to 8.38% and 4.38% respectively. At household level, maximum amount of loan took were utilized in cultivation (43.18%) followed by meeting daily needs (31.82%), purchasing fishing gears (10.23%), business/petty trade (4.55%), and medical costs (4.55%).

At the beginning of the project most participants had limited access to different institution, similar projects and NGOs. Project created capacity to link with other local institutions. Duration of membership varies from 1 to 5 years depending on category of project/NGO. Accumulated savings per household is Tk 600.00. Highest savings in ASA members (Tk 3050) followed by GB members (Tk 2400), brac members (Tk 2082), POPI members (Tk 1800) and other NGOs (Tk 1800). Average number of loans within the last 12 months is about 1 unit across all categories of participants in different organizations and the amount repaid from Tk 3000 to Tk 15000. Second round study shows the highest accumulated savings members of ASA (Tk 2920) followed by brac (Tk 2820), BRDB (Tk 2000), BKB (Tk 1750), Grameen Bank (Tk 1609) and lowest saving by new members of HFMLIP (Taka 650) in 2020. Average number of loans within the last 12 months of second round still 1 unit across all categories of participants of different organizations ranges from Taka 10000 to 30900. The highest accumulated savings have been observed in the third round study of the members of different local NGOs (Tk 6000) followed by brac (Tk 3600), ASA (Tk 3400), EBK (Tk 2800), BRDB (Tk 2400) and the lowest savings by HFMLIP members (Tk 658).

Baseline data revealed that women of 30.23% sample household went to hospital/clinic, 23.72% went to Union parents/relatives house, 11.19% went to market/bazaar, 8.93% went to beel, 7.94% in agriculture field, 6.41% in festival/village fair and rest 11.58% went to bank/post office/union parishad/NGO office etc. for accessing different services. The most common outside involvement of women is fetching water, fuel wood collection and some women are involved in petty trading. The second round study reflects women mobility has increased due to different types of Government and NGO interventions in haor area. Current study data revealed that women of 25% sample household went to hospital/clinic, 16% to market/bazar, 13.32% to parents and relative's



house, 11.64% to Upazila head quarter, 7.85% went to agriculture field, 7.09% went to project waterbody and rest 19.5% went to school parents meeting bank/post office/union parishad/NGO office etc. for accessing different services. The third round study reflected women mobility has not increased to distance services due COVID-19, current study data revealed that women of 27% sample household went to hospital/clinic, 22% went to project waterbody, 19% went to agriculture field, 13% to market/bazar, 6% to parents and relative's house, 6% to village festivals'/fairs and others for accessing different services. The most common outside involvement of women is fetching water, fuel wood collection.

In first round study 54% households severe food shortage, 16% had moderate and 30% had no food deficit while, situation has improved in second and third round study to 48% and 22% severe food shortage, 14% and 27% had moderate, and 38% and 51% reported no food shortage respectively. A decrease in prevalence of severe food insecurity was accompanied by an increase in mild/moderate food insecurity, suggesting that households had moved out of a more serious food access problem into an improved situation. In the same way, families previously classified as moderately food insecure appeared to have moved into the food secure category.

In third round study, the prime source of annual protein intake among the participating households was found fish (45 gm/day) followed by chicken (30 gm/day), and meat (5gm/day). In addition, other source of protein consumption was egg (20 piece/month) and milk (4.5 liter/month) per household. While, in first round data show fish consumption per person is 30 gm/day, chicken/duck 25 gm/day, meat 4 gm/day, egg 14 pieces/month and milk 3 liters/month per households. Whereas, per person fish consumption 31 gm/day, egg consumed 13 no/month/household, meat consumption 4 gm/day per person and milk 4 liter per households in second round study. Overall data showed per capita fish consumption, number of eggs, chicken/ducks and liters of milk consumed in third round study increased compared to first and second round survey.

In first round study, 39 members of sample household received trainings from the project and 8 members received training from other NGOs and government agencies. In second round study, total 123 members of sample household received trainings, of which, 68 persons received training on Beel fisheries management, followed by 37 on organizational management and 14 on IGA. Third round study result shows that total 167 members of the sample households received training of which, 86 persons received training on Beel fisheries management followed by 54 received organizational management, and 25 on IGA. The study result revealed that project emphasized on the capacity development of participating households Table 21.

**The following investment strategies recommended:**

- HFMLIP project has been implementing integrated rural development project to tackle the vulnerability of household economy by using available common resources around the homestead. Project provided access right to BUG members for sustainable fisheries resources management, however, for effective co-management long-term access right is essential, BUG need legal entity from relevant government agencies.
- Project organized different IGA training for participating households along with financial support. Follow up training need to be organized for similar participants, to ensure quality with proper utilization.
- Need to develop linkages between project participants and other service providing agencies like government extension services, financial institutes and NGOs.
- Not only education but in the other field like, in the field of health, community development & recreation projects are required to create awareness among poor people. Government, non-government, NGO's & private sector can play vital role in this issue.
- Access to financial institution is vital for creating new entrepreneur from participating community, without finance, skills do not generate income or even skill become idle without finance.
- Non-formal credit for villager always plays a dominant role to mitigate households need and financial crisis. HFMLIP may provide micro credit support at lower interest rate for BUG member households to access other income opportunities like business, livestock rearing, and lease holding and fulfilling emergency basic needs.
- Women empowerment is essential for the well-being of individual households and contributes to economic productivity. Capacity development of women through organizing an increased number of skill development training by project or linking them to other service providing agencies. In addition, emphasis should be given to both social mobilization as well as group savings for future sustainability.
- In order to strengthen institutional capacity democratic practices should be made in BUG e.g. change of leadership, regular meetings, and fish sanctuary establishment and management, swamp tree plantation and excavation. Improvement is also required in marketing, participatory planning, and greater transparency in safety net program.
- Re-introduction of valuable/endangered species, SIS (*Mola* culture) and fast growing species can be a good option for production enhancement and women involvement in socio-economic development.
- BUG/CBOs should be registered under Cooperative Department to integrate between fisheries co-management and household livelihood activities for ensuring sustainable socio-economic condition.

WorldFish arranged district level result dissemination workshop on “ Fish Catch, Biodiversity and BUG Members Livelihood Impact Monitoring”, presented the study results of fish catch & biodiversity and livelihood studies have been carried out in sample waterbodies in Sunamganj, Netrokona, Kishoreganj, Brahmanbaria and Habiganj district.

In addition, a national level workshop also held on “Fish Catch Monitoring and Biodiversity Impact Study and Livelihood Impact Assessment of Beel user Group Members under HFMLIP (LGED Part) held on 22<sup>nd</sup> June, 2022 at the Seminar Room (Level-4), LGED HQ, Dhaka Chaired by Sk. Md. Mohsin, Chief Engineer, LGED. Honorable Chairman indicated Haor region as one of the hotspot of fisheries resources providing livelihood support for the vulnerable people. In addition, he also highlighted the impact of interventions on species diversity, habitat restoration, establish beel connectivity for maintaining balance in fisheries population stock in the Haor region. WorldFish Team attended and delivered final presentation on that workshop. The overall progress of the project in terms of Fish production, biodiversity and livelihood of fisher’s was first presented to the audiences presented from different government and non-government organizations including LGED Bangladesh, JICA Representative, Department of Fisheries, Bangladesh Water Development Board, CNRS, BRAC, We CARE Bangladesh, WorldFish-Bangladesh and others.

# 1 Introduction

## 1.1 Background

WorldFish has been conducting fish catch, bio-diversity and households livelihoods impact monitoring of the fisheries component of the HFMLIP from 2016 to till today. HFMLIP is an integrated rural development project of Local Government Engineering Department (LGED), has been implementing activities in five haor districts are Sunamganj, Netrokona, Kishoreganj, Brahmanbaria and Habiganj. HFMLIP project mandate is to secure direct and indirect wellbeing of the participating households and other community members covering within a set of livelihoods indicators. The haor region is deep floodplain, usually grow single crop most of its area, flash flood/early flood is the common challenge causes severe damage to standing crops just before harvesting. Communication network limits the incentives for increasing production, discourages rural growth and limits access to the markets, off-farm employment opportunities, services providing agencies, particularly health and education. Monsoon strong wave action amplifies the vulnerability since it potentially washes away the village fringes and poses a major threat to many villages in the haor basin. The HFMLIP has following objectives to cover:

- Rehabilitating and constructing the rural infrastructures.
- Promoting fisheries and related activities in the haor areas.

The main challenge in fisheries promotion component is to establish access right to the target communities and to establish 125 BUGs at five districts. These CBOs are an essential part to establish proper community based fisheries management (CBFM) each waterbody to enhance bio-diversity, productivity and income. Along with other monitoring activities, the WorldFish assignment includes studies for assessing the impacts of project activities on biodiversity, productivity and livelihoods of participating members' households. Current study has undertaken the livelihoods status of the 125 sample BUG members' households under fisheries promotion of the HFMLIP. Current report captures the result of third round households' livelihoods survey findings has incorporated into the report. The report will provide important information relating to the households demography, housing and sanitation, land ownership patterns, assets, income, expenditure, food security, women mobility, use of micro credit and institutional involvement of BUG members. The study covers three main objectives:

- To assess the current status of the households livelihood situation
- To quantify livelihood indicators and provide comparative information across different categories of BUG members;
- To create a standard set of livelihood information that enables an understanding of the periodical impact of the project on the BUG members over the given time.

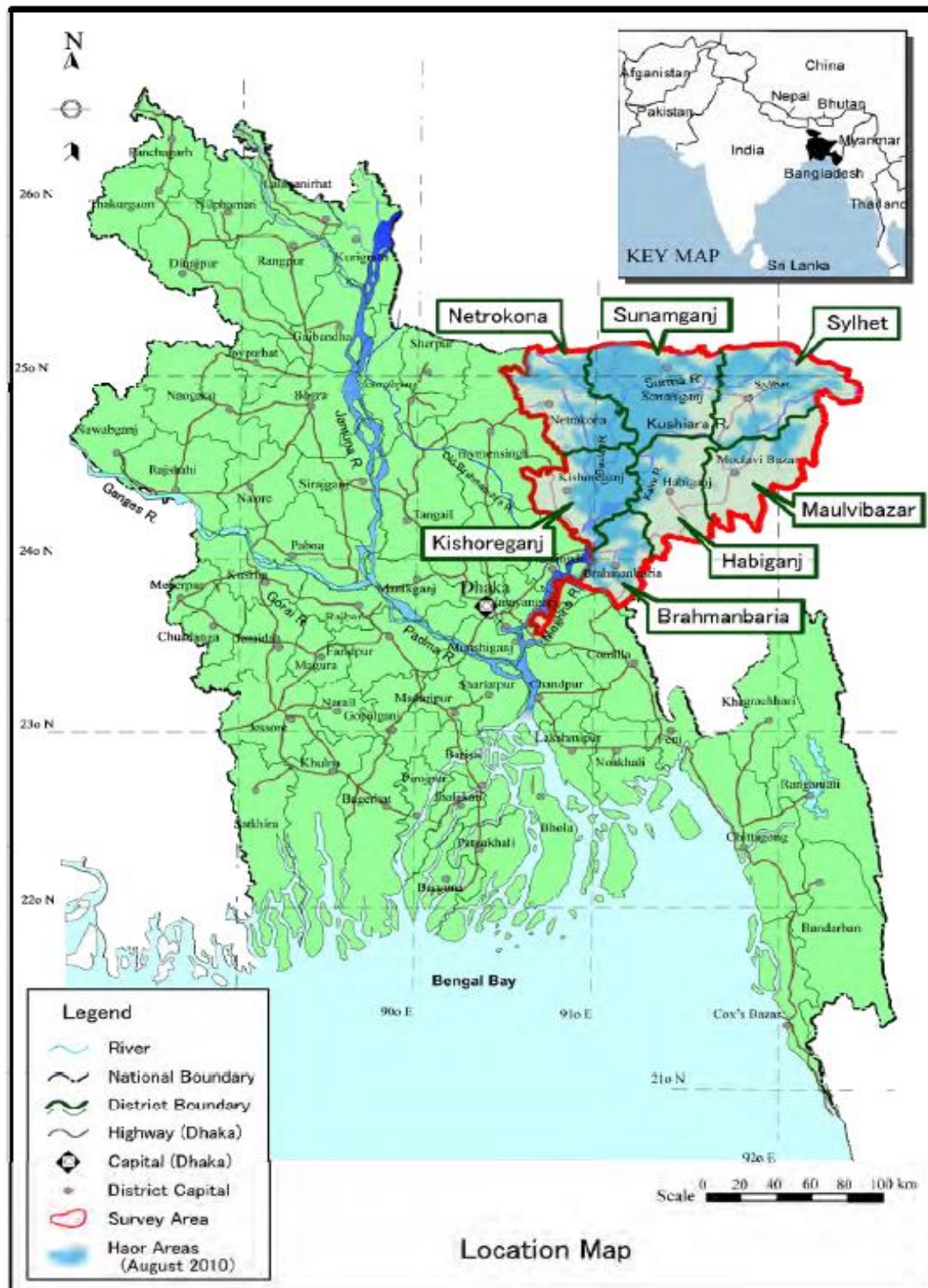


Figure 1: The Project has been implementing in 33 Upazila of five haor districts in the haor basins of Netrokona, Habiganj, Brahmanbaria, Kishoreganj and Sunamganj.

## **1.2 Scope of Work**

The WorldFish planned to prepare a quality report covering households' information through BUGs members' sample households' survey. Collected data has analyzed to prepare a comprehensive report; samples have drawn through two-stage sampling. The first-stage 25 BUGs selected from project intervening waterbodies and 125 sample households sampled from 25 BUGs i.e. 5 households from each BUG. Members were selected by simple random sampling method from the sample members of the BUG listed by HFMLIP. WorldFish has drawn 5 sample households from each selected BUG members list, the BUG lists (prepared by HFMLIP) and will conduct interviews of sample households.



## 2 Methodology

### 2.1 Analytical Framework

The framework has developed to guide the impact monitoring process in the discussion with HFMLIP-LGED management team. The third-round livelihoods report will measure the same sets of indicators used in first round, household livelihood questionnaire has prepared ([Annex-2](#)) to measure the present status of the livelihoods situation, giving maximum attention to securing comparability with other stages of monitoring. It captures a number of factors influencing livelihood changes, measured by quantitative indicators.

### 2.2 Quantitative Surveys

The third round of livelihoods study provides essential and appropriate information of livelihoods changes. The study draws upon a quantitative assessment and captures the main trends of the BUG members' livelihoods. The overview covers: sources of income, housing quality, sanitation, education, occupation, assets ownership, land holding pattern, agriculture, income, expenditure, food security, sources of finance, institutional involvement, women mobility and human capacity building. The studies will provide deeper understanding of the issues underlying livelihoods in the project beneficiaries. The third round quantitative survey with HFMLIP participating households has initiated in March 2021 using a standard questionnaire for data collection and continued up to June 2021. This survey has conducted in HFMLIP area (5 districts- Sunamganj, Netrokona, Kishoreganj, Brahmanbaria and Habiganj) covering 125 households ([Annex-1](#)).



### 2.3 Sampling

WorldFish in consultation with HFMLIP-LGED management has designed the households sample size for this study, total 125 households from a list of 25 BUGs ([Annex-3](#)) have been drawn from the livelihoods monitoring. A two-stage simple random sampling method has been adopted to make the sample representative at the potential participant level.

**First stage:** Twenty-five waterbodies ([Annex-3](#)) were randomly sampled from HFMLIP waterbodies.

**Second stage:** Five households from each BUG have been randomly selected from the sample BUG list in the project area.

## 2.4 Quality Control

WorldFish team involve in monitoring of data collection, provided on-the-spot training, feedback after reviewing the filled-in questionnaire on a sample basis, and shared experiences during team meetings. For each question of the study questionnaire has a standard guideline to ensure data quality and collection of information from respondents. The HFMLIP management provides administrative support to the survey team to conduct data collection smoothly. As a follow up to cross check survey enumeration, the WorldFish senior staff members checked at least 25% of the sample households to identify the missing links, ambiguous answers, and digital errors, and provided feedback to the team.

## 2.5 Data Management and Analysis

The data entry template has designed in MS-Access. Consistency checks and keystroke errors have also detected and corrected before data table preparation and analysis. Data analysis has done using SPSS software.

## 2.6 Livelihood Profiles

Human capital covers brief description of literacy and education levels (adults and children), school enrolment by gender, illness, skills, occupations (primary and secondary), wage status, women mobility, etc. Household profiles are represented as a summary of different characteristics of the sample households within a certain period.

## 2.7 Livelihood Indicators

Households livelihoods indicators has been represented as a summary of different characteristics of the sample households within a certain period of time, where human capital relates to literacy and education levels (adults and children), school enrolment by gender, illness, skills, occupations (primary and secondary), wage status, women mobility, etc.

### 3 General Demographic Characteristics

#### 3.1 Household Size

The household's profiles provide a summary of demographic characteristics of sample households. The purpose is to capture aspects of these households that are important for calculating population size. The status of different household categories of respondents has given in Table 1. The average household size was found in all studies is around 5.6 which, is little higher than the national statistics (4.2; Statistical Year Book of Bangladesh 2018) for *haor* area. This study showed that 50.22% are male and 49.78% are female members in sampled households in first round study while it has changed to 51% and 49% in both second and third round study.

**Table 1: Status of different household size by study round**

Study Round	Household sample	Male	Female	Total people	People per household
2018	125	350	347	697	5.57
2020	125	355	343	698	5.58
2021	125	356	342	698	5.58

#### 3.2 Beel User Group Membership

The HFMLIP is now in final year of its implementation; project already developed primary groups (BUG) at community level. Hence, BUG member's household's livelihoods study got sufficient scope to draw 25 sample BUGs to conduct studies in five project districts. Table 2 shows membership status (including executive committee) in three rounds of BUG livelihood study. Following table shows the proportion of executive members in all rounds; study indicates enhance numbers of sample households in better empowerment over. It is also apparent in third round study that, 28% of sample members are holding position in Beel Management Committee (BMC) while it was only in 18% first round study. Although this may simply reflect the comparativeness of hierarchy of the households, it can also be a reflection of increased social capital for those households.

**Table 2: Membership status of general member and executive committee from selected households in three round study**

Name of Position	2018 BUG Study	2020 BUG Study	2021 BUG Study
President	2	1	1
Secretary	20	14	13
Cashier	1	3	4
BMC Member	0	16	17
General Member	102	91	90
Total	125	125	125

### 3.3 Education and Literacy

Despite of infrastructure development by different co-management projects in haor region, still school going children have to suffer to access to educational institutions in monsoon in this area. Most of the roads remain under water about 5 to 6 months in a year. To address this problem, HFMLIP project intervention has been establishing better road networks at the village level for socio-economic changes of the rural people.



Study data showed the level of education (and presumably literacy rate, population above 7 years) in general in project area was 59% in first round while; this become 60% in second round and 62% in third round. Table 3 describes that 22.38% of the people in project area were illiterate in first round survey, while, third round data shows reduced illiteracy to 16.33%. According to the Bangladesh Bureau of Statistics (BBS) literacy report 2020, the literacy rate stood at 74.70% in 2020, while literacy in HFMLIP implementing haor areas is 62%.

**Table 3: Level of education (%) in sample households (all members) in three sound surveys**

Level of Education	2018	2020	2021
None	22.38	19.34	16.33
Can Sign	18.79	20.49	21.35
Level (1-4)	24.68	24.93	26.22
Level (5-10)	32.57	33.09	26.22
Level > 11	1.58	2.15	9.89

### 3.4 Land Holding Pattern

This part of reports captures the land ownership pattern and distribution by category of sample households. In HFMLIP implementing area, most of the land belongs to local landlords (i.e. big land owners); since the respondents are from the poor, they took sharecrop land from big land owners. Usually average household land holding in *haor* area is bigger than the other parts of the country. Average



landholding size in second rounds study was 105.86 decimals in the project area whereas; national average is 64 decimals (0.64 acres, Statistical Year Book of Bangladesh 2018). In the first round survey, average homestead land per household was 4 decimals, while in third round survey, average

homestead area become 4.8 decimals, total operated land (own cultivated land and sharecrop-in land) 202 decimals in first round and 212 decimals in third round. Pond size in third round also becomes 3.7 decimals from 2 and 2.8 decimals in first and second round survey. [Table 4 & 5](#) shows the total land possess by household and percentage of households land ownership in all three rounds of survey.

**Table 4: Land ownership pattern of sample households in decimals by first, second and third round study**

Land use patterns	2018	2020	2021
Own homestead land	4.0	4.7	4.8
Homestead land owned by someone else	6.0	1.4	2.8
Pond or ditch (own and rent)	2.0	2.8	3.7
Land owned and cultivated by the HH	106.0	124.2	72.9
Land cultivated last year but own by others(Sharecropped/rented/mortgage in)	96.0	104.6	138.8
Land owned but cultivated last year by others (Sharecropped/rented out)	78.0	16.8	16.8
Khas land	5.0	10.4	3.7
Land owned but mortgage out	0.0	8.0	58.2
Own non-cultivated land	2.0	62.0	15.5

**Table 5: Percentage (%) of different types of land operated by households in first, second and third round study**

Land use patterns	2018	2020	2021
Own homestead land	1.34	1.40	1.51
Homestead land owned by someone else	2.01	0.42	0.88
Pond or ditch (own and rent)	0.67	0.84	1.17
Land owned and cultivated by the HH	35.45	37.07	23.00
Land cultivated last year but own by others(Sharecropped/rented/mortgage in)	32.11	31.22	43.79
Land owned but cultivated by others (Sharecropped/rented out)	26.09	5.01	5.30
Khas land	1.67	3.10	1.17
Land owned but mortgage out	0.00	2.39	18.36
Own non-cultivated land	0.67	18.51	4.89
Total	100	100	100



## 4 Physical Condition of Households, Housing, Water Source, Sanitation and Asset ownership

### 4.1 Housing Condition

Data shows average number of dwelling houses across all three rounds of studies shows similar (1.7). Study data also reveal average dwelling area per household was around 300 sqft in first round study, which changed to 316 sqft and 318 sqft in second and third round studies (Table 6). The table also reflects the financial capacity of sample households; in house maintaining in 2018 average household expenditures for house building or repair was 3681 BDT and in 2021 is 7898 BDT.



**Table 6: Average number of dwelling house, area and year-wise expenditure for repairing of sample households**

Particulars	2018	2020	2021
Number of houses	1.75	1.80	1.72
House area (sq ft)	300	316	318.38
Cost of house repair/building (Tk)	3681	4146	7898

Housing quality depends on the materials used for wall and roof in the sample households. Study data shows in first round 75% households have tin walls, 5% jute stick, 4% made of earth and 14% are brick etc. (Table 7). On the other hand in 2021 (third round), wall materials of 77% sample households was corrugated tin, 4% made of earth, 15% bricks and remaining 4% used other material like bamboo, earth, jute tick etc.

**Table 7 : Materials of walls of dwelling houses of selected households in three round studies**

Wall materials	2018	2020	2021
Bamboo	0.44	2.44	2.44
Brick	13.89	15.69	14.69
Earth	4.11	4.11	4.11
Grass	0	0	0.00
Straw/leaves	1	0.44	0.00
Tin	74.67	75.77	76.76
Concrete	0.44	1.11	1.11
Jute sticks	5.44	0.44	0.89



Community people are increasingly using tin (corrugated iron) on roof in building new houses. In 2018, 94% households had houses with tin (corrugated iron) roof, remaining 6% households used, bamboo, grass and straw leaves into the roof. Slight different shows in third round (2021) study, about 94% of the households used tin (corrugated iron), 5% used concrete and remaining 1% households used straw/leaves onto the roof. [Table 8](#) shows the housing materials of roof use by theBUG members in 2018 to 2021.

**Table 8: Materials of roofs of dwelling houses in 2018, 2020 and 2021**

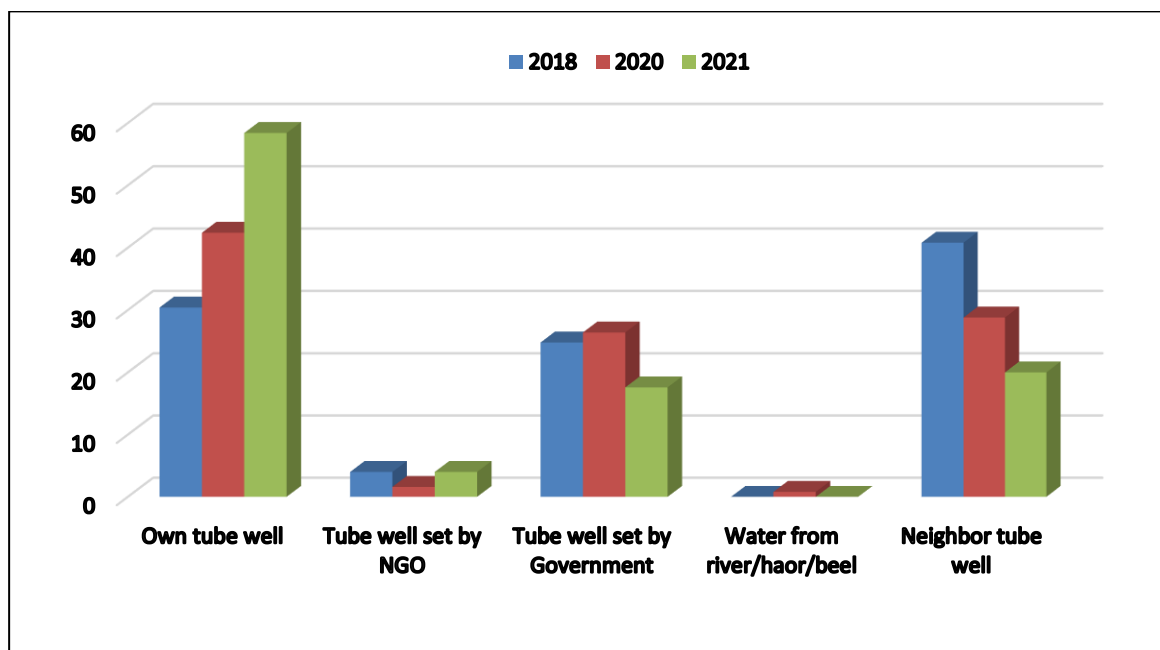
Roof materials	2018	2020	2021
Bamboo	0	0	0.0
Earth	0	0	0.0
Grass	0	0	0.0
straw/leaves	5	1.6	0.4
Tin	94	96	94.3
Jute sticks	1	0	0.0
Concrete	0	2.4	5.2

## 4.2 Household Water Sources

Access to safe drinking water is essential to avoid health hazards. In HFMLIP working area, most people drink tube well water set up by different person or agencies. About 30% tube well were owned by respondents, followed by 41% set by neighbor and remaining 29% set by the government and NGO in first round study while, in third round 58% tube wells set by own households, 20% set by neighbor and remaining 22% set by the government and NGO ([Table 9](#)). Area residents are becoming very aware of the need for safe drinking water. Due to intervention of different government projects and NGOs, use of safe drinking water has been increasing day by day.

**Table 9: Use of safe drinking water by sample households by different sources in 2018, 2020 and 2021**

Type of Water Source	2018	2020	2021
Own tube well	30.4	42.4	58.4
Tube well set by NGO	4	1.6	4
Tube well set by Government	24.8	26.4	17.6
Water from river/haor/beel	0	0.8	0
Neighbor tube well	40.8	28.8	20

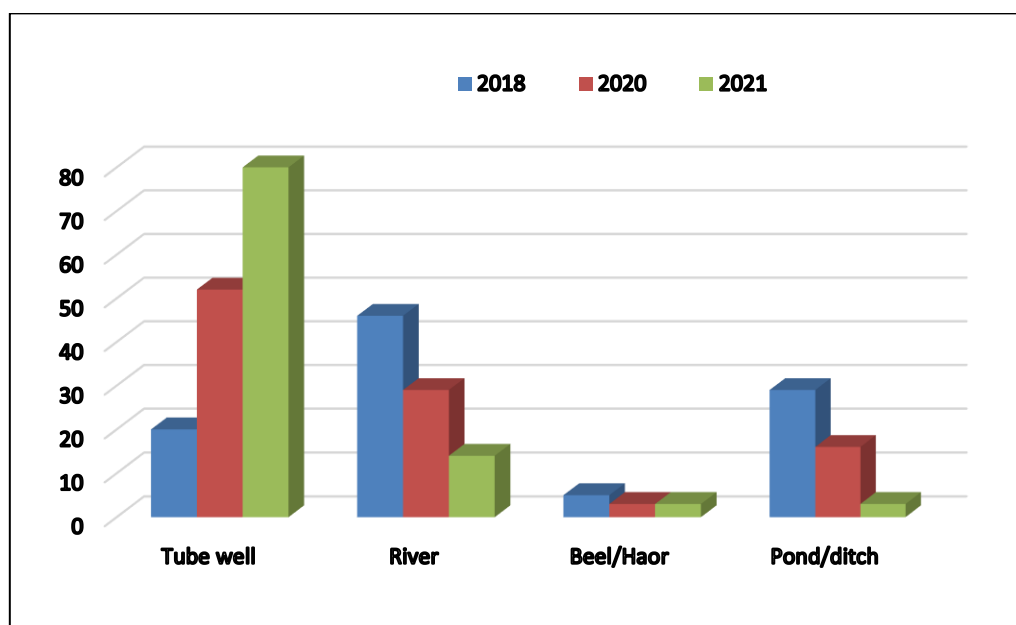


**Figure 2: Percentage (%) of safe drinking water sources in three round studies**

Table 10 shows the status of different water sources for the households used in other activities except drinking purposes. People of Haor area use available surface water around their homestead; because of the limited access to own tube well water for general purposes by sample households. The first round study shows only 20% household would use tube well water for household purposes and the remaining 80% used surface water from river, beel/haor and pond/ditch. In third round study, 80% respondent households used tube well water, 14% used river water and remaining 6% use water from other surface water sources like floodplain/ponds for household purposes.

**Table 10: Sources of water for households purposes in 2018, 2020 and 2021**

Type of Source	2018	2020	2021
Tube well	20	52	80
River	46	29	14
Beel/Haor	5	3	3
Pond/ditch	29	16	3



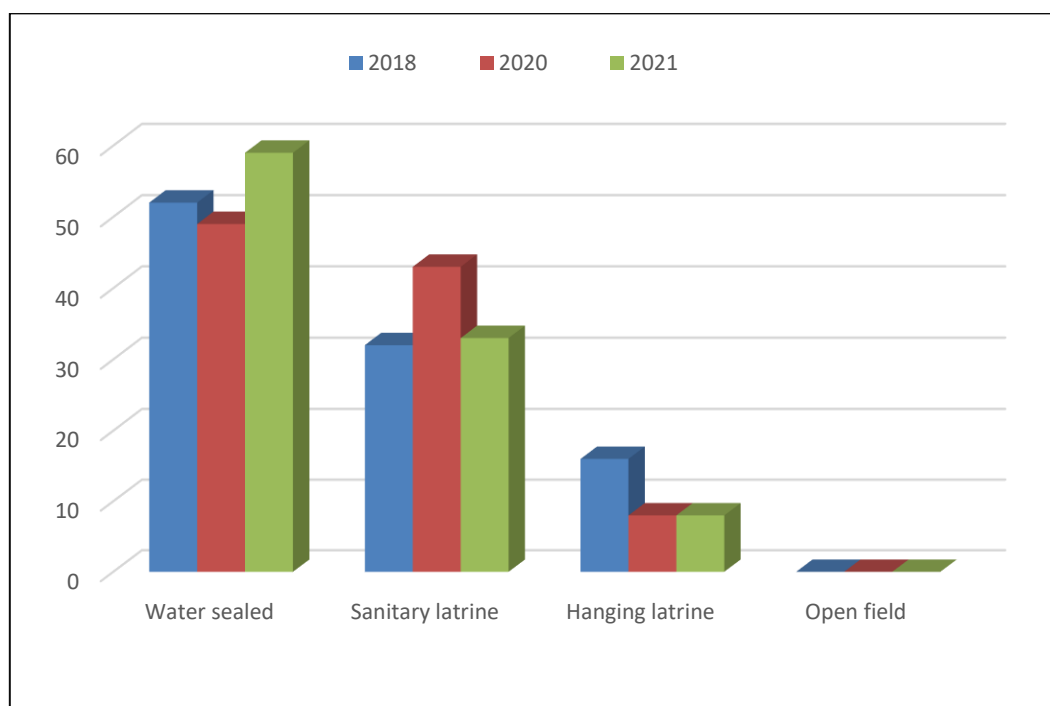
**Figure 3: Water use condition of BUG member for household purpose**

### 4.3 Household Sanitation

HFMLIP project area located in low laying floodplain haor region, the risks of water borne diseases are very high. Earlier people used hanging latrines set up near the flowing river adjacent to each residence. Due to different government and NGO intervention, this situation has improved significantly. First round livelihoods data shows that 52% households had water-sealed latrine, 32% has sanitary latrine and 16% households hanging latrine. Current study shows that about 8% households use hanging latrine, about 59% households has water-sealed latrine and 33% has sanitary latrines. People need better knowledge to set up hygienic latrine considering all standard conditions. [Table 11](#) represents the situation of hygienic condition of households between first round, second and third round livelihoods studies.

**Table 11: Households' sanitation condition in project area in 2018, 2020 and 2021**

Latrine type	2018	2020	2021
Water sealed	52	49	59
Sanitary latrine	32	43	33
Hanging latrine	16	8	8
Open field	0	0	0



**Figure 4: Household's sanitation conditions in HFMLIP working area for selected households**

#### 4.4 Household Asset Ownership

Normally household's durable assets ownership indicates economic condition and certain kinds of livelihoods activities of the households, such as net and plough indicates fishing and agriculture respectively of a household. Table 12 shows the percentage of household's assets holding in first round, second and third round study. Following table shows assets like wooden furniture, fishing nets, solar panel, mobile phones, boats, ornaments, sewing machine, televisions, and bicycles are commonly owned by households. The first round survey data shows sample households possess beds 94%, fishing nets 88%, mobile phone 70% and solar panel 21% whereas, in third round survey shows beds 99%, fishing nets 89%, mobile phone 72% and solar panel 41% These data shows a positive shift of valuable asset ownership from first round livelihoods survey. Table 13 shows change of valuable assets ownership by percentage (%) among first, second and third round livelihoods survey.

**Table 12: Average status of valuable assets of sample households in three round studies**

Name of Items	2018	2020	2021
	%	%	%
Beds/Cots (Khat)	94	98	99
Dressing table	07	22	23
Show case/Almira	35	50	62
Table	19	37	66
Chair	40	72	88
Rickshaw/Van/Van/Auto	02	03	02
Bicycle/Motorbike	02	08	09
Boat	39	43	65

Mechanized Boat	14	16	11
Fishing Net	88	74	89
Plough	14	08	05
Shallow machine	06	01	01
Power tiller	01	01	01
Radio	00	00	00
TV	11	14	27
Refrigerator	01	02	09
Sewing machine	50	26	08
Buffalo	02	05	00
Cattle	46	57	87
Sheep	00	02	03
Goat	00	02	19
Poultry	07	14	83
Mobile Phone (Smart/Ordinary)	70	72	95
Solar Panel	21	29	41
Jewelry (gold/silver)gm	28	31	29
Fan	00	00	09

## 5 Household Financial Situation

### 5.1 Household Income Profile

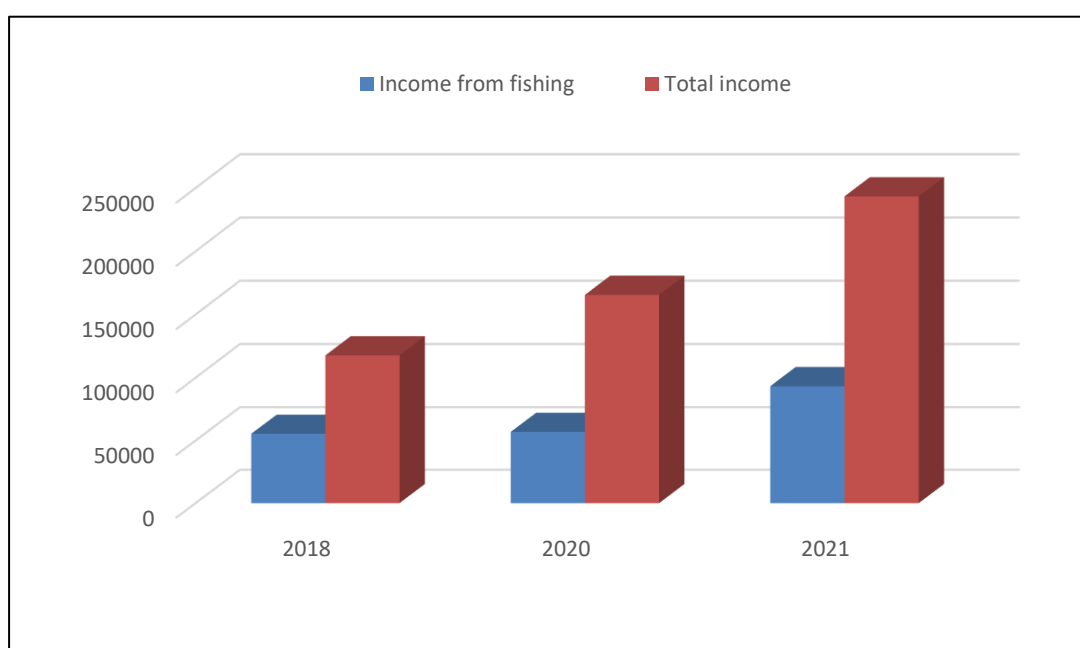
In haor region common resources around the households always have been playing an important role in contributing the household's economic activities and other households need. People of this area are famous for their high degree of resilience against natural shocks and calamities. Frequent natural calamities embrace communities to cope with the changing situation and to adopt potential occupational changes. In this study, households were asked to estimate their income from different sources for 12 months prior the survey. This part of the report provides a preview of the overall household income contributed from different economic activities. The household members were involves in different occupations represented in this section of the report. [Table 13](#), is reveals average households income increased 118%, fish and fish related income increased by 68%, and income also changed in different sources from first round to third round. Basic difference between first round and third round livelihoods study is agriculture and related income. All studies shows highest income derived from fish and fish related sources followed by agricultural laboring. Following table also illustrates distribution of income by different occupation.





**Table 13: Average Household Annual Income by different sources in BDT in three round studies**

Source of income	2018	2020	2021
Fishing (daily + Major+ processing,/aquaculture)	55375	56900	93265
Agriculture labour	17373	21322	23948
Non-agriculture labour	7425	7076	21497
Rickshaw/van/Motorbke/Auto	2028	1307	1672
Boatman	423	208	432
Petty trade	1961	920	1152
Domestic service for others	349	684	1699
Handicrafts/ Carpenter/mason	416	228	552
Other daily income	4263	10035	3370
Fish and Fish related trading	927	2863	5696
Major Fshing	1940	4574	6948
Business	4518	4564	10344
Service (private/NGO/government)	3661	5129	5184
Sale of land/Mortgage	1266	813	0
Sale of livestock	3412	6479	26184
Remittances in country and abroad	2757	7999	6584
Agriculture Income	5279	24339	24574
Other(shop rent, savings)	4263	10035	10220
Total	111450	155400	243321

**Figure 5: Average annual income from fishing and total income in 2018, 2020 and 2021**

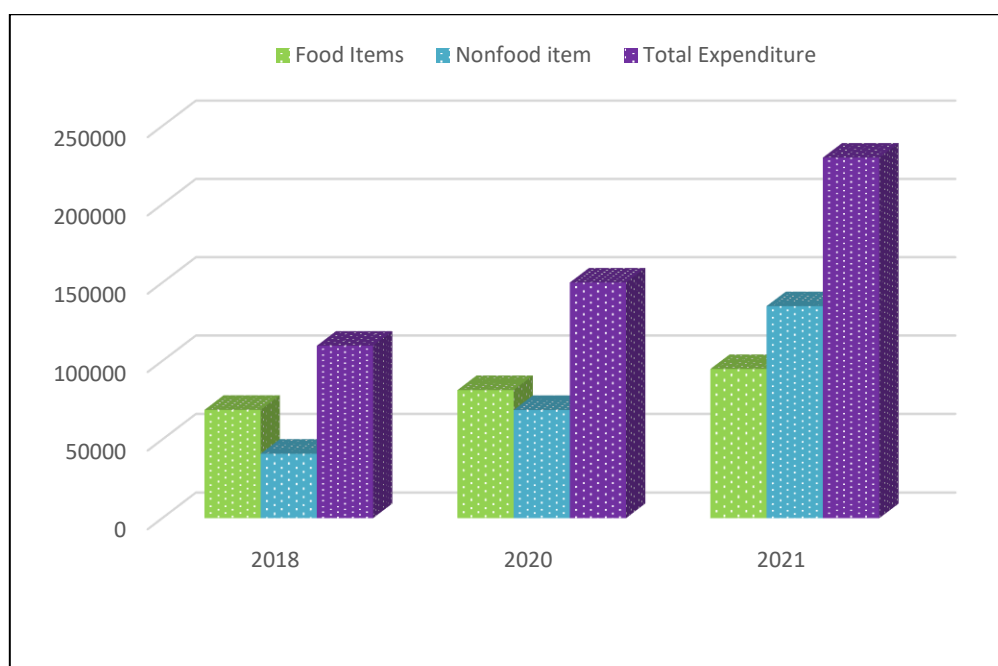
## 5.2 Household Expenditure

Third round BUG members households livelihoods impact monitoring result shows that overall household's expenditure increased 109% while, food items enhanced by 38% and 230% in non-food expenditure. Data also shows increased capacity of expenditure on non-food items households gain better capacity to develop living standard compare to base year. Detailed questions are provided investigate households' expenditure on various food and nonfood items in first, second and third

round survey. Household expenditure reflects the estimated expenses incurred for family need during last 12 months. [Table 14](#) presents a detailed breakdown of expenditure of different food and nonfood items consumed by the households

**Table 14: Average expenditure of sample household in BDT by different items in 2018, 2020 and 2021**

Particulars	2018	2020	2021
<b>Food Items</b>			
Rice/wheat	33075	32128	35870
Vegetables	7459	9880	11810
Egg	1306	2056	2441
Fish	3397	5655	6404
Meat	3957	4278	4912
Dal	2330	2538	2645
Fruits	2820	2683	3490
Edible oil	3028	4100	4808
Spices	4411	6247	6331
Betel leaf/Tobacco	6024	9238	10169
Other (food item milk, tea,)	1020	2619	5989
<b>Average</b>	<b>68827</b>	<b>81422</b>	<b>94869</b>
<b>Nonfood item</b>			
Clothing	6497	9046	13960
House repair	3123	4146	14360
Education	6766	11644	10284
Health	2616	9895	13488
Fuel	2013	2767	3948
Travel	4087	4454	5765
Loan repay	3315	986	21087
Land purchase	1691	2079	872
Saving	1008	958	694
Live Stock	1318	637	15784
Furniture	1097	284	64
Festival	2461	3203	9116
Mobile phone	2762	5170	4925
Agriculture	2000	13252	18216
Other (Cosmetics)	193	192	2454
<b>Average</b>	<b>40947</b>	<b>68713</b>	<b>135017</b>
<b>Total</b>	<b>109774</b>	<b>150135</b>	<b>229886</b>



**Figure 6: Average expenditures of BUG household on food and non-food items in three round study**

### 5.3 Source and Uses of Credit

Despite of project provided one-time cash support to BUG members, HFMLIP has no other provision to provide micro credit for participating households to fulfill urgent needs. Credit always plays a vital role to the small farm holders and poor people like BUG member. Community people generally receive informal credit on a short-term basis from friends, relatives, kin members, moneylenders, neighbors, shopkeepers, farmers, marketing intermediaries, village and other local income groups. This type of credit includes various traditional non-institutional ways of accumulating and extending credit to rural informal credit markets where institutional credit facilities are absent or insufficient to cater to the needs of different categories of local people. The dominance of micro credit institutes in rural area, still informal sources of credit plays an important role for the sample households; data shows dependency on moneylenders is one of the important for mitigating urgent need in an about 50% cases, table also shows better relation with relatives, commercial bank and local societies. [Table 15](#) shows the status of loan received by sample households in 2018, 2020 and 2021.

**Table 15: Status of loan received by the sample households in 2018, 2020 and 2021**

Source of Loan	2018	2020	2021
Loan from fish trader	0.47	0.00	1.71
Loan against sale of other produce	0.00	0.00	0.00
Loan from <i>mohajan</i> (not fish trader)	50.73	44.08	54.46
Loan from grocery shop	0.71	0.31	0.00
Bank loan	15.30	20.22	8.38
Loan from local society ( <i>samity</i> )	11.77	11.62	4.38
Loan from relative	13.18	18.12	19.27
Loan from someone else - no interest	7.85	5.65	11.81
Total	100	100	100

Current data described the loan utilization pattern of sample households' informal sources. In third round BUG livelihoods study highest loan utilized for meeting daily needs, followed by cultivation and purchasing fishing gear. Household also used loan for livestock, fishing gear, medical, loan repayment, house repair, and marriage purposes. [Table 16](#) shows the sources of loan utilized in different purposes.

**Table 16: Sources of other loan and different uses by sample households in 2018, 2020 and 2021**

Sources of Loan	Fishing gear	Meet daily needs	Livestock	To buy land	Petty trade/Business	Cultivation	Marriage	Medical costs	House repair	Loan repayment	Election	Total
<b>2018</b>												
Loan from fish trader	0	1	0	0	0	0	0	0	0	0	0	1
Loan against sale of other produce	0	0	0	0	0	0	0	0	0	0	0	0
Loan from mohajan (not fish trader)	27	7	4	0	2	0	0	0	0	0	0	40
Loan from grocery shop	0	2	0	0	0	0	0	0	0	0	0	2
Bank loan	3	2	1	0	0	0	0	0	0	0	0	6
Loan from local society (samity)	3	1	0	0	0	0	0	0	0	0	0	4
Loan from relative	10	1	1	0	2	1	0	0	0	0	0	15
Loan from someone else - no interest	1	1	2	0	0	0	0	0	0	0	0	4
	<b>44</b>	<b>15</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>72</b>
<b>2020</b>												
Loan from fish trader	0	0	0	0	0	0	0	0	0	0	0	0
Loan against sale of other produce	0	0	0	0	0	0	0	0	0	0	0	0
Loan from mohajan (not fish trader)	5	10	0	0	3	12	2	0	2	3	1	38
Loan from grocery shop	1	0	0	0	0	0	0	0	0	0	0	1
Bank loan	3	2	1	0	0	4	0	0	0	0	0	10
Loan from local society (samity)	0	5	0	0	1	1	0	2	0	0	0	9
Loan from relative	1	6	3	1	0	1	1	2	1	1	0	17
Loan from someone else - no interest	0	0	1	0	0	0	1	0	1	0	0	3
	<b>10</b>	<b>23</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>18</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>78</b>
<b>2021</b>												
Loan from fish trader	0	0	0	0	0	1	1	0	0	0	0	2
Loan against sale of other produce	0	0	0	0	0	0	0	0		0	0	0
Loan from mohajan (not fish trader)	5	10	0	0	3	24	1	3	0	0	0	46
Loan from grocery shop	0	0	0	0	0	0	0	0	0	0	0	0
Bank loan	0	4	0	0	1	3	0	0	0	0	0	8
Loan from local society (samity)	0	2	0	0	0	1	0	0	0	0	0	3
Loan from relative	1	7	1	0	0	5	0	0	0	2	.	16
Loan from someone else - no interest	3	5	0	0	0	4	0	1	0	0	0	13
	<b>9</b>	<b>28</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>38</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>88</b>

**Note:** Total 29 HH received NGO loan (brac 10, BRDB 1, ASA 6, GB 11 and Ekti Bari Ekti Khamar 1 person)

## 5.4 Institutional Involvement

Involvement of an institution is a good proxy of social capital, because it provides members with network access services, finance, material and non-material goods and to social events. Current data shows that project participating households has involvement in different institutions like NGOs and government projects two to five years. It shows better entity with local institution, first round

study shows the highest accumulated savings by ASA members (Taka 3050/-) followed by GB members (Taka 2400/-), BRAC members (Taka 2082/-), POPI members (Taka 1800/-), BRDB members (Taka 1700/-) and lowest saving is in Ekti Bari Ekti Khamar members (Taka 570/-) in 2018. Average number of loans within the last 12 months of first round survey (2018) was about 1 unit across all categories of participants in different organizations and the amount repaid ranges from Taka 17, 00 to Taka 5,063.

Third round study shows the highest accumulated savings by BRAC members (Taka 3600), followed by ASA (Taka 3400), Ekti Bari Ekti Khamar (Taka 2800), BRDB (Taka 2400) and HFMLIP (Taka 658) in 2021. Average number of loans across all studies within the last 12 months is around 1 unit across all categories of participants. The third round data shows amount of credit received households from different organizations ranges from Taka 10000 to 39200. The following table (Table 17) Organizational involvement of sample households (average) in 2018, 2020 and 2021.

**Table 17: Organizational involvement of sample households in different financial events in 2018, 2020 and 2021**

Particulars	HFMLIP	BRAC	BRDB	Ekti Bari Ekti Khamar	ASA	GB	Krishi Bank	POPI	Others
<b>2018</b>									
Number of households member	0	1	1	1	1	1	1	1	1
No of years in Project /Org	0	3	2	4	5	2	1	4	3
Savings (Tk/household)	0	2082	1700	570	3050	2400	200	1800	1800
Amount outstanding (Tk) before last 12 months	0	660	1200	1400	600	4907	1500	600	700
Loan received in last 12 months (Tk)	0	12000	8000	3000	10500	11500	15000	9800	11000
Amount of loan repaid in last 12 months (Tk)	0	5063	3200	0	4050	3500	1700	2400	2000
<b>2020</b>									
Number of households member	1	1	1	0	1	1	1	0	0
No of years in Project /Org	3	3.5	2	0	4	4	3	0	0
Savings (Tk/household)	650	2820	2000	0	2920	1609	1750	0	0
Amount outstanding (Tk) before last 12 months	0	850	2000	0	1000	1463	1000	0	0
Loan received in last 12 months (Tk)	10000	30900	20000	0	25000	25090	30000	0	0
Amount of loan repaid in last 12 months (Tk)	0	12690	6400	0	9150	10945	10500	0	0
<b>2021</b>									
Number of households member	1	1	1	1	1	0	0	0	1
No of years in Project /Org	4	4.5	3	2	5	0	0	0	2.5
Savings (Tk/household)	658	3600	2400	2800	3400	0	0	0	6000
Amount outstanding (Tk) before last 12 months	0	0	3000	0	1600	0	0	0	0
Loan received in last 12 months (Tk)	10000	39200	22000	18200	0	0	0	0	0
Amount of loan repaid in last 12 months (Tk)	0	14822	7200	4300	11000	0	0	0	7200



## 6 Women Mobility and Food Security

### 6.1 Access of women to services

Poor participating households has very limited access to natural resources around the homesteads, some women need to work outside the homestead having no other alternative. Sometimes, social barriers on women's mobility create hindrance to involve outside activities; can be seen as non – prestigious work. Survey results provide a unique opportunity to explore the status of women (wife of HH head) mobility during last



twelve months. The survey questions covers physical mobility and freedom of women to move outside their homes, current data reveals that women mostly went hospital/clinic, followed by Beel, agriculture field, village festival, market place, and parents/relatives house. Data also showed that women are mobile to places like, Upazila Head Quarter, different offices and Participated in parents meeting in school in last 12 months of the respective study period. Current data also showed diversified mobility across service centers, local events and festivals in 2018, 2020 and 2021. Women went to adjacent homestead area for chores mainly carried out by women including washing, cleaning, cooking and other domestic activities (Table 18).

**Table 18: Percentage of women (wife of HH head) mobility to different destination in 2018, 2020 and 2021**

Places visited	2018	2020	2021	Remarks
Market/Bazaar	11.19	15.59	13.07	Due to COVID and consecutive lockdown situation women mobility outside homestead reduced while it had increased significantly in second round study.
Bank	1.41	2.13	2.23	
Post office	0.1	0.77	0.51	
NGO Office	1.92	1.06	0.20	
Land settlement office	0.23	0.14	0.26	
Union Parishad	1.58	3.73	2.97	
Upazila Head Quarter	2.67	11.64	0.54	
Hospital/Clinic	30.23	25	26.52	
Went to Beel	8.93	7.09	22.05	
Went to Agric. field	7.94	7.85	18.94	
Festival/Village fair	6.41	6.3	6.17	
Parents house	23.72	13.32	6.21	
Participated in parents meeting in school	3.68	5.37	0.33	
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	

## 6.2 Household food and nutrition

Increasing demand of food by the growing population is dependent on effective management of natural resources around the participating community. Daily needs of participating houses are mainly fulfilled by agricultural production and income from other livelihoods options utilizing variable resources around them. Women play an important role in averting vulnerability and sustaining livelihoods in the project area.



This section describes the household's nutritional status; following table shows per person's fish consumption (gm/day), egg consumed (no/month), meat consumption (gm/day) per person and milk liter per/households over the period. Overall fish consumption situation between first and third round livelihoods survey fish consumption has increased about 47%, and milk increased by 50%. Similarly, chicken meat, and egg consumption also increased significantly compared to first round study. Table 19 reveals the status of protein and milk consumption by the households in HFMLIP project area. This result also indicates that fish consumption level in study area is higher than different cities of Bangladesh including Rajshahi (16 gm/day) and in Khulna (27 gm/day) (Bogard *et al.*, 2017). Currently, approximate fish consumption is 37 g per capita in Bangladesh. The fish consumption amount is also higher than that of Antakya, Turkey (8.12 gm/day; reported by Can *et al.*, 2015).

**Table 19: Average amount of food items consumed per person/household in 2018, 2020 and 2021.**

Food Items	2018	2020	2021
Fish (gm/day/person)	30	31	44
Meat (gm/day/person)	6	4	3
Chicken (gm/day/person)	23	28	32
Egg (No./month/hh)	14	13	20
Milk (Lt/month/hh)	3	4	4.5

Respondents were asked directly about nine different food security questions in order to assess household's food security status. In first round study 54% households severe food shortage, 16% had moderate and 30% had no food deficit while, situation has improved in second and third round study to 48% and 22% severe food shortage, 14% and 27% had moderate, and 38% and 51% reported no food shortage respectively. A decrease in prevalence of severe food insecurity was accompanied by an increase in mild/moderate food insecurity, suggesting that households had moved out of a more serious food access problem into an improved situation. In the same way, families previously classified as moderately food insecure appeared to have moved into the food secure category. Table 20 shows the comparative status of household food security status in 2018, 2020 and 2021.

**Table 20: Percentage of sample household experiencing different food shortage in three round studies**

Food security category (2)	Food security category (3)	2018		2020		2021	
		No. of HH	%	No. of HH	%	No. of HH	%
Food secure	Food secure	38	30	47	38	64	51
Food insecure	Mild/Moderate Food insecure	20	16	18	14	34	27
	Severe Food insecure	67	54	60	48	27	22
<b>Total</b>		<b>125</b>	<b>100</b>	<b>125</b>	<b>100</b>	<b>125</b>	<b>100</b>

## 7 Training

HFMLIP has organized different capacity building events like trainings, meeting and other awareness building campaign. The main events were Organization Management, Beel Fisheries Management, Aquaculture Management, Leadership development, IGA activities and Exposure visit of knowledge development. The following table shows the status of training



received by sample households during the study period from different formal and informal sources. In first round study, 39 members of sample household received trainings from the project and 8 members received training from other NGOs and government agencies. In third round study, total 167 members of sample household received trainings, of which, 86 persons received training on Beel fisheries management, followed by 54 members on organizational management and 25 members on IGA. [Table 21](#) also reveals that all training in second rounded provided by the HFMLIP, this show's project provided more emphasis on the capacity development of participating households.

**Table 21: Number of different trainings received by sample households in 2018, 2020 and 2021**

Name of Training	Number of Training Received		
	2018	2020	2021
Organizational Management (from HFMLIP)	5	37	54
Training on Beel Fisheries Management (by HFMLIP)	17	68	86
Aquaculture Management (from HFMLIP)	1	3	2
Leadership Training (from HFMLIP)	6	1	0
Training on IGA (from HFMLIP)	2	14	25
Exposure visit (from HFMLIP)	8	0	0
Others/NGO/Government	8	0	0
<b>Total</b>	<b>47</b>	<b>123</b>	<b>167</b>

## 8 Conclusion

The current study is the subsequent study of first and second round study using same set of sample households and livelihoods indicators. The study find out occupational diversify of the households members from fishing to non-fishing activities due to continuous support from HFMLIP interventions. The project aimed to reduce fishing pressure in surrounding fisher community people in the working waterbodies, in addition, project created consensus among adjacent community. Household income enhanced due to diversification of activities, although still most of the participating households remain dependent on the fish, fisheries and agriculture related work due to limited access to other resources. Capacity building of BUG members is vital; access to local service providing agencies to develop human capital. Project activities so far provided more access to health clinic, bank, post office, union Parishad and micro Finance Institute and other government offices based at the Upazila and Union level. HFMLIP created a better platform in order to get access to natural resources like fisheries, agriculture and wetlands. Trainings provided by the project enhance capacity of participating households address different challenges, increased number of people from participating community should get IGA training in order to diversified occupation create better access to jobs reduce dependency on common resources, ultimately reduce fishing pressure of inland capture fisheries.

Since the project approaching to the last year of its tenure, management can be linked with BUG members to other similar projects and institutions to access common trainings modules, technologies and micro finance available to these institutions. Challenges in fisheries management BUGs beyond project period like difficult access right, high lease value and less support from other government agencies. To ensure long-term sustainability of BUG, they should be registered with cooperative department; it will provide legal entity to BUG/CBO beyond project period. Registered BUG will develop a platform for community people form capital for better economic activities, raise voice to local issues, utilize common resources and access to services.

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## Annex-1 List of Selected BUG Members for Survey

### BUG Livelihood Survey, Third Round

#### Haor Flood Management and Livelihood Improvement Project (HFMLIP) List of BUG Members

Name of WB	Name of BUG Members	Father/Husb and	Village	Upazila	District
Chat of Sunbari	Md.Kamal	Late Mohammad Kha	Najorpur	Dharmapasha	Sunamganj
	Ahad Miah	Late Kalachan Miah	Do	Do	Do
	Rakesh Das	Late Ramcharan Das	Sunbari	Do	Do
	Nur Kalam	Late Umed Ali	Banaroshipur	Do	Do
	Sushil Sarkar	Late Jamini Sarkar	Sunbari	Do	Do
Kaldora Nagdora Beel	Md. Robiul Islam	Abdul Monaf	Birgoan	South Sunamganj	Do
	Pronoti Rani Biswas	Monmohon Biswas	Nidonpur	Do	Do
	Anil Biswas	Late Dhoroni Biswas	Do	Do	Do
	Taraj Ali	Late Aziz Ullah	Birgaon	Do	Do
	Rokon Ahmed	Abdul Monaf	Do	Do	Do
Pakhimara Ramghuta Jolokorpunjo	Rasna Begum	Late Shir Uddin	East Birgaon	Do	Do
	Abdul Hoq	Late Islam Uddin	Do	Do	Do
	Shiplu Miah	Sabid Nur	Do	Do	Do
	Likul Hoq	Late Joban Ullah	Do	Do	Do
	Piyara Begum	Ruhin Ahmed	Do	Do	Do
Kumaria Beel	Salma Begum	Md. Jahidul Islam	Vatgaon	Dharmapasha	Do
	Momina Aktar	Md. Abul Kashem	Do	Do	Do
	Md. Helal Miah	Md. Saheb Ali Miah	Do	Do	Do
	Mokhlesur Rahman	Lt. Mohammad Ali	Do	Do	Do
	Harej Miah	Lt. Mohammad Ali	Do	Do	Do
Shimul Tola Chikon Dair	Sapon Miah	Md. Sumon Miah	Shekhergaon	Do	Do
	Md. Bakki Miah	Lt. Ashehan Miah	Do	Do	Do
	Md. Rokon Miah	Late Ramjan Miah	Do	Do	Do
	Lutfu	Md. Kamrul Islam	Do	Do	Do
	Masuda Khatun	Md. Kala Miah	Do	Do	Do
Kirtan Khola	Md. Shafiq Kha	Md. Usuf Kha	Islampur	Do	Do
	Md. Abdur Rouf	Md Usman	Do	Do	Do
	Ripta Aktar	Md. Aynul Hoq	Do	Do	Do



	Enamul Hoq	Late Abdur Jobbar	Do	Do	Do
	Md. Golam Nur	Late Lal Hossain	Do	Do	Do
<b>Suraiya Beel</b>	Md. Sajirul Islam	Toiyeb Ali	Jibdara	South Sunamganj	Do
	Kalam Miah	Ibrahim Ali	Do	Do	Do
	Md. Azud Miah	Late Joykush Ali	Do	Do	Do
	Md. Abdul Ahad	Md. Abdul Jolil	Do	Do	Do
	Ruptara Begum	Late Akrom Ali	Do	Do	Do
<b>Kala-Sunda Beel</b>	Muslim Ali	Late Joyen Ullah	Gaglajur	Chatak	Do
	Askan Ali	Late Farid Ali	Do	Do	Do

Name of WB	Name of BUG Members	Father/Husb and	Village	Upazila	District
	Samor Uddin	Late Najib ullah	Do	Do	Do
	Mortuz Ali	Late Fajor Ali	Do	Do	Do
	MD. Arosh ali	Late Chanda Ali	Do	Do	Do
<b>Choto Nainda Boro Nainda</b>	Lokkhi Kanta	Ramjoy Boisnob	Meghna	Derai	Do
	Haripodo Choudhury	Lt. Upendra Kumar	Dolua	Do	Do
	Sadhon Chandra	Late Shis Lal Das	Do	Do	Do
	Suranjana Rani	Arun Das	Do	Do	Do
	Md. Soidul	Lt. Altabur Rahman	Do	Do	Do
<b>Ranggadair Jolmohal</b>	Md. Khokon Miah	Late Moktar Uddin	Sahota	Barhatta	<b>Netrokona</b>
	Khalil	Late asor uddin	Do	Do	Do
	Rabeda aktar	Kajol Miah	Do	Do	Do
	Md. Sohel Miah	Md. Mukshed	Do	Do	Do
	Md. Jiku Miah	Md. Chalek Miah	Do	Do	Do
<b>Baradia Beel</b>	Romela	Mojibor Rahman	Karardup	Atpara	Do
	Johirul	Abdul jobbar	Do	Do	Do
	Saidul Miah	Md. Kadu Miah	Do	Do	Do
	Arzu	Late Abdul Helim	Do	Do	Do
	Julhas Miah	Md. Atab Uddin	Do	Do	Do
<b>Hogla Beel</b>	Md. Safikul Islam	Late Siraj Ali	Kanir pech	Purbadhal a	Do
	Abdul Hakim	Achir Uddin	Sankiyari	Do	Do
	Lipi	Tarab Miah	Shibpur	Do	Do
	Kiron Rani	Ronjit Chandra	Nij Hogla	Do	Do
	Lilu Mahmud	Lt. Abdul Mannan	Do	Do	Do
<b>Dattakhila Beel</b>	Ali Hosen	Late Arshod Ali	Nijki	Mohonganj	Do
	Md. Habib Miah	Late Lal Miah	Do	Do	Do
	Md. Din Islam	Late Afil Miah	Jhimti	Do	Do
	Md. Safikul	Abdul Karim	Do	Do	Do
	Mst. Farida Aktar	Md. Abdul Barek	Do	Do	Do
<b>Noniala Beel</b>	Jaher Uddin	Abdul Hai	Shimla	Itna	<b>Kishoreganj</b>
	Yeasmin	Safikul	Do	Do	Do
	Md. Jamidul Islam	Md. Taher Uddin	Do	Do	Do
	Sanu Miah	Late Muktar Hosen	Do	Do	Do
	Monoara Begum	Sadhon	Do	Do	Do
<b>Chapra Beel</b>	Sobor Ali	Late Israfil	Kurshi	Do	Do
	Hafijul	Kadir Miah	Do	Do	Do
	Monnak Miah	Amir Uddin	Do	Do	Do
	Md. Rahul	Abdur Khurshid	Do	Do	Do
	Sajeda	Kachom Ali	Do	Do	Do
<b>Kalni Beel</b>	Emdad Khan	Motalib	Shimulbak	Do	Do
	Ichu Miah	Late Shahed Ali	Do	Do	Do

<b>Dhoniar Kona Beel</b>	Babul Khan	Late Rojob Khan	Do	Do	Do
	Safiq Khan	Late Ismail	Do	Do	Do
	Ripon	Late Taleb Hosen	Do	Do	Do
	Mojibur Rahman	Late Abdul Khalek	Aralia	Do	Do
	Moina Aktar	Abdul Khalil	Do	Do	Do
	Irin	Habu Miah	Do	Do	Do
	Komola	Humayon	Do	Do	Do
	Foujdar Ali	Late Abdul Karim	Do	Do	Do

Name of WB	Name of BUG Members	Father/Husband	Village	Upazila	District
<b>Korgaon ½ Gazipur</b>	Shamima Aktar	Mohsin Kha	Bahadurpur	Austagram	Do
	Jaber Mollik	Sobur Mollik	Do	Do	Do
	Austolal Das	Amritolal Das	Islampur	Do	Do
	Susen Das	Kongsho Das	Mosjidjam	Do	Do
	Farida Begum	Helal Miah	Brammapura	Do	Do
<b>Goza Beel</b>	Somendra Das	Sltanath Das	Do	Bajitpur	Do
	Alka Rani Das	Dulal Chandra Das	Do	Do	Do
	Nirmol Das	Upanondo DAS	Do	Do	Do
	Shidham Das	Abinash Das	Do	Do	Do
	Khokon Das	Volanath Das	Do	Do	Do
<b>Satbila Fishery</b>	Md.Deloar Hosen	Late Kala Miah	Satbila	Bancharampur	<b>B. Baria</b>
	Shanu Miah	Late Malu Miah	Do	Do	Do
	Kulsum Begum	Babul Miah	Do	Do	Do
	Johor Miah	Late Hamid Miah	Do	Do	Do
	Oron Miah	Late wahab Ali	Do	Do	Do
<b>Choto Beri Beel</b>	Mostofa Ahmed	Late Abdul Hoq	Khurs ha Khagaura	Baniachang	<b>Hobiganj</b>
	Abu Bakkar Miah	Late Afroj Miah	Do	Do	Do
	Tajera Begum	Taher Ali	Do	Do	Do
	Khudeja	Jigor Sha	Do	Do	Do
	Somchiya Begum	Late Rahim Ullah	Do	Do	Do
<b>Andaura Beel</b>	Anjan sarkar	Late Amor Chan	Vatipara	Do	Do
	Subol Chandra Das	Lal Mohon Das	Do	Do	Do
	Vaggessor sarkar	Gurupodo Sarkar	Do	Do	Do
	Mina Rani Das	Din bondhu Sarkar	Do	Do	Do
	Premanondo Sarkar	Late Biju Charan Das	Do	Do	Do
<b>Tutiar Khal Katuar khal oUdgol</b>	Shamsul Amin	Late Islam Ullah	Kawrakandi	Do	Do
	Durlov chand	Abu Chayed	Do	Do	Do
	Md. Belal Miah	Md. Abdur Rahman	Do	Do	Do
	Abdur Batin	Abdur Gafur	Do	Do	Do
	Laos Miah	Arzu Miah	Do	Do	Do
<b>Boro Paikka Beel</b>	Shipra Rani Das	Kripesh Das	Hosenpur	Bahubol	Do
	Shila Rani Das	Babul Das	Do	Do	Do
	Bisshojit Das	Bisjoy Das	Do	Do	Do

<b>Silarag Group Fishery</b>	Nishikanto Das	Nilmoni Das	Do	Do	Do
	Nitai Das	Nripendo Das	Do	Do	Do
	Tajul Islam	Late Shobdar Ali	Rasulpur	Ajmeriganj	Do
	Latifa Begum	Abdul Hosen	Do	Do	Do
	Md. Sirajul Islam	Abdul Sattar	Do	Do	Do
	Md. Mannan Ali	Late Abdul Aziz	Do	Do	Do
	Afjal Miah	Md Khalek Miah	Do	Do	Do

## Annex-2 3<sup>rd</sup> Round BUG Survey Questionnaire

**WorldFish – HFMLIP-LGED**  
**BUG Member Household Livelihoods Impact Monitoring Survey**  
**Questionnaire (3<sup>rd</sup> Round)**

Name of Interviewer:

Date:

**INTERVIEWER TO COMPLETE:**

Name of the Beel: .....

|||

Name of the HH head: ..... Father/Husband /Wife name: .....

If household head changed please write down reason:

Member name: ..... Relation with HH head: .....| | |

Village: ..... Union: ..... Upazila .....

Name of BUG ..... Date of joining BUG .....

Position in BUG: .....| | |

President = 1, Secretary = 2, Cashier = 3, General Member = 4, BMC Member = 5.

\*Main occupation of head of household..... Female headed household Yes/No

### Q 1.1 Profile of Household Members:

[illegible]

- Education 1=Continue, 2 = Discontinue

1-head of HH 2- wife/husb and 3-son /daughter 4- grandchild 5- brother/si ster6-	<b>Finish:</b> 0- none 1 to 16 years of school completed 17-can sign nameonly 18-can read only <b>Cont:</b> tick if yes	<b><u>Occupation:</u></b>  1-cultivate own land 2- cultivate own and sharecrop land 3- sharecropper only 4-rent out land	11-agric labourer12- non-agric labourer 13- rickshaw/v an14-Auto 15- boatman 16- handicra	23-paid homestead work24- housewife 25- livestock 26- Poultr y rearin g
--	---	--	---	---

brother's wife 7-sisters husband 8- son/daughte r of brother/siste r 9- father/moth er 10- grandparent 11- daughterinl aw12-son in law 13-other (specify)22- employee( maid servant)	<b>Fishing</b>	5-fishing 6-fish trader 7- fish net/trap maker8-fish processing 9-fish culture 10- fish gear trader	ft 17- petty trade18- business 19- mechanic/driv er20-other employee/Ng o service 21- teacher 22- g overnmen tservice	27-- Carpenter/ Mason/black smith28- student 29- beggar 30- n o activity other (specify) 31. Imam/Thakur 32. L and Surveyo r 33.Vacci nator Other specify .....
	1- professio nal2-part time for income 3- just to eat 4- helping others 5- never			



## Q. 2 Household Assets

### Q 2.1 Housing Condition

Number of dwelling houses/room owned by household ..... | | |

Area of dwellings owned by household (sq feet)..... | | | | |

Materials of main house: Wall ..... | | |

Roof ..... | | |

Floor ..... | | |

[Materials: 1- Tin, 2 - concrete,, 3-brick, 4- wood, 5-bamboo, 6- jute mats, 7 straw/leaves, 8-earth,

9- jute sticks, 10-tiles, 11- other]

### Q 2.2 Household Water Sources

Source drinking water..... | | |

(Own tube well =1, Tube well set by HFMLIP/LGED =2, Tube well set by NGO=3, Tube well Set by Government =4,  
Water from river/haor/beel = 5 and Neighbor Tube well =6)

Source of water for households uses ..... | | |

(Tube well = 1, River =2, Beel/Haor = 3, Ditch = 4 and Other (specify) =5 )

### Q 2.3 Household Sanitation Condition

Types of latrine used by the households ..... | | |

(Water Sealed =1, Sanitary Latrine = 2, Hanging Latrine =3, Open field =4)

If water sealed latrine used by the household, where they got it?..... | | |

(HFMLIP/LGED = 1, Public health Dept. = 2, NGO = 3 and Own initiative = 4)

How much cost needed for setting latrine?..... TK..... | | | | |..

Year of setting:

Sources fund for setting up latrine:

(HFMLIP/LGED = 1, Public health office = 2, NGO = 3 and Own = 4)

**Q 2.4 Households assets ownership? Number:**

S I. N o.	Items	Total No.	Owned by Male	Owned by Female	Price in Tk
1.	Beds( <i>khat</i> )				
2.	Dressing table,				
3.	Show case				
4.	Table				
5.	Chair				
6.	Rickshaw/van/Auto				
7.	Bicycle/Motorbike				
8.	Boat				
9.	Mechanized Boat				
10.	Fishing Net				
11.	Plough				
12.	Shallow machine				
13.	Power tiller				
14.	Radio				
15.	TV				
16.	Refrigerator				
17.	Gold ( <i>sonar gahona</i> ) gm				
18.	Sewing Machine				
19.	Buffalo				
20.	Cattle				
21.	Sheep				
22.	Goat				
23.	Poultry				
24.	Mobile Phone				
25.	Solar panel				
26.	Other				

**Q 3 Land ownership and tenure**

**Q 3.1 Area of all household's land:**

S I. N o.	Land use	Area (dec)
1	Own homestead land	
2	Homestead land owned by someone else	
3	Own pond or ditch (No.)	
4	Pond (Rent in)	

5	Land owned and cultivated by the household	
6	Land cultivated last year but owned by others (Sharecropped/rented /mortgagedin)	
7	Land owned but cultivated last year by others (Sharecropped/rented out)	
8	Khas land	
9	Land owned but mortgaged out	
1 0	Own non-cultivated land	

**Q 3.2 Total agricultural income** last year from cultivation of own and rented in land by main crops: *[only ask if household cultivates land]*  
Not applicable.....

S l. N o.	Crop	Pro du ction (Kg)	Pr ic e (T k/ K g)	Total value (Tk)	Cash cost of product ion*
1					
2					
3					
4					
5					
6					
	Total (Tk)				

(\* Purchased fertilizer, seed, pesticide, and water + hired human labour + hired draft power.)

If household has any **land rented or sharecropped out**, what was the total income last year (after any expenses on that land)? .....Tk | | | | | | |

### Q 3.3 Fish Production

S l. N o.	Source	No of people involve in fishing	Averag e person daysper month	A ve ra g e n o of m o n t h s	Averag e catch per day (Kg)	Tot al Prod uctio n (Kg)	Retain for consum ption (Kg)	Cos t of Prod uctio n (Tk)
1	Project Beel							
2	Pond							
3	Ditch							
4	Other Beel							

### Q. 4 Household Income and Expenditure

**Q 4.1 Sources of income for all household of the last year** *[Complete for each relevant source for all hh members]*

Sl no	Income source	To tal no of pe opl e	Averag e no of months in year	Average person daysper month	Average daily income Tk/day	Annu al Income (TK)
1	Fishing					
2	Agriculture labor					

3	Non-agriculture labor					
4	Rickshaw/van					
5	Boatman					
6	Fishing gear (net/trap)					
7	Motorbike/Auto bike Driver					
8	Petty trade					
9	Handicrafts					
10	Domestic service for others					
11	Other daily income (specify)					

**Q 4.2 Annual income from other sources** (for which daily/weekly calculation is difficult)

Sl no	Income source	Total income Tk
1	Fish and fish related trading	
2	Income from major fishing	
3	Fish fry selling	
4	Aquaculture	
5	Drying/processing fish	
6	Business	
7	Service (private/NGO/government)	
8	Renting out fishing equipment not used by household	
9	Rent out draft power/Power tiller	
10	Sale of cattle/goats/sheep, poultry birds, milk and eggs	
11	Sale of agricultural bi-products (straw, jute sticks, dung) – total	
12	Sale of trees	
13	Remittances in country	
14	Remittances in abroad	
15	Sale of land	
16	Mortgage	
17	Shop/house rent	
18	Other (specify).....	

Do household members out-migrate for livelihoods: Yes/No If yes, how many persons: M\_\_\_\_F\_\_\_\_

How many months: M\_\_\_\_F\_\_\_\_

**Q 4.3 Expenditure**

Expenditure on **Food**

[In the last year how much did you spend in **cash** on food consumption and non-food items?]

Sl. No.	Item	Expenditure (Tk)
1.	Rice/wheat	
2.	Vegetables	
3.	Egg	
4.	Fish	
5.	Meat	
6.	Dal	
7.	Fruits	
8.	Edible oil	
9.	Spices	
10.	Betel Leaf,/tobacco/Tea	
11.	Others (specify)	
	Total	

**Q 4.4 Expenditure on non-food items**

S I. N o .	Item	Expenditure (Tk)
1.	Clothing	
2.	House repair/building	
3.	Education	
4.	Health	
5.	Fuel/Electricity	
6.	Travel	
7.	Loan repayment	
8.	Savings	
9.	Land (purchase, tax, mortgage)	
10.	Cattle	
11.	Buffalo	
12.	Poultry	
13.	Furniture and equipment	
14.	Festivals, ceremonies, marriage etc.	
15.	Mobile phone bill	
16.	Other (specify)	

**Q 5 Household Food Security Status**
**Q 5.1 Food Security**

No	Question	Code
1	How many times did you worry about crisis of food?	
2	How many times did you take loan to buy food?	
3	How many times did you or your household have to eat rice only? (with salt, onions, chili etc)	
4	How many times did you have to eat unusual foods which are not usually eaten because of a lack of resources?	
5	Did you have to eat smaller meal because of insufficient food/money to buy food?	
6	Did you have to skip meals because of insufficient food/money to buy food?	
7	Did the food stored in your home run out and due to financial crisis you couldn't buy more that day?	
8	Did you have to go to sleep at night hungry because of lack of enough food or money to buy food?	
9	How many times did you have to go a whole day and night without eating meal because there was not enough food?	

Never = 0

One or two times= 1

Three to ten times= 2

More than ten times= 3

**Q 5.2 Numbers of times per month normally consumes:**

S I. N o. .		Weekly		Monthly		Yearly	
		Am oun t	Ta ka	Amo unt	Tak a	Amo unt	Taka
1.	Fish bought (Kg)						
2.	Consumption small fish						
3.	Meat, (Kg)						



4	Chicken						
5	Duck/Pigeon (No.)						
6	Eggs (No.)						
7	Milk (L)						

**Q 6.1** In the **last 12 months** has your household taken a loan? What were the uses of this money?

S I n o	Source	No of loans	Amount Tk	Use of loans (code)
1	Loan from fish trader			
2	Loan against sale of other produce			
3	Loan from mohajan (not fish trader)			
4	Loan from grocery shop			
5	Bank loan			
6	Loan from local society (samity)			
7	Loan from relative			
8	Loan from someone else - no interest			
	Total loans received			

[Use: 1-fishing gear, 2- meet daily needs (food etc.), 3-livestock, 4-to buy land, 5-business/petty trade, 6-cultivation, 7-marriage, 8-medical costs, 9-TV, Mobile, (other codes later)]

What were the main uses of this money? [Use of maximum to minimum amount of loans]

1st use.....|\_|\_|, 2nd use.....|\_|\_|, 3rd use.....|\_|\_|

**Q 6.2 Organisational involvement**

How many people of this household is the member of the *HFMLIP* project or a NGO, or a cooperative, or a fishing society? For each organisation:

Sl. No	Description of Status	HFMLI P project	1 (other NGO /organisati on)	2 (other NGO /organisatio n)
1	Name of organisation (codes)			
2	No. members of organisation in household			
3	No. years member (maximum in household)			
4	Household savings held (Tk)			
5	Amount outstanding (Tk.) before last 12 months			
6	Loans received in last 12 months (no.)			
7	Loans received in last 12 months (Tk)			
8	1st use of loan (codes as above)			
9	2nd use of loan (codes as above)			
10	Amount repaid in last 12 months (Tk)			

**Q 7.1 \* Women Mobility (senior women member of HH)**

Sl. No.	Do Women Household go to:	How many times in a Month	How many times in aYear	Not at all
1	Market/Bazar			
2	Bank			
3	Post office			
4	Land settlement office			
5	Union Parishad			
6	Upazila Head Quarter			
7	Hospital/Clinic			
8	Went to Beel			

9 .	Went to Agri field			
10 .	Festival/Village fair			
11 .	Parents house			
12 .	NGO office			
13 .	Participated in parents meeting in school			
14 .	Other (specify)			

**Q 7.2 Development Services Received to Date**

Sl. No.	Training (Please specify)	Number of courses	
		Project	Other Source
1	Organization management training		
2	Training on Beel Fisheries Management		
3	Aquaculture management training		
4	Leadership training		
5	Training on IGA		
6	Climate adaptation		
7	Exposure visit		
8	Other		

**Please note any other observation you have on this household during survey:**

### Annex-3 List of Sample Waterbody Selected for Livelihood Survey

S l o .	Name of water body	Area (acr)	Area (hac )	Upazila
<b>District: Brahmanbaria (01)</b>				
01	Satbila Fishery	75.60	30.61	Bancharampur
<b>District: Kishoreganj (06)</b>				
02	Noniala Beel	17.41	7.05	Itna
03	Chapra Beel	13.20	5.34	Itna
04	Kalni Beel	19.90	8.06	Itna
05	Dhoniara Kona Beel	5.10	2.06	Itna
06	Korgaon- ½ Gazipur	18.65	7.55	Austogram
07	Goza Beel	5.09	2.06	Bajitpur
<b>District: Netrokona (04)</b>				
08	Rangadair Jolmohal	37.28	15.09	Barhatta
09	Boradia Beel	16.15	6.54	Atpara
10	Hogla	140.52	56.89	Purbadhola
11	Dattakhila	19.55	7.91	Mohonganj
<b>District: Hobiganj (05)</b>				
12	Choto Beri Beel	19.25	7.79	Baniachong
13	Andaura Beel	85.75	34.72	Baniachong
14	Kutiara Beel, Udgar Khal o Kutiarar Khal	35.51	14.38	Baniachong
15	Boro Paikka Beel	12.53	5.07	Bahubal
16	Silarag Group Fishery	44.17	17.88	Azmiriganj
<b>District: Sunamganj (09)</b>				
17	Chat of Sunbari	75.34	30.50	Dharmapasha
18	Kal Doraa Nak Dora Beel	72.17	29.22	South Sunamganj
19	Kumaria Beel	45.92	18.59	Dharmapasha
20	Shimul Tola Chikon Dair	102.38	41.45	Dharmapasha
22	Kirton Khola	19.61	7.9	Dharmapasha

1			4	
2 2	Pakhimara Ramghuta Jolkorpunjo	117.03	47. 38	South Sunamganj
2 3	Suraiya Beel	13.3	5.3 8	South Sunamganj
2 4	Kala Sunda Beel	18.8	7.6 1	Chatok
2 5	Chto Nainda Boro Nainda Beel	42.29	17. 12	Dera



**Figure 7. Third round BUG Members Households Livelihood Impact Study in Sample Household**