



End Line Evaluation Report

Integrated Flood Resilience Programme (IFRP)
through
Community-based Disaster Risk Reduction (CBDRR)

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Evaluation Conducted by:

Center for People and Environ (CPE)

Aparajita, Plot No. 284, Road#1 A, Block # B, Nobodoy Housing Ltd,
Mohammadia Housing Ltd. Mohammadpur, Dhaka-1207, Bangladesh.

Cell: +8801844-454094.

E-mail: info@cpe-bd.org

Website: www.cpe-bd.org

Study Team

Dr. Mohan Kumar Das (Team Leader)

Muhammad Abdur Rahaman (Climate Change & DRR Expert)

N. R. Musfika Laiju (Gender Expert)

Research Associate

Zereen Saba

Mithun Dutta

Javed Meandad

Joy prokash

Mursheduzzaman

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International Federation of Red Cross and Red Crescent Societies (IFRC)

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Abbreviations and acronyms

BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BDRCS	Bangladesh Red Crescent Society
BDT	Bangladeshi Taka
BWDB	Bangladesh Water Development Board
CBDRR	Community-Based Disaster Risk Reduction
CDMC	Community Disaster Management Committee
C-DREF	Community Disaster Relief Emergency Fund
CDRT	Community Disaster Response Team
CO	Community Organizer
CPE	Center for People & Environ
CRI	Climate Risk Index
DAE	Dept. of Agriculture Extension
DLS	Dept. of Livestock
DPHE	Dept. of Public Health Engineering
DRR	Disaster Risk Reduction
DRRO	District Relief and Rehabilitation Officer
FEWS	Flood Early Warning System
FFWC	Flood Forecasting and Warning Center
FGD	Focus Group Discussion
H.S.C	Higher Secondary School Certificate
HHS	Household survey
GDP	Gross Domestic Product
GoB	Government of Bangladesh
ICT	Information Communication Technology
IFRC	International Federation of Red Cross and Red Crescent Societies
IFRP	Integrated Flood Resilience Programme
IGA	Income Generating Activity
IPCC	Inter-governmental Panel on Climate Change
KII	Key Informant Interview
KOICA	Korea International Cooperation Agency
LGI	Local Government Institution
MBBS	Bachelor of Medicine and Bachelor of Surgery
MFI	Micro-finance Institutes
MoFA	Ministry of Foreign Affairs
MTR	Mid Term Review
NDRCC	National Disaster Response Coordination Centre
NGO	Non-government Organization
PASSA	Participatory Approach for Safe Shelter Awareness
PHAST	Participatory Hygiene and Sanitation Transformation
PIC	Project Implementation Committee
PIO	Programme Implementation Officer
PWD	Person with Disability
RCY	Red Crescent Youth
SDG	Sustainable Development Goal
S.S.C	Secondary School Certificate
SSN	Social Safety Net
TV	Television
UDMC	Union Disaster Management Committee
UHC	Upazila Health Complex
UzDMC	Upazila Disaster Management Committee
VGD	Vulnerable Group Development
WASH	Water Sanitation and Hygiene

Glossary

Forage

Forage is a plant material (mainly plant leaves and stems) eaten by grazing livestock. Historically, the term forage has meant only plants eaten by the animals directly as pasture, crop residue, or immature cereal crops, but it is also used more loosely to include similar plants cut for fodder and carried to the animals, especially as hay or silage.

Resilience

Resilience also the ability of a system or organization to respond to or recover readily from a crisis, disruptive process, etc.: Resilience is the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Relief

Relief is money, food, or clothing that is provided for people who are very poor, or who have been affected by war or a natural disaster.

Relief refers to the provision of essential, appropriate and timely humanitarian assistance to those affected by a disaster, based on an initial rapid assessment of needs and designed to contribute effectively and speedily to their early recovery.

Recovery

In term of disaster management, recovery is the restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors. A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential.

Preparedness

Preparedness refers to a research-based set of actions that are taken as precautionary measures in the face of potential disasters. These actions can include both physical preparations (such as emergency supplies depots, or adapting buildings to survive earthquakes) and trainings for emergency action. Preparedness is an important quality in achieving goals and in avoiding and mitigating negative outcomes.

Disaster preparedness

Disaster preparedness refers to measures taken to prepare for and reduce the effects of disasters. That is, to predict and, where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences.

Kalboishakhi (Nor'wester)

Violent thunderstorms in the Gangetic plains of India are locally known as Kal Baisakhi or Nor'westers. These localized events are generally associated with thunderstorms accompanied by strong squally winds and torrential rainfall. The first sign of nor'wester is a low bank of dark cloud in the northwest region, the upper outline of which has the appearance of an arch. It approaches slowly at first and then rapidly with a strong gust or squall. Sometimes the wind blows with almost hurricane force. This storm has become a familiar feature of the hot afternoon of March, April and May (now also injure). In Bengal increases towards March, April, and May, with the onset of monsoon March, April, and May, with the onset of monsoon, the occurrence of it decreases.

Monsoon flooding

Monsoon rains brought massive flooding in several countries across Asia, leading to dam collapses, rivers overtopping their banks, landslides and mudslides. Summer monsoons can bring heavy rains that destroy homes, damage infrastructure, wash away crops, and destroy Water, Sanitation and Hygiene (WASH) infrastructure.

Geo-physical

A topography with similar scales in both the downstream and the cross-stream directions is potentially more relevant to geophysical problems.

Flood early warning

While some areas are more prone to flooding than others, the establishment of flood warning systems near any major waterway or body of water provides critical information that can protect property and save lives. Of course, the most effective flood warning methods extend beyond the installation of gages and telemetry equipment, and employ qualified staff and carefully designed procedures to provide the earliest warning about whether a flood should be expected, when it will occur, and how severe it will be. This guide offers instruction to individuals, communities, and organizations interested in establishing and operating flood warning systems.

Readiness

Readiness is the state of being fully prepared for something.

Mobile health camp

The Mobile Health Camps are conducted in different locations of far-off islands of the operational area every week by the qualified doctor, nurse, paramedic and community health workers. The camp locations are finalized, disseminate information about date, time and service available in the health camp etc. and logistic arrangements are made beforehand. The island people of all categories, pregnant women, lactating mothers access services at their doorsteps.

Specialized doctor

Specialized doctors have training in a specific area of medicine. This allows them to treat complex health problems that primary care doctors may not be able to.

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Executive Summary

Monsoon flooding is common climate induced disaster in Lalmonirhat and Nilphamari district. These districts are susceptible to floods where severe floods occur in these districts during the monsoon season. Considering the situation, International Federation of Red Cross and Red Crescent Societies (IFRC) in partnership with Bangladesh Red Crescent Society (BDRCS) implemented a programme entitled “Integrated Flood Resilience Programme (IFRP) through Community-based Disaster Risk Reduction (CBDRR)” to enhance the community resilience through reducing the vulnerability of highly exposed people to floods of four communities under two northern districts of Bangladesh. The programme was implemented from March 2018 to June 2021 containing the components of disaster risk reduction, climate change adaptation, livelihood, shelter, water, sanitation and hygiene, health and capacity enhancement. The programme interventions were implemented to increase the capacity to reduce life and livelihood risks of the vulnerable people of the community. The participation of women, children, elderly people and people with disability was ensured in every aspect of programme management cycle including planning, implementation and monitoring.

This End Line evaluation has been conducted to assess the performance of IFRP and to capture the programme’s achievements, challenges, best practices, key lessons and recommendations to improve future resilience programmes of BDRCS and IFRC. Center for People & Environ (CPE) led this End Line Evaluation through reviewing the recommendations of the Mid Term Review (MTR), and other findings of monitoring study as well as activities that were conducted during the programme implementation including the overall quality of the implementation through collecting beneficiaries’ opinion on the quality of the services that they had received.

The overall study design incorporated eight phases in order to implement the tasks enshrined in line with the study objectives, the methodology consisted of different quantitative and qualitative tools and methods in line with DAC OECD criteria (the relevance, timeliness, quality, effectiveness, replicability, and sustainability)

To fulfill the study objectives, 384 households (97 from Sheikh Para, 100 from Dighir Par, 99 from Garain Para and 88 from Shiber Kuti community) were interviewed and 18 Focus Group Discussions (FGDs), 14 Key Informant Interview (KII) with different stakeholders including Union Disaster Management Committee (UDMC), Upazila Disaster Management Committee (UzDMC), Community Disaster Management Committee (CDMC), Upazila Health Complex (UHC), Dept. of Agriculture Extension (DAE), Dept. of Public Health Engineering (DPHE), Mason, Unit Disaster Response Team, Dept. of Livestock (DLS), BDRCS, IFRC and KOICA were conducted and also 10 case stories were collected to articulate the qualitative change through programme.

Among the 384 respondents, 155 respondents were male and 229 were female representing 40% respondents and 60% respectively. The household respondents were aged between 19-70 where the highest respondents (42%) were from 24-38 age groups and 93% were from Muslim and 7% only from Hindu community. Most of the respondents (53%) are illiterate. 13% households of the study sample contain PWD. Agriculture is the main occupation of the respondents which occupies more than 50% of the respondents. Being flood vulnerable and poverty-stricken area, average monthly income is below but the household income has increased from 5000.00 VDT (baseline) to 9234.00 BDT at end line.

About 98% of the respondents have gained knowledge from IFRP courtyard session/micro-group meetings on different issues like on flood early warning, how to deal with COVID-19, wearing masks and avoiding mass gathering, what to do before, during and after flood, community resilience, climate change, safe shelter. /establishing household at the safer places and raising household level, women reproductive health etc.

About 94% of the respondents increased their knowledge on DRR and which was only 9% during baseline study and also about 89% of the respondents know about changing climate and its impact on life and livelihoods. Students have gained the knowledge on DRR and climate change by “Bhugol Sir er Class” which is one of the innovative and knowledge enriching initiative for the students of targeted 14 schools under IFRP.

About 99% of the respondents are knowledgeable on Flood Early Warning System (FEWS) and its importance in reducing flood induced loss and damage but it was found that only 9% of the respondents had knowledge on FEWS during the baseline. Flood marker is the prime source of FEWS, and some other early warning sources are under tracking by the community people to get updated information on flood danger level.

Almost 100% respondents know about disaster preparedness, rescue and recovery by the IFRP interventions. Though all of the community people don't practice similar actions, but they do something to reduce and recover flood induced loss and damage and they are taking advice from CDMC, CDRT and CO of IFRP, preserving food, evacuate livestock and poultry in safe place, help women and other people who are not able to evacuate themselves etc before and during the flood period.

CDRT and CDMC are the most effective Community-based Organizations (CBOs) and always active in communities during flood and about 77% of respondents mentioned that they have got support from CDMC and CDRT during floods of 2019 and 2020. Community Disaster Relief Emergency Fund (C-DREF) was effective mechanism in flood management and more than 50% (56% from Sheikh Para, 78% from Shiber Kuti, 36% from Garain Para and 50% from Dighir Par community) got support from this fund during and after flood.

Drinking water was one of the major problems in the four communities of Nilphamari and Lalmonirhat before implementing the Programme. Before the implementation of IFRP, 77% respondents were getting water from tube-well and now 100% of the respondents are getting drinking water from tube-well. It was also observed that the tube-wells which were used to get drinking water were not safe because of submergence during flood but now community people are getting drinking water from raised tube-well which is safe for drinking. Improved sanitation was a major problem in the study area even now though 58% respondents have good quality sanitary latrine within or nearby their house which was only 14.37% during MTR and 5% during baseline study. Knowledge on hygiene practice has increased among community people and about 81% of the respondents have gained hygiene practice knowledge and handwashing for 99% from PHAST sessions. Women and adolescent also going to be habituated to use sanitary napkin after menstruation and about 64% of the women respondents used sanitary napkin during menstruation.

Community people are aware about the causes, consequences and protection measures of COVID 19. CDMC, CDRT, CO and some other sources including social media, health workers, television etc. made them aware on COVID-19. Every single person carried a good knowledge about COVID-19 from different ways and media. Mobile health camp organized by IFRP was the prime health service provider in the study area which was mentioned by 22% respondents. Beyond the programme, this service would be stopped, and the people will not get health service after the phase out of IFRP which was a concern of community people. Though linkage has been developed with specialized health service providers and made awareness among beneficiaries on seeking health service, further beneficiaries should be connected with local community health clinic/centers to get the long-term support.

Knowledge about the technique of flood resilient house construction increased among community people. During the baseline study, it was found only 11% households knew about how to construct resilient shelter but now about 84% of the households know about the way of construction of resilient shelter as well as houses through Participatory Approach for Safe Shelter Awareness (PASSA). During the flood of 2019 to 2021, about 47% households have made their house resilient following Participatory Approach for Safe Shelter Awareness (PASSA). About 21% of the households also made their house accessible for PWD and older people.

About 28% of the respondents received training on resilient livelihoods and also received livelihoods support under IFRP among those 27% are women. Trainings and livelihood support included resilient homestead gardening; agriculture, animal-husbandry, small business and retailing, business planning, tailoring, computer and mobile to improve the household livelihoods. Economy, livelihoods and lifestyle has been changed by undertaking these income generating activities. About 99% women have increased their income and lifestyle after getting training and livelihood support from the programme.

The IFRP activities and outcomes would be sustained beyond the phase out because the programme design strategy had a strong implication for sustainability. By this strategy, even after the completion of the activities, programme participants will remain as members of the involved community platforms (CDMC, CDRT) and may continue the awareness and development activities. The participants would likely to continue their resilient interventions like resilient farming, WASH technologies and entrepreneurship because the participants have realized that the activities benefited them in lot of areas such as income generation, resilience skill development, women empowerment, economic improvement, livestock rearing, resilient WASH, resilient shelter, communication with specialized doctors etc. It has also increased the level of their income, level of savings and possession of productive assets. It has also contributed to the quantity and quality of their food intake. Through IFRP support, the communities also improved the life of ultra-poor and vulnerable woman in decision making process. All these things have been achieved through the programme participants and their proactive engagement with the implementation process. CDMC and CDRT will sustain in the communities because both of these committees have developed their capacity in terms of flood preparedness, rescue and recovery and both of these committees have gained own furnished office which may be used as productive place. The programme participants will be able to continue their income through resilient farming, homestead farming, fish farming, and livestock venture by applying their knowledge and skills that they have learned from the involvement with the programme. They are now confident enough to take any decision in critical times regarding their activities which will enhance the prospects of their venture in future. Through this programme, the IFRP beneficiaries have developed a strong relationship with DAE, DPHE, LGI, BDRCS District Unit, LSP, traders and market actors which will be beneficial beyond the programme also.

The study also showed that WASH technologies and resilient livelihood activities tended to have greater health and economic benefits, possibly indicating health outcome and economies of scale leading to greater returns. On the other hand, health cost decreased by the programme period due to practicing improved WASH behaviors and getting support from health camps. In this regard, the programme beneficiaries are interested to continue their initiatives without external support.

By organizing the people from the communities, CDMC and CDRT were formed, which are effective mechanism and the driving force behind the operation for flood resilient interventions. These committees are well equipped and trained to response during flood. There is also CDERF which is a local funding mechanism to response in emergency need which sustain because it contributes to the local people during and beyond the flood. Vocational, livelihoods, PASSA and PHAST training, lessons of “Bhugol Sir er Class” are the most important interventions for flood resilient communities. Under these interventions, the programme participants have developed their knowledge and capacity on resilient paradigm shift and these learnings will diffuse generation to generation. As a whole, the IFRP has enriched reputation of District level BDRCS unit so why the district units are satisfied to monitor the programme outcomes beyond the programme.

By organizing the people from the communities, Community Disaster Management Committee (CDMC), Community Disaster Response Team (CDRT) were formed, which are effective mechanism and the driving force behind the operation for flood resilient interventions. These committees are working at community level which are working to ensure flood resilient community and also operating flood preparedness, rescue and recovery activities. Both of these community level committees are also working to inform policy level, sub-district and district level apex body to take proper initiative in flood management at community level which is most effective mechanism for flood management. Vocational and livelihood training and also livelihood support is one of the most important interventions for flood vulnerable communities. Under this training, skill development and income opportunities have improved and also improved household level food security, livelihoods and wellbeing. The programme also provided WASH infrastructural support considering flood level, flood resilient shelter, flood early warning system using innovative flood marker as FEWS which are most relevant for the communities.

The IFRP activities are directly aligned with targets and Sustainable Development goals of the Goal 1: No Poverty, Goal 2: Zero Hunger (Training and livelihood support), Goal 3: Good Health and Wellbeing (Mobile health camps), Goal 5: Gender Equality (Capacity building and women empowerment through training and livelihood support), Goal 6: Clean water and sanitation (Resilient WASH infrastructure), Goal 8: Decent work and economic growth (training, livelihood support and self-employment), Goal 10: Reduced Inequality (Support to women, PWD, minorities, age old people), Goal 13: Climate action (Flood early warning, flood damage and loss

recovery support), Goal 16: Peace, Justice and strong institutions (CDMC and CDRT establishment), Goal 17: Partnerships to achieve the goal (Partnership development with government agencies like DAE, DPHE, DLS, UHC and local government institutions like Union Paishad, Upazila Parishad etc.) and contributed to achieve the goals of national development plan i.e. the 7th five year plan. The activities related to skill development, livelihoods, gender and justice, WASH, flood management are directly and/or indirectly contributed to different SDGs and the targets of the 7th five year plan. In view of the local needs and priorities as well as national development targets and goals, the relevance of the programme is justified through the appropriateness of the actions/interventions of the programme.

IFRP design was based on thorough analysis of policy and locality context (BCCSAP, National Disaster Management Plan, District Disaster Management Plan, SDG 1, SDG 2, SDG 3, SDG 5, SDG 6, SDG 8, SDG 10, SDG 13, SDG 16 and SDG 17, 7th Five Year Plan.); poverty levels and capacity of the beneficiaries thus there was strong relevancy of the designing of IFRP with broader policy goals of poverty reduction, food security, WASH, DRR, and livelihood sustainability of the poor segment of flood vulnerable people of northern Bangladesh (Nilphamari and Lalmonirhat).

The IFRP log frame in terms of programme objectives, results, analysis of assumptions/risks, and identification of problems and needs of the target population etc. found to be relevant. The intervention logic, verifying indicators and time frame were practical in view of the operation, monitoring and evaluation.

Beneficiary and programme area selection was unique in a sense that it targeted the most flood vulnerable communities which are remote and hard to reach area. No other organization work there in flood management. It also targeted most vulnerable females in terms of food and livelihood insecurity and was based on sound analysis of beneficiaries' poverty context, which was in line with the programme results and objectives. The selection process was free from political pressurization.

The IFRP has run completely aligned with the needs and priorities of the target people. To ensure these needs and priorities, the programme provided relevant and necessary trainings to the participants in the field of vocational training, resilient farming, disaster management, hygiene management and group capacity building. In order to do that, various intervening programs were activated, and the participation of the programme participants were ensured to fulfill different requirements to achieve the objectives of IFRP. The training methodologies were sound and were delivered by qualified professionals. External expertise for conducting trainings was sought wherever this was necessary. All of these were done to ensure the proactive engagements of the participants with the programme activities. All these activities contributed positively in achieving the expected results. The participants of these trainings were reasonably satisfied with the relevancy, quality and adequacy of the trainings. The trainings helped to change the behaviors, attitudes and knowledge as well as income opportunity of the participants. In fact, all the other programme components have been found to be appropriately aligned with the requirements of the target people. The IFRP has introduced innovative flood early warning system which is termed as "flood marker". Flood marker is the most relevant intervention for the communities because the illiterate people of the communities cannot understand the scientific flood early warning information provided by FFWC.

Moreover, the IFRP considers the needs and priorities of the community people. It has designed a lot of activities where some are very special like training for programme participants on resilient farming, disaster management, livestock and poultry rearing, Resilient WASH, livelihood beneficiary group formation, WASH group formation, resilient shelter group formation, local service provider development, Community Disaster Management Committee and Community Disaster Response Team Development, pertaining vocational training, linkage development health service provider and local government agencies. But there is no linkage with financial institutions, job providers which is urgently needed. Beyond the programme, the activities, programme participants will remain as members of the involved community platforms (CDMC, CDRT) and diffuse the awareness and development activities. The beneficiaries will continue their resilient interventions like resilient farming, WASH technologies and entrepreneurship because they realized that these are the most beneficial interventions for their resilience in terms of income generation, resilience skill development and capacity building, women empowerment, economic improvement, resilient WASH, resilient shelter, communication with specialized doctors etc. The CDMC, CDRT and flood marker which are most important software and hardware interventions to promote flood resilient community will sustain because these interventions like to have capacity and information related to flood

preparedness, rescue and recovery and CDMC have official set up to work smoothly in the communities. C-DEFER is another mechanism which will sustain because of its contribution to emergency flood management.

The IFRP is a model as well as a success story of BDRCS and IFRC to build flood resilient community. The programme has done a lot beyond the thought for the flood vulnerable four communities of northern Bangladesh. But it has some observation and recommendations to do more for flood resilient community development which are illustrated in the following below:

- Citizen science (indigenous knowledge) should be prioritized in nature-based flood solution;
- The fund allocated for household level resilient shelter construction is not enough to make a resilient house as per the need of community beneficiaries. Amount of fund should be increased considering the market price of raw materials to construct household level resilient shelter at community level;
- Linkage with community-based health centers should be strengthened with beneficiaries so that they can get regular health support from community-based health clinic/centers
- Flood resilient water and sanitation interventions, shelter interventions should be promoted through the other DRR and resilience programmes of BDRCS and local government”;
- CDMC should be registered with government agency to work for communities as a legal entity beyond the IFRP;
- Community based, community managed and community-led flood shelter should be constructed considering the flood level in which household resources (livestock, poultry, domestic assets) can be preserved during flood;
- Flood resilient forage should be introduced in the communities to ensure availability of livestock fodder during flood (flood resilient varieties, hydroponic).
- Fund leveraging system for C-DEFER from external sources like LGI, government agency should be encouraged by establishing collaboration and linkage.

By the IFRP, women and men are making conscious changes to gender-based power structures at the household and community level. Individuals, community organizations (CDMC, CDRT and LGI) are engaged in long term processes of change that address root causes of poverty and flood risks. Absence of inclusive forms of governance that for giving more equal access to resources or allow people living in poverty to fully participate in the design, monitoring and accountability of policy processes.

Chapter One

Introduction and Research Methodology

The geographical context of Bangladesh makes it one of the most disaster-prone countries in the world. It is a low-lying country within the tropics and is the largest delta in the world formed by the mighty rivers namely the Ganges, the Brahmaputra, and the Meghna. It has the Himalayan range to the north, the Bay of Bengal to the south with its funneling towards Meghna estuary, and the vast stretch of Indian land to the west (Islam, MR; 2010). These special geographical features have a significant contribution to excessive flooding in northern Bangladesh. Along with natural disasters, climate-induced extremes increased the vulnerability of the country especially of northern Bangladesh.

There have been several researches conducted that highlights the disasters that frequently occurs in these regions. Rahman *et al.* (2018) in their study found that, in the last five years in these two districts, Flood was the most frequent disaster which specially affects Lalmonirhat. However, drought occurrence frequency was lower in the last five years. Also, due to being far away from the coast, these two districts weren't affected by Cyclone as much as the coastal areas of the country. In their study of the Char people in Dimla, Nilphamari, Masud *et al.* (2021) found that the people in the area face various disasters throughout the year. In the summer, heat wave, kalboishakhi, drought, water scarcity are the most prominent disasters. Specially kalboishakhi (Nor'wester) which causes severe crop damage. In the rainy season, regular and sudden floods or water logging are most frequent. Also, river bank erosion occurs throughout the year and hamper the daily lives of the people.

Monsoon flooding is common climate induced disaster in Lalmonorhat and Nilphamari district. These districts are susceptible to floods, sometimes severe floods occur in these districts during the southwest monsoon season. In some years, these districts are affected recurring floods in the same year. In 2019 and 2020, severe floods occurred in Bangladesh and almost 7 months were flooded. In 2020, Ranpur was the worst hit district in Bangladesh. Parts of Nilphamari was also affected by flood with around 20,000 people marooned and hundreds of buildings damaged (Floodlist.com, 2020). In 2019, 15 districts including Nilphamari and Lalmonirhat are the worst hit district (Reliefweb, 2019). Not only 2019 and 2020, almost all of the years, flood is common disaster in Bangladesh. According to BWDB, in 2017, the water level in the Brahmaputra River rose by 49 cm during the monsoon and it flowed 78 cm above its danger level at Fulchharighat point (BWDB, 2017). According to Flood Forecasting and Warning Center (FFWC) as on August 22, 2017, of the 90 stations under monitoring, 37 stations rose, 49 fallen and 4 stations were steady. At 26 points, rivers had been running above the danger level (Relief Web, 2017). In 2016, rivers in the north started to rise in early July and by the 20th of July nearly all of them started to flow over the danger level. It caused floods in northern Bangladesh including Kurigram, Gaibandha, Jamalpur, Nilphamair and Lalmonirhat. In these districts, flood water entered in, put together 17 numbers of upazilas. It inundated crop fields and dwelling areas, washed away standing crops, houses and households assets, livestock and displaced the affected people.

According to the Climate Risk Index (CRI) 2020 by a Germany-based non-profit research institution (Germanwatch), Bangladesh ranks seventh among those 10 countries in the world most vulnerable to climate change-induced natural calamities (Eckstein et al, 2021). The CRI incorporated number of events, total deaths, loss of property of each affected person, and loss of gross domestic product (GDP). In its report, Germanwatch estimated that during the period 2000–2019, Bangladesh sustained US\$ 1860.04 million billion (Eckstein, et al, 2019) in damages wrought by a variety of natural disasters.

Flood is one of most chronological and devastating disasters for Bangladesh and it has been affecting the country throughout history, especially during the years 1966, 1987, 1988, 1998, 2004, 2016, 2017, 2019 and 2020. The 2007 South Asian floods affected a large portion of Bangladesh. According to Reliefweb, Bangladesh suffered total economic losses due to different hazards of 285,400 million US\$ in the last 10 years, where average annual losses by flood is more than 64%. Almost all sectors of the country, i.e agriculture, shelter, transport, land, education, forests, industries and other livelihoods of people, have been affected by flood. Though there is no statistical

evidence but the frequency of flooding in Bangladesh has increased greatly in the 20th century (Reliefweb, 2007). In 2020, due to flood 102 upazila and 654 unions of Bangladesh have been inundated, affected 3.3 million people and left 7,31,958 people in water logging. 93 people have lost their life and 41 child died due to drowning (Reliefweb, 2020). In 2019, Bangladesh's National Disaster Response Coordination Centre (NDRCC) measures that over 70 people died and 5 million have been affected by the monsoon floods. NDRCC also estimates that 5,302,698 people directly affected by the 2019 flooding in where 27,170 houses have been destroyed and 419,336 damaged and 287,513 people displaced (Floodlist.com, 2019).

There is indication that the inter-annual variation of floods and the areal extent of big events have increased since 1950. In line with this the northern part of Bangladesh is highly exposed to flood and climate change effect. The recent years' devastation evidently shows that flood is still a matter of grave concern for Bangladesh. Moreover, recent analysis show, around 5.3 & 3.3 million people were affected and 287,513 were displaced by flood of 2019 & 2020, respectively (Floodlist.com, 2019, 2020). In terms of capacity and knowledge, flood affected people have very limited access to resources and scientific knowledge about coping with flood; however, they have traditional practices but no cumulative approach. The most affected sector by flood is agriculture and properties where diarrhea and typhoid are the prevalent diseases.

The number of people at risk has been growing each year and the majority is in developing countries like Bangladesh with extreme poverty levels making them more vulnerable to disasters. Moreover, discriminatory and explosive practices such as taking high interest loan rate is quite common in the flood affected districts of Bangladesh, which make them even more exposed to the generational cycle of poverty. The recent experience of flood shows the same negative coping mechanism which causes them in further disaster risk.

Changing climate has significant impact on the Bangladesh and its footprint already been noticed in different area. In year 2017, Bangladesh faced two mega floods and even excessive rainfall in the months of October, which is quite unusual for Bangladesh. In some point August flood has accede the previous 20 years flood level which is beyond the prediction of the communities and cause huge damage of the lives and livelihood leading to have more disaster resilient intervention.

The Government of Bangladesh has several social protection programs or social safety nets in place to provide food security in the event of a disaster. Some of these programs, such as the Vulnerable Group Development program being implemented from the early 1970. The VGD programme has evolved over time to focus on helping poor women graduate out of poverty. Immediate disaster assistance is provided through the Vulnerable Group Feeding program. However, this program is focused on the poor and not necessarily those most adversely affected by the disaster. The government also emphasizes on local level management by organizing and strengthening the local institutions and employing them from disaster response to risk reduction.

The South Asian country of Bangladesh, located next to India, is prone to flooding due to being situated on the Ganges Delta and being the basin for several tributaries flowing down into the Bay of Bengal.

1.1. Programme details

1.1.1 Background of Programme

To overcome the worsening situation occurred by flood in those districts, International Federation of Red Cross and Red Crescent Societies (IFRC) in partnership with Bangladesh Red Crescent Society (BDRCS) has implemented a programme entitled "**Integrated Flood Resilience Programme through Community-based Disaster Risk Reduction (CBDRR)**" to enhance the community resilience through reducing the vulnerability of highly exposed people to floods of four communities of the two northern districts of Bangladesh for the period of March 2018 to June 2021 by disaster risk reduction, climate change adaptation, livelihood, shelter, water, sanitation and hygiene, health and capacity enhancement of the people of targeted communities and delivering interventions targeted to increase the capacity to reduce life and livelihood risk of the vulnerable people of the community including women, children, elder people and people with disability through participatory management ensuring participation of stakeholders in every aspect of programme management cycle including planning, implementation and monitoring.

1.1.2. Programme Objectives

The broad objective of the programme is to strengthen community resilience for effective and efficient response to multi-hazards and climate-induced phenomena.

The specific objective of the programme is to build capacity of community to reduce the loss of life, livelihood and wellbeing in recurrent disaster and climate change risks through Community Based Approach

1.1.3 Programme Outcomes

Outcome 1: Communities are capable to effectively respond to flood and adapt to changing climate

Outcome 2: Most vulnerable households have improved livelihood and shelter to withstand small scale flood

Outcome 3: Community people have increased access to appropriate and sustainable water, sanitation and hygiene practice

Outcome 4: BDRCS capacity is enhanced to deliver scaled up DRR programmes for disaster risk reduction

1.2. Study details

1.2.1. Study objectives

The purpose of this evaluation study was to assess the relevance, timeliness, quality, effectiveness, replicability, sustainability of the programme in the areas: (i) programme objectives and results as outlined in the programme log frame; and (ii) to improve future resilience programmes of BDRCS and IFRC.

The specific objectives of the evaluation were as follows:

- To evaluate whether the programme delivered effective, efficient, relevant and timely activities to the targeted beneficiaries and community people as set in the programme logical framework
- To assess whether the coordination and collaboration among BDRCS, Government, non-government and other humanitarian organizations were strengthened in implementing community-based resilience interventions
- To identify and assess key lessons, challenges, best practices and recommendations for utilizing in future resilience programmes of BDRCS, IFRC and others.

1.2.2. Study approach and methodology

1.2.2.1. Study approach

The overall study design incorporated eight phases in order to implement the tasks enshrined in line with the study objectives, the methodology consisted of different quantitative and qualitative tools and methods in line with DAC OECD criteria (the relevance, timeliness, quality, effectiveness, replicability, sustainability)

. The methodology however included the following steps.

- Initial discussion with IFRC and BDRCS.
- Collection and review of literature and documents.
- Collection and analysis of secondary data.
- Designing the study tools and instruments (household survey questionnaire, FGD checklist).
- Field work at communities and BDRCS Units and collection of qualitative and quantitative data
- Compilation and processing of data generation of statistical outputs.
- Analysis and report preparation incorporating the findings and results of the study.
- Finalization and submission of the report.

As the proposed study was undertaken during the ongoing COVID-19 pandemic, with Bangladesh being the second most affected country in South Asia after India, additional consideration was given to the overall study design in relation to the ongoing COVID-19 operational context in target study areas.

- In terms of a lockdown situation, the household information was collected by Red Crescent Youth of Bangladesh Red Crescent Society (BDRCS). For qualitative information, CPE expert team visited study areas and conducted Focus Group Discussions (FGDs), Key Informant Interviews (KIIs) and case stories collection and CPE experts also conducted national level KII through zoom.
- Along with the primary information, secondary information was collected through reviewing programme documents including programme proposal, logical framework, Mid-Term Review, baseline reports, annual report, Flood Early Warning System (FEWS) effectiveness study report etc. and analyzed them to blend with the primary information.

1.2.2.2. Study methodology

1.2.2.2.1. Household survey

For the household survey (HHS), the study used mobile friendly data collection tool Kobo which was developed by guided structured questionnaires (SQ) as a quantitative data collection tool. Four teams consisting of eight enumerators (in each district four enumerators) carried out the HHS.

1.2.2.2.2. Household sample size determination

The household sample size is determined using the following equation:

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N} \right)}$$

Where

N = Programme beneficiaries = 1675

e = Margin of error (percentage in decimal form) =4.4%

z = 1.96 (z-score at 95% confidence level)

p= Response distribution=50%

Using the above-mentioned sample determination formula, the sample size is 383 as well as 384

The target population for the Household Survey (HHS) of this end line study are disaster vulnerable people. The end line study would be made use of systematic random sampling in order to select the respondents for investigation.

1.2.2.3. Household sample selection criteria

The household respondents were selected based on the following key criteria:

- Adult household members aged between 18 – 69 years old.
- Only programme beneficiaries of IFRP 1675 households who are adult and knowledgeable on programme activities.

Form each community, sample households were selected based on the provided beneficiary list. Form the provided beneficiary list, study team randomly selected every 5th households, and if not 5th household member were found then next one household were interviewed. The head of household (husband or wife) were preferred as respondent. But sometimes, head of the household were absent and, in that case, the members of the household who knows about IFRP were interviewed who age aged above 18 years. The enumerators interviewed female respondents from the selected odd numbers of beneficiary list and male respondents from the selected even numbers of beneficiary list to ensure gender representation in the study.

1.2.2.4 Focus group discussion

Focus group discussions were conducted with community people including women, children, students, elderly and PWD, CDMC, CDRT, livelihood beneficiary groups, WASH beneficiary groups, shelter beneficiary groups in order to explore the adherence to fundamental principles and code of conduct of IFRC, DAC criteria of programme activities (relevance and appropriateness, efficiency, effectiveness, impact, coherence, sustainability and connectedness), coverage of the programme activities. 18 FGDs were conducted in four communities which is given in the following table 1.1:

Table 1.1: List of FGD

District	Upazila	Union	Community	FGD Participants
Nilphamari	Dimla	Tepa Kharibari	Dighir Par	Women, Children, Elderly & PWD, CDMC
		Khalisa Chapani	Garain Para	Livelihoods beneficiary, Students, CDRT, WASH beneficiaries, shelter beneficiaries
Lalmonirhat	Sadar	Kulaghat	Shiber Kuti	Farmer, Women, Children, Elderly & PWD
		Khuniagachh	Sheikh Para	Livelihoods beneficiary, Students, WASH beneficiaries, shelter beneficiaries,

1.2.2.5 Key informant interview

Key informants interviews were conducted with key stakeholders of the programme including Union Disaster Management Committee (UDMC), Upazila Disaster Management Committee (UzDMC), Community Disaster Management Committee (CDMC), Upazila Health Complex (UHC), Dept. of Agriculture Extension (DAE), Dept. of Public Health Engineering (DPHE), Mason, Unit Disaster Response Team, Dept. of Livestock (DLS), IFRC and KOICA to understand the gaps, opportunities, challenges and sustainability of IFRP and also to extract future way forward. The list of KII has given in the following able 1.2:

Table 1.2: List of Key Informant Interviews

District	Upazila	KII Participants
Nilphamari	Dimla	UDMC, UzDMC, CDMC, UHC, DAE, DPHE, Mason, Unit Disaster Response Team
Lalmonirhat	Sadar	UDMC, LSP, Disaster Response Team, DLS, Unit Disaster Response Team
National level		IFRC, KOICA and BDRCS

1.2.2.6 Case studies

Case studies and best practice were documented from the communities to extract change story on different interventions. During the extracting changes, we have focused on mainly quantitative change and conducted ten case studies in the communities which is described in the following table 1.3:

Table 1.3: List of case studies

Name of case	Interventions	Location	Changes/Outcome
Flood marker, the effective Flood Warning system	Flood Early Warning System	Shiber Kuti	Observing flood marker, in the last two floods (2019 and 2020), flood induced loss and damage has reduced in the community.
Halima Khatun: The economic empowered woman	Livelihood beneficiary	Garain Para	Through livestock rearing and raising plinth of cowshed considering flood level, the woman has improved household income and becoming self-dependent
Laili Begaum: A self-dependent woman by sewing	Livelihood beneficiary	Garain Para	The woman became household head of the household by own income
Smart shelter: The model for flood resilient dwelling place (Minoti Bala)	Shelter beneficiary	Garain Para	In the last two floods (2019 and 2020), the house was not flooded and many community people used it as safe shelter.
Moyna: A successful entrepreneur	Livelihood beneficiary	Garain Para	The widow became household head of the household by own income and supporting age old father, two children.
Paradigm shift: Flooding to safe shelter (Rashida Begaum)	Shelter beneficiary	Shiber Kuti	In the last two floods (2019 and 2020), the house was not flooded and many community people used it as safe shelter.
Age old widow: The hope for the household (Farida Begaum)	Livelihood beneficiary	Sheikh Para	After the death of husband, Farida Begaum was not able to feed her 1 son and 3 daughters but now within two years, she is the hope for the family.
Brick wall: A safeguard for thousands households	Flood protection infrastructure	Sheikh Para	The wall protected more than thousand families, three villages and hundreds of agricultural land from the flood of Teesta river
Resilient drinking water source: Safeguard for health	WASH	Dighir Par	Before installation of the tube-well considering flood level, community people were not meet drinking water during flood and suffered from water borne diseases but now the diseases prevalence rate decreased almost at 10%.

Chapter Two

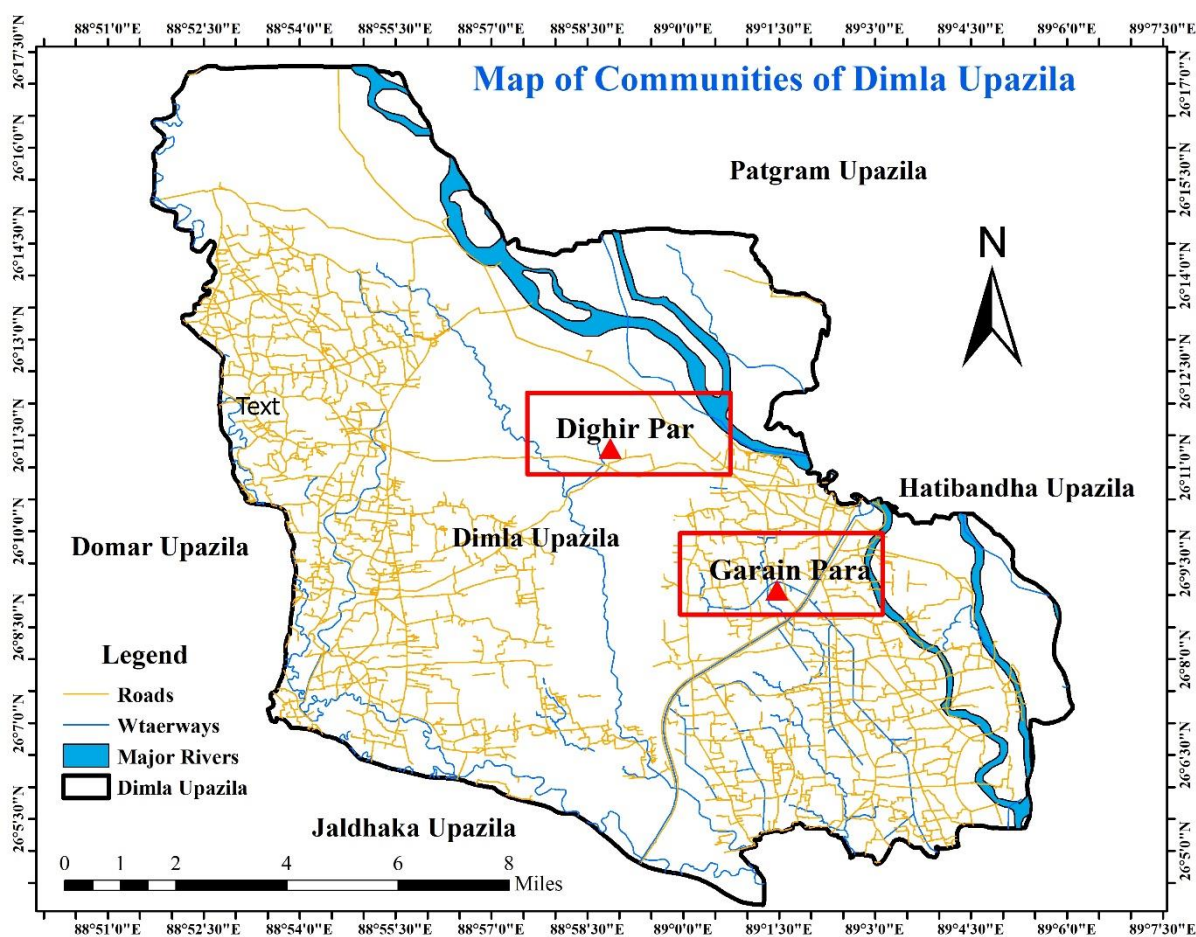
Geo-physical and socio-economic information

Geo-physical and socio-economic information is the most important aspect to understand the location specific scenario of any settlement. Geo-physical information includes geographical location, landscape, land use pattern etc. In this study, geographical information were collected to understand the geographic scenario. On the other hand, socio-economic information represents social, cultural, economic status of a community.

2.1. Geographic information

Dighir Par and Garain Para communities are two flood vulnerable communities of Dimla Upazila under Nilphamari district. Dimla upazila is located at 26.1278°N and 88.952°E (Map 1)

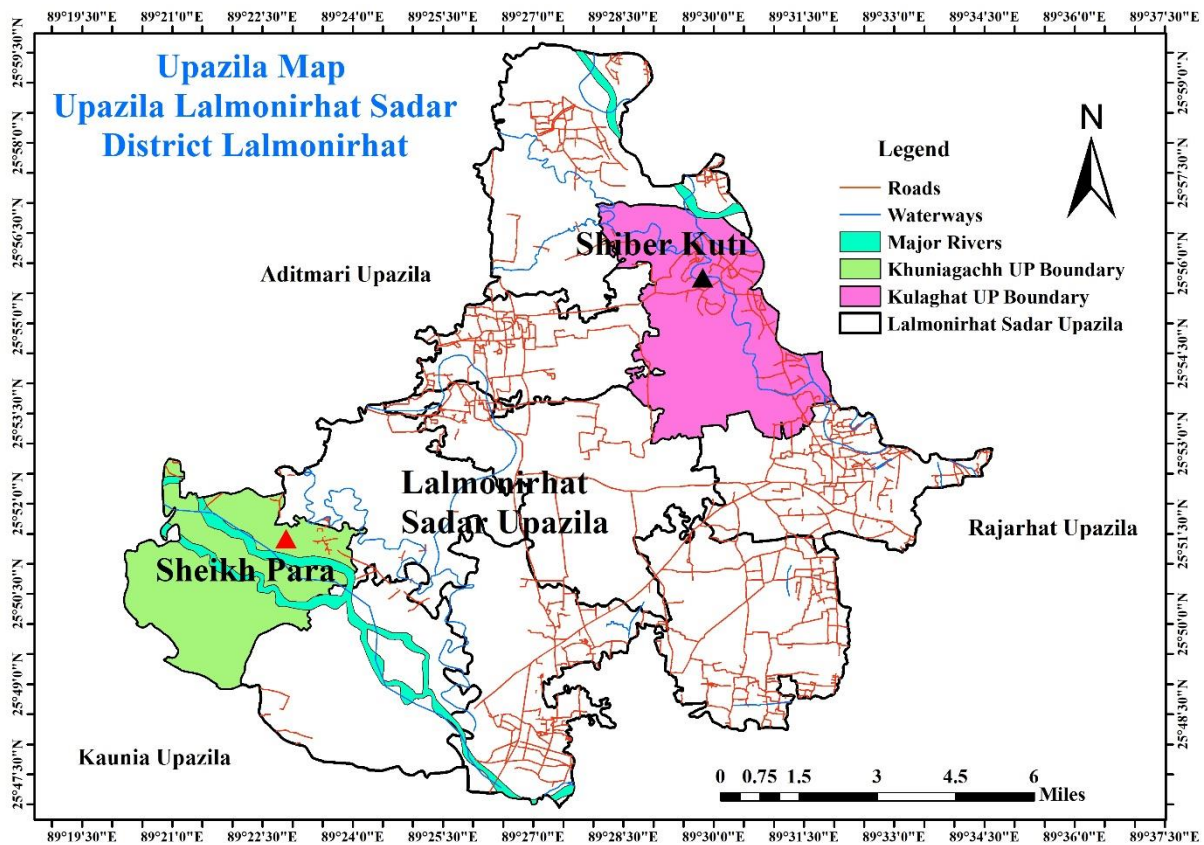
Map 2.1: Study area of Dimla, Nilphamari District.



Source: CPE RS & GIS Unit

Sheikhapara and Shibderkuti communities are two communities of Lalmonirhat Sadar upazila under Lalmonirhat district. Lalmonirhat Sadar is located at 25.9153°N and 89.45°E. It has a total area of 259.54 km². Both of the communities are being flooded due to over flowing of Teesta River.

Map 2.2: Study area of Lalmonirhat Sadar, Lalmonirhat District.



Source: CPE RS & GIS Unit

2.2. Gender of the respondent

The sex ratio of the total population of Bangladesh is 50.6: 49.4 (male: female) (countrymeters.info, 2021) but in the study, the male female ratio was 60:40 as well as among 384 respondents, 155 respondents were male, and 229 respondents were female. In the four communities, the study revealed that in Sheikh Para, 18% respondent were female and 8% were male. In Dighir Par, 20% respondent were female and 6% were male. In Garain Para, the study collected information from female respondents which was 5% of the total respondents and in Shiber Kuti, 17% respondents were female (Figure 2.1).

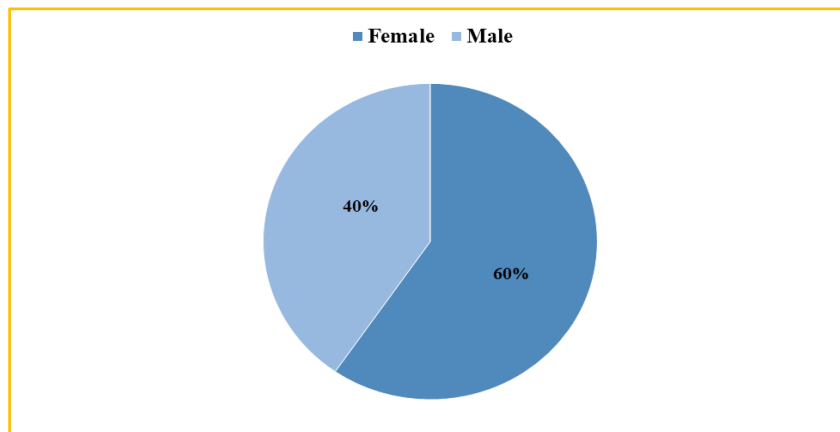
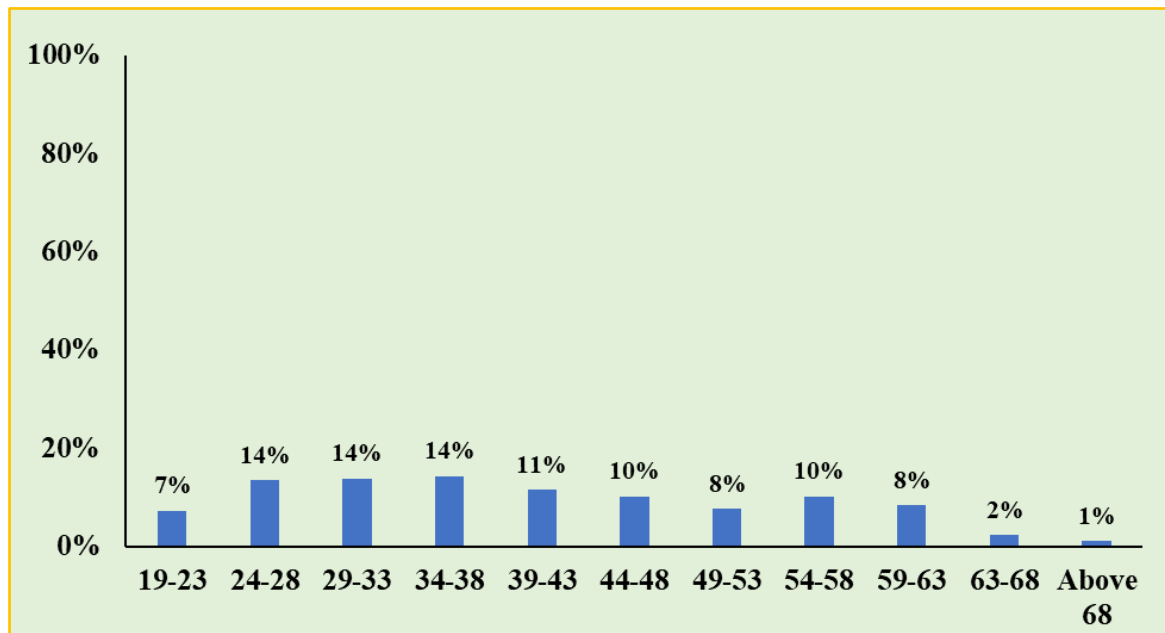


Figure 2.1: Gender of the respondent

2.3. Age of the respondent

Average life expectancy of Bangladesh is 71.6 years (Dhaka Tribune, 2019). In the study area, it is found that most of the respondents comes from 24-48 years age group which is 63.28% of the total respondents in four communities. The figure 2.2 illustrates the respondent age and it is found that among all of the respondents maximum (42%) respondent are between 24 to 34 years. 7% respondents are between 19-23 years and 2% respondents are between 63-68 years age group.

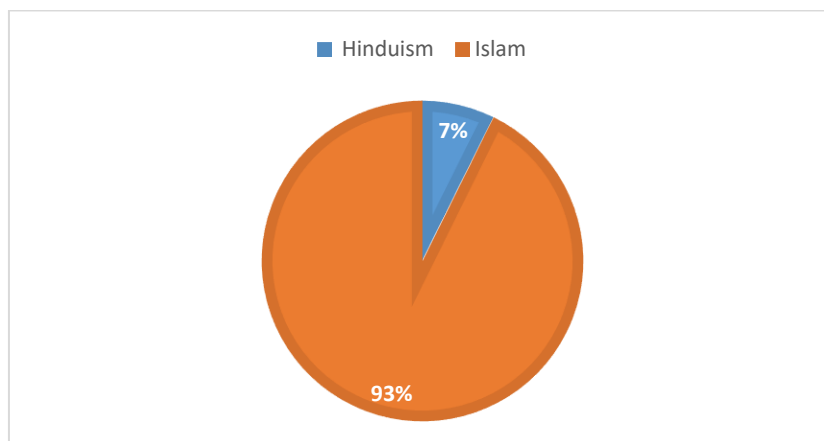
Figure 2.2: Age of the respondent



2.4. Religion of the respondent

Most of the respondents of the study areas are Muslim and Islam is the religion of 93% respondents among the all respondent and 7% respondents have Hinduism as their religion. (Figure 2.3).

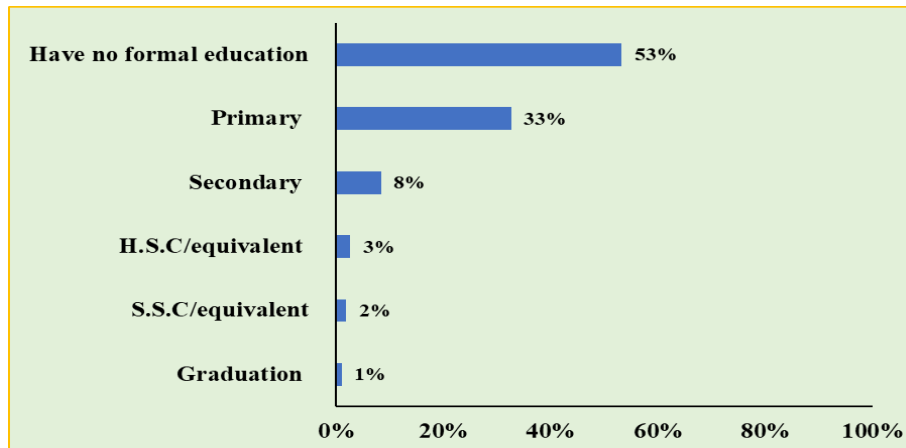
Figure 2.3: Religion of the respondents



2.5. Education of the respondent

Bangladesh literacy rate is 74.68% (World Bank, 2019) but in the study area, it is found that 53% respondents in the four community have no formal education. Among all respondents (Figure 2.4) of the study area, 33% have primary education, 8% have secondary education, 2% respondent have completed S.S.C or equivalent, 3% respondent have completed H.S.C or equivalent and only 1% have completed graduation.

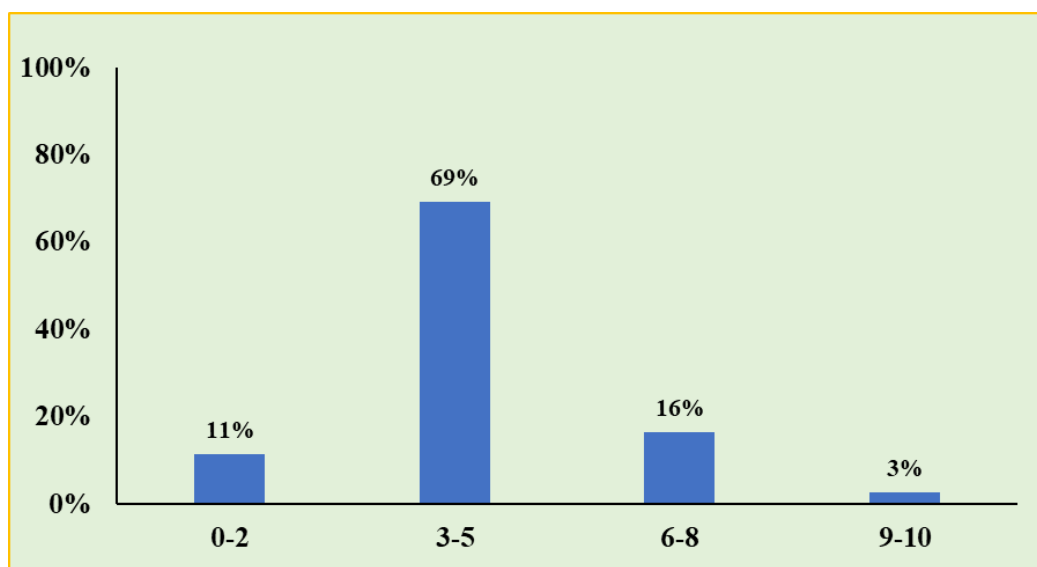
Figure 2.4: Educational qualification of respondent



2.6. Household member size

Average household size of the study area is 5.88 but the country average household size is 4.060 (HIES, 2016). Lack of education and awareness, birth control is absent in the study area for which household size is larger than national average. The study reveals that the highest number of respondents (69%) have 3-5 members in their household. The second highest number of respondents (16%) have 6-8 family members and it is also found that there are 3% households who have 9-10 family members which also illustrates in Figure 2.5.

Figure 2.5: Household size



Among the four communities in the study area, the figure 2.6 illustrates that 16% households have person with disability members and 84% don't have PWD household members and from these 16% households who have PWD members, 87.3% have one PWD member, 11.11% have 2 PWD member and rest of the household (1.59%) have three PWD members (Figure 2.7).

Figure 2.6: Existence of PWD member in household

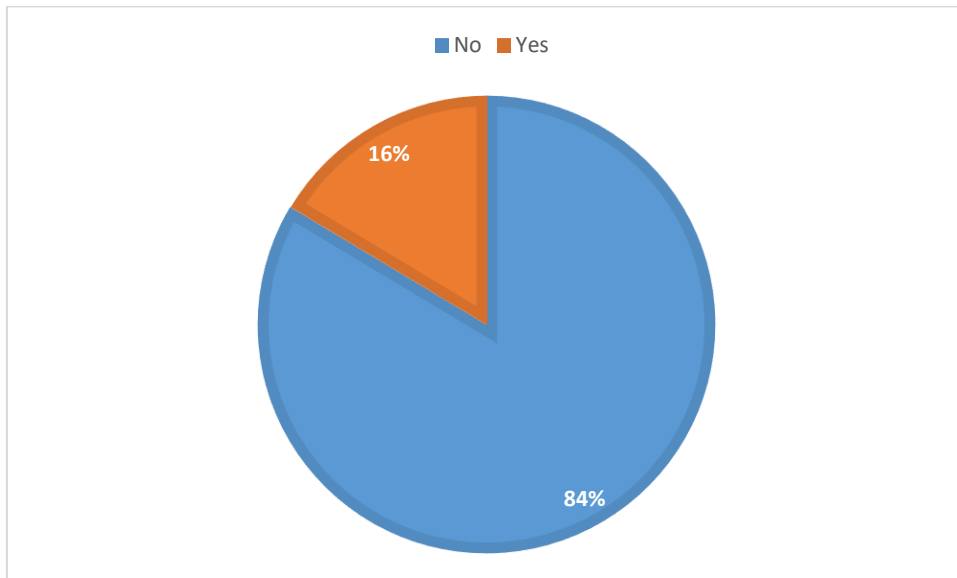
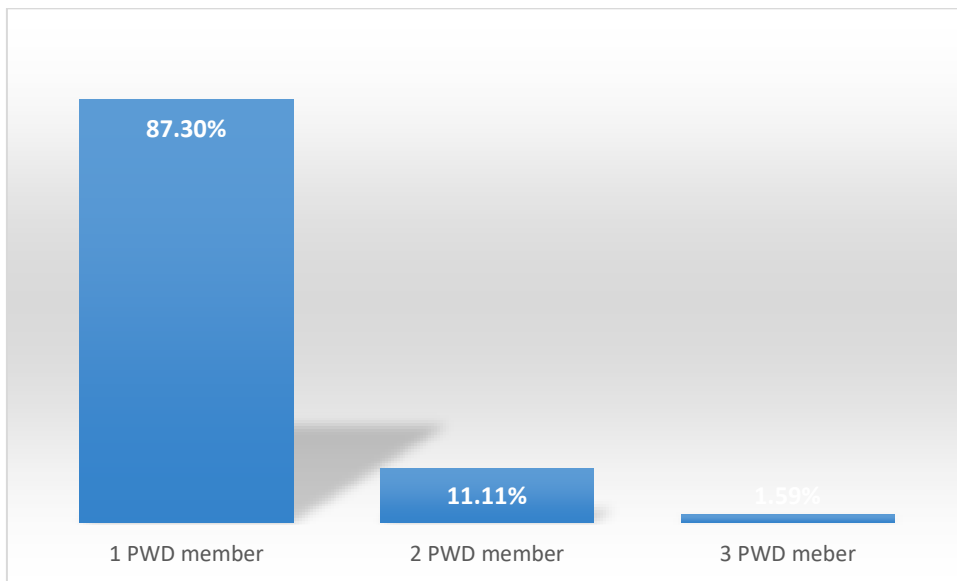


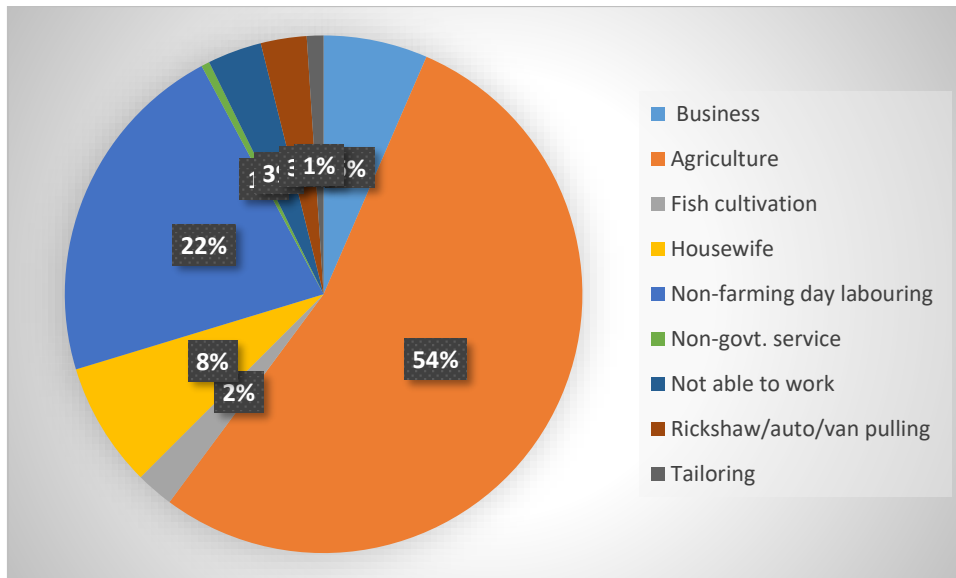
Figure 2.7: Number of PWD members in household



2.7. Occupation

Like other part of Bangladesh, most of the respondents of the studied communities are involved with agriculture for their livelihoods which is 54% of the total respondents, 21% respondents are involved with non-farming day labor as occupation. (Figure 2.8).

Figure 2.8: Occupation status in the study area



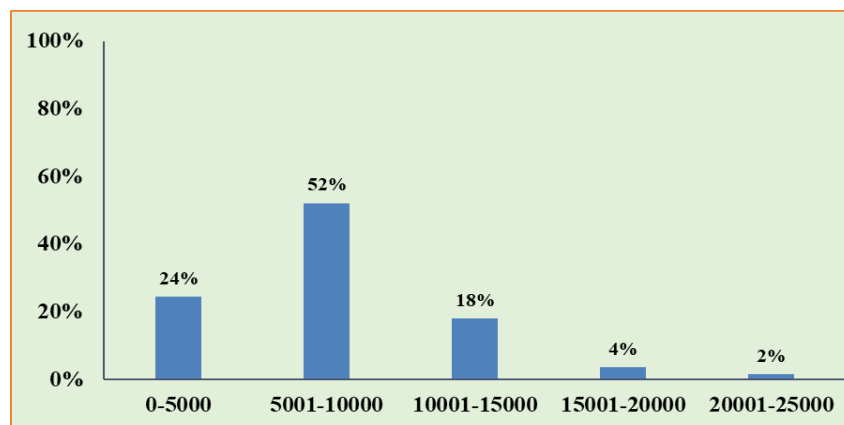
In the focus group discussion, it was also found that there are some other occupations are available in the study area which are begging, farming day labour, construction labour, brick filed labour, boatmen etc.

2.8. Household income and expenditure

2.8.1 Monthly income

Because of poverty stricken area, most of the people of the study area are poor and their monthly average income within 10000.00 BDT which is found 9234.00 BDT but it was 5000.00 BDT during the baseline study. The highest number of respondents (52%) mentions that their monthly income within 5001.00-10000.00 BDT and 2% of the total respondents have monthly income within 20001.00-25000.00 BDT. (Figure 2.9).

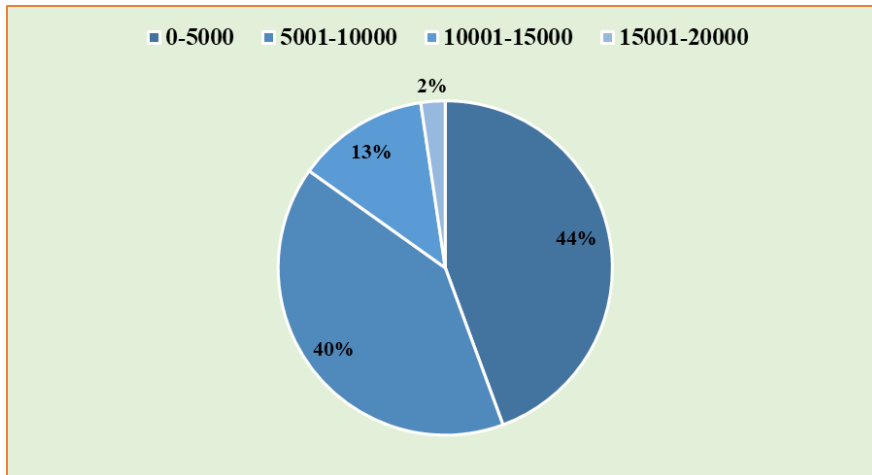
Figure 2.9: Monthly average household income



2.8.2 Monthly expenditure

About 44% respondents mentioned that their monthly expenditure was between 0-5000 BDT, 40% mentioned between 5001-10000 BDT, 13% mentioned between 10001-15000 BDT and 2% mentioned between 15001-20000 BDT (Figure 2.10).

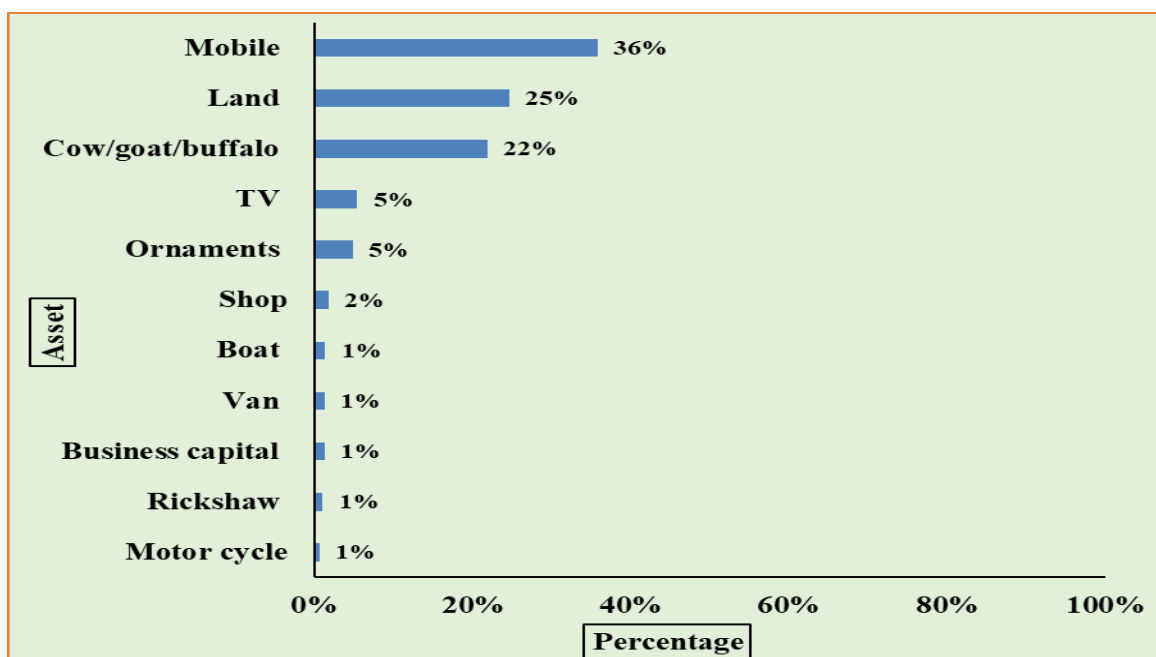
Figure 2.10: Monthly expenditure of the household



2.9. Household assets

Regarding the household asset among all the respondents 36% (Figure 2.11) mention they have mobile phone, 25% mention about land, 22% mention cow/goat/buffalo, 5% respondents mention they have television, 5% mention about ornaments, 2% respondents mention they have shop, 1% mentions boat, 1% mention van, 1% mention business capital, 1% mention they have rickshaw and 1% respondent mention motorcycle as their household asset. In the end evaluation study, whereas 25% respondents mention that they have land as their fixed asset but during the baseline study none of the respondents have mentioned that they have land as fixed asset (Baseline study report, p. 31).

Figure 2.11: Types of fixed asset of the household



Chapter Three

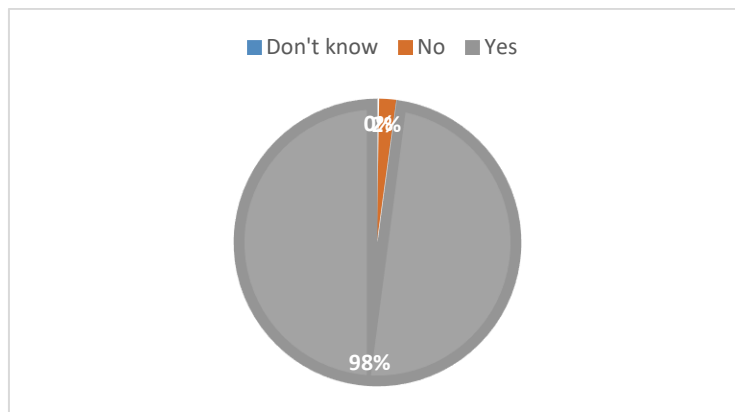
Climate Change and DRR

The programme was implemented in four flood vulnerable communities with several intervention including capacity building activities. Different types of capacity building activities like community awareness meetings, trainings were conducted in the communities to build the knowledge level on flood resilience. The community people from these received flood resilience education and capacity by the programme personnel under the IFRP.

3.1 Knowledge on IFRP courtyard sessions/micro-group meetings

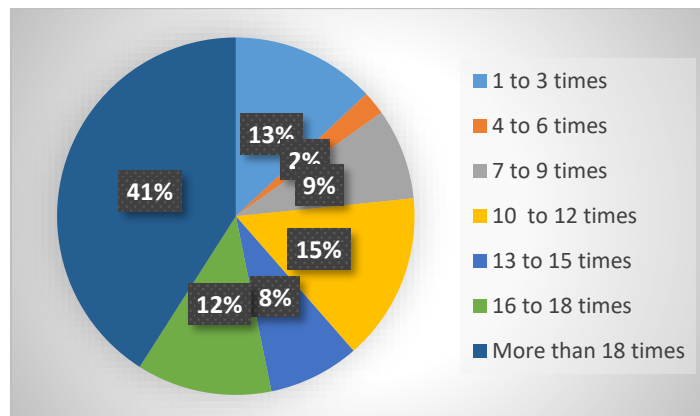
Among all respondents, 98% respondents have knowledge on IFRP courtyard session/micro-group meetings. But other 2% respondents don't have knowledge on that because during the field study, the study team could not reach the household person who have received training or participated in the meetings. (Figure 3.1).

Figure 3.1: Knowledge on IFRP courtyard sessions/micro-group meetings



Most of the respondents participated in the courtyard meeting for more than 18 times which is 41%. Lowest number of respondents which is 2% participated in the courtyard meetings to learn on different issues (Figure 3.2). During the focus group discussion with community people, it was found that courtyard meetings were mostly interesting and learning session for social change issues, disaster management including women empowerment, flood resilience, health, reproductive health and so why they were interested to participate in the courtyard meeting.

Figure 3.2: Times of participation in courtyard meetings



Regarding the lessons learnt from IFRP courtyard session/micro-group meeting 97% respondents among the all communities mentioned that they have learnt about the information about the implementation of IFRP, 84% respondents mentioned health and also some respondents mentioned about health camp, 67% mentioned they have learnt role of COs, CDMC and CDRT volunteers and also 67% mention they have learnt role of BDRCS, IFRC and Ministry of Foreign Affairs (MoFA) KOICA for IFRC, 66% mention information on flood early warning system, 65% mention they have learnt how to deal with COVID-19 situation, such as: about pandemic, wearing masks and avoiding mass gathering etc., 63% respondents mention agriculture, 75% mention about WASH, 53% mention information about disaster, flood vulnerability and river erosion, 77% respondents mention they have learnt about disaster management mainly flood response information mainly what to do before, during and after flood, 74% respondents mention community resilience, 45% mention climate change, 68% mention role of BDRCS and its unit, 72% mention different social awareness information, 76% mention they have learnt about mother and children issue, 77% mention about safe shelter/establishing household at the safer places and raising household level, 47% mention women vulnerability and safety during disaster, 68% mention adaptation and 58% mention women reproductive health (Table 3.1).

Table 3.1: Lessons learnt from courtyard meetings

Lessons	Percentage of respondents
Adaptation	68%
Agriculture	63%
Community resilience	74%
Mother and childcare issues	76%
Disaster management	77%
Safe shelter	77%
WASH	75%
Women vulnerability and safety during disaster	47%
COVID-19	65%
Climate change	45%
Social awareness information	72%
Flood response information	75%
Health	84%
Health camps of BDRCS	84%
Information about disaster, flood vulnerability and river erosion	53%
Information about the implementation of IFRP	97%
Information on flood early warning system	66%
Role of BDRCS and its Units	68%
Role of BDRCS, IFRC and Ministry of Foreign Affairs (MoFA), KOICA for IFRP	67%
Role of COs, CDRT & CDMC volunteers	67%
Women reproductive health	58%

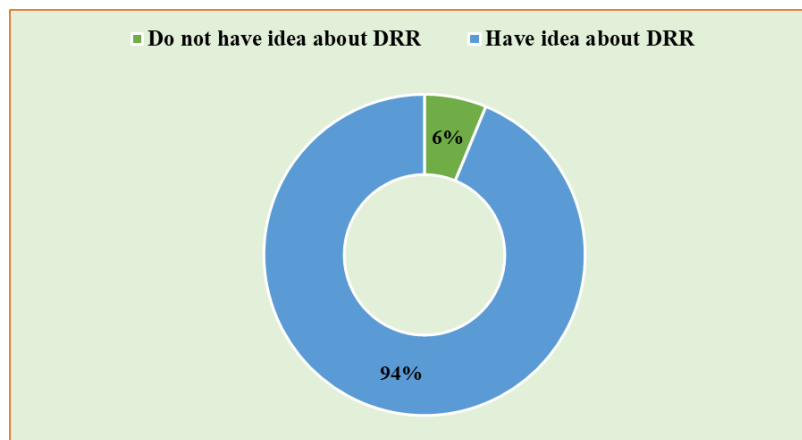
3.2 Idea about DRR

As discussed earlier, Nilphamari and Lalmonirhat districts are highly susceptible to adverse climatic changes and natural disasters, particularly flood. The people here now consider it as a regular phenomenon and try to cope with it. A few years back, they had little knowledge about climate change except a few indigenous ideas of historical weather variations. After the IFRP being implemented, they know by now about several approaches of disaster risk reduction (DRR) at community level.

This study revealed that only 6% of the total respondents still don't know about DRR at all while 94% agreed that they know about DRR strategies and components to some extent which largely increased through the activities

undertaken by IFRP because during the baseline study only 9% of the respondents had idea or knowledge about climate change (Baseline study report, p. 32) (Figure 3.3).

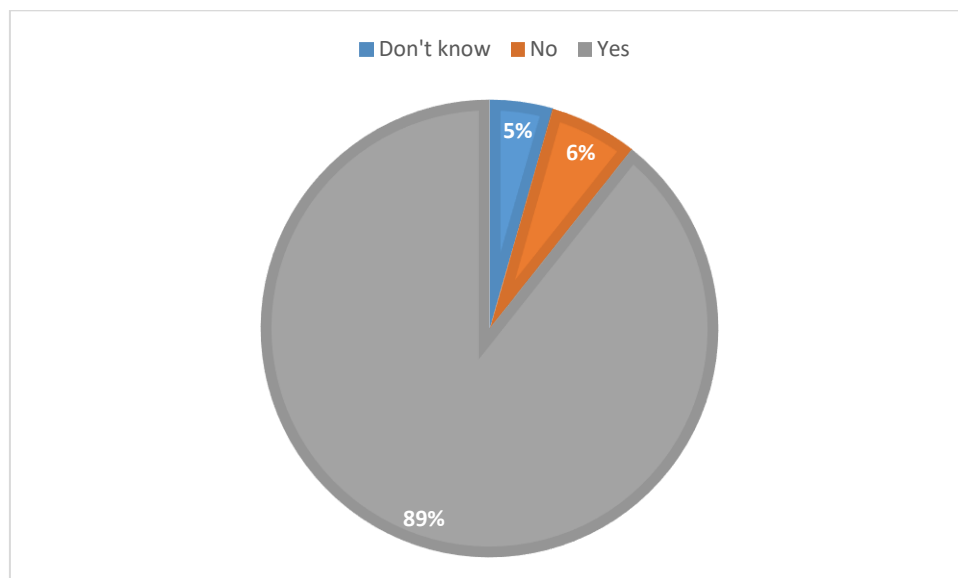
Figure 3.3: Respondents idea about DRR



3.3 Idea on climate change

Similarly, idea on disaster risk reduction, over the last few years, activities undertaken by IFRP significantly increased community people's awareness about climate change. 89% of the respondents agreed that they know about changing climate while rest 11% (6% expressed as No and 5% expressed their opinion as Don't Know) still unaware about this. Perhaps a continuation of IFRP activities might be useful to reach the group left behind (Figure 3.4).

Figure 3.4: Idea on climate change



Though the community residents possess very little knowledge about scientific or data-driven changes in the climate, but they understand the changes from their life experiences, adverse climatic phenomenon and their increased frequency. Comparing their previous knowledge on this matter, it was clear that being benefited by the IFRP, the whole community has an improved idea about climate change.

By the discussion with different stakeholders in community level and also in institutional level, it was found that before the programme implementation, most of the people of these communities were not aware about climate change, disaster risk reduction, disaster induced loss and damage but in the last several years, people have

enriched their knowledge on climate induced disaster, disaster loss and damage reduction. In the school level disaster awareness and capacity building initiative delivered by the programme through “Bhugol Sir er Boi” is one of the innovative and knowledge enriching initiative by the programme, which was mentioned by students of Shiber Kuti, and Sheikh Para and also mentioned by Principal, Gayabari School and College.

“.....There is no disaster and climate change content in the academic books so why students of the primary school and high school level do not get knowledge on these issues. But the “Bhugol Sir er Class” has brought the change among students of my educational institution. Most of the students now can get preparation during flood and they also play active role to ensure disaster resilient communities. I think this book should be introduced in all educational institutes of disaster and climate vulnerable areas of Bangladesh.” Md. Farhad, Principal, Gayabari Scholl and College, Dimla, Nilphamair

3.4 Impact of climate change

Having flood as the most recurring and devastating disaster in the study area, there are plenty of other hazards affect all of the communities under IFRP. Unlike previous perception ratings of DRR and climate change, there have been a wide range of hazards stated by the community people with diversified weightage considering the frequency and magnitude of such events induced by climate change. In the baseline and mid-term review, idea on climate change was not depicted but during the end evaluation study, attempt was made to understand the comparative scenario y the discussion with community people and it is found that climate change was not known to the people before 2018. The study reveals that impact of climate change in the local community is multi-dimensional and from the own opinion, the community people expressed that they understand impact of climate change as changing livelihoods, recent pandemic of COVID-19 worldwide, destroying crops and other agro-based products by flood, hail storm etc., displacement due to flood and river bank erosion, increasing heat wave and cold wave increasing trend of flood and drought, seasonal variation in weather, temperature rising, increasing trend of dense fog. Though a lowest number of respondents (5%) express their opinion as displacement in the meaning of impact of climate change but in the study areas, displacement is a major concern. Due to riverbank erosion, in each year, a remarkable number of household migrate in the nearby locations or far away which was found during the community consultation. (Table 3.2).

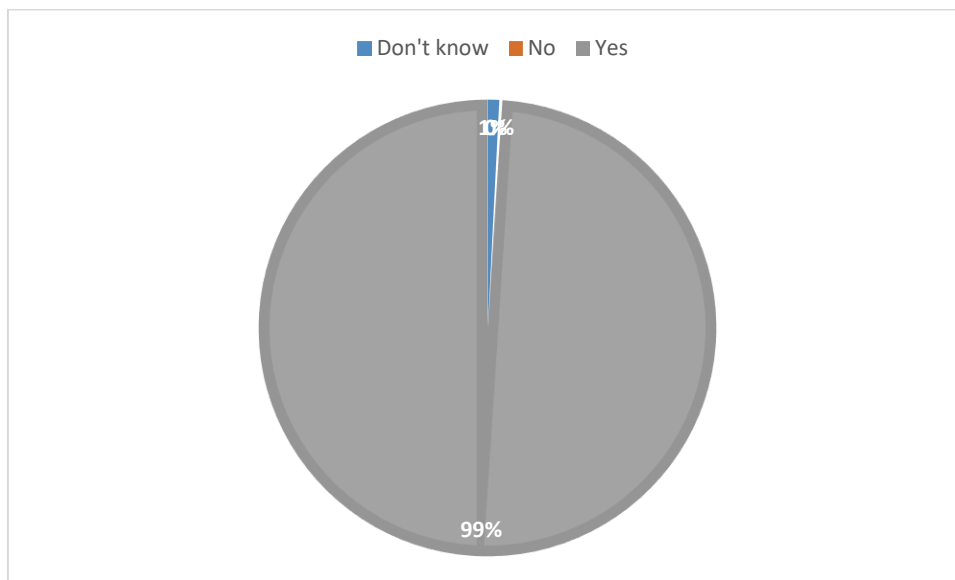
Table 3.2: Impact of climate change in communities by respondent’s opinion

Parameters of climate change	Percentage of respondents
Changing livelihoods	93%
COVID-19	49%
Destroying crops by flood, hailstorm etc.	91%
Displacement	5%
Increasing Drought	45%
Increasing heat and cold wave	55%
Inconsistent rainfall	61%
Increasing diseases and illness	32%
Increasing flood	89%
Increasing fog	35%
Increasing nor’wester	39%
Increasing thunderstorm	41%
Lack of water in rivers for agricultural cultivation	68%
Increasing River erosion	64%
Seasonal variation in weather	89%
Temperature rising	80%

3.5. Knowledge on flood early warning system

In the study area, overall 99% of the respondents are knowledgeable at the end of the programme on flood early warning system (FEWS) which was only 9% during the baseline (Baseline report, p. 37) and in the mid-term review it was found approximately 75% of the community people are knowledgeable on FEWS (MTR, p. 45) (Figure 3.5). 1% of the total respondents express that they don't knowledgeable on FEWS because of their absence in study area. Most of the time, they live far away for their livelihoods. There is an understanding gap of FEWS though the communities are living with floods for a long.

Figure 3.5: Knowledge on flood early warning system



The People during the Focus Group Discussions (FGDs) and Key Informant Interview (KII) narrated that flood early warning system knowledge situation in the locality.

"The flood almost occurs every year and there are some places where usually water overflow. In 2019 and 2020 the flood scenario was different. Both the years' flood occurred in many areas where floods never occurred before but due to flood early warning as well as food marker, in those floods, flood induced loss and damage was low comparatively previous floods."

As stated above, the community people are not only aware of flood marker, rather they have well understanding of all types of the flood early warning systems such as radio, television, miking by the local government and CDMC/CDRT groups.

By the discussion with DRRO, Lalmonirhat, it was found that flood marker is the innovative and effective flood early warning system which was introduced by IFRP.

".....Flood marker is the new innovation in Flood Early Warning System (FWES) which has largely contributed to flood management and reducing loss and damage induced by flood in the last two floods (2019 and 2020). This innovation should be replicated in other places which are flood vulnerable then flood preparedness would be smoother and more beneficial for community people and GoB."-DRRO, Lalmonirhat.

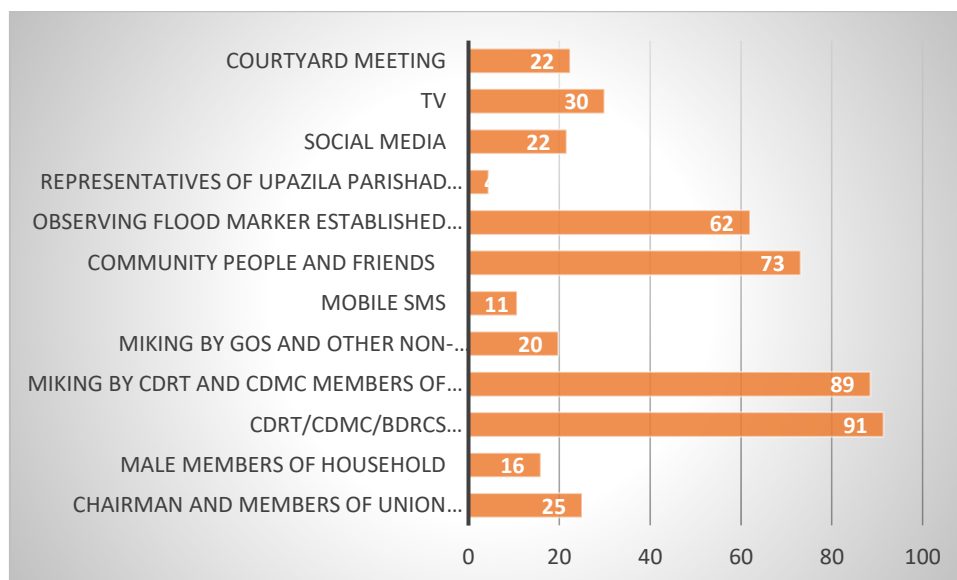
3.6. Flood early warning information/ message during floods of 2019 & 2020

Almost every respondent assured that they received early warning messages during flood of 2019 and 2020 having sufficient time in hand to move in shelters. Previously, people tended not to move in shelters, but in recent years they got to know about the necessity and following all the safety precautions. This has become a community culture and people doesn't hesitate about this anymore. IFRP initiatives largely facilitated this change process for all four communities. Community people especially women and farmers argue that previously they were not were to take shelter in safe places and so why most of the households suffered from highest loss and damage in terms of lives and asset but now after getting flood early information by different sources including observing flood marker, they take shelter to the safe places and reduced loss and damaged.

As per respondents' opinion, the most common channels for receiving the FEW are message from CDRT/CDMC/BDRCS volunteers and IFRP Community organizers and also miking by the same agent which are 91% and 89% respectively from total respondents mentioned. The other important sources of FEW which are mentioned by the community people are friends and relatives, TV, Mobile, Radio, social media, government organizations and also Union Disaster Management Committee (UDMC) and Upazila Disaster Management Committee (UzDMC). Among the mentioned common channels the most active channels are CDRT/CDMC/BDRCS volunteers and IFRP Community organizers which was not active before the programme so why flood preparedness was not sufficient in the communities mentioned by women, farmers, students during the community discussion.

The Focus Group Discussion and Key Informants Interview with Water Development Board (BEDB), Dept. of Agriculture Extension (DAE) in both locations, they mentioned that if any nearby river water increases and there is continuous heavy rainfall, people try to collect flood information and also communicate with BWDB, DAE for update information which was not observed before 2018. In this point of view, it may be concluded that by the intervention of IFRP, community people are aware on flood level and flood information.

Figure 3.6: Flood early warning information sources



Executive Engineer of BWD, Lalmonirhat mentions that we are not able to reach flood related information to the remote communities but the information is most important for preparedness. Flood Forecasting and Warning Center (FFWC) situated at BWDB only able to know the water gauge station danger level and probability and duration of flooding. In the flood of 2019 and 2020, many people from Shiber Kuti and Sheikh Para made phone call to know the flood information which was not observed in my regime of 7 years in Lalmonirhat.

Along with the forecast genesis of potential flood events, different community uses different sources in a diversified way. The below figure 3.6 presents which programme components were comparatively successful to share early warning messages effectively in the community.

3.7. Preparation after early warning

Following the dissemination of flood early warning messages, community people take several preparedness measures in recent years at household and community level (Table 3.3). This is highly regarded by the community people that timely and smart initiatives by IFRP has been very instrumental to grow a culture of disaster preparedness. Most of the respondents from the study areas do something for response and recovery of flood. 9% of the total respondents take advice from CDMC, CDRT and CO of IFRP for flood preparedness. And 61% of the respondents keep regular contact with CDMC, CDRT and CO of IFRP for regular update of flood situation and 60% who don't have ability to recover flood by own finance, contact with CO of IFRP for financial support from CDREF. But 4% of the respondents do nothing and seek assistance from external sources. During the FGD, it was found that these respondents don't have nearby safe shelter and they also live on embankment in government Khash land, they have no alternates to do for them so why they seek external sources.

Table 3.3: Preparation after getting the flood early warning information.

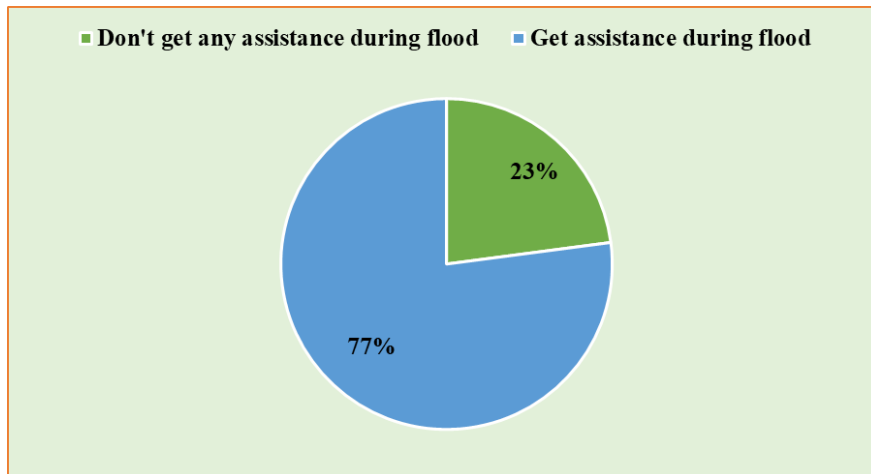
Preparedness measures	Percentage
Collect and preserve safe drinking water	26%
Communicate with CO for Community Disaster Relief Emergency Fund (CDREF)	60%
Communicate with the CO, CDMC, CDRT for further information and suggestions	61%
Contact with Water Development Board	11%
Cover tube well or water point to secure safe water	27%
Discuss and plan within own household to take actions before, during and after flood	50%
Help women, elder people and children	26%
Inform community people to take safe shelter and preparation for flood measurements	19%
Keep enough money in mobile	15%
Manage cash money for emergency purposes	45%
Plan to move livestock at safer places	32%
Plan to shift the household assets at safer places	46%
Prepare to take safe shelter	64%
Preserve dry food	76%
Preserve kerosene oil, fuel, dry straw etc.	40%
Preserve necessary medicine	33%
Secure safety and security of adolescent girl and women	33%
Secure safety and security of pregnant women	21%
Take advice from CDMC, CO and BDRCS	96%
Wait for external assistance	12%
DO nothing	4%

3.8 Assistance from CDMC and CDRT during flood

The IFRP has developed Community Disaster Management Committee (CDMC) and Community Disaster Response Team (CDRT) which is the remarkable initiative of the programme. These well-formed and active CDMC & CDRT groups are most successful components of IFRP as described by the respondents particularly for the early warning messages dissemination and evacuation to shelters. 77% (Figure 3.7) which was 75% in MTR (MTR report, p. 45) of the total respondents received support from CDMC and CDRT during floods of 2019 and 2020.

The rest of the respondents know about CDMC and CDRT but got assistance from other sources. During the baseline study, there was not committee like CDMC and CDRT to assist them directly in flood preparedness, flood recovery and rescue through Union Disaster Management Committee (UDMC) exists in each union but these are not active like CDMC and CDRT which was illustrates by community people during focus group discussion. This also mentioned by Chairman of 9 No. Tepakhali Union Parishad that due to lack of proper training and orientation, UDMC cannot work actively in flood preparedness, rescue and recovery.

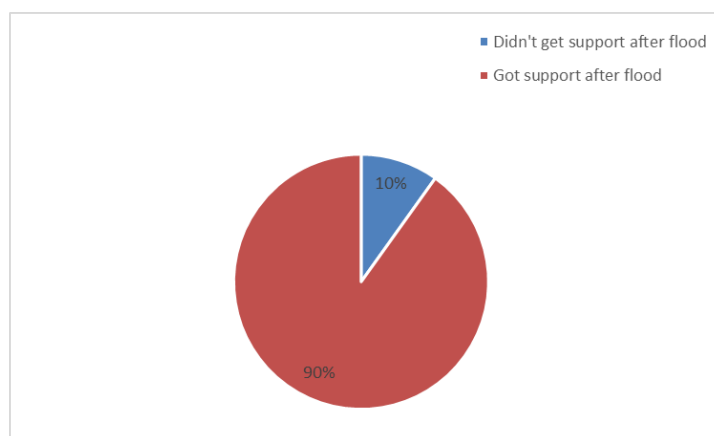
Figure 3.7: Getting assistance during flood from CDMC & CDRT



3.9. Flood response support

After flood, recovery support is most essential for recovering loss and damage for the poor and marginalized families. Government of Bangladesh provides some support in terms of relief and cash support to recover the flood induced loss, but it is not enough for the community people. On the other hand, some other non-government organizations also support beyond the flood. IFRP/BDRCS introduced this intervention in the working communities and 90% of the respondents acknowledged that they have received support from the programme in a post-flood recovery. Rest of the 10% of community people mentioned that they did not get support from the programme, but they received support from other sources which was interlinked by programme personnel, CDMC and CDRT based on their needs or damages caused by flood (Figure 3.8).

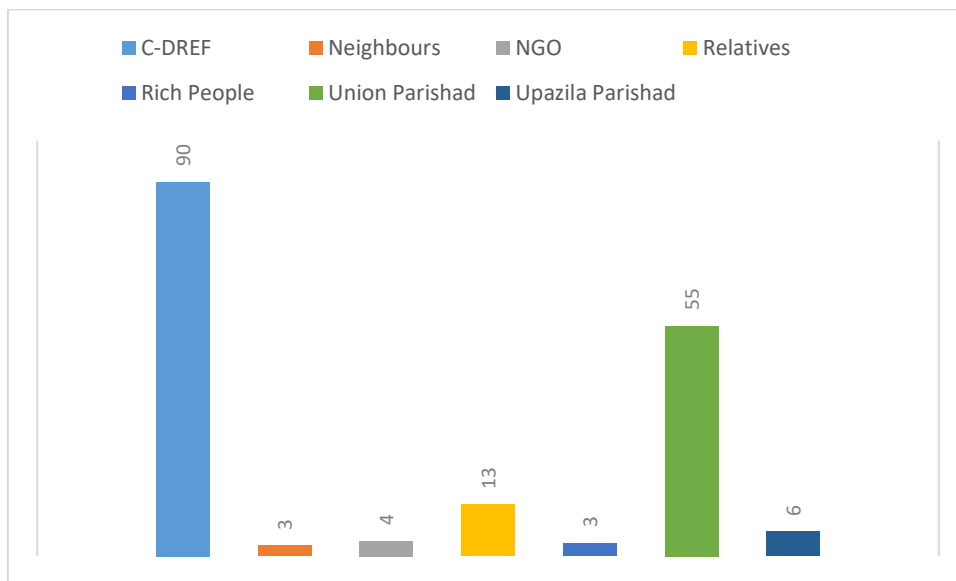
Figure 3.8: Getting flood response support after flood



Community Disaster Relief Emergency Fund (C-DREF) is another significant contributing component of IFRP programme of BDRCS. This fund has been generated and operated by the community people that allows to support the most sufferers within the community at shortest time delay. 90% of the total respondents highly praised this

initiative (Figure 3.9). The effectiveness of the C-DREF is found during the community discussion and key consultation with Secretary of Dighir Par Community Disaster Management Committee (CDMC).

Figure 3.9: Flood response support from different sources



“.....Many families of our community is not capable to afford flood preparedness cost. On the other hand, they are not able to buy dry food to preserve for flood period. In the last two years, we have provided support to more than 300 families from the C-DREF fund before flood to buy food and medicine which was not able before 2018. We will continue this fund beyond the project by our own contribution because it is most helpful for flood management and we need not to look financial support from external sources.”-Secretary, Dighirpar Community Disaster Management Committee (CDMC).

3.10. Flood/disaster preparedness/readiness measures

Flood management and reducing flood induced loss and damage depends on preparedness, rescue and recovery activities. Preparedness actions can reduce damage during flood. Similarly, actions during flood can prevent lives and asset damage. On the other hand, actions in post-flood can easily recover the flood induced loss and damage. The courtyard meetings and training of IFRP put efforts to teach the community people on actions before flood, during flood and after flood. By the indigenous knowledge, flood affected people practice a number of actions before flood, during and after flood to rescue their lives and assets. In the baseline study, it was found that 33% people take action before flood, 33% take actions during flood and 23% take actions after flood (Baseline report, p. 35-37) but at the end line study the percentage of taking action before, during and after flood increased at 100% in each communities which is the great achievement of the IFRP though the actions adopted by the community people are different based on location and level of flood vulnerability which is illustrated in the following table 3.4, 3.5 and 3.6.

Table 3.4: Flood preparedness activities

Flood preparedness activities	Percentage
Check electricity safety	69%
Clean out drainage canal in field	31%
Evacuate by order of local authorities	91%
Inform community people to be prepared for disaster/flood	89%
Keep all important documents in the prepared container (grab bag)	89%
Keep children from not going to school	69%
Move livestock	47%
Prepare contact list of emergency call	82%
Prepare evacuation route and area	80%
Prepare safety kit (life vest, lifebuoy, torch, rope...)	76%
Preserve food	100%
Protect belongings	88%
Raise the household level	80%
Raise the platform of tube well and latrine	75%
Regularly listen to news	62%
Reserve fuel	94%
Save money	100%
Stockpile food	91%
Store drinking water	98%
Store medicine	98%
Strengthen local dyke	78%
Strengthen the house	100%
Take information about the shelter center	79%

Remarkable change was found in the end evaluation which was not observed during baseline that a mentionable percent of community people is responsive to women and work for safety, security of women and girls members of family and ensure safety of women and girl sanitary napkin, dress and other menstrual hygiene management related products which is found among 61 and 71% of the respondents respectively.

The community people argues that they have learned the importance of menstrual hygiene management and also securing women and adolescent matters from the mobile health camps. They also express that during flood, adolescent and women are in risk due to water pollution and so why they now secure these matters.

Table 3.5: Flood rescue activities by communities

Rescue measures	Percentage
Advise others to shift and take safe shelter	54%
Boil water for drinking	88%
Call the local authority	80%
Collect relief if provided	59%
Do not allow children to play near risk areas	40%
Ensure the safety and security of women and Girl	66%
Ensure women and Girl personal need-based product like sanitary napkin, dress and cover	71%
Help vulnerable people	81%
Participate in rescuing when required	72%

Regular listening to news on disaster situation	77%
Save family members	100%
Shift properties and materials in safe places	100%
Strengthen the house	94%
Take shelter on roads or shelter centers	86%
Work together to reduce the loss of disaster/flood	39%

By the capacity building and awareness raising activities of IFRP, community people are known to flood recovery activities and they involve themselves in different types of flood recovery activities. From multiple tasks, the mentionable practices of community people are found in household survey and also in group discussion are drinking water after boiling or purifying to prevent water borne diseases, avoiding drinking polluted water or after from submerged water point, making veil for women and adolescent to safe defecation and bathing. Some of the respondents share their experience with those people who did not adopted preparedness activities which is found 12% from total respondents.

Table 3.6: Flood recovery activities by communities

Check electric appliances before using	80%
Cleaning water sources	88%
Make veil for women for defecation and bath or wash	92%
Participate in relief work	56%
Participate in meetings at CDMC office to share experiences on disaster preparedness and response	86%
Re-built latrine	83%
Report to local government about the effects of disaster	80%
Do nothing	12%

Chapter Four

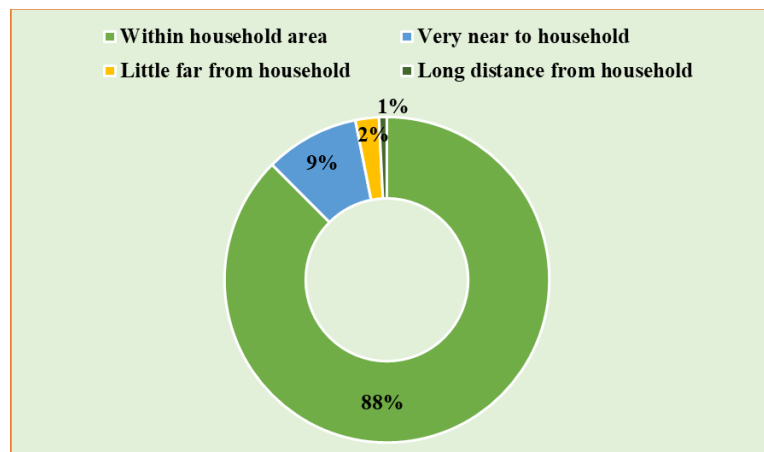
Water Sanitation and Hygiene

Over the last two decades, Bangladesh has made remarkable progress in eliminating the practice of open defecation, but there are many challenges yet to overcome since access to sanitation remains moderate at 55.9 per cent in the country. In Bangladesh, there is a high proportion of shared toilets particularly in urban slums and less hygiene practice in char areas. Dissemination of hygiene messages found highly effective in the country, yet proper hand washing, and hygiene behavior needs much improvement at rural contexts. Due to strong links among diarrheal and skin diseases from polluted water and poor sanitation after flood disaster, this required particular focus on WASH components by IFRP while implementing in Nilphamari and Lalmonirhat. The Baseline study of IFRP revealed that only 2% dwellers in the intervening areas of IFRP used sanitary latrine while the final evaluation found 58% people having good defecation practice. This change process over the last few years has significant contribution from IFRP initiatives.

4.1. Major source of drinking water during normal period and distance from household

Almost all respondents in all four communities' uses drinking water from tube-well during normal time (see figure 6.1) and it is found that 88% (Figure 4.1) of the total respondents from four communities have tube-well inside their households as well as own tube-well but during the baseline study it was only for 40% (Baseline Report, p. 43). During the focus group discussion with tube-well user groups in each community, it was found that they are informed and got knowledge on importance of drinking safe water in normal period and flood period which changed the culture of having tube-well in household premises or in a close location. This practice gradually increasing by the awareness raising attempts of IFRP and also low installation cost to having drinkable water level within 40-100 feet as well as co-benefits of sound health learned from IFRP.

Figure 4.1: Distance of drinking water source from household

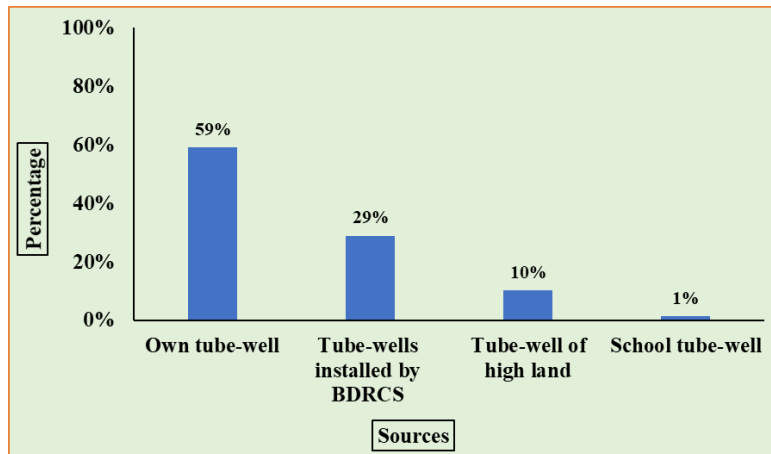


4.2. Drinking water source during flood

During flood situations, drinking water sources at community level often gets contaminated by sludge and polluted water mixing. IFRP installed a few numbers of tube-wells keeping higher plinth considering emergency use during floods. Apart from personal household level tube-wells unaffected by flood water, tube-wells from IFRP has been considered as major source for safe drinking water during the flood of 2019 and 2020. This study found that 100% respondents used drinking water from tube-well during flood which was 77% during baseline study it was 85.2% during MTR (Baseline Report, p. 44 and MTR Report, p. 11 though drinking water sources are different type tube-

well and it is almost 59% respondents manage to get from their own tube-wells while 29% use tube-wells installed by BDRCS. However, they also acknowledged that drinking water collection from IFRP installed tube-well will be increased significantly if the flood level increase because most of the household level tube-well installed in plain land without considering flood level (Figure 4.2). A total of 40 context-specific water-points (tube-well) at communities and schools were installed (33 at communities and 7 in schools) by IFRP considering highest flood level which were not submerged in the floods of 2019 and 2020.

Figure 4.2: Drinking water sources during flood in 2019-2020.

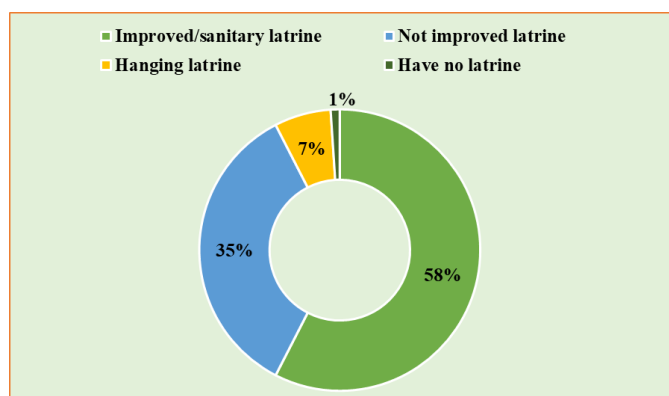


The evaluation team found that the respondents mostly know where from they can get safe drinking water during floods. Although the baseline showed nearly 22% people used contaminated water for household use as well as often for drinking which substantially reduced during mid-term review, this study found the situation improved furthermore. However, people still tend to collect safe water for drinking only while they still use contaminated water for household and defecation uses due to a shortage of storage facility during disaster.

4.3. Types of latrines used in normal time

Almost 58% of the respondents have good quality sanitary latrine within or nearby their house which was only 14.37% during MTR (MTR Report, p. 27) and 5% during baseline study (Baseline study report, p. 47). Still 35% people use conventional unimproved latrines. In addition, 7% people uses unhygienic hanging latrine while 1% still goes for open defecation (Figure 4.3) though Bangladesh has reduced unhygienic defecation practices to almost zero in 2019 (1.5%) (MICS, 2019) but the scenario in the study area is different and it is far away from national average because of poverty, disaster vulnerability and lack of development interventions as well as awareness raising which is found during the focus group discussion with latrine user groups and key informant interview with Dept. of Public Health Engineering (DPHE).

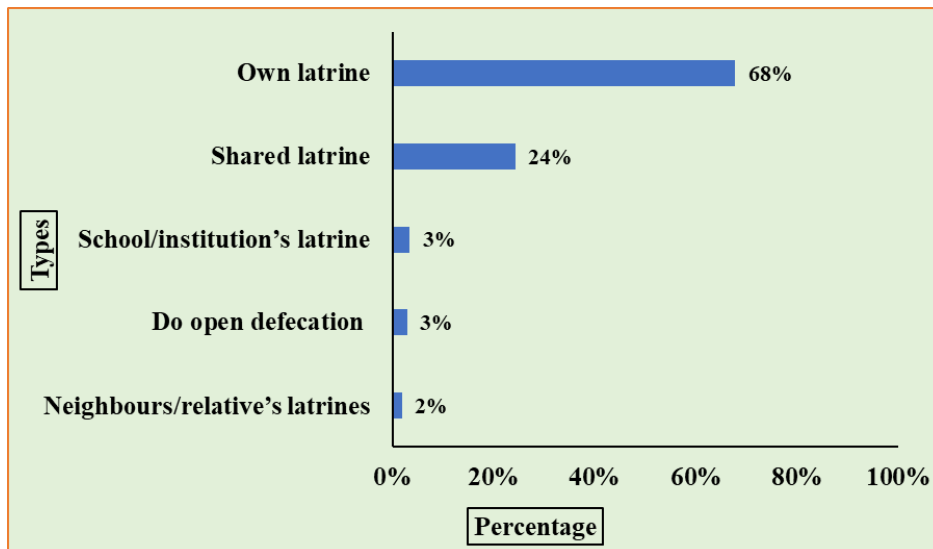
Figure 4.3: Types of latrines using in normal time



4.5. Types of latrine using in flood period

A common notion found among large number of respondents that they developed their own toilets with a considerably raised plinth above average flood height. This allows them to use their own toilets (nearly 68%) if they don't relocate to shelters. In case, their own toilet is inundated, and the family is evacuated to a shelter, shared latrines are preferably used. Notwithstanding, still some of them needed to use neighbor's latrine or open defecation if the shared latrines are too far or unreachable (see figure 4.4).

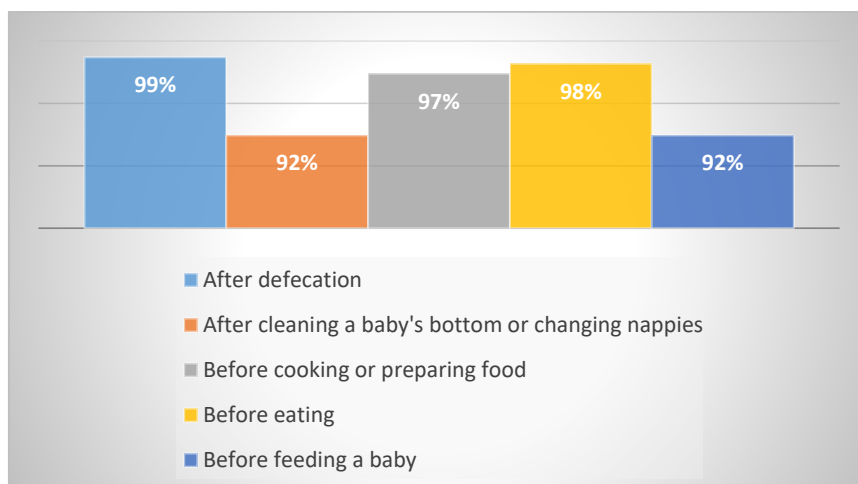
Figure 4.4: Types of latrine used in flood period



4.6. Hand washing practice after defecation and sandal use for latrine

As stated in the beginning of this chapter, the overall country's hygiene practice scenario has similarity with the study locations. Hygiene messages worked tremendously well in the programme location particularly for hand washing practice and use of sandals while going to use latrines. Almost every respondent assured that they know proper hand washing method and they use soap for washing hands every time after defecation. To maintain hygiene behavior, they use separate sandals/slippers for use during defecation. This has been a clear indication of improved hygiene behavior due to IFRP's initiatives compared to its baseline condition.

Figure 4.5: Knowledge about proper hand washing at 5 critical times.

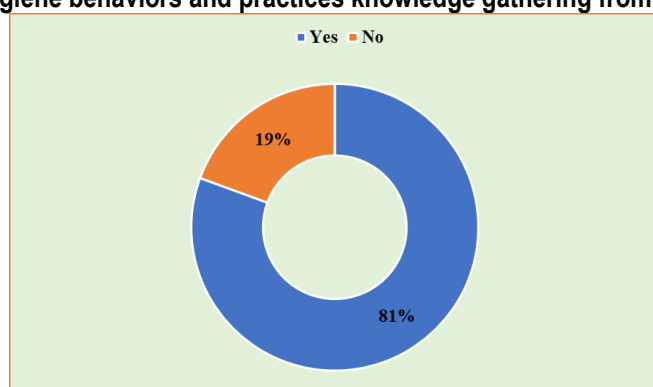


In addition, respondents from all four-programme communities shaded light about their experience of sharing knowledge of hand washing within their family and neighbors. This has been a success from “Uthan Boithok” and “Bhugol sir er class”. Especially school going kids learn this from school and happily shares with their family members. The figure 4.5 shows respondent’s knowledge about 5 critical times of hand washing.

4.7. Knowledge gathering from PHAST session

PHAST sessions conducted by IFRP received remarkable popularity among the beneficiary communities. 81% of the respondent mentioned that they received information on hygiene behaviors and practices from those sessions though during the baseline study it was only for 31% (Baseline Report, p. 53). While 19% still lacks such knowledge and most of them stated their irregular presence in such sessions or not being informed about such activities as underlying reason (see figure 4.6).

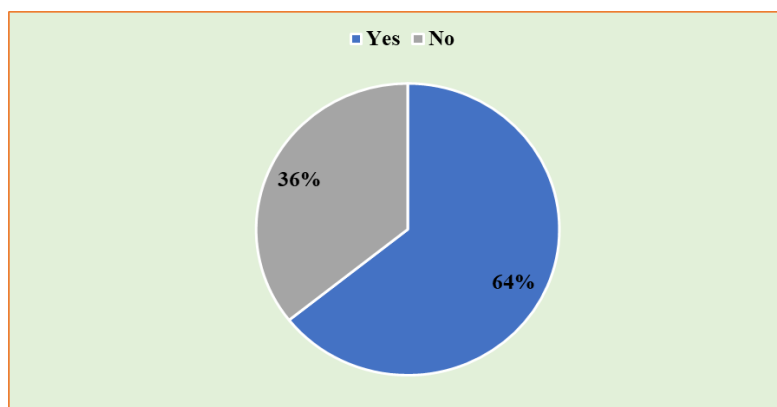
Figure 4.6: Hygiene behaviors and practices knowledge gathering from PHAST session



4.8. Using sanitary napkins during menstruation

Finally, use of sanitary napkins during menstruation is still being considered as shameful thing to share with the males in the community. Although 64% women respondents use sanitary napkins but still 36% women and adolescent girls use unhygienic cloths (see figure 4.7). Utilization of sanitary napkins by women and adolescent girls is increasing by the initiative of IFRP. Community consultation at community level reveals that before 2018, they were not known to sanitary napkins to use after menstruation. They have learnt on this issue from the Health Campaign organized by IFRP. It is also proved by the remark of physician who participated in the health campaigns.

Figure 4.7: Women and girl using sanitary napkin during menstruation



“.....I have participated almost all health campaigns. At the beginning I found, most of the newly married women and adolescents are suffering from different complexities in reproductive organs. I was tensed and asked them hygiene management issues during menstruation. I found that none of them use sanitary napkins during menstruation. I have suggested them to use sanitary napkins. Though it was a tough job, but I have changed their habit gradually and found that the complexities are reducing tremendously. The last campaign I have observed most of the women and adolescent who visited for health service were not related to reproductive organ complexity.”-Dr. Sharmin Sultana Bithi, MBBS, Dimla, Nilphamari.

Chapter Five

Health

Ensuring healthy lives and promoting well-being at all ages is essential to sustainable development. The SDG 3 (Good Health and Wellbeing) has set target to achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all. Align with this set target, IFRP has initiated an innovative mode of approach to provide health service to the community people of the programme area who are experiencing flood almost every year and also suffering from flood-related health burden. Thus, they face numerous health problems including mental, physical, reproductive health problem. The women, adolescent and older people are the most vulnerable segment of the communities in terms of health sufferer. During the food time diarrhea, dysentery, jaundice, cholera, cold-influenza, fever are very much common diseases in the four communities. Being remote area, there is no specialized treatment facilities in the communities so why occasional health camps organized by IFRP has changed the story on health and treatment facilities for the poor and marginalized flood vulnerable communities.

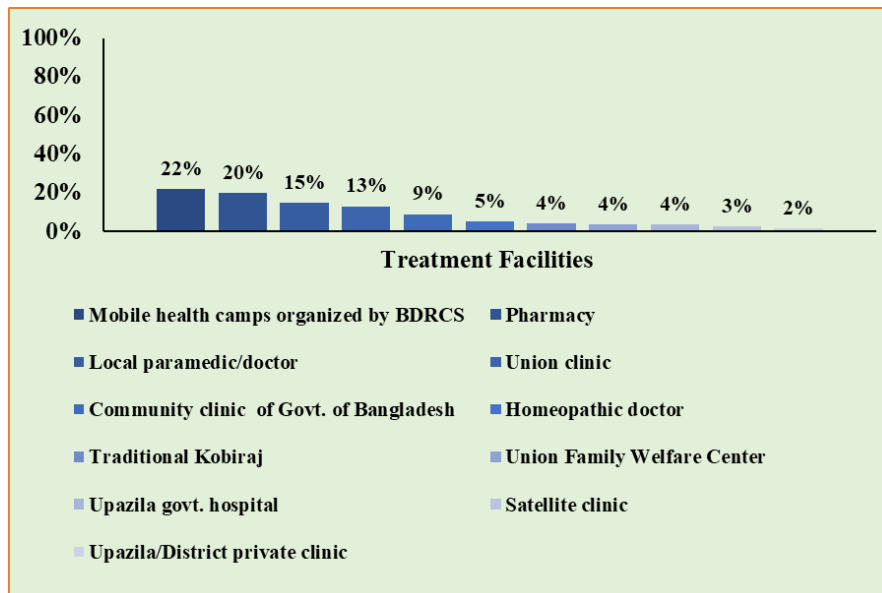
5.1. Existence of treatment facilities at community

Flood increases outbreak of infectious diseases. Flood affected areas become prone to disease outbreak during and after the flood. Flood victims frequently report feeling depressed and isolated (Tapsell, 2000). In the aftermath of a flood deaths and injuries not only result from the physical characteristics of the event but are also determined by the prevailing socioeconomic and health conditions of the community and any endemic infectious diseases. Increased rates of diarrhea (including cholera and dysentery), respiratory infections, hepatitis A and E, typhoid fever, leptospirosis, and diseases borne by insects have been described as occurring after floods in developing areas (Howard eds, 2000; CDC, 1986). Typhoid, cholera, hepatitis A, conjunctivitis, leptospirosis, dengue jaundice, etc are common disease occur during and post flood. Flood water literally increase the risk and transmission of vector-borne and water-borne diseases. Vector-borne diseases like dengue, malaria, chikungunya, etc. transmit through several parasites and pathogens such as mosquitoes. On the other hand, water borne diseases like cholera, typhoid, jaundice, leptospirosis, etc. cause by contaminated water. During the focus group discussion, the study made an attempt to investigate insight of comparison of suffering from diseases during and post flood of the respondents and it is found that diarrhea, dysentery, asthma, jaundice, pneumonia, typhoid, dysentery, cholera are the common diseases during and after flood. Dr. Md. Arifuzzaman Bhuyan, Asst. Surgeon of Kulaghat Union Sub-Health Complex, Sadar, Lalmonirhat mentions that jaundice is the common disease in the area during and after flood. He also added that we cannot accommodate diarrhea patients after flood. Mr. Bhuyan also said that the people of char areas suffer mostly from diarrhea during and post flood. During flood, people cannot move elsewhere and drink polluted water. After flood we in collaboration with Department of Public Health (DPHE) provide water purification table, bottled water but it becomes pandemic. He mentioned that in the last two floods (2019 and 2020), in each day on an average 50-60 patients have admitted in the hospital from water borne disease. During the focus group discussion with women groups in the communities, it is found that during flood, highest number of women suffer from high fever and diarrhea. But due to lack of health facilities locally and lack of financial solvency, they cannot take treatment properly. They also mention that IFRP organized health camps became fortunate for them to get the health services.

In terms of existence of treatment facilities, 22% respondents from all four communities mention about mobile health camps organized by BDRCS, 20% respondents mention pharmacy, 15% respondents mention local paramedic/doctor, 13% respondents mention union clinic, 9% respondents mention community clinic of Govt. of Bangladesh, 5% respondents mention homeopathic doctor, 4% respondents mention traditional kobiraj, 4% respondents mention union family welfare center, 4% respondents mention Upazila govt. hospital, 3% respondents mention satellite clinic, and 2% respondents mention about district govt. hospital as the treatment facilities for the community people. The end line study reveals that highest number of community people depends on health camps

organized by IFRP for their health support which is illustrated in the figure 5.1 but it was local paramedic (49%) during the baseline study (Baseline study report, p. 55).

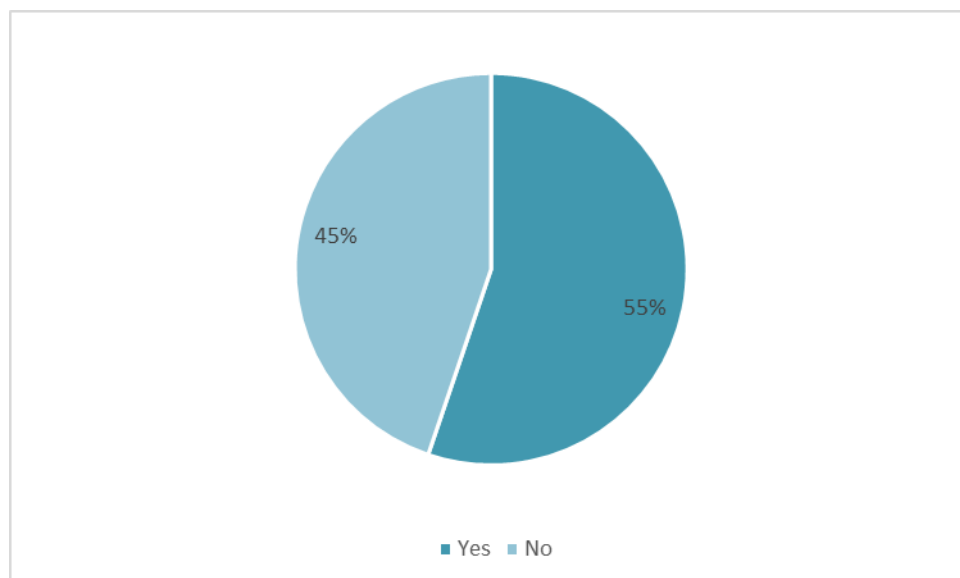
Figure 5.1: Facilities are available for treatment purposes



5.2. Diseases sufferings during the flood of 2019 and 2020

Among the entire respondent from four communities 55% mention that they have suffered from diseases during the flood of 2019 and 2020 but 45% respondents mention they did not suffer from any diseases. (Figure 5.2).

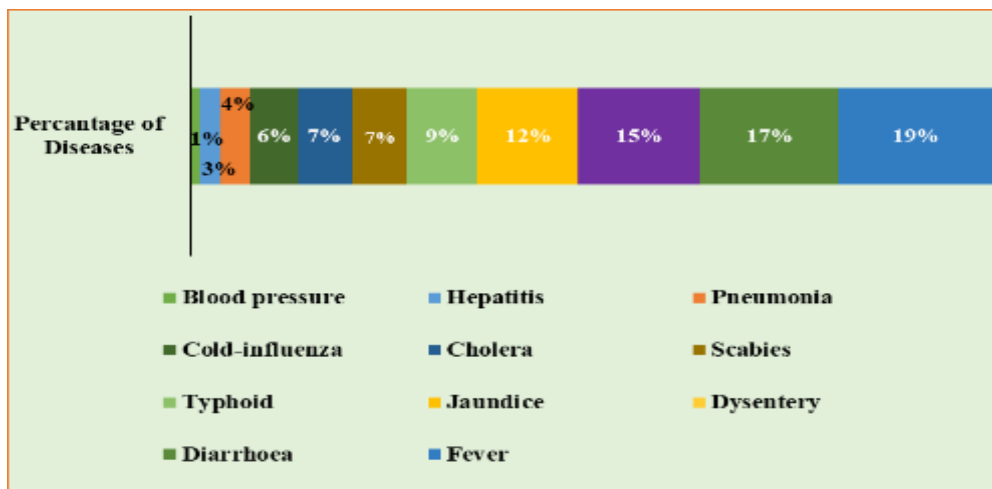
Figure 5.2: Diseases suffering during the last floods (2019 and 2020)



Regarding the types of diseases during last two floods of 2019 and 2020, 19% respondents from whole surveyed households mentioned that they have suffered from various water and fecal borne diseases which is 17% for diarrhea, 15% for dysentery, 12% for jaundice, 9% for typhoid, 7% for scabies, 7% for cholera, 6% for cold-influenza, 4% for pneumonia, 3% for hepatitis and 1% for blood pressure (Figure 5.3). But in the community

consultation with women from each community, it is found that menstruation and reproductive health problems are remarkable health problems in the communities especially post-flood period.

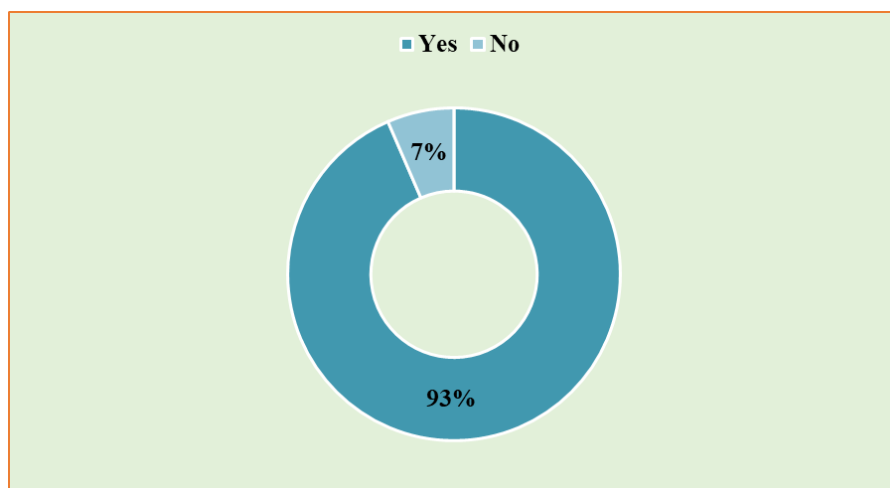
Figure 5.3: Types of diseases during flood of 2019 and 2020



5.3. Health service support from IFRP

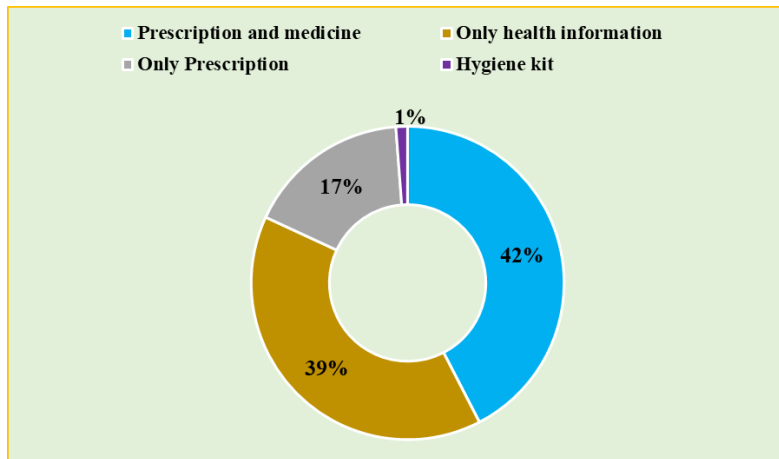
Under the IFRP, mobile health camps provided different health services including medicine, hygiene kit, prescription, linkage development with specialized doctors etc. The overall scenario is that from four communities, 93% respondents received health service from IFRP (Figure 5.4). But 7% respondents mention they did not receive health service support from IFRP.

Figure 5.4: Health supports from health camps organized by IFRP



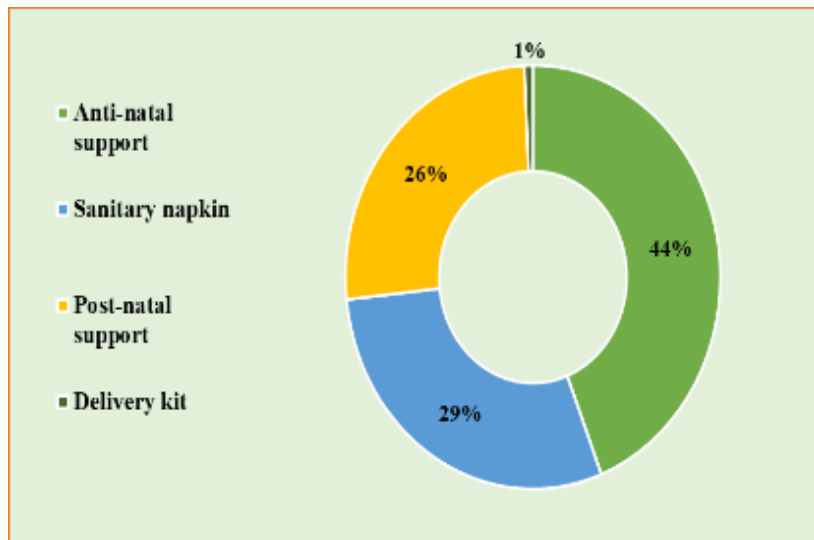
In terms of health support, 42% respondents received prescription and medicine (primary treatment facilities), 39% respondents received only health information as well as mother and baby care, hygiene management, diet, and food habit etc. 17% respondents received prescription from specialized doctors which is related to operation, diagnosis etc. and these were not possible in the camps. Health camps also provided hygiene kit which was provided to 1% people to change the habits (Figure 5.5).

Figure 5.5: Types of support from the health camp



In terms of support for women, there are 44% women respondents among the four communities got anti-natal support from the health camps, 29% women received sanitary napkin, 26% received post-natal support and 1% received delivery kit. Delivery kit distribution is new intervention in the communities. Without IFRP, none of the organization form government or non-government sectors provided delivery testing kit in those communities (Figure 5.6).

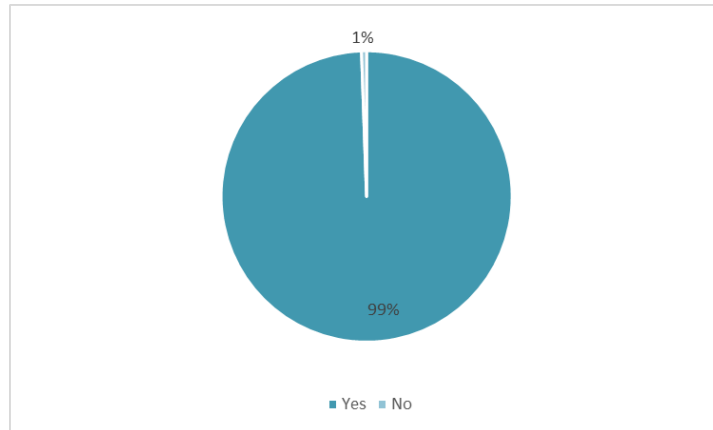
Figure 5.6: Support for women from health camps



5.4. Linkage development with specialized health service through health camps

The utmost keen interest of organizing mobile health camps is to develop linkage with specialized doctors and health service providing hospitals at Uapzjal and district levels and the IFRP has achieved its target because 99% respondents has developed linkage with specialized health service (Figure 5.7).

Figure 5.7: Linkage development with specialized health service

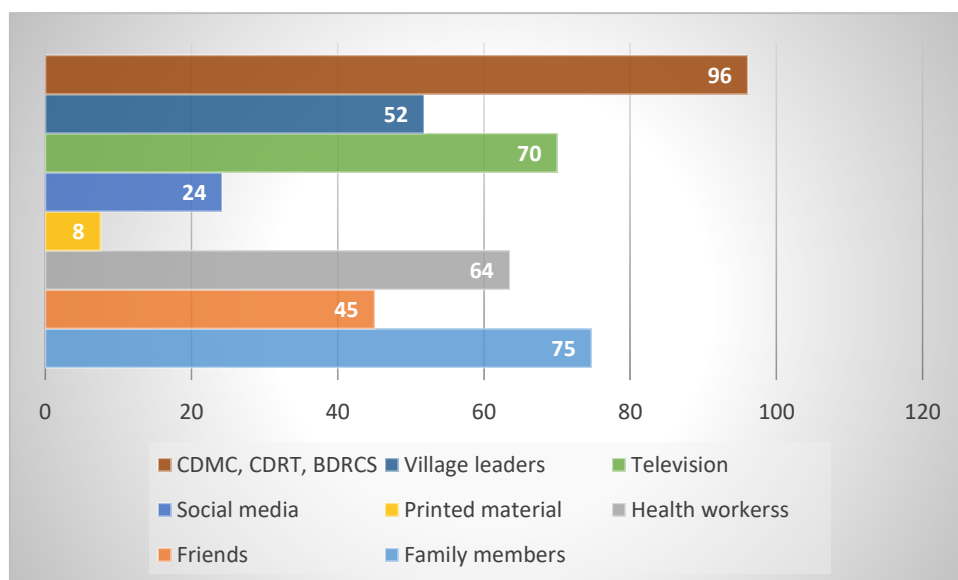


Health support seeking behavior from Upazila and district level government hospitals increased at 4% by the mobile health camps (Figure 8.9) which was 2% during the baseline (Baseline report, p. 55). Community people don't go to district level hospitals for health service which was revealed in the household survey and also in community consultation because of distance and financial terms. But it was found that health support seeking tendency from specialized doctors who have participated in the camps over phone increased which was mentioned by Assistant Surgeon of Lalmonirhat.

5.5. Knowledge and information on COVID 19

Respondents of the study area ensured that more or less most of them had knowledge about COVID-19. Because of its harmful and dangerous impact everyone well known about it. They gather knowledge from different media and sources. Figure 5.8 represents the sources and their percentage of having the knowledge of COVID-19 of the study area. From the figure the highest source that they carried knowledge about this pandemic were CDMT/CDMC/BDRCS (96%), Television (70%), and Family member (75%). Some of the respondents mentioned that they have received information from health workers, social media, and village leaders.

Figure 5.8: Source of information about COVID-19



Chapter Six

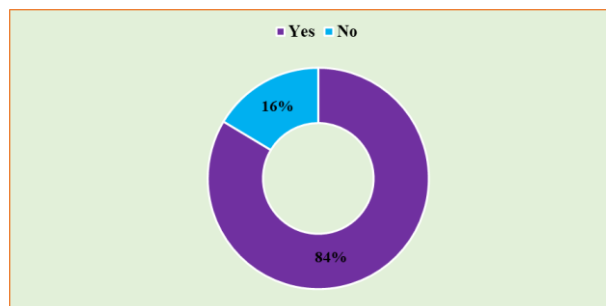
Shelter

In the study areas, jhupri, kutchha, semi pacca and pucca are the common housing types. Flood is the common scenario in the study area and the communities face flood almost every year. Construction materials, height of plinth, lack of user-friendly infrastructure made the houses are more vulnerable in this area. As a result, the community people face several problems in shelter during the flood. IFRP has taken attempt to make to household shelter resilient by capacity building, supporting technical know-how and construction materials, demonstration of resilient shelter etc. as well as raising awareness.

6.1. Knowledge about the technique of flood resilient house construction

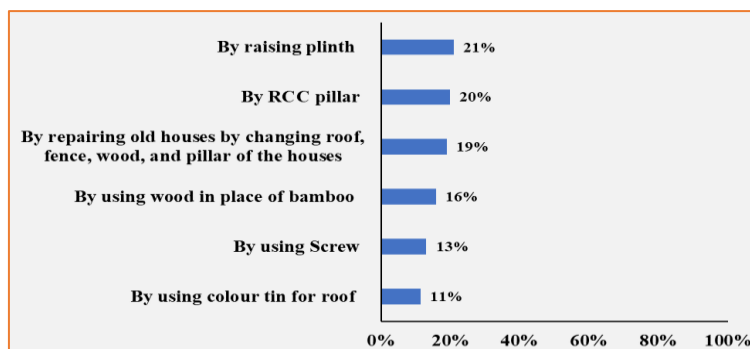
During the baseline study, it was found only 11% people are known to resilient shelter (Baseline Report, p. 64) which stands at 57.49% females and 14.67% males during MTR (MTR Report, p. 25) but in the end evaluation, it was found at 84% (Figure 6.1) for overall respondents from four communities who have knowledge about the technique of building a flood resilient house and 16% respondents have no knowledge about the technique of building a flood resilient house.

Figure 6.1: Knowledge about the technique to build a flood resilient house



The community people who know about flood resilient shelters are also known to resilient criteria. The study attempts to explore the criteria related to flood resilient shelters by the opinion of respondents from the studied households in four communities. It reveals that multiple response comes in this regard which are raising plinths, using RCC pillar, repairing old houses using different construction materials, using wood in lieu of bamboo, using screw to tighten the roof, using strong colored tin for roof etc. (Figure 6.2).

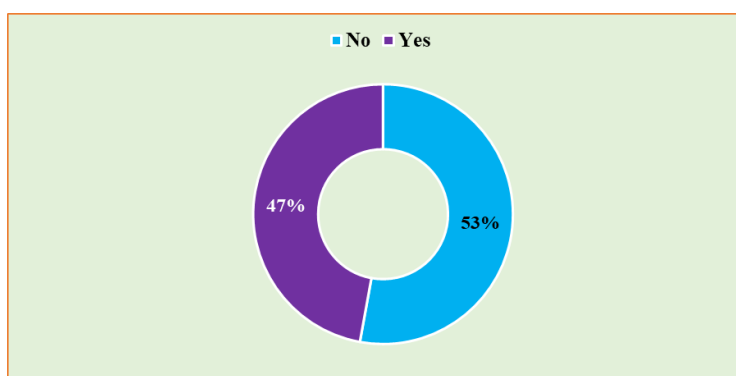
Figure 6.2: Criteria of flood resilient house



6.2. (Participatory Approach for Safe Shelter Awareness) PASSA to make flood-resilient house in 2019 to 2021

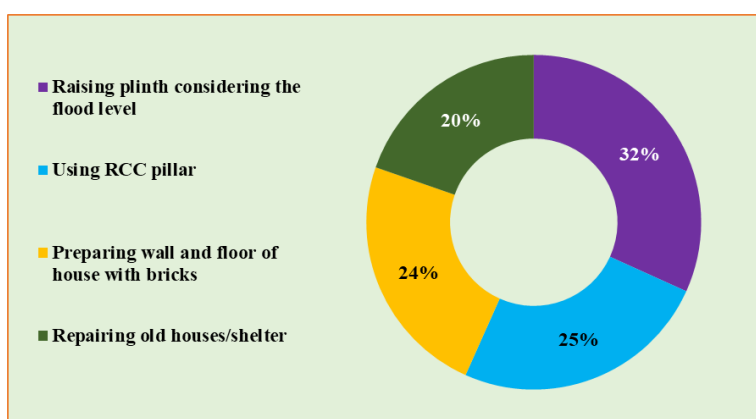
Participatory Approach for Safe Shelter Awareness (PASSA) is an innovative approach introduced by IFRP to make resilient shelter in the programme area. In the baseline study, there was none of the community people was known to the approach but in the MTR, it was found that 23.24% respondents are known to this approach (MTR Report, p. 25) and in the end evaluation it is found that 47% respondents (Figure 6.3) mention they have followed the PASSA (Participatory Approach for Safe Shelter Awareness) to make their house as flood resilient in 2019 to 2021. Rest of the 53% respondents did not followed or are not following this approach to make flood resilient shelter are not financially capable to afford the necessary construction materials which was found during the community consultation at community level.

Figure 6.3: Following PASSA to make flood resilient house in 2019 to 2021



Linkage with the following PASSA, the following figure illustrates that 32% respondents raised homestead plinth considering the flood level to make flood resilient shelter; 25% respondents used RCC pillars, and 24% respondent constructed wall and floor of house with bricks to make their flood resilient house. 20% respondents modified their old houses as per their financial ability to make it flood resilient (Figure 6.4).

Figure 6.4: Types of modification to make flood resilient house/shelters

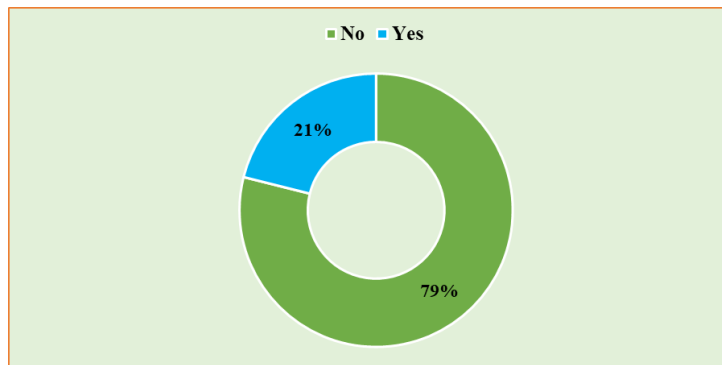


6.3. Accessibility of PWD in shelter/house

Accessibility of person with disability (PWD) and older people is one of the important criteria of flood resilient shelter. In each community, some of PWD and older people are living and so why their accessibility in the shelters should be ensured. The study made an attempt to explore the accessibility of those people are not able to access

in houses as like as those people who don't have any physical or mental barrier. The study reveals that 79% respondent mentions there have no accessibility of PWD in shelter or house whereas only in 21% households they have easy access as well as those shelters are friendly for accessibility of PWD and older people (Figure 6.5).

Figure 6.5: Accessibility of PWD in shelter/house



The shelters which are found accessible for PWD and older people have raised the plinth of the house considering commuter way, using ramp in the shelters and containing wheelchair in the shelters.

Chapter Seven

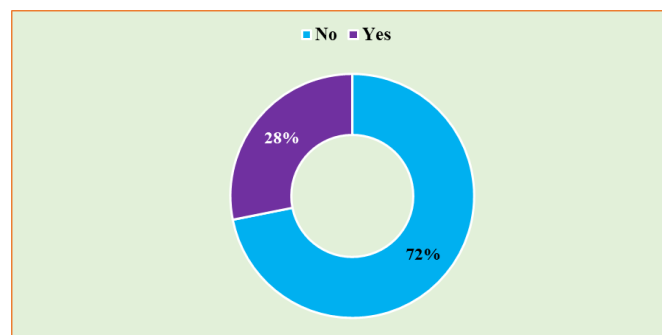
Livelihoods

Floods cause substantial losses not only in lives but also in livelihoods. Floods cause the adverse impacts of these losses to accumulate by not allowing affected households to rebuild their livelihoods and recover. The accumulated negative impacts of recurring floods on household livelihoods have long-term effects, reinforcing intergenerational transmission of poverty and pushing poor households further into greater vulnerability. The IFRP has made attempt to provide resilient livelihoods on two ways viz. building capacity of the community people and providing input support to undertake the potential livelihoods activities. Several types of livelihoods trainings and input support was provided to the communities like agriculture, homestead gardening, animal husbandry, small business and retailing, tailoring etc.

7.1. Training from IFRP on improving livelihood

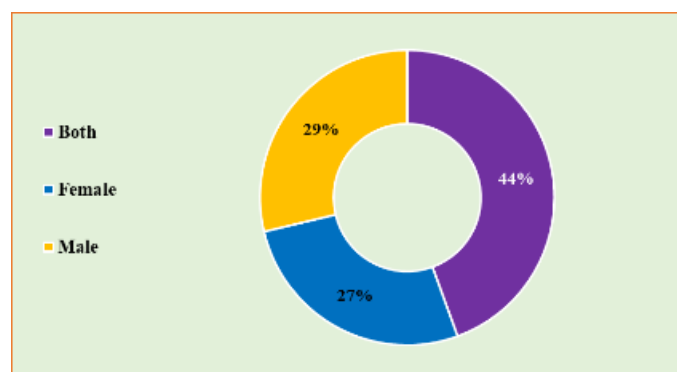
The IFRP was designed with different components and one of the components is livelihoods support. To promote resilient livelihoods in the communities, IFRP provides training on several livelihood options. The study reveals that 28% households from four communities received training on such livelihood options (see figure 7.1).

Figure 7.1: Receiving training from IFRP for improving livelihood options



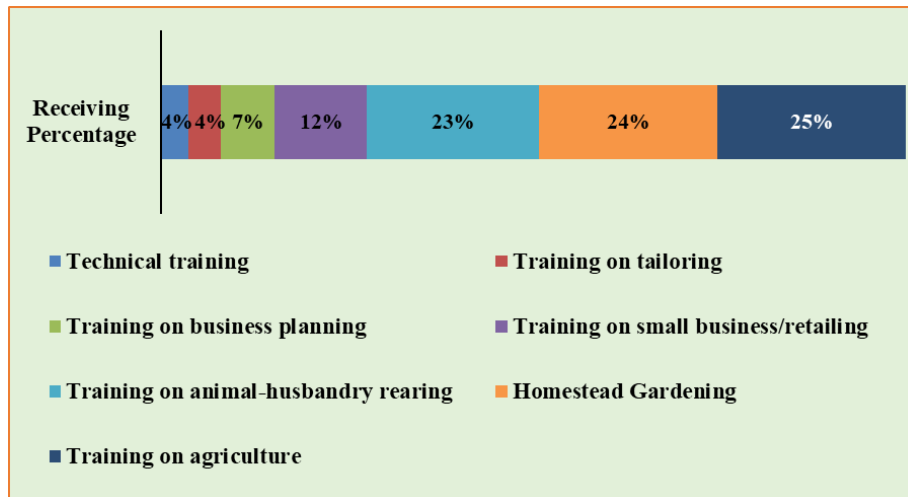
The study also revealed that women are the major training participants and 29% female received training individually, 27% male received training individually and 44% of both male and female from each household received training on livelihoods intervention under IFRP (Figure 7.2).

Figure 7.2: Receiving training by gender



Several types of livelihoods training were provided in the study area like training on agriculture, homestead gardening, training on animal husbandry, small business and retailing, business planning, tailoring, technical training on computer, mobile repairing. The highest number of respondents received training on agriculture which is 25% of total respondents (Figure 7.3). It is remarkable that 24% people have received training on homestead gardening and 23% received training on animal husbandry. Focus group discussion with livelihoods beneficiary group (both male and female) depicts that women have received training on homestead, tailoring; male participants received training on small business and retailing, business planning, computer and mobile repairing and agriculture and animal husbandry training were received by male female both communities.

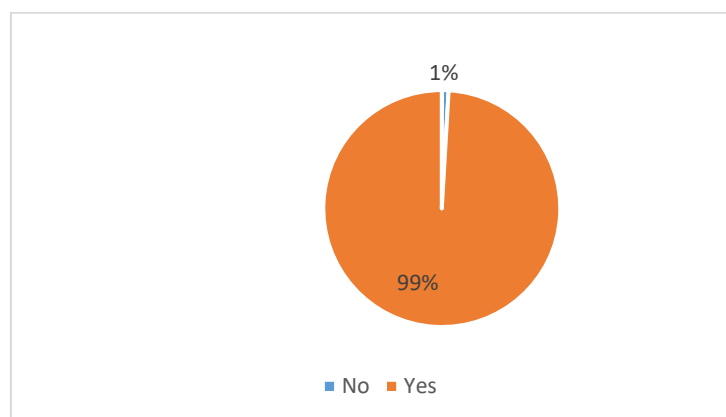
Figure 7.3: Types of training in the study area



7.2. Role of training to increase women livelihood and lifestyle

In male dominant society of Bangladesh, women don't have any voice in taking decision in the households and society. In general, women mobility outside households is almost restricted due to religious and social restriction in the face of lack of education, economic empowerment and awareness. Besides, there exists discrimination between male and female in respect of mainly in access to quantity and quality of food and education and other human rights.

Figure 7.4: Role of training to increase woman livelihood or changing the condition of lifestyle.



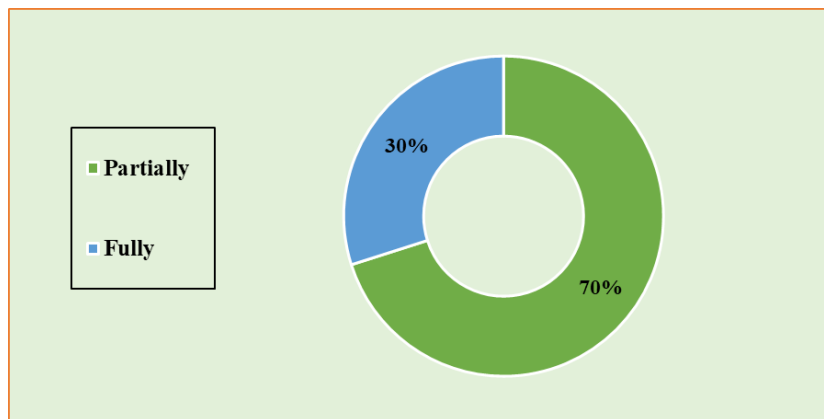
The study reveals that training of IFRP increased women livelihood and changed lifestyle in the study areas. Majority of the women respondent as well as 99% argue (Figure 7.4) that they have improved their livelihood and conceive improvised lifestyle after getting training from IFRP on different income generating activities. Rest of the

1% of the total women respondents who did not improved their livelihoods and lifestyle after getting training, they are even now under tight restriction of family which is depicted during the consultation with women groups and livelihoods beneficiary groups.

In terms of changing lifestyle, during the community consultation, it was found that taking decision on family matters alone by husband has decreased significantly. In most of the cases decision by wife or joint decision for family matters has increased. Decision taking capacity of women to involve with any cooperative society or NGO has found significant. In visiting father house or relatives house, women’s decision taking capacity has increased which was not took place before the training, mentioned by the participants. Overall, the empowerment of women in taking decision in family matters has improved considerably as appears from the study.

Along with the improving livelihood opportunities and improvising lifestyle of the women participants, training has increased household capacity to earn more for their income. The study shows that 100% as well as all of the training participant women increased their earning source but 30% express that they have increased their earning source fully and rest of the participants (70%) partially increased their earning source (Figure 7.5).

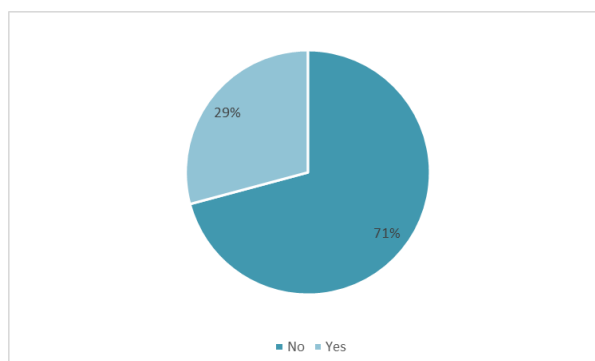
Figure 7.5: Contribution of training to increase household member's capacity



7.3. Livelihoods support from IFRP

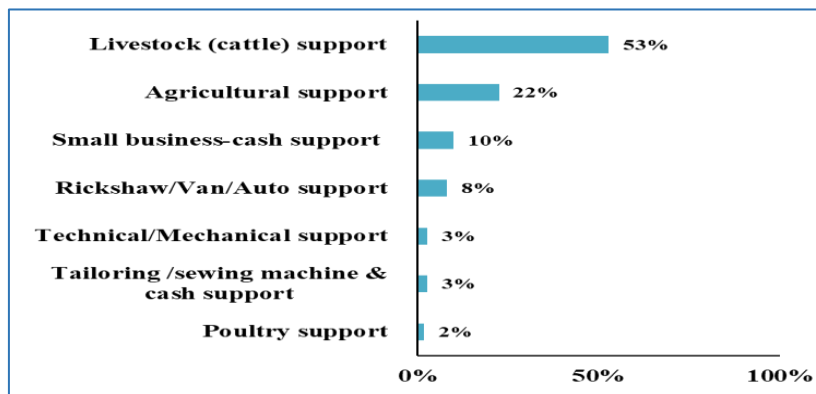
Along with the training, IFRP has provided support to undertake livelihood interventions and from the studied households, it is found that 29 % respondents received livelihood support from IFRP and rest of the respondents as well as 71 % did not received livelihood support from IFRP but during the MTR, only 11.46% of total respondents received livelihood support from the IFRP (MTR Report, p. 36). Thought the total beneficiaries of IFRP are 1675 but it covered only 29% by livelihoods support (Figure 7.6) and the rest of beneficiaries were covered by other support which was found during the focus group discussion at community level and key informant interview with PIC.

Figure 7.6: Livelihood support from IFRP of BDRCS.



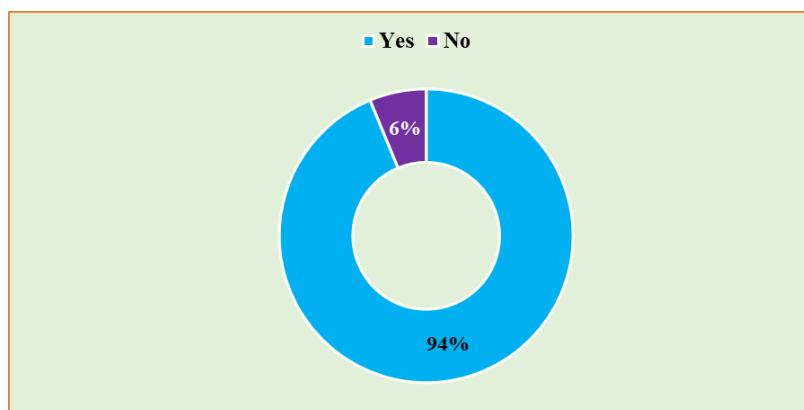
Livelihood support has been provided based on the detailed analysis plan as well as who received training. In the inception period, need assessment was conducted to provide the training and livelihood support considering needs, willingness, ability etc. The IFRP has provided different livelihood support including livestock, agriculture, cash support for small business, rickshaw, van, auto, technical and mechanical support, cash support for tailoring and sewing machine and poultry supports. The study reveals that 53% of livelihood beneficiary group received livestock (cattle) support in four communities. 22% received agricultural input support, 10% received cash support for small business, 8% received rickshaw/Van/Auto support, 3% received technical and mechanical support, 3% received cash support for tailoring and sewing machine and 2% received poultry support from IFRP (see figure 7.7).

Figure 7.7: Types of Support



In the study area, most of the people are poor and also disaster made them more vulnerable in terms of livelihoods and food security. Livelihood support from IFRP has provided alternate income generating activities and contributed to the increasing of household income. In the MTR, only 17.42% respondents reported that their household income increased by the livelihood support (MTR Report, p. 40) but in the end evaluation, 94% of livelihood support group (figure 7.8) mentioned that fully or partially their household income increased by the livelihood support. The rest of the 6% who could not change the household income by the livelihood support, their support has ruined because of proper take care which is evident in the community discussion.

Figure 7.8: Contribution of livelihood support to increase household income



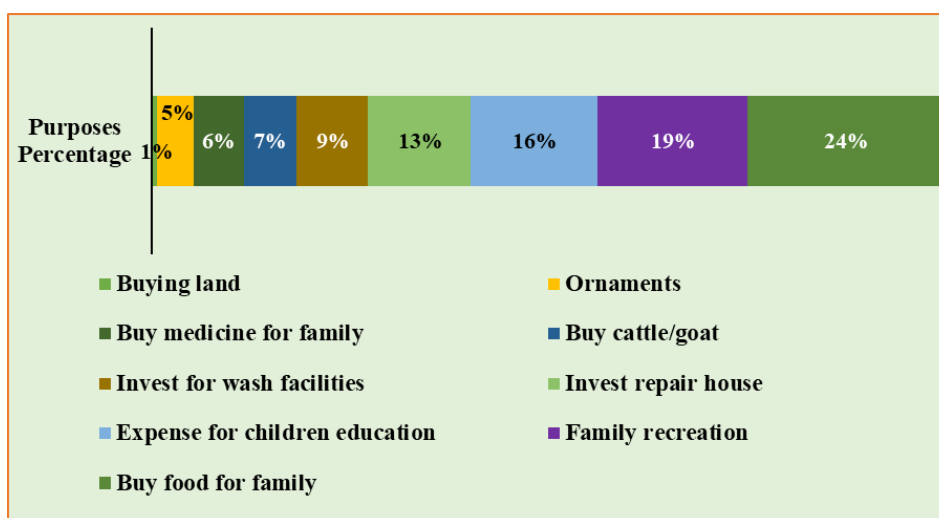
7.4. Expenditure sector of extra earning by livelihood support

The households who were not able to secure their daily needs in terms of food, cloths, medicine before livelihood support but some of them have bought ornaments, land and also bought more cattle after securing their daily foods and other domestic purposes utilizing the livelihood support which is the great achievement of the IFRP.

The study shows that expenditure sector of extra earning by livelihood support includes buying food for family, family recreation, expense for children education, invest in repairing house, investment for improved wash facilities, buying cattle/goat, medicine for family, buying ornaments, reinvesting money in productive sector, buying land etc. The largest portion (24%) of expenditure goes to buying food for family to secure food and second largest portion (19%) of expenditure goes to family recreation. 16% respondent expense for children education and 13 % for repairing house to make it flood resilient as well (Figure 7.9).

“.....I was working as rickshaw puller in Dhaka which was laborious job but low paid. At the first quarter of 2018, I was suffering from illness due to over loaded work and came back home. Somehow my wife came to contact with IFRP CO and became a member of IFRP livelihood beneficiary group. From IFRP she received cash support to buy a van and I was started to drive the van. Now in each month, I earn minimum 15000.00 BDT. In this tree years I have reconstructed my house and raised plinth considering the highest flood level as well as following PASSA, took lease of 3 bighas agricultural land and also planned to buy 1 bigha agricultural land by this year. Now I am the happiest man in Digirpar.”....Mogur Ali, VAN driver, Dighirpar, Dimla.

Figure 7.9: Expenditure sector of extra earning by livelihood support



7.5. Improvement of wellbeing

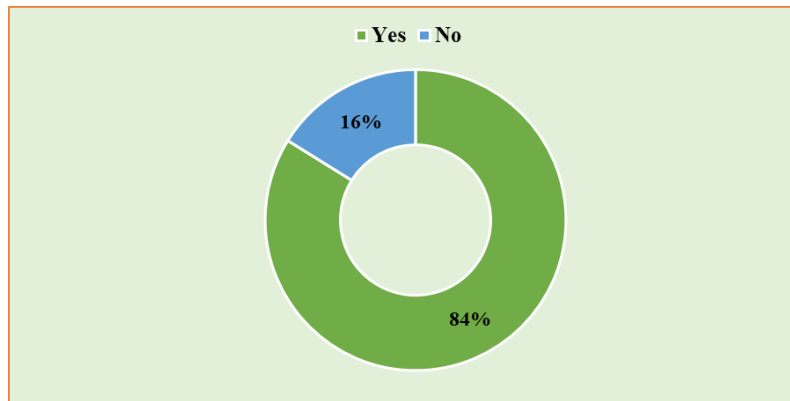
“one cannot meaningfully add chances and outcomes. A happy and productive life is not better when lived in a perfect environment by a well-endowed person than when realized in difficult circumstances by someone handicapped.” (Veenhoven, 2000, p.25)

Wellbeing is happiness which covers both physical and psychological wellbeing as well as the quality of relationships between family and society and the quality of social relationships as well as connectedness which is depicted in the following figure 10.16:

The study reveals that family wellbeing has increased with increasing household income and extra earning opportunities in the study area which was not measured in the baseline and mid-term review. In the end line study, the attempt was made to understand the wellbeing level of the community people in four communities and the

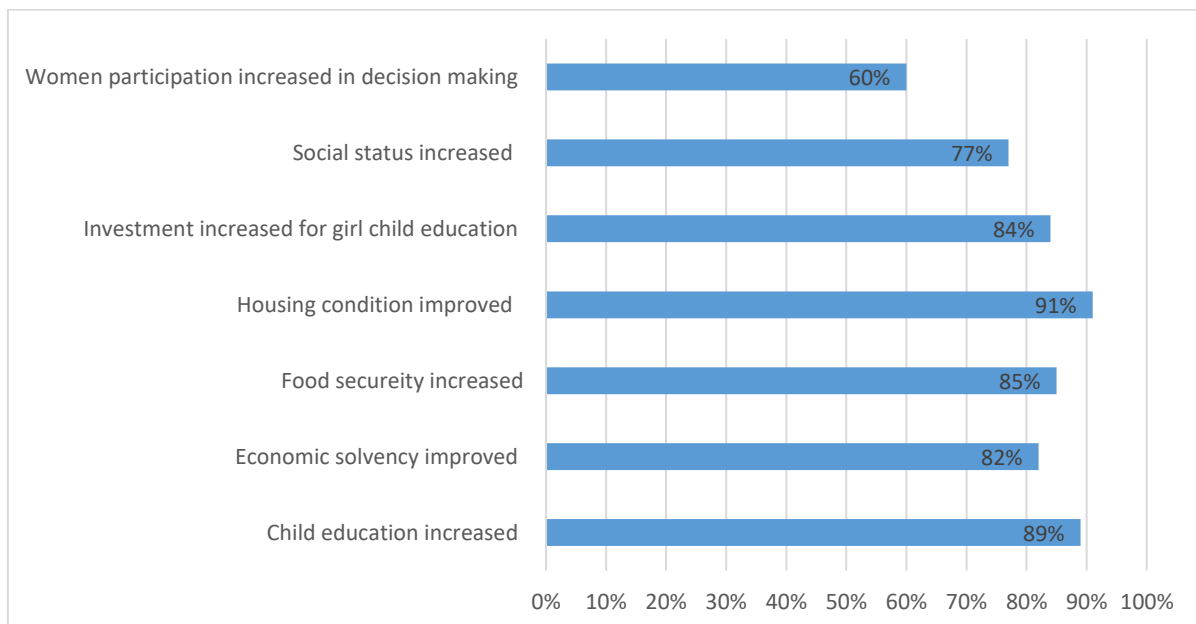
study found that family wellbeing increased in all four communities in terms of family relationship, physical safety and health, economic security and also connectedness in society which is found (Figure 7.10) for 84% respondents for whole studied households. Respondents who (16%) could not improve their wellbeing was no able to earn more by utilizing livelihoods support which is evident in the community consultations and also found that they were not able to choose perfect livelihood interventions for their own improvement.

Figure 7.10: Wellbeing improvement



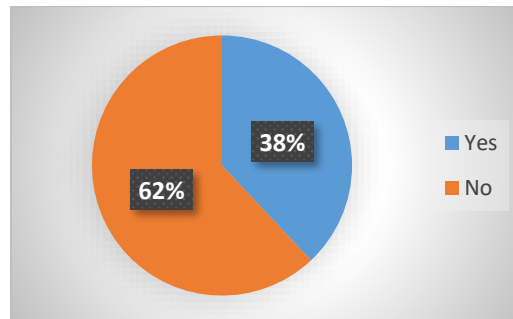
In the study area, the community people has improved their family wellbeing by securing food, improving economic status, building societal relations, women participate in decision making, increasing investment for girls education. It is found that overall 85% respondents secured food, 82% improved economy, 77% respondents developed social relationship and kinship, and 89% ensured investment for child education, 60% women participation secured in family decision making process and 84% investment ensured for girl child education (Figure 7.11).

Figure 7.11: Types of wellbeing



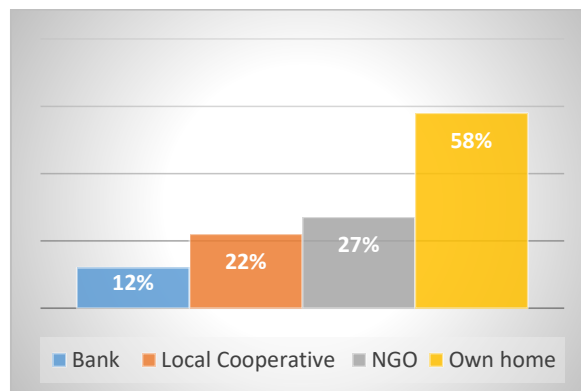
Along with the livelihoods and food security improvement and also improving wellbeing, IFRP have generated savings tendency among the community people. The study reveals that 62% respondents are habituated with savings during the programme period (Figure 7.12)

Figure 7.12: Saving tendency among community people.



Community people are involved with savings in different savings location and the study found that some of respondents save their surplus money in banks which is 12% of the total respondents. Some other savings points are local cooperatives, NGOs and a major portion saves their savings in own home for emergency response which is 58% of the total respondents (Figure 7.13).

Figure 7.13: Savings point of community people



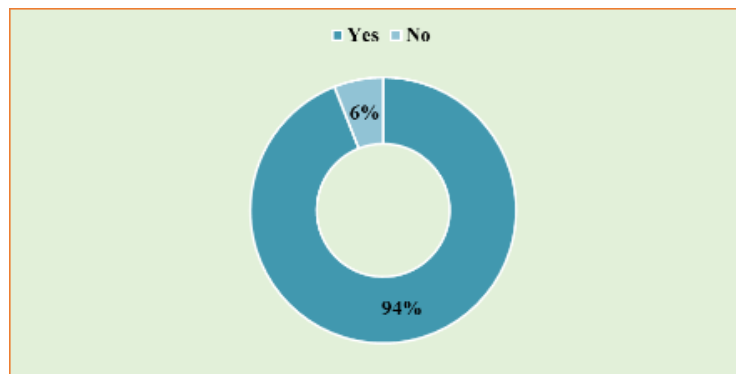
Chapter Eight

Community Resilience

8.1. Idea about community resilience

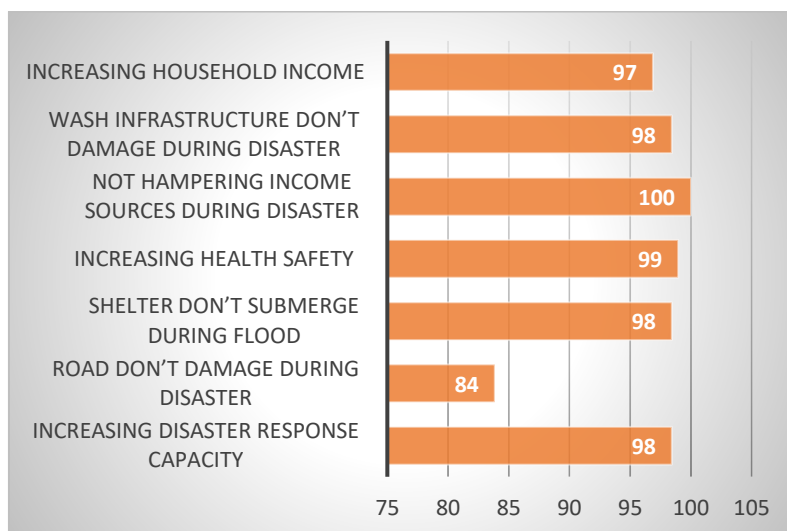
Community resilience is a newly imposed approach in the communities which was performed by IFRP in the last three years and community people was not known to this terminology before the IFRP. By the courtyard meeting, training and software-hardware intervention, IFRP have promoted idea of community resilience in the community as well as students at school level to enhance the knowledge level of the vulnerable people. The study found that by the end of the IFRP, 94% respondents are known to community resilience and the respondents from all four community carry out a good idea on community resilience (Figure 8.1).

Figure 8.1: Idea about community resilience



Respondents were asked to express their knowledge and idea on community resilience by their own perspective and interestingly found a lot beyond the limit. The respondents expressed that increasing disaster response capacity (97%), increasing food security, health safety and household income (99%), shelter don't submerge during flood (98%), road don't damage during disaster (84%), not hampering income sources during disaster (100%) and WASH infrastructure doesn't damage during disaster (98%) are the meaning of community resilience (Figure 8.2).

Figure 8.2: Meaning of community resilience



Respondents also asked to express how to achieve community resilience from their own perspective. Table 8.1 depicts the scenario of achieving community resilience status and only 3% of the total respondents do not know how to achieve community resilience but rest of the respondents (97%) expressed multiple options for community resilience and the most precious criteria are established CDREF (97%), capacity to recover from flood/disaster situation (71%), organized and capable community volunteers as well as CDMC and CDRT (97%), alternative sustainable livelihoods options (97%) and having well-functioning flood early warning system (97%).

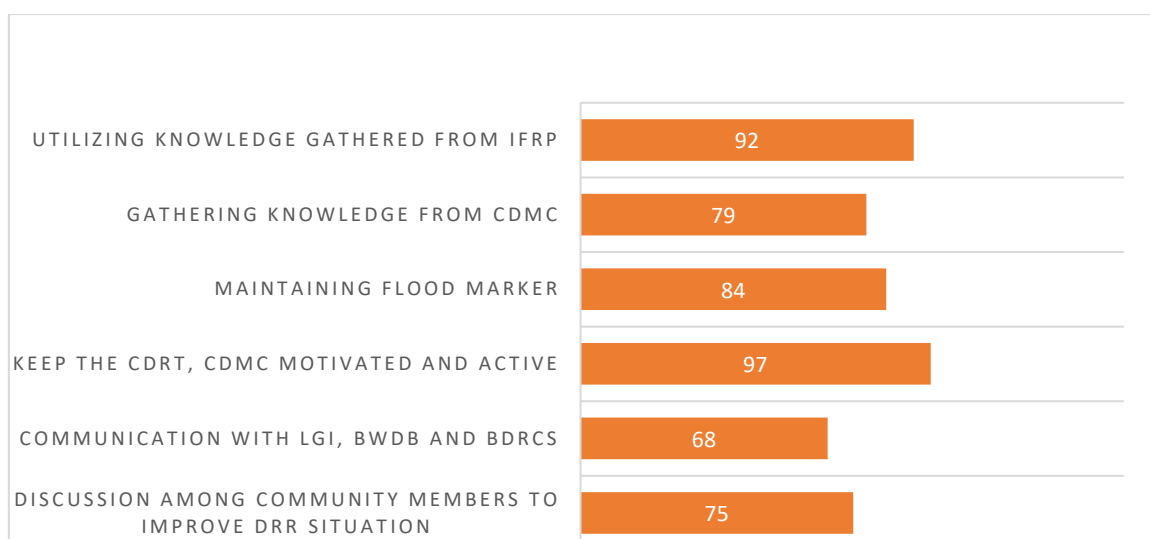
Table 8.1: Community understanding on resilience

Community understanding on resilience	Percentage
Capacity of saving money for flood period	70%
Capacity to recover flood damage	71%
Having Community plan of Action	77%
Having Contingency plan	78%
Having well-functioning flood early warning system	97%
Access to information	48%
Having alternative sustainable livelihoods options	97%
Connectedness	85%
Having sufficient search and rescue equipment	73%
Having established CDREF	97%
Having disaster resilient houses	94%
Having organized and capable community volunteers	97%
Sufficient WASH and health facilities	94%
Don't know	3%

8.2. Beyond the programme, doing of community

The figure 8.3 describes the sustainability of IFRP in the community. During the study, this question was asked the respondents of the households that what will they do for their community after phasing out of IFRP. About 97% of the respondents opined that will keep motivated the CDRT and CDMC to work actively for flood preparedness, rescue and recover the community volunteers motivated to work before and during flood period would be helpful for community people.

Figure 8.3: Community wise status of doing for community

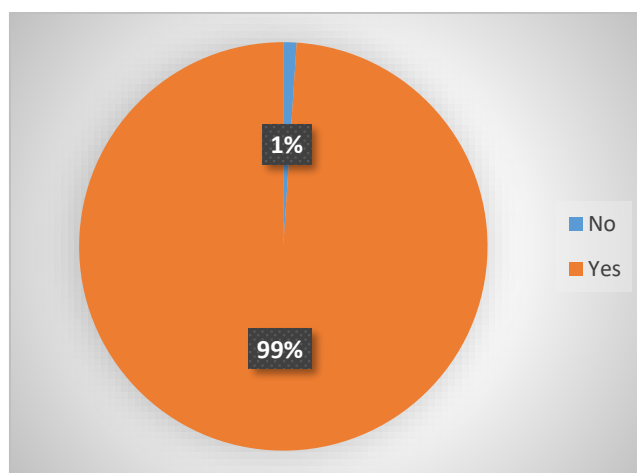


68% of the total respondents mentions that they will communicate with LGI, BWDB and BDRCS to take advice for flood management whereas 84% will take responsibility to management flood marker which is the community-led FEWS. In the same way, community people explain that they would be gathered knowledge from CDMC because CDMC is the community-based organization who are capable in flood management and also utilizing flood resilient knowledge on WASH, livelihoods, shelter are the vital learning which should be practiced in life. About 75% of the respondents mentioned that utilizing the meeting place for knowledge gathering and dissemination from IFRP would be useful for sustainability (Figure 8.3).

8.3. Knowledge about Community Disaster Relief Emergency Fund (C-DREF)

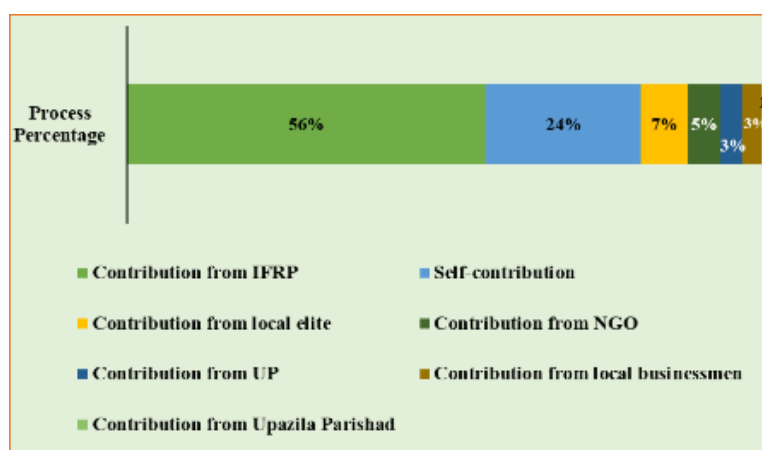
Community Disaster Relief Emergency Fund (CDREF) raised by the communities meant to be utilized during disaster period for better preparedness towards local hazards. Among all the respondents, 99% mention they have knowledge on community disaster relief emergency fund (CDREF). But other 1% respondents do not have knowledge on it (Figure 8.4).

Figure 8.4: Knowledge about C-DREF



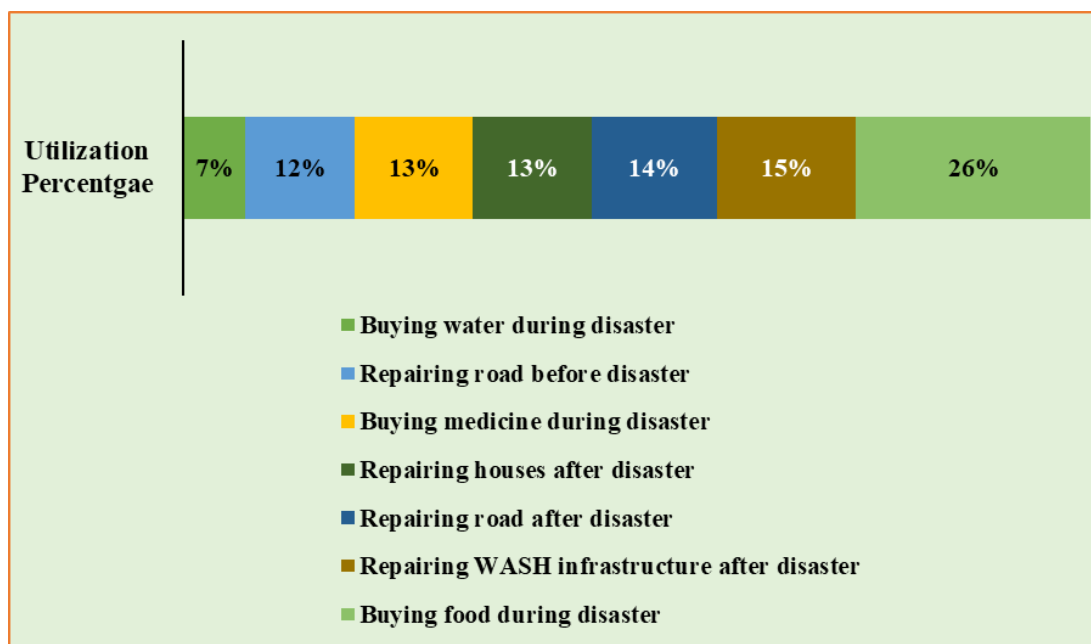
Regarding the process of CDREF generation figure 8.5 shows that 56% respondents among all the communities mention they generate community disaster relief emergency fund through the contribution from IFRP, 24% respondents mention self-contribution, 7% mention they generate CDREF from the contribution of local elite person. About 3% respondents mention the contribution of UP & local businessman. Only 1% respondents report the contribution of Upazila parishad.

Figure 8.5: Process of CDREF generation



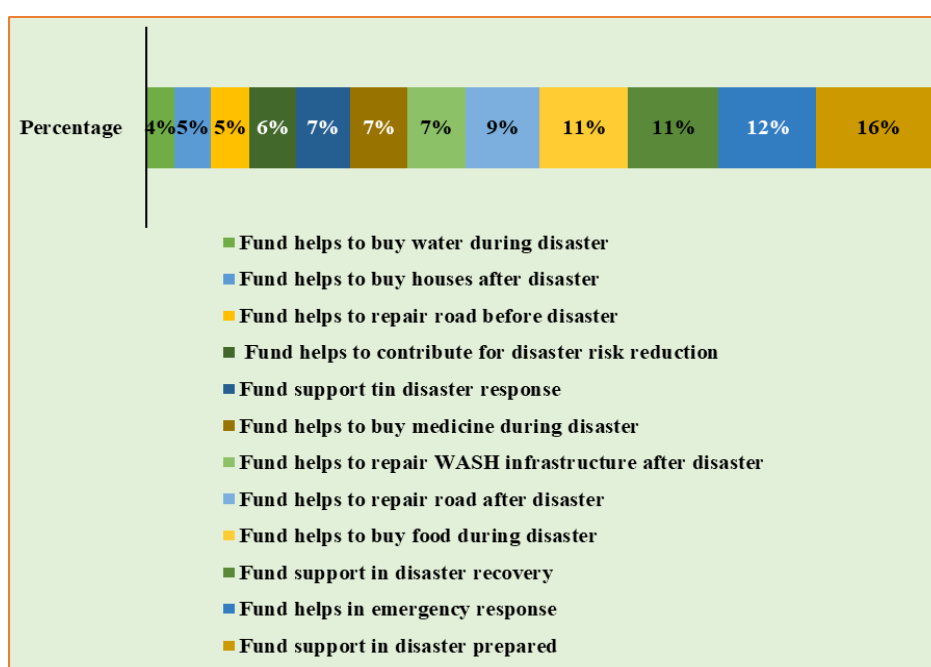
Regarding the utilization of this fund 26% respondents among all the communities mention that they were buying food during disaster by using this fund, 15% respondents were repair WASH infrastructure after disaster, 14% repairing road after disaster, 13% respondents mention that they repaired houses after disaster and buying medicine during disaster. About 12% respondents mention that they also repair the road before disaster. Only 7% respondents buying their water during disaster by using this fund (Figure 8.6).

Figure 8.6: Utilization of CDREF



From the analysis it is found that Community Disaster Relief Emergency Fund is very helpful for all community. During the survey, a question was asked that respondent's wise to continue the fund. Majority respondents want to continue this fund. About 100% respondents mention the contribution of CDREF.

Figure 8.7: Causes of continuing C-DREF



Community people of Nilphamari & Lalmonirhat are benefited by the CDREF. For that reason, community people are interested to continue the CDREF service. There are many causes behind this. Regarding the causes of continuing CDREF 16% respondents among all the communities mention that the fund support community disaster preparedness, 12% respondents mention fund helps the community in emergency response without dependency on other people, 11% report that the fund support in disaster recovery and help to buy food during disaster, 9% respondents mention that the fund helps to repair the damaged road after disaster, 7% mention fund helps to repair WASH infrastructure after disaster and buy medicine during disaster and also support in disaster response, On the other hand, only 4% respondents mention that the fund helps the community to buy water during disaster (Figure 8.7).

Chapter Nine

Relevancy, efficiency, effectiveness, impact and sustainability

The IFRP is designed for 3 years period (March 2018 to June 2021) to enhance the community resilience through reducing the vulnerability of highly exposed people by disaster risk reduction, climate change adaptation, livelihood, shelter, water, sanitation and hygiene, health and capacity enhancement of the people of targeted communities and delivering interventions targeted to increase the capacity to reduce life and livelihood risk of the vulnerable people of the community including women, children, elder people and people with disability through participatory management ensuring participation of stakeholders in every aspect of management cycle including planning, implementation and monitoring

Relevancy, effectiveness and sustainability of IFRP

By organizing the people from the communities, Community Disaster Management Committee (CDMC), Community Disaster Response Team (CDRT) were formed, which are effective mechanism and the driving force behind the operation for flood resilient interventions. These committees are working at community level which are working to ensure flood resilient community and also operating flood preparedness, rescue and recovery activities. Both of these community level committees are also working to inform policy level, sub-district and district level apex body to take proper initiative in flood management at community level which is most effective mechanism for flood management. Vocational and livelihood training and also livelihood support is one of the most important interventions for flood vulnerable communities. Under this training, skill development and income opportunities have improved and also improved household level food security, livelihoods and wellbeing. The programme also provided WASH infrastructural support considering flood level, flood resilient shelter, flood early warning system using innovative flood marker as FEWS which are most relevant for the communities.

Relevance: The IFRP activities are directly aligned with targets and Sustainable Development goals of the Goal 1: No Poverty, Goal 2: Zero Hunger (Training and livelihood support), Goal 3: Good Health and Wellbeing (Mobile health camps), Goal 5: Gender Equality (Capacity building and women empowerment through training and livelihood support), Goal 6: Clean water and sanitation (Resilient WASH infrastructure), Goal 8: Decent work and economic growth (training, livelihood support and self-employment), Goal 10: Reduced Inequality (Support to women, PWD, minorities, age old people), Goal 13: Climate action (Flood early warning, flood damage and loss recovery support), Goal 16: Peace, Justice and strong institutions (CDMC and CDRT establishment), Goal 17: Partnerships to achieve the goal (Partnership development with government agencies like DAE, DPHE, DLS, UHC and local government institutions like Union Paishad, Upazila Parishad etc.) and contributed to achieve the goals of national development plan i.e. the 7th five year plan. The activities related to skill development, livelihoods, gender and justice, WASH, flood management are directly and/or indirectly contributed to different SDGs and the targets of the 7th five-year plan. In view of the local needs and priorities as well as national development targets and goals, the relevance are found of the programme is justified through the appropriateness of the actions/interventions of the programme.

IFRP design was based on through analysis of policy and locality context (BCCSAP, National Disaster Management Plan, District Disaster Management Plan, SDG 1, SDG 2, SDG 3, SDG 5, SDG 6, SDG 8, SDG 10, SDG 13, SDG 16 and SDG 17, 7th Five Year Plan.); poverty levels and capacity of the beneficiaries thus there was strong relevancy of the designing of IFRP with broader policy goals of poverty reduction, food security, WASH, DRR, and livelihood sustainability of the poor segment of flood vulnerable people of northern Bangladesh (Nilphamari and Lalmonirhat).

The IFRP log frame in terms of programme objectives, results, analysis of assumptions/risks, and identification of problems and needs of the target population etc. found to be relevant. The intervention logic, verifying indicators and time frame were practical in view of the operation, monitoring and evaluation.

Beneficiary and programme area selection was unique in a sense that it targeted the most flood vulnerable communities which are remote and hard to reach area. No other organization work there in flood management. It also targeted most vulnerable females in terms of food and livelihood insecurity and was based on sound analysis of beneficiaries' poverty context, which was in line with the programme results and objectives. The selection process was free from political pressurization.

“.....IFRP beneficiary selection was so uniquely free from all kinds of nepotism that it was not possible even for the IFRP staffs to have such kind of impartial selection of beneficiary in their project because of political pressurization.” UP Chairman, 9 No. Goyabari Union Parishad, Dimla, Nilphamar.

The IFRP has run completely aligned with the needs and priorities of the target people. To ensure these needs and priorities, the programme provided relevant and necessary trainings to the participants in the field of vocational training, resilient farming, disaster management, hygiene management and group capacity building. In order to do that, various intervening programs were activated, and the participation of the programme participants were ensured to fulfill different requirements to achieve the objectives of IFRP. The training methodologies were sound and were delivered by qualified professionals. External expertise for conducting trainings was sought wherever this was necessary. All of these were done to ensure the proactive engagements of the participants with the programme activities. All these activities contributed positively in the achievement of the expected results. The participants of these trainings were reasonably satisfied with the relevancy, quality and adequacy of the trainings. The trainings helped to change the behaviors, attitudes and knowledge as well as income opportunity of the participants. In fact, all the other programme components have been found to be appropriately aligned with the requirements of the target people. The IFRP has introduced innovative flood early warning system which is termed as “flood marker”. Flood marker is the most relevant intervention for the communities because the illiterate people of the communities cannot understand the scientific flood early warning information provided by FFWC.

Moreover, the IFRP considers the needs and priorities of the community people. It has designed a lot of activities where some are very special like training for programme participants on resilient farming, disaster management, livestock and poultry rearing, Resilient WASH, livelihood beneficiary group formation, WASH group formation, resilient shelter group formation, local service provider development, Community Disaster Management Committee and Community Disaster Response Team Development, pertaining vocational training, linkage development health service provider and local government agencies. But there is no linkage with financial institutions, job providers which is urgently needed.

Efficiency of Interventions: The IFRP has provided technical assistance in the form of trainings on IGA, capacity building of the group members and leaders, financial management etc., capacity building of CDMC and CDRT on flood management, flood response which were timely and were in accordance with the schedule align with the carrying capacity of the groups and beneficiaries. Financial assistance and input support to undertake livelihood interventions were delivered on time. The programme also provided training on resilient shelter which is termed as PASSA and another training on resilient WASH and hygiene management which is terms as PHAST. Both of these trainings are highly effective in the communities by which community people ensured their shelter as well as household housing as flood resilient and sustainable water, sanitation & hygiene.

Programme Structure and Programme Management system was found as dynamic and efficient to ensure transparency of resources management- both physical and financial. The ratio of programme staff and beneficiary was reasonably adequate. Management of programme' s physical resources was done according to the procedures set by IFRC with proper documentation. Financial resource disbursements, asset procurement etc. were also done in accordance with IFRC guidelines and programme budget, including assets transfer costs. Relevant rules and guidelines were strictly adhere to for the above and were subjected to auditing. Thus, physical resource and financial management was reasonably transparent and value for money in respect of operating costs was taken contingence of in financial management. However, it was felt assets transfer cost could be more in view of the market price of the assets.

Bangladesh Red Crescent Society (BDRCS) district unit and Programme Implementation Committee (PIC) worked effectively and monitored closely from the unit. Necessary monitoring tools based on the log frame and baseline indicators, including programme objectives, resources, financial support delivery, IGA and other inputs and outputs, among others; were developed and used throughout the IFRP period. The data collected seem to be overwhelming; however, necessary monitoring reports were produced regarding progress of IFRP, input delivery and outputs to inform the programme management at different levels at regular intervals.

A baseline survey was conducted, and report produced. This was very useful for benchmark development of the log frame indicators, among others, which was very useful for subsequent monitoring, progress reporting and evaluation of the programme. The Mid-term review was conducted to track the progress which was found sound good and tracked the activities, impact, result and achievement accordingly. Human resource development, BDRCS unit development, RCY development, livelihoods beneficiary group development, capacity building trainings were imparted by IFRP which were relevant and effective. The training methodologies were sound and delivered by qualified resource persons. External expertise for delivering trainings were sought wherever, this was necessary. Training reports were compiled, and modules were developed and documented. The trainees of these training were reasonably satisfied interims of relevancy, quality, and adequacy and training materials. The trainings imparted helped changing the behavior, attitude and knowledge of the participants, which was evident in the FGDs and KIIs.

Effectiveness: The implementation of different of programme activities, in general is found to be effective to a various extent depending on the delivery by the programme itself and the external factors. The advocacy by the newly formed people centred organizations such as CDMC and CDRT has made significant strides in achieving the intended results through establishing effective linkage with local government and administration. The WASH component especially in terms of access to safe water and hygiene, sanitation has been achieved significant success. However, the effectiveness of health service is in question because beyond the programme there is no health service provider though linkage development was priority issue with specialized health service providers but due to lack of finance and being remote area, the community people of Nilphamari may be suffer from health burden.

The effectiveness of diversify livelihoods component involving crop varieties and farming system is often constrained due to lack of capacity of available flood resilient varieties and also livestock rearing may be hampered due to lack of flood tolerant forage.

Impacts on Results: Cross cutting such as gender sensitivity, DRR, WASH, Shelter, Health and hygiene, environment considering PWD etc. have been addressed by IFRP. Economic impact is the major concern of the activities and it is found that the livelihoods beneficiary groups increased their economic, family wellbeing by undertaking economic activities. IFRP is designed as a very gender and PWD focused programme, thus a very high-level impacts on poverty alleviation of the ultra-poor women headed households, and PWD and their mobilization and empowerment have been achieved. The core focus of the IFRP was to ensure flood resilient communities and the result has been achieved by the installation of flood marker to provide FEW and resilient shelter ensured flood resilient shelter in the communities. Flood resilient communities have been promoted by CDMC and CDRT. Both of these committees are proactive in flood preparedness, rescue and recovery. The major result of the programme is C-DREF which is sustainable mechanism to manage flood. The IFRP has brought about substantial impacts on WASH/Health and Hygiene through strategically linkage development with specialized doctors and DPHE and with other health and WASH programme in the area quite synergistically.

Participation

The IFRP participants were involved in the programme throughout the various stages. Programme participant selection and involvement was unique in a sense that it targeted the ultra-poor flood vulnerable people and was based on sound analysis of participant poverty context, which was in line with the objectives. The selection process was free from political pressurization and free from all kinds of favoritism.

The participation of the programme participants was very effective and fruitful. In the early stage of the programme, local stakeholder (Union Parishad, Upazila Parishad, Dept. Of Public Health Engineering, Dpt. of Agriculture Engineering, Water Development Board, Dept. of Livestock, Upazila Health Complex, Community Clinic etc.)

engagement was ensured and by building a partnership with the programme beneficiaries, all the activities were carried out in the study areas and different kinds of supports were also ensured. The skills of the programme participants were improved so that their income could also be increased by sustainable management of livelihoods interventions like resilient farming, livestock, water technology management, entrepreneurship development. As a result, participation of the programme participants in different activities increased and they were getting expected benefits. The programme provided technical assistance in the form of trainings, building capacity of the programme beneficiaries and leaders and managing financial issues, which were timely and were in accordance with the programme schedule and the capacity of the groups and beneficiaries.

There were clearly many benefits that the participations received. Financial assistance was delivered on time and technical support was provided in the form of trainings and information sessions. Proper monitoring of the activities was also ensured. These were helpful to support their activities. The partnership and management arrangements worked well together, and it was developed further over time. The partnership and management were found to be efficient to ensure the transparency of resources management- both physical and financial. The ratio of programme staff and beneficiary was reasonably adequate. Management of programme physical resources was done according to the procedures and its partner organizations with proper documentation. Financial resource disbursements, asset procurement etc. were also done in accordance with guidelines of its partner organizations and programme budget including assets transfer costs. Physical resource and financial management was reasonably transparent and as a result, the partnership and management arrangements were aligned and functioned well together. But there is no participatory monitoring mechanism including members from programme beneficiary groups.

There was sufficient institutional linkage and relationship between the local government institutions and government officials including Union Parishad, Upazila Parishad, Dept. of Agriculture Extension (DAE), Dept. of Public Health Engineering (DPHE), Dept. of Livestock (DPHE), Upazila Health Complex (UHC), Union Health Clinics, Union Family Welfare Center but there is no strong relation Upazila level some government departments which are most important for such type of programme like Dept. of Social Service (DSS), Dept. of Women and Children Affairs, Programme Implementation Officer (PIO), and also district level service provider organizations. There was need a robust linkage between programme participants from marginalized communities who are involved with production and local traders, representatives and various stakeholders and also with micro-finance institutes (MFI) and other financial institutions and job providers. Lack of linkage development has restricted the processes of accessing various public services and market linkage. However, programme participants were participated in the programme component in satisfactory level.

Sustainability

The IFRP activities and outcomes would be sustained beyond the phase out because the IFRP design strategy has a strong implication for sustainability. By this strategy, even after the completion of the activities, programme participants will remain as members of the involved community platforms (CDMC, CDRT) and may continue the awareness and development activities. The participants will likely continue their resilient interventions like resilient farming, WASH technologies and entrepreneurship because the participants have realized that the activities benefited them in lot of areas such as income generation, resilience skill development, women empowerment, economic improvement, livestock rearing, resilient WASH, resilient shelter, communication with specialized doctors etc. It has also increased the level of their income, level of savings and possession of productive assets. It has also contributed to the quantity and quality of their food intake. This programme also improved the life of ultra-poor and vulnerable woman in decision making process. All these things have been achieved through the programme participants and their proactive engagement with the implementation process. CDMC and CDRT will sustain in the communities because both of these committees have developed their capacity in terms of flood preparedness, rescue and recovery and both of these committees have gained own furnished office which may be used as productive place. The programme participants will be able to continue their income through resilient farming, homestead farming, fish farming, and livestock venture by applying their knowledge and skills that they have learned from the involvement with the programme. They are now confident enough to take any decision in critical times regarding their activities which will enhance the prospects of their venture in future. Through this programme, the IFRP participants have developed a strong relationship with DAE, DPHE, LGI, BDRCS District Unit, LSP, traders and market actors which will be beneficial beyond the programme also.

The study also showed that WASH technologies and resilient farming activities tended to have greater health and economic margins, possibly indicating health outcome and economies of scale leading to greater returns. On the other hand, health cost was decreased during the programme period due to improved water and sanitation management. In this regard, the programme participants are interested to continue their venture without external support.

By organizing the people from the communities, CDMC and CDRT were formed, which are effective mechanism and the driving force behind the operation for flood resilient interventions. These committees are well equipped and trained to response during flood. There is also CDERF which is a local funding mechanism to response in emergency need which sustain because it contributes to the local people during and beyond the flood period. Vocational, livelihoods, PASSA and PHAST training, lessons of Bhugol Sir er Boi are the most important interventions for flood resilient communities. Under these interventions, the programme participants have developed their knowledge and capacity on resilient paradigm shift and these learnings will diffuse generation to generation. As whole, the IFRP has enriched reputation of District level BDRCS unit so why the district units are satisfied to monitor the programme outcomes beyond the programme.

Chapter Nine

Recommendations and Conclusion

9.1. Recommendation for improving the result of community resilience programme

The IFRP is a model as well as success story of BDRCS and IFRC to build flood resilient community. The programme has done a lot beyond the thought for the flood vulnerable four communities of northern Bangladesh. But it has some observations and recommendations to do more for flood resilient community development which are illustrated in the following:

- Citizen science (indigenous knowledge) should be prioritized in nature-based flood solution;
- The fund allocated for household level resilient shelter construction is not enough to make a resilient house as per the need of community beneficiaries. Amount of fund should be increased considering the market price of raw materials to construct household level resilient shelter at community level;
- Linkage with community-based health centers should be strengthened with beneficiaries so that they can get regular health support from community-based health clinic/centers
- Flood resilient water and sanitation interventions, shelter interventions should be promoted through the other DRR and resilience programmes of BDRCS and local government”;
- CDMC should be registered with government agency to work for communities as a legal entity beyond the IFRP;
- Community based, community managed and community-led flood shelter should be constructed considering the flood level in which household resources (livestock, poultry, domestic assets) can be preserved during flood;
- Flood resilient forage should be introduced in the communities to ensure availability of livestock fodder during flood (flood resilient varieties, hydroponic).
- Fund leveraging system for C-DERF from external sources like LGI, government agency should be encouraged by establishing collaboration and linkage.

The activities and interventions of communities beyond the programme period should be monitored by the BDRCS district/unit offices which will encourage community CDMC/volunteers to continue their good work. Thus, communication with CDMC and CDRT should be continued by BDRCS unit offices.

9.2. Conclusion

By the IFRP, women and men are making conscious changes to gender-based power structures at the household and community level. Individuals, community organizations (CDMC, CDRT and LGI) are engaged in long term processes of change that address root causes of poverty and flood risks. Absence of inclusive forms of governance that for giving more equal access to resources or allow people living in poverty to fully participate in the design, monitoring and accountability of policy processes. Early warning systems are in place and functioning giving information to the communities manually, but it can be updated through ICT based information dissemination system.

All field level trainings, meetings and community gathering events under Integrated Flood Resilience Programme have been suspended by BDRCS from mid-March 2020 following the countrywide lockdown of GoB due to COVID-19 pandemic. Few activities like construction of community gathering place, cash for work were continuing based on the decision of unit offices of BDRCS. In September 2020, the project activity plan was revised by the IFRP project team and started to implement slowly in the field. The activities were implemented considering the COVID-19 context and ensuring protection measures. Also, community level awareness on COVID-19 were raised by the programme and protection equipment (mask, sanitizer etc.) were distributed among the community people, which have impacted positively on the communities of IFRP.

Due to lockdown situation all over the country, study team could not utilize highest level of merit to reach the study populations in every sphere of the study locations. Due to limited access induced by hard-to-reach area, the study deserve allocation of more time and resources to extract the highest level of study findings.

The study findings are permitted to utilize in study purposes without reproduction and reprinting the similar document. The researchers, academicians, development partners, government and non-government organizations can utilize the study findings to replicate the success stories of the programme in other flood vulnerable areas. Under the IFRP, there are some innovative approach and interventions are explored which are unique in terms of developing flood resilient communities like PHAST approach, flood marker as flood early warning system, PASSA approach for shelter resilience should be replicated in different flood vulnerable areas.

The IFRP has focused women and PWD as the core beneficiary groups of the programme. It has proved capacity building and livelihoods support, health service considering the women vulnerability and more than 60% of the programme beneficiaries are women. On the other hand, it has developed resilient shelter, WASH infrastructure which are PWD, age old people friendly which is most important cross cutting issues of this programme.

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Annexures

Annex 1: Comparison of outcome and output indicators value between baseline study and end-line evaluation study.

Outcome	Indicators	Baseline	End line
Outcome 1: Communities are capable to effectively respond to flood and adapt to changing climate	Indicator 1.1: # of community contingency plans developed and functional to facilitate preparedness response based on VCA	0%	100%
	Indicator 1.2: % of targeted people have increased level of knowledge on DRR, WASH and Health		
	1.2.1 Respondent's idea and knowledge about climate Change, resilience and DRR (%)	9%	94%
	1.2.2 Respondent's idea about improved and hygienic latrine (%)	22%	99%
	1.2.3 Respondent's knowledge about proper hand washing technique (%)	31%	99%
	1.2.4 Respondent's idea about hygiene management during menstrual period (%)	38%	64%
	Indicator 1.3: # of targeted communities have well-functioning CDMCs and CDRTs	0%	100%
Outcome 2: Most vulnerable households have improved livelihood and shelter to withstand small scale flood	Indicator 2.1: % of HHs followed PASSA findings to make their shelter resilient to disaster risk	0%	47%
	Indicator 2.2: % of targeted beneficiaries initiated diversified and enhanced IGA after getting the support from the project	0%	71%
Outcome 3: Community people have increased access to appropriate and sustainable water, sanitation and hygiene practice	Indicator 3.1: % of community household have access to safe drinking water and improve sanitation facilities		
	3.1.1: Households have own tube-wells (%)	79%	100%
	3.1.2: Households have improved tube-wells (%)	19%	58%
	3.1.3: Households have own latrines (%)	80%	92%
	3.1.4: Households have improved latrines (%)	5%	58%
	Indicator 3.2: of community people have knowledge and access the health support services		
	3.2.1: Respondent's knowledge on national vaccination program (%)	89%	100%
	Indicator 3.3: % of community people has improved Hygiene behavior and practices	38%	81%
	3.3.1: Respondents and their household members use sandal during defecation (%)	91%	100%
3.3.2: Respondents and their household members wash hands with soap at other critical times (%)	69%	99%	

Output	Indicators	Baseline	End line
Output 1.1: Disaster and climate change risks are identified and appropriate community-centered preparedness and response plan along with early warning systems is formulated in 4 communities	# Community vulnerability and Capacity are identified and community action plan developed in 4 targeted communities	0	4
	# Community based flood early warning system (EWS) in 4 communities established and well-functioning	0	4
Output 1.2: Community people have increased access to knowledge on DRR	# 1368 awareness raising sessions conducted on DRR with community people and schools	0	1069
	# of community gathering place established and functioning	0	3
Output 1.3: Disaster Management and volunteer groups are formed, trained and functional to mobilize in DRR, CCA, WASH and health services	# 08 no. of community disaster management & volunteer teams formed	0	8
	# 70% of community volunteers participated in the planning and implementation of the project	0	65
	# 164 community volunteers and disaster management committee members in the targeted communities received trainings on DRR, FA & SAR and community development	0	FA & SAR – 150, DRR - 66
Output 2.1: Community people have diversified & sustained livelihood options	# of beneficiaries received skill development support for livelihood improvement (including women & Person with Disability-PWDs)	0	Livelihoods – 240, Homestead Gardening - 400
	# beneficiaries received cash and kind support for livelihood improvement and diversification	0	257
Output 2.2: Targeted beneficiaries have received cash and skill development support to construct resilient shelter	# 240 beneficiaries received cash grant support for shelter repairing	0	240
	# of staffs and volunteer received ToT on PASSA (participatory approach for safe shelter awareness)	0	25
Output 3.1: Targeted beneficiaries have received support on WASH facilities	# of beneficiaries reached through medical & hygiene promotion support	0	2508
	# of beneficiary are trained on Hygiene behavior and practices	32	1360
Output 3.2: Community WASH facilities have improved through mitigation measures	# of households with access to improved sanitation facilities	4	4 communities, 227 Improved Latrines
Output 4.1: Staff & volunteer are trained and skilled in technical and management areas in Disaster Risk Reduction (DRR).	# of IEC material developed, printed and shared with community and volunteer	0	2
	# of staff and volunteers received training on Disaster Risk Management (DRM)	0	18
	# 40 staff, volunteers and Unit Executive Committee (UEC) member received training on technical areas such as Gender & Diversity, SGBV, PHAST, School Book and IEC material	0	Gender and Diversity – 229, PHAST - 25, School Book/IEC - 24
Output 4.2: Coordination and collaboration between BDRCS, Government and humanitarian	# 140 collaboration meeting with 10 targeted local government institutions (LGIs) and service providers and formation of BDRCS resilience framework	0	155 (UDMC/UzDMC=40, Advocacy Session - 51,

organizations has established in implementing community based DRR			Sharing Best Practice - 4, PIC Meeting - 58, Staff Coordination Meeting - 2)
	# 01 (one)workshop organized to share lesson learned, best practices and knowledge with relevant stakeholders	0	1
Output 4.3: Formalized Complaints and Response Mechanism (CRM) in place	# 04 CRM established and functional	0	4
	# of staffs and volunteer are trained on CRM	0	27

Annex 2: Case studies

Flood marker: An effective flood early warning system

Md. Rezaul, the inhabitant of Shibber Kuti community. Shibderkuti community is surrounded by Teesta River and



almost every year, the community flooded by Teesta flood. According to Mr. Rabiul, “Sometimes flood happens very fast and sometimes it uplift very slowly. But we don’t get information properly and so why preparation to evacuate in safe shelter is tough for us. During the flood of 2017, we did not get time to prepare ourselves as the water comes so quickly into the river”. He also

added that in the flood of 2019 and 2020, we had have enough time to take preparation because of flood marker. In this regard, by the question of “Do you have idea on flood marker?” He respond positively and said that yes I know about it, if there is a red mark then it means there is a danger situation, yellow mark indicate that we should prepare ourselves to leave for a safe place and then green mark represent normal condition. Mr. Rabiul also added that in 2019 the flood marker was installed here which made the community flood resilient. He also expressed that it is very helpful for us because actually we live adjacent to the river so every year flood is common scenario in our community so we follow it and get time to take preparation, evacuation livestock, poultry and also children and old people. Mr. Rabiul also prove example from the previous two floods (2019 & 2020) and said that due to this flood marker, nothing of us damaged during flood because following the marker level, we have took preparation and also took shelter to the safe places. Mr. Rabiul also said that all of the community people don’t understand the triggering level of the flood marker but Community Disaster Management Committee (CDMC) and Community Disaster Response Team (CDRT) translate the language of flood marker and inform community people by yard meeting and also miking to the community people of long distance which is most effective for flood preparedness. He also expressed that green mark is the triggering level of flood as well as if the river water exceed green mark and touch yellow mark then they start to preparation on taking flood management initiate and when the flood level exceeds the yellow mark then they evacuate themselves to the safe shelter.

Cattle rearing: The hope for the future

Halima Khatun, a 40 years old woman and living on embankment of community. He husband is a day flood who cannot work almost 9 and so why they live with hunger with of 12 and 9. One year ago, Ms. got 25000.00 BDT from IFRP and she 27500.00 BDT. She said that now if this cow, it will 50000.00 BDT but she After 9 month of buying this cow, she Every day she gets 1.5 liter milk from she sells to the nearby rural market BDT as well as 2100.00 BDT in each money, she bought 8 hen three months ago and now she has 31 chicken. She also sold egg of 1300.00 BDT within two months. She wants to buy a small piece of land to build a flood resilient house from her income and from now she started to save money. She expressed with smiling face hat IFRP become as hope for the future.



who is landless Garainpara labor but due to months of a year two children age Halima Khatun bought a cow by she want to sell will not sell it. got one calf. this cow which and earn 70.00 month. From this

Sewing machine is sustainable alternative livelihoods for flood vulnerable people

Mst. Laili Begum, a 38 years woman of Garaipara community who is living at Chotokhata village on embankment because of landlessness. But within one year, Mst. Laili has bought half bigha land as a lease from the earning of sewing with 30000.00 BDT. She has two children (one boy and one girl) who studies at school in class six and in class four. Laili Begaum said that he always bear educational expenses for her kids from the earning of sewing and in each month she expenses almost 3000.00 BDT for her kids. Almost two years ago, Laili Begum became member of IFRP micro-group and got training on sewing and tailoring. She also added that one sewing machine also provided from IFRP. Before starting sewing, it was so hard for me and my husband to bear the family cost. We have survived a lot but now the situation has changes. Now we have livestock and a sewing machine which help me much to improve my economic condition, Laili Begum added. From the earning she raised plinth of her house to protect from flood by the learning of PASSA though IFRP did not provided any financial support for flood resilient shelter. She expends 20000.00 BDT to make flood resilient shelter by taking loan from local micro-credit NGO and now from her income, she pay 2000.00 BDT in each month. Laili Begum expressed that along with her income, she also trained 8 girls on sewing which is her great achievement by involving with IFRP. Now she dreams to open a small entrepreneurship with those girls who were trained. She also expect to spread the training among the flood vulnerable communities to ensure sustainable flood resilient livelihoods.



PASSA: An innovative approach for flood resilient shelter



Minoti Bala, a 42 years old woman of Garaipara community who don't have own land and living on embankment. Becoming member of IFRP micro-group she received training on PASSA, an approach to build flood resilient shelter. Minoti Bala said that due to flood, almost each year for a long time we suffer from flood. We cannot sleep in our hosue because flood raise up to 5 feet. To protect from flood, my husband was trying to build a flood resilient shelter for the last three years and saved some money but we didn't have knowledge on that. In 2018, IFRP started working there and I became a member of micro-groups.

As a member, IFRP provided a training on construction of flood resilient shelter. After receiving the training, have shared knowledge with my husband. Not only discussion with me, he have discussed with IFRP Community OrganizSer and acquired more knowledge on flood resilient shelter. After discussion, she took loan from bank and started to build the shelter. Minoti Bala also added that we have expend around 1 lac 20 thousands taka for the construction of a flood resilient shelter. Now in each month we pay the loan from our small business but we are happy that for the last two flood (2019 and 2020), we did not flooded though almost 90% hoses of this locality were submerged. She also expressed with happily that to protect my house from flood, we have built the floor with concrete. Now my house is safe from flood. Actually I have lost lot of things in flood thus I have fixed permanent solution by learning from IFRP.

Moyna: A successful entrepreneur



Moyna, a young widow of Garainpara community who live with her age old father. Her father don't have income source to bear household expenses. Moyna got support from IFRP on small business. She also added that she got training on business management. Her father cannot do anything for his a back pain thus she is the only earning member of her family. With training, she got 20000.00 BDT to buy goods for the shop. From this small business, Moyna earn almost 300.00 BDT in each month. Moyna said that before getting training and financial support from IFRP, we had to survive with hungry but now the situation has changed. She also added that now

someone want to marry me. Within a few months, Moyna has reconstructed her house as flood resilient shelter with cost of 30000.00 BDT from the earning of this shop, she expressed happily. She also expressed that in each month, she save 2000.00 BDT for future emergency. She said that I have benefitted a lot for this support because before that we cannot even get meal properly but now we are happy. This support help us to become self-depended.

Shelter for community people

Rashida Begum, a woman of Shiberkuti community who are suffering from flood since born. Due to lack of knowledge and sufficient money, they were not able to make a flood resilient shelter. She said that in the last of 2018, IFRP started working here to make a flood resilient community. With others, I was interested to become a member of micro-group and 3 months later for the first time, I got training on building flood resilient house. She also added that almost each year, we submerge under water during monsoon and the plinth of the house goes almost 3 feet under water. After receiving the training, I have asked to IFRP to provide me financial support for building flood resilient shelter following the procedures because I am not solvent to bear the all cost. IFRP agreed to support me but the support was not sufficient. Along with the support of IFRP, I have managed 25000.00 BDT and constructed the shelter following all rules and also considering the highest flood level. We have made this house at the first of 2019. During the flood of 2019 and 2020, though the community is flooded but my house was not submerged. People from surroundings have used my hose as flood shelter in the last two floods. The Red Crescent has said that the house will be so high.



Age old widow: The hope for the household

Farida
lost her

any land
survive
Before
her son
hand to
her family.
business
from
income is
but she

uttered



Begum, an age old widow who husband 5 years ago of Shekhapara. She don't have or alternate income source to with her 1 son and 3 daughters. starting the business, she with and daughters were live to mouth but now she is hope for In the last 2019, she started a with the support and training IFRP. Now in each month, her almost 15000.00 BDT, she said need only 10000.00 BDT household expenses. She with smiley face that in the last

two years, she bought one bigha land for farming and she get food crops from this land for the whole year. She can maintain loss and profit because she got training on business management from IFRP. She also added that she trains her son for future who will continue this business.

Brick wall: An innovative safeguard for thousands households

Sheikhapara community under Huliagach union of Lalmonirhat Sadar is a flood affected community which is had to flood each year. In the last year, the area is flooded and water rose up to knee which is expressed by community people. Due to flood, almost 500 families of this community submerge in each year for almost 6 months, twice in each months for 5-7 days due to flooding of Teesta. In the last of 2019, the community people have innovated a new idea by the discussion with IFRP to make a brick wall to protect flood. By the support of IFRP and Union Parishad, the



community people constructed 1.5 feet high and 300 feet long brick wall with the cost of 71000.00 BDT. The villagers said that in each years along with household of 500 families, crop land of 15-20 acres were submerged during flood and all the paddy have to rotten but in the last year (2020), though the flood was rose up to knee but none of household or paddy field were submerged and no loss and damage were found.

Annex 3: List of KII

Name	Designation	Organization
Dr. Mujibul Haq Chowdhury	President	Diabetic Samity, Lalmonirhat
Ziaul Haque Zia.	President	Dighirpar CDMC
Al Mahmud Hasan	Sub-Assistant Agriculture Officer	Dimla DAE
Dr. Md. Arifzaman	Assistant Surgeon	Kulaghat Union Health Center, Sadar, Lalmonirhat
Nayan Kumar Saha	DRRO	DC Office, Lalmonirhat
Md. Khairul Islam Tokder	Health Assistant	Upazila Health Complex, lalmonirhat Sadar
Advocate Ashraful Hossain Badal	Secretary	Bangladesh red Crescent Society, Lalmonirhat Dstrcit Unit
Dr. Sazia Afrin	Upazila Livestock Officer	Dept. of Livestock, Lalmonirhat Sadar
Md. Kamrul Islam	Sub-Assistnat Engineering	Bangladesh Water Development board, Lalmonirhat
Dr. Shamima Sultana Sathi	MBBS	Dimla
Md. Fahad	Principal	Gayabari School and College, Dimla
Md. Moynul Haq	Chairman	9 No. Tepakhoribari Union, Dimla
Hasina Ahmed	Secretary	Bangladesh Red Crescent Society, Nilphamari District Unit
Biplob Kanti MONDAL	Project Manager – Resilience and WASH	IFRC
Sabina Yasmin	Deputy Director	Bangladesh Red Crescent Society (BDRCS)
Ms. Ilryoung Lee	Deputy Country Director	KOICA

Annex 4: HH survey Questionnaire

Integrated Flood Resilience Programme (IFRP) through Community-Based Disaster Risk Reduction (CBDRR)

END LINE EVALUATION

Questionnaire for Household Survey

Submitted to



International Federation of Red Cross and Red Crescent Societies
Bangladesh Delegation
Bangladesh Red Crescent Society NHQ | 1st Floor (East Side)
684-686 Bara Mogh Bazar | Dhaka-1217 | Bangladesh

Submitted by



APARAJITA
PLOT No. 284, ROAD#1A, BLOCK#B, NOBODOY HOUSING LTD
MOHAMMADIA HOUSING LTD. MOHAMMADPUR
DHAKA-1207, BANGLADESH
Cell: +8801973-487838, +8801844-454094
E-mail: info@cpe-bd.org **Website:** www.cpe-bd.org

Questionnaire for Household Survey

PART A: CONSENT

Hello, my name is ----- . I am a data enumerator from **Centre for People & Environ (CPE), Dhaka**. You would know that **Bangladesh Red Crescent Society (BDRCS)** has been implementing **Integrated Flood Resilience Programme (IFRP)** at your community since last 3 years. We are conducting a household survey at your community as the End Line Evaluation part of IFRP. Your household has been selected for the survey and I would like to ask you some questions to know about the changes and success achieved through the implementation of IFRP. If you agree and you are 18 years old/more, then I will spend approximately 50 minutes to ask some questions. I will not disclose your name and share any of the information provided by you and all the information will remain confidential for the programme purpose. Your information will help BDRCS to understand about the community resilience achieved through the implementation of IFRP. I will give the contact details of the survey coordinator and BDRCS officer if you have any query about our programme.

Are you agreed to participate in the interview?

- Yes
- No

If yes, please proceed. If no, please stop the interview.

PART B: BASIC INFORMATION OF HOUSEHOLD AND RESPONDENT

1. **Name of the interviewer?** -----

2. **Date of the interview?** -----

3. **Time of the interview?** -----

4. **Name of the district?** (Choose one response):

- Nilphamari
- Lalmonirhat

5. **Name of the community?** (Choose one response):

- Garain Para
- Dighir Par

- Shiber Kuti
- Sheikh Para

6. **ID number of the household?** ----- (the ID no. to be placed from the household list)

7. **Name of the respondent?** -----

8. **Age of the respondent?** ----- (the respondent's age must be 18 or above 18)

9. **Gender of respondent?** (Choose one response):

- Man
- Woman
- Other (please specify)

10. **Religion of the respondent?** (Choose one response):

- Islam
- Hinduism
- Buddhism
- Christianity
- Others (please specify)

11. **Educational qualification of the respondent?** (Choose one response):

- Primary
- Secondary
- S.S.C/equivalent
- H.S.C/equivalent
- Graduation
- Post-graduation
- Above post-graduation
- Have no formal education

12. **Total number of your household members?** -----

13. Is there any PWD member in your household? (Choose one response):

- Yes
- No

14. If yes, what is the number of PWD member? -----

15. What is the main occupation of your household head? (Choose one response):

- Agriculture
- Non-farming day labouring
- Business
- Govt. service
- Non-govt. service
- Rickshaw/auto/van pulling
- Fish cultivation
- Tailoring
- Housewife
- Others (please specify)

16. How much (BDT) does your household have monthly income? -----

17. How much (BDT) does your household have monthly expenditure? -----

18. Does your household have any amount of land? (Choose one response):

- Yes
- No

19. If yes, how much is the amount of land (decimal)? -----

20. What types of following fixed asset do you have? (Choose all that apply):

- Land
- Pond
- TV
- Radio

- Mobile
- Rickshaw
- Van
- Auto
- Shop
- Business capital
- Cow/goat/buffalo
- Ornaments
- Boat
- Motor cycle
- Others (please specify)

21. Do you know that under IFRP, the courtyard sessions/micro-group meetings have been conducted at your community? Choose one response):

- Yes
- No
- Do not know

22. If yes, did you/your household members ever participate at the courtyard sessions/micro-group meetings? Choose one response):

- Yes
- No

23. If yes, how many times, did you/your household members take part at the courtyard sessions/micro-group meetings? (Choose one response):

- 1 to 3 times
- 4 to 6 times
- 7 to 9 times
- 10 to 12 times
- 13 to 15 times
- 16 to 18 times
- More than 18 times

24. What have you learned from the courtyard sessions/micro-group meetings?

(Choose all that apply):

- Information about the implementation of IFRP
- Role of BDRCS, IFRC and Ministry of Foreign Affairs (MoFA), KOICA for IFRP
- Information about disaster, flood vulnerability and river erosion
- Information on flood early warning system
- Flood response information (What to do before, during and after flood)
- Other disaster response/preparation/mitigation information
- Climate change
- Community resilience
- Adaptation
- Health
- WASH
- Women vulnerability and safety during disaster
- Agriculture
- Mother and childcare issues
- Health camps of BDRCS
- Safe shelter/establishing houses at safer places and raising household level
- Different social awareness information
- Different day observation information
- Role of COs, CDRT & CDMC volunteers
- Role of BDRCS and its Units
- About COVID-19 (about the pandemic, hand washing to protect the community people, wearing masks, avoiding mass gathering etc)
- Women reproductive health
- Others (please specify

PART C: DISASTER RISK REDUCTION (DRR) AND CLIMATE CHANGE

25. Do you/your household members have any idea/information about DRR?

(Choose one response):

- Yes

- No
- Do not know

26. If yes, what does DRR mean? (Choose all that apply):

- Tackle the risk of disaster
- Disaster mitigation
- Take preparedness to disaster
- Response to disaster
- Need to recover
- Reduce flood risk
- Disaster has no impacts on livelihoods and income
- Other (please specify)

27. Do you/your household members have any idea/information about climate change? (Choose one response):

- Yes
- No
- Do not know

28. If yes, what are the impacts of climate change? (Choose all that apply):

- Increase flood
- Inconsistent rainfall
- Heat/cold wave
- Increase thunderstorm
- Increase fog
- Increase nor 'wester/cyclone
- Drought
- Changing livelihoods
- River erosion
- Lack of water in rivers for agricultural cultivation
- Destroy crops/paddy/vegetable fields by flood, hail storm etc.
- Seasonal variation in weather
- Increase diseases and illness among the community people
- COVID-19

- Temperature rising
- Displaced
- Others (please specify)

PART D: FLOOD EARLY WARNING INFORMATION

29. Do you/your household members have well understanding on flood early warning system? (Choose one response):

- Yes
- No
- Do not know

30. Did you/your household members receive flood early warning information/ message in previous floods (2019 & 2020)? (Choose one response):

- Yes
- No

31. If yes, how did you get the flood early warning information that flood may occur in the previous years (2019 & 2020)? (Choose all that apply):

- Self-observation
- Observation by community people and friends
- Interpersonal communication
- Message by CDRT/CDMC/BDRCS volunteers/Community Organizer
- Was informed at yard discussion meeting that flood might occur
- Observed at the flood marker established at the community under IFRP
- Miking by CDRT and CDMC members of BDRCS
- Miking by GOs and other non-government organizations
- TV
- Social media/Facebook
- Chairman and Members of Union Parishad (UDMC)
- Representatives of Upazila Parishad (UzDMC)
- Mobile SMS
- Male members of household
- Others (please specify)

32. What did you do after getting the flood early warning information? (Choose all that apply):

- Take advice from CDMC, CO and BDRCS
- Inform other community people and neighbours that flood might occur
- Discuss and plan within own household to take actions before, during and after flood
- Prepare to take safe shelter/move safer locations
- Plan to shift the household assets at safer places
- Manage cash money for emergency purposes
- Inform community people and surroundings households to take safe shelter and preparation for flood measurements
- Plan to move livestock at safer places
- Preserve dry food
- Preserve necessary medicine
- Preserve kerosene oil, fuel, dry straw etc.
- Collect and preserve safe drinking water
- Communicate with the CO, CDMC, CDRT for further information and suggestions
- Contact with Upazila Water Development Board
- Safety and security of adolescent girl and women
- Safety and security of pregnant women
- Help women, elder people and children and provide them information about flood
- Keep enough money in mobile
- Cover tube well or water point for save water
- Wait for external assistance
- Communicate with CO for Community Disaster Relief Emergency Fund (CDREF)
- Others (please specify)
- Did nothing

33. Did you/households get any assistance during flood from CDMC and CDRT?

(Choose one response):

- Yes
- No

34. Did you get any support just after flood? (Choose one response):

- Yes
- No

35. If yes, from where did you get the support? (Choose all that apply):

- C-DREF (BDRCS)
- UP
- Upazila
- DC Office
- NGO
- Rich People
- Money lender
- Relatives
- Neighbours
- Human trafficker
- Others (please specify)

36. What types of preparedness/readiness measures did you take before flood/disaster? (Choose all that apply):

- Raise the household level
- Preserve food
- Save money
- Take information about the shelter centre
- Raise the platform of tube well and latrine
- Inform community people to be prepared for disaster/flood
- Regularly listen to news
- Stockpile food
- Store drinking water
- Store medicine

- Prepare safety kit (life vest, lifebuoy, torch, rope...)
- Prepare evacuation route and area
- Reserve fuel
- Check electricity safety
- Protect / raised belongings
- Move livestock
- Evacuate by order of local authorities
- Keep children from not going to school
- Strengthen local dyke
- Strengthen the house
- Prune trees around house
- Clean out drainage canal in field
- Prepare contact list of emergency call
- Keep all important documents in the prepared container (grab bag)
- Others (please specify)
- Don't take any preparation

37. What types of measures do you take during disaster/flood? (Choose all that apply):

- Shift properties and materials in safe places
- Take shelter on roads or shelter centres
- Advise others to shift and take safe shelter
- Work together to reduce the loss of disaster/flood
- Boil water for drinking
- Collect relief if provided
- Regular listening to news on disaster situation
- Participate in rescuing when required
- Help vulnerable people
- Do not allow children to play near risk areas
- Collect wood and catch fish on rivers, sea
- Strengthen the house
- Regularly checked water salinity
- Keep calm
- Save myself

- Save my family
- Ensure the safety and security of women and Girl
- Ensure women and Girl personal need-based product like sanitary napkin, dress and cover
- Call the local authority
- Others (please specify)
- Don't take any preparation

38. After a natural disaster, what should you do?

- Cleaning water sources
- Re-bult latrine
- Make vail for women for defecation and bath or wash
- Proactively prevent diseases
- Participate in relief work
- Check electric appliances before using
- Participate in village meetings to share experiences on disaster preparedness and response
- Report to local government about the effects of disaster
- Fix the public facility
- Other (specify)
- Nothing

PART E: WASH

39. What is the major source of drinking water that you/your household members are now using? (Choose one response)?

- Tube-well
- Pond
- River
- Canal
- Rainwater
- Others (please specify)

40. How far is the distance of the drinking water source from your household?

(Choose one response):

- Within household area
- Very near to household
- Little far from household
- Long distance from household
- Others (please specify)

41. During flood, from where did you get water for drinking? (Choose one response)

- Own tube-well
- Tube-wells installed by BDRCS at community and schools
- Tube-well of high land
- Pond
- River
- Rainwater
- School tube-well
- Tube-wells from local market/bazar
- Bottle water
- Others (please specify)

42. What kind of latrine does your household have? (Choose one response):

- Improved/sanitary latrine
- Not improved latrine
- Hanging latrine
- Have no latrine
- Others (please specify)

43. What kind of latrine do you/your household members use during flood?

(Choose one response):

- Own latrine
- Shared latrine
- School/institution's latrine

- Neighbours/relative's latrines
- Do open defecation
- Others (please specify)

44. Do you/your household members wash hands by using soap after defecation? (Choose one response):

- Yes
- No

45. Do you/your household members use sandal during latrine use? (Choose one response):

- Yes
- No

46. Do you/your household members know the 5 critical times of handwashing? (Choose one response):

- Yes
- No

47. If yes, when do you/your household members wash your hands? (Choose all that apply):

- Before cooking or preparing food
- Before eating
- After defecation
- Before feeding a baby
- After cleaning a baby's bottom or changing nappies

48. Do you/your household members know the proper hand washing technique? (Choose one response):

- Yes
- No

49. Did you/your household members receive any type of knowledge on hygiene behaviours and practices (hand washing, using improved latrines, using sandals while defecation, covering foods, drinking safe water, using tube-

wells water etc.) from courtyard discussion and Participatory Hygiene and Sanitation Transformation (PHAST) sessions? (Choose one response):

- Yes
- No

50. Do you/your household women and girl members use sanitary napkin during menstruation? (Choose one response):

- Yes
- No

PART F: COVID-19

51. How did you get information about Covid-19?

- Television
- Radio
- Website
- Social media (Facebook, Whatsapp, IG, Twitter, etc)
- Health workers
- Printed material (information, education, campaign material)
- Village leaders
- Family members
- Friends/neighbours
- Other (specify)

52. What kind of information have you received about COVID-19? (Choose one or more options)

- How to protect yourself from COVID-19
- The symptoms of COVID-19
- How COVID-19 is spread
- What to do if you have the symptoms of COVID-19
- Risks and complications COVID-19
- Other (specify): _____
- Nothing

- Don't Know

53. How does the Covid-19 virus spread?

- Inhaling droplets from infected person
- Inhaling airborne droplet / particles
- Having close contact with an infected person
- Touching contaminated surface or object
- Respondent reporting incorrect answer
- Other (Specify)
- Don't Know

54. What are Covid-19 prevention measures?

- Wash your hands with soap frequently
- Avoid contact with others (stay in your house)
- Maintain physical distancing
- Avoid touching eyes, mouth and nose
- Cover your mouth and nose with a mask when around others
- Cover coughs and sneezes
- Clean AND disinfect frequently touched surfaces daily (e.g., tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks)
- Monitor your health daily and be alert for symptoms (e.g., fever, cough, shortness of breath)
- Other (Specify)

55. What are the symptoms of COVID-19?

- Fever or chills
- Cough
- Shortness of breath or breathing difficulty
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or running nose

- Nausea or vomiting
- Diarrhoea
- Other (Please specify):

56. What to do if you have Covid-19 symptoms?

- Stay home
- Separate yourself from other people
- Wear medical mask, if you need to leave your house or have someone near you
- Avoid sharing personal household items (dishes, drinking glasses, cups, eating utensils, towels, or bedding)
- Clean all frequently touch surfaces
- Call health care provider for advice
- Monitor your symptoms
- Seek medical service
- Seek COVID-19 test
- Don't know

57. After COVID-19 emerging, did you practise the following hygiene and health measures? (Choose all that apply):

- Wash hand properly by using soap
- Maintain social distance
- Avoid mass gathering
- Sensitize others people
- Wear mask
- Stay at home
- Others (please specify)

PART G: HEALTH

58. Which following centres/facilities are available at your community for treatment purposes? (Choose all that apply):

- Mobile health camps organized by BDRCS
- Union clinic
- Union Family Welfare Center

- Community clinic of Govt. of Bangladesh
- Local paramedic/doctor
- Upazila/District private clinic
- District govt. hospital
- Upazila govt. hospital
- Pharmacy
- Traditional Kobiraj
- Satellite clinic
- Homeopathic doctor
- Others (please specify)

59. Had any of your household members suffered from any diseases during last floods (2019 & 2020)? (Choose one response):

- Yes
- No

60. If yes, from what types of diseases your household members suffer during last flood (2019 & 2020)? (Choose all that apply):

- Cholera
- Diarrhoea
- Dysentery
- Hepatitis
- Scabies
- Cold-influenza
- Fever
- Blood pressure
- Jaundice
- Pneumonia
- Others (please specify)

61. Did you/your household members receive any types of health-related supports/services (basic suggestions and basic medicine) from the health camps organized by BDRCS at your community? (Choose one response):

- Yes

- No

62. What types of support did you get from the health camps?

- Only health information
- Only Prescription
- Prescription of medicine
- Hygiene kit

63. What type of support did women get from the health camps?

- Sanitary napkin
- Delivery kit
- Anti-natal support
- Post-natal support

64.61 Question if yes, do you/your household members have now increased linkage and access to specialized doctors and health centres/facilities by attending health camps organized by BDRCS? (Choose one response):

- Yes
- No

65. Do you/your household members are satisfied by getting the supports/services from the health camps organized by BDRCS? (Choose one response):

- Yes
- No

66. If no, what should be done to make the community people more satisfied from health camp services of BDRCS? (Choose all that apply):

- Increase the frequency of health camps
- More medicine should be supplied to community people
- More specialized doctors should be hired
- Others (please specify)
-

PART H: SHELTER

67. Do you/your household members now know the technique to build a flood resilient house? (Choose one response):

- Yes
- No

68. If yes, how a flood resilient house can be built? (Choose all that apply):

- By raising plinth
- By CC pillar
- By using Screw
- By using colour tin for roof
- By using wood in place of bamboo
- By repairing old houses by changing roof, fence, wood, and pillar of the houses
- Others (please specify)

69. Did you/your household members take any type of measures/following (Participatory Approach for Safe Shelter Awareness) PASSA to make your house flood-resilient in recent years (from 2019 to 2021)? (Choose one response):

- Yes
- No

70. If yes, what types of modification did you bring to your house/shelters to make it flood resilient? (Choose all that apply):

- Raise plinth considering the flood level
- Use CC pillar
- Prepare wall and flood of house with bricks
- Repair old houses/shelter
- Others (please specify)

71. Are the shelters being accessible for PWD/age old people?

- Yes
- No

72. If yes, why do think the shelters are accessible for PWD/age old people?

- The shelters used ramp
- The plinth raised considering road
- Contains wheelchair

PART I: LIVELIHOODS

73. Have you/your household members received any training from IFRP of BDRCS for improving livelihood options in last 03 years? (Choose one response):

- Yes
- No

74. If yes, who have received the training of you/your household members

- Male
- Female

75. If yes, what types of training you/your household members have received? (Choose all that apply):

- Training on agriculture
- Training on animal-husbandry rearing
- Training on small business/retailing
- Training on tailoring
- Technical training (computer, mobile repairing)
- Homestead Gardening
- Training on business planning
- Others (please specify)

76. Do you think this training influence or increase woman livelihood or make any change the condition of the women life style.

- Yes

- No

77.If yes, how this training was helpful to increase your/your household member's capacity to earn more? (Choose one response):

- Fully
- Partially
- Not increased

78.If yes, was this livelihood training help to increase income generating activities? (Choose one response):

- Yes
- No

79.Did you receive any livelihood support from IFRP of BDRCS? (Choose one response):

- Yes
- No

80.If yes, what was the type of the support? (Choose one response):

- Livestock (cattle) support
- Agricultural support
- Rickshaw/Van/Auto support
- Small business-cash support
- Tailoring /sewing machine & cash support
- Technical/Mechanical support
- Net and boat support
- Poultry support
- Others (please specify)

81.If yes, do you think that the livelihood support has been helpful to increase your/household income/earning? (Choose one response):

- Yes
- No

82. If yes, for what purposes you/your household members are using this money? (Choose all that apply):

- Expense for children education
- Buy food for family
- Buy medicine for family
- Reinvest money
- Buy cattle/goat
- Invest repair house
- Invest for improved wash facilities
- Family recreation
- Marriage
- Dowry
- Buying land
- Loan payment
- Others (please specify)

83. Do you/your household save money from the earning? (Choose one response):

- Yes
- No

84. If yes, where do you save the money? (Choose all that apply):

- Bank
- NGO
- Self/own home
- Local Cooperative
- Others (please specify)

85. Have you bought assets from these money?

- Yes
- No

86. If yes which asset?

- Land

- Ornament
- Bi-cycle
- Motor cycle
- TV
- Van
- Rickshaw
- Making house
- Repairing house
- Others (Please specify)

87. Has your wellbeing improved?

- Yes
- No

88. If yes, what type of wellbeing improved?

- Economic solvency improved
- Child education increased
- Food secured
- Housing condition improved
- Social status increased
- Women participate for decision making
- Investment increased for girl child education
- Others (Please specify)

PART J: COMMUNITY RESILIENCE

89. Do you have any idea about community resilience?

- Yes
- No

90. If yes, what do you mean by community resilience?

- Increasing disaster response capacity
- Increasing food security
- Increasing health safety

- Increasing household income
- Not hampering income sources during disaster
- WASH infrastructure don't damage during disaster
- Road don't damage during disaster
- Shelter don't submerge during flood

91. What are the criteria of a flood resilient community? (Choose all that apply):

- Have access to information
- Have connectedness to external stakeholders
- Can take preparation to flood
- Have a Community plan of Action
- Have a well-functioning local flood early warning system
- Have a Contingency plan
- Have organized and capable community volunteers
- Have established CDREF
- Have enough search and rescue equipment for flood response
- Have Flood/disaster resilient houses
- Have alternative and sustainable livelihoods options
- Sufficient WASH and health facilities
- Capacity to earn and save money for flood period
- Capacity to recover from flood/disaster situation
- Do not know anything
- Others (please specify)

92. After phasing out of IFRP, what will you do for your community? (Choose all that apply):

- Utilize the Community Gathering/Meeting Place for knowledge dissemination
- Utilize the knowledge gathered from IFRP
- Increase the communication with local institutions (UP), Upazila/District Water Development Board and BDRCS
- Discuss among ourselves for improvement DRR situation
- Keep the community volunteers (CDRT, CDMC) motivated to work before and during flood period
- Maintain and keep the developed flood early warning system effective

- Others (please specify)

93. Do you know about Community Disaster Relief Emergency Fund (CDREF)?

- Yes
- No

94. How the CDREF generated?

- Contribution from IFRP
- Self-contribution
- Contribution from UP
- Contribution from Upazila Parishad
- Contribution from local elite
- Contribution from NGO
- Contribution from local businessmen
- Others (Please specify)

95. How this fund is used?

- Buying food during disaster
- Buying medicine during disaster
- Buying water during disaster
- Repairing houses after disaster
- Repairing WASH infrastructure after disaster
- Repairing road before disaster
- Repairing road after disaster
- Others (Please specify)

96. Do you wish to continue this fund?

- Yes
- No

97. If yes, why do you wish to continue this fund?

- Fund support in disaster prepared
- Fund support in disaster recovery

- Fund support tin disaster response
- Fund helps to buy food during disaster
- Fund helps to buy medicine during disaster
- Fund helps to buy water during disaster
- Fund helps to buy houses after disaster
- Fund helps to repair WASH infrastructure after disaster
- Fund helps to repair road before disaster
- Fund helps to repair road after disaster
- Fund helps to contribute for disaster risk reduction of poor people
- Fund helps in emergency response without dependency on others people

98. Please share your recommendation for improving the result of community resilience programme in future? -----

99. What is level of satisfaction about IFRP programme implementation at your community? (Choose one response):

- Highly satisfied
- Satisfied
- Moderate satisfied
- Little satisfied
- Not satisfied

100. May I take a photo of you?

- Yes
- No