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Role of Microfinance Institutions to Enhance Food Security in the Climate Change Context: Gender based analysis of rural poor community of Bangladesh



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Submitted by

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1. Introduction

Principal goal of this study is to examine the impact of climate change on the food security of rural poor women and what Microfinance Institutions (MFIs) are doing to enhance their food security in the context of climate change. Further, by identifying the problems and expectations related to present forms of MFIs it intends to explore the expected model of MFIs, which would ensure food security for the rural poor women.

In order to achieve the goal of this project following five objectives have been finalized

- I) To identify the impacts of climate change on food security of rural poor women.
- II) To investigate the changes in women daily labor and life style to ensure household food security in the climate change context.
- III) To examine the role of Microfinance Institutions to address the changes in the lives of rural poor women due to climate change and to ensure their food security.
- IV) To inspect the problems, constraints and expectations related to present forms of Microfinance Institutions to enhance food security of rural poor women in the climate change context
- V) To explore a new and expected model of Microfinance Institution to enhance food security of rural poor women in the climate change context

In order to achieve all the above mentioned objectives several research questions are needed to be answered. This project seeks the answers of following objective oriented research questions.

- a) What are the changes in the food availability, accessibility, affordability, and consumption patten (quantity and quality of food) of rural poor women in the context of climate change?
- b) What are the changes in the daily labor, life style and economic activities of rural poor women to ensure food security in the context of climate change since last 15-20 years?
- c) What are the contribution/role/activities performed by Microfinance Institutions (MFIs) to enhance food security of rural poor women in climate change context?
- d) Whether the women's food security has been improved after becoming member of MFIs or not?
- e) What are the problems and constraints related to present forms of Microfinance Institutions to enhance food security of rural poor women in the climate change context?
- f) What are the expectations of women to the present forms of Microfinance Institutions to enhance food security in the climate change context
- g) What actions/changes should be incorporated to redesign the present forms of MFIs and thus to ensure food security of rural poor women in climate change context?

2. Progress on setting up research

All the research questions have been incorporated in a household questionnaire survey, survey of Microfinance Institution and Focused Group Discussion (FGD). During formulation of questionnaires and organizing group discussion, the prime challenge was to differentiate the impact on food security induced by climate change and the impact induced by other factors.

Women who are the target group of this research cannot clearly make this distinction. Since poor, rural people, and especially women, have little understanding about climate change, it was difficult and time consuming to get their views about the impact of climate change in their lives, daily labor and food security. However, climate change is affecting coastal communities of Bangladesh, in addition to other factors (IPCC, 2007, Parvin et al. 2008 and Parvin et al. 2010). This is changing women's livelihoods, increasing hardship in their daily life and lowering food security. Field level personnel of Microfinance Institutions also do not have much understanding about climate change and its impact on women's life.

In spite of having little understanding about climate change and its impacts on poor women's food security, both the local community and MFIs in the study area were cooperative in providing support during field investigation and expressing their views and perceptions. MFIs officials and local leaders helped to identify and get access to the households who are MFIs beneficiaries. In different villages FGDs were organized with the help of local leaders and MFIs officials. Therefore, no noticeable logistical difficulties were faced to conduct this research till now. From the beginning budget has been monitored carefully and the expenditures done till now fit well within the work plan provided earlier.

3. Research Methods

The major methodological steps are as follows-

I) Conceptualization of the Problems

Extensive review of literature, previous researches related to climate change, Microfinance Institutions and women empowerment and food security have facilitated to conceptualize this research problem.

II) Selection of the Study Area and Justification

Study area for this research project has been selected based on the review of literature and previous studies related to climate change. Majority of coastal people are low income agricultural workers and their lives and livelihoods are vulnerable to climate change (Mo WR, 2005). In addition to impact of climate variability on agriculture, salinization of drinking water sources is also becoming a major problem (WEDO, 2008) in south-west coastal areas of Bangladesh. In this context urgent research and initiatives are needed to address climate change impact on food security of coastal areas; especially among poor women, who are the most vulnerable among all in the study site. Below is a map of the studied villages.

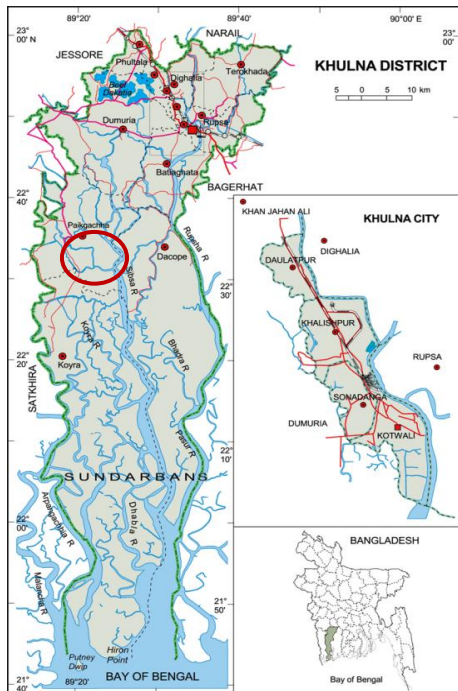


Fig.1 Paikgacha Thana in Khulna District

Source: <http://www.banglapedia.org/>

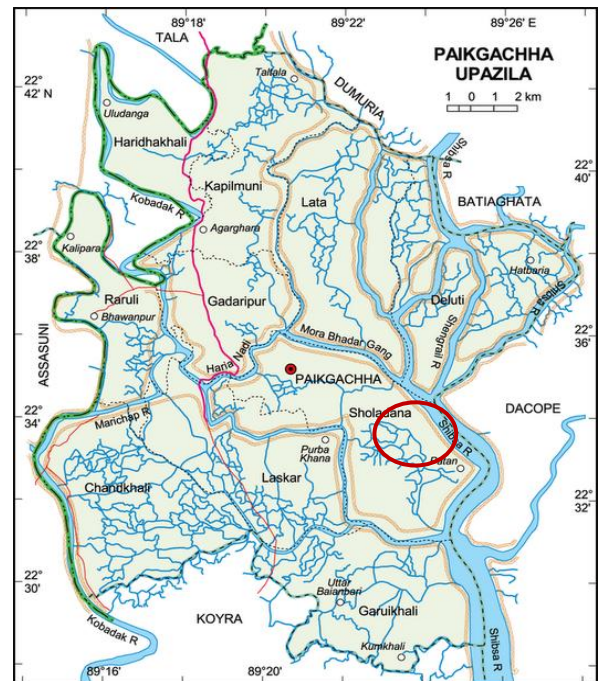


Fig.2 Studied Villages in Paikgacha

Three villages named Horikhali, Soladana and Boyarjhapa of Paikgacha Upazila of Khulna district have been selected for this project. According to the Thana Nirbahi Officer (TNO) these are the poorest villages in the upazila. These villages are located at the southwestern coastal areas of Bangladesh. . Since the villages are located in the coastal areas of Bangladesh and accommodate poor rural communities, where a number of MFIs are working for the poor women, these villages are critically important for this study.

III) Data Collection Approaches

Secondary Data Collection

Base map of Paikgacha Upazila has been collected from the web site <http://www.banglapedia.org/>. Basic information related to Paikgacha Upazila and the selected 3 villages has been collected from the office of Thana Nirbahi Officer (TNO) and Union Parishad (local level administrative office). This basic information mainly includes demographic information, information about infrastructures, socio-economic condition, prime natural disasters, climate related changes in the areas and their impact, and finally the Microfinance Institutions (MFIs) that are working in the study areas.

Primary Data Collection

Field investigation, semi-structured questionnaires and Focused Group Discussion (FGD) were the principal tools for primary data collection for this project. Household questionnaire survey was conducted by random sampling among the beneficiaries who are poor women in different MFIs working in the three studied villages. Total 120 samples (women member of MFIs) have been finally determined after knowing the total number of women who are member of different MFIs for at least 3 years. During determining sample size it has been tried to make it statistically sound and representative of the community.

Presently 6 MFIs (all are NGOs) have their programs in the studied villages and all these MFIs have been investigated and interviewed for data collection. In addition to these questionnaire surveys, total of 4 FGD were organized; one in the *Upazila sadar* and three in 3 studied villages. In the FGD, including officials of MFIs, agriculture extension workers, union *parishad* chairmen, members, school teachers and local people total about 25-30 persons were presented. These people expressed their opinions related to climate change and its impact on women's food security, and what MFIs are doing to enhance poor women's food security.

As mentioned earlier, it was difficult to differentiate the impacts induced by climate change and the impacts induced by other natural or man-made factors. However, long and informal discussion with the respondents allowed them to be aware about climate change and its induced impacts on lives, livelihoods and food security. Great support and cooperation were extended by the local community, MFI officials and local leaders that made it easy for me to gain access to the community and collect adequate data.

IV) Data Processing, Analysis and Report Writing

All data collected is now being processed by using Statistical Package for Social Scientist (SPSS). After completion of data input and processing, different statistical analyses such as descriptive statistics, cross tabulation, correlation and regression, etc. will be conducted to understand the study site and to investigate the cause-effect relationship between climate change, food security and women. Based on these findings and analysis, a final report will be prepared.

Since data input is not completed at this moment, statistical analyses are not included in this technical report.

4. Analysis of Findings

4.1 Climate Change Impacts in the Study Area and People's Perception about Climate Change

The term "climate change" itself is not familiar to local people. But when they are asked about the changes they have noticed in the present climatic condition compared to last 15-20 years, they can recognize remarkable changes in temperature, rainfall pattern, natural disasters, salinity

intrusion and water availability that are directly or indirectly related to climate. It should be noted that there is no significant differences between men and women in terms of their perceptions regarding climate variability. The following changes can be noticed in the climatic condition of the study villages according to the perception of the local communities.

Temperature

In coastal communities, the elderly especially claimed that there has been an overall perceptible increase in temperature all year round since last 15-20 years. Summers have become significantly hotter, and winters have become warmer. However, they also reported experiencing very erratic and severe cold for a period of 5-7 days each winter, which temporarily restricted their activities. Majority in the community including women of all ages have agreed that the warm weather now lasts longer. As a result, the cropping season and harvesting time have shifted. Respondents (women) also affirmed that changes in the summer and winter temperatures have had very destructive effects on everyday life and health, especially that of children and the elderly.

Rainfall

Respondents' perception related to rainfall is contradictory in many cases. Some people think rainfall has decreased and in contrast some people think rainfall has increased. According to the elderly, since last 15-20 years there are significant differences in average rainfall amount in different years. One year there is too much rainfall and another year people suffer for lack of adequate rainfall. So it is difficult for people to decide whether rainfall increased or decreased since last 15-20 years. But all have noticed that rainfall pattern and season have changed and no one can predict the accurate time of rainy season. IPCC fourth assessment report also claims that climate change will alter the precipitation/run-off (IPCC, 2007). This type of change in the rainy seasons has severe impacts in the lives and livelihood of rural communities of Bangladesh, since majority of the people are directly or indirectly rely on agriculture, which is highly susceptible to salinity. Although the poor in the study area do not conduct agricultural activities but rely on fishing, daily labor in the shrimp farms, small trade, they all suffer from high rainfall vulnerability.

Salinity Intrusion

It is estimated that about 100% population of three main south-western coastal districts Satkhira, Khulna and Bagerhat are suffering with salinity, which is one of the major vulnerability contexts of the poor in these districts (Rashid, 2004). Due to sea level rise, establishment of unplanned dams and embankments and spread of shrimp farming, salinity intrusion in this coastal region is increasing (MoEF, 2005).

About 2 decades before shrimp farming flairs in south-western coastal areas including this study area. At that time salinity intrusion in agricultural land was done by the farm owners. . But now

local people, including different institutions working in the study area, claimed that since last 5-7 years salinity intrusion has become severe due to climate change. People noticed that the salinity level of the water of their surrounding rivers increased, due to sea level rises. It should be noted that the Bay of Bengal is only about 10km away from this study area. Furthermore, as the height of tidal surges increase, river water that is mixing with the saline seawater is now submerging their agricultural land, threatening livelihoods.

Among all the impacts of climate variability, salinity intrusion has the most severe impacts in the lives and livelihood of poor in the study area. Almost all the poor have changed their economic activities since last 15 to 20 years due to this gradual increase of salinity. About 2 decades before more than 80 % of the poor conducted agricultural activities. They and their next generations are now engaged in fishing, shrimp farming related daily labor, small trading or van and rickshaw pulling in the nearby towns. According to local people and thana agricultural extension officer, due to salinity intrusion, agricultural activities have been almost demolished and crop production decreased more than 3 times. Except a few homestead gardens there is no vegetable gardens in the three study villages. Livestock can hardly be seen in the study area, as there is no grazing field and almost no paddy field. The green beauty of Bangladeshi villages is fully absent in the study area, as there is almost no plant and trees except few which are highly saline tolerant. Poor people claim that before they could grow at least some crops and vegetables in their small amount of lands and that contributed much to their dietary requirements. But now as they are not able to produce anything due to salinity, they need to buy all kinds of food and vegetables, which is sometimes very expensive for them with their limited income. Furthermore, those who are now engaged with fishing and shrimp fry collecting from rivers claim that due to increase of salinity in the water, river fish species and shrimp fries have been significantly reduced. Therefore, they can catch far less amount than before leading to reduced income. Additionally, salinity has caused severe scarcity of drinking water. Rain water is now the prime sources of drinking water in the study site. Sometimes women need to travel 1-2 km to collect sweet water from tube-well.

Frequent and Severe Natural Disaster

Respondents, especially the elderly women have noticed that compared to the last 15-20 years both frequency and severity of natural disasters have increased in their locality. Within last 5 years they have faced 2 devastating cyclones with very high tidal surges, which generally do not happen within such short interval. They suspect that this type of changes in natural disaster also might be a cause of the overall changes in the climatic condition in the study area. In fact, Fourth Assessment Report of IPCC already supports that sea level rise and rise of the sea surface temperature will cause an intensification of tropical cyclone and extreme waves and storm surges (IPCC, 2007).

People in the study area stated that among the two devastating cyclones, cyclone Aila imposed the most severe impacts in their lives and livelihoods. It washed away all the belongings, including shelter of the poor. Whole areas of the three studied villages were inundated for

months. There was no food and drinking water. Water born diseases like diarrhea affected hundreds of people (UNDP, 2009).. Findings from other research also reveal that despite numerous humanitarian interventions, since after two years of Cyclone Aila, communities have not yet managed to get back to the same standard of living they had before. In many places salt water that had covered the arable land still remains, portable water is very difficult to access, sanitation situation is crucial and health centers, schools and such other important infrastructures are not fully active yet (Raillon, 2010).

Cropping/Agriculture/Gardening

Due to salinity intrusion shrimp farming became popular in this study area since early 90s. Rapid and uncontrolled conversion of agricultural land (paddy field) into shrimp farm has changed the total agricultural practice of the studied villages. Now except few homestead gardens there is almost no agricultural practice in the villages. Before starting massive shrimp farming generally about 550-660 kg paddy produced in 1338 sq meter of land (in local measurement unit 5-18 mond paddy in 1 bigha;1 mond = 37.1 kg. and, 1 bigha land = 1338 sq m.). But according to the farmers experience now if any farmer tries to produce rice, the production will decrease about 3 times than before.



Fig.3 Homestead Gardening

“Rain Water Harvesting (RWH): Source of Sweet Water”

Since salinity is a severe problem in the study area. There is 1 tube well which is 2-3 km away from the study area. Except this, there is no tube well with sweet water which is safe to drink. Rain water is the prime source of villagers’ drinking water. Uttaran and Prodipan two famous national NGOs have installed rain water harvesting plants in a community and the community paid 37 US\$ (about Taka. 3050, 1 USD=82 Taka, as per the value in May 2012) at their first

installment. Union *Parishad* office also provides water tank for a single family and they took Taka 3000 (USD 36.5) at the first installment. About 30% of the families use rain water harvesting plants as a first source of drinking water. However, many families collect rain water with indigenous technology but many households also use pond water as a second drinking water source.



Fig.4 Rain Water Harvesting Plant as source of Drinking Water

4.2 Impacts of Climate Change on Food Security of Rural Poor Women

The availability of food has decreased in most of the families of the studied villages since last 10-20 years. According to the responses of the women, the primary causes behind such decrease in food availability in the study area are mainly reduction of income, loss of employment, reduction of crop yield, increase of food price and increase of family expenses. Some women are not able to establish any link between the impact of climate change and the decrease of food availability of food. However, More than half of the respondents think that climate change is a factor. Now- a-days the income generating activities are also decreasing. Presently there are only daily labor and fishing type activities for the poor women. However, these are also very competitive to access.

According to the responses of the women the accessibility of food is also decreasing to some extent since last 10-20 years. The distances of food market or shops are in the same position after the cyclone Aila, but since the cyclone, access to roads that connect to markets or shops have deteriorated. Further, since there is no agricultural crop produced in the study area, food accessibility for women and their families has decreased.

Since both the availability and accessibility to food have been decreased, majority of the families have changed their food consumption pattern since last 10-20 years. Overwhelming majority of the respondents supported that both quality and quantity of food consumption have been deteriorated. They said that number of meal per day decreased to 1 or 2, which was generally 3

meals before. Due to the changes in the climatic condition stresses on job availability and consequently stresses on food security have been increasing since last several years. In addition with this situation, cyclone SIDR in 2007 and later cyclone Aila in 2009 have imposed severe hardship in finding suitable jobs, enough income, and food to consume daily. Though this hardship to ensure food security has affected family's food consumption pattern majority of the women have agreed that, their food consumption pattern (both quantity and quality) is relatively lower than men in the entire villages. Women eat both less quality and quantity of food due to lowering their food security.

It should also be noted that according to the respondents, not only the food consumption of the women has decreased, but their daily hardships to ensure food security for their families have increased since last 10-20 years. In the villages, the working opportunities significantly decreased and that is why hardships have increased in terms of earning income for food. According to the poor women, in addition to the lack of employment opportunities and adequate income which they perceive as climate change related the rapid increase of food prices in last few years have made their hardship, unbearable.

4.3 Changes in Women and Men's Daily Labor and Life Style to Ensure Household Food Security in the Climate Change

As mentioned earlier, rural poor women claimed that their the daily labor and hardship (both in terms of working hours and labor) have increased in order to ensure food security since last 10-20 years. Working hours have been increased to earn more so that can acquire adequate amount of food for their family members. Women also need to spend extra money to buy fuel, unlike in the past. Since there is no agricultural activities, no grazing field for livestock and not much trees and plants in the villages, women cannot collect firewood from their surroundings. Therefore, these women buy firewood from those (mainly men) who collect fuel from the Sundarbans and sell at local market.

The studied rural poor women also have stated that their life style and economic activities have changed to ensure food security since last 10-20 years. They need to wake up early and they have to reduce leisure time. For instance, a large number of women are now engaged in shrimp fry collection in the rivers. But due to increase of salinity shrimp fry has reduced remarkably. Therefore, compared to the previous years, women spend t longer time to catch few number of fries (baby shrimp), which give relatively lower income when selling to shrimp farm owners. Compared to the agricultural activities that were available 2 decades ago, women also need to do manual labor, such as constructing shrimp farms and construct of local roads under the food for works program funded by the Local Government and Engineering Department (LGED). Four to five years ago, most of these women worked for shrimp farms and they were appointed to clean weeds from the farm's beds. At that time most women worked 6 hours per day. After working in the shrimp farm, they are obligated to take care of their family or have another job, like fry catching or sewing clothes for extra income. They used to work for the shrimp farms for 6-7 months to clean the weeds and it was a stable job. The average pay rate was Taka 30-40 (about 0.45 US\$) per hour. But this weed cleaning job is now reduced to 1-2 months over the last 3-4 years due to increase of salinity, especially after cyclone Aila. As an alternative most of them are now working as day laborers as mentioned earlier. Those who are not strong enough to do such

manual labor are unemployed. The payment for a day labor is high compared to working in a shrimp farm. It is about Taka 70-80 per hour. But the working hours and opportunities to work is very low. Now they usually hire for four hours a day and the job is only available for 4 months in a year. The wage rate is high but average income is about 30 to 40% low compared to last 5-6 years.

Job scarcity, low income and higher food price have made poor women change their life style, reduce leisure time and work hard so that they can somehow survive in this difficult situation. In addition with this situation influenced by climate change, women are now trying to work more to pay the installments of MFIs. Since their income reduced, their indebtedness has been increased and they use to take loan from different sources to meet their daily needs and especially to buy food in slack season and disaster time.

The daily wage of a woman is Taka. 80 (about 1 US\$, till January 2012 it was Taka. 50-60) and man's daily wage is Taka. 120 to 200. Men are mainly engaged in fishing, shrimp field preparation, shrimp farming, van and rickshaw pulling, and working as day labors in nearby towns. Estimating the exact amount of average monthly family income is difficult, since they are mostly daily paid labors and their working days varies in different months. Men earn about Taka. 5000-7000 (US\$ 60-85).



Fig.5 Women's earth work at shrimp Farm



Fig.5 Woman in Fishing



Fig.6 Man in Fishing



Fig.7 Children are also engaged in Shrimp Fry Collection

Men who fish in rivers said that due to increase in salinity, fish catches reduced remarkably, that has reduced their income. Their daily labor and hardship of women have been severely increased. Consequently, women's food security will be threatened more than men since women's prime income earning activities are based on shrimp collection, which is more susceptible to the negative impacts of salinity with sea level rise. Furthermore, compared with men, women have fewer opportunities to search for alternative livelihood to cope or adapt to climate change.

4.5 Introduction of MFIs working in the study Areas

Name of the MFIs

Microfinance is defined as the delivery of small loan, savings, insurance and other financial services to the poor so that they can generate income opportunities, build assets base, stabilize consumption and protect themselves against risk (Hammill, 2008). Though Microfinance Institutions (MFIs) can be different types, in Bangladesh Non-Governmental Organizations (NGOs) are the prime providers of microfinance to the poor. It is estimated that there are more than 1200 certified Microfinance Institutions (MFIs) with over 13 million clients (CDF 2002, cited in Agrawala and Maelis 2010). Further, it is also estimated that more than 400 NGOs are working in coastal areas. But there is no estimation about the number of MFIs working in coastal areas. These MFIs are working almost all over the country and addressing the vulnerable and disadvantaged communities.

Field investigation finds that there are 6 noticeable NGOs are operating their Microfinance Programs in Horikhali, Boyerjhapa and Soladana villages of Paikgaha thana. These are Association of Social Advancement (ASA), Bangladesh Rural Advancement Committee (BRAC), Sabalamby Unnayan Samity (SUS), UTTARAN, Prodipan and BUREAUE BANGLADESH. These MFIs have been working in the village since 10-12 years. Apart from these MFIs, there is a bazaar named Horikhali besides the village, the *Bazaar Sammeete* also provides loan to the villagers.

Target Group

Similar to the approach of Grameen Bank, the founder of microfinance program for the poor the beneficiaries of most of the MFIs in the study area are the poor who have 0.5 acre or less than this amount of land. The women who are poor are the main target group MFIs. The age limit of these women is generally 18-52 years. Besides these, some MFIs welcome small percentages of poor male members as their beneficiaries.

Though it is often claimed that the extreme poor can hardly become the beneficiaries of MFIs in the study area Uttaran provide credit to the hard core poor and those who are landless.

Amount of Disbursed Credit and Sectors of Uses

Fishing, trading, rearing domestic cattle and vegetable cultivation, small farming and share cropping are the main sector of credit disbursement in the study area. Since the prime economic activities of the poor in this study area are related to fishing and small trading, these two sectors comprise major part of the disbursed credit. Poor use their credit to buy fishing net and to do trading. Buying rickshaw van is another common purpose of credit use in this area. Besides these, most often a part of the credit is used for consumption, children's education, treatment and to pay back other credit. Interesting as well as a common fact is most of these families have an average 3 loans from different sources. So they take the loan from one MFI and pay the installment of other MFIs.

Different MFIs have different ranges of credit disbursement pattern. Generally the minimum amount of MFIs in this area is about Taka5000 and maximum amount goes up to Taka 200,000 (for small entrepreneurs). For the poor usually the amount of microcredit varies within Tk. 5000-Taka20000. Officially the beneficiaries have to pay 15 percent interest. (1 US\$=Taka82 appx., as per value in May 2012). However, beneficiaries of MFIs claim that MFIs receive 33%-38% interest rate from them and from the savings deposited at MFIs office beneficiaries get only 10% interest.

4. 5 Roles of MFI

Special Support and Approaches after Disaster

MFIs also perform humanity activities such as distributing emergency food support not only for their beneficiaries, but also to others after any natural calamity. After any disaster, especially devastating ones like cyclone Aila, most of the MFIs postpone their weekly installment collection for few weeks. For example, after cyclone Aila, Uatran provided financial aid to start small businesses among the severely affected beneficiaries, material support, food and drinking water. SUS provided low interest (4% interest) business loan, housing loan and some cases housing materials. BRAC supported the poor farmers with no interest loan under the ACP (Agricultural Credit Program) to encourage farmers to produce alternative climate adaptive crops such as beans, corns and sunflower to adapt to climate change as they require very low amount of water.

Efforts to address Climate Change, Gender and Food Security

MFIs were asked about their personnel expertise and knowledge about climate change and disaster management. None of the MFIs have climate change or disaster management expertise at the field level. Among the local staff the level of understanding about climate change varies. In most cases the local staffs are informed or have heard about climate change, but how that affects the local communities and up to what scale is not clear to them. Among the staffs of Prodipan and BRAC the understanding about climate change is relatively better. But recently most of MFIs are trying to incorporate climate change and disaster preparedness awareness

among their staff with short training courses for the benefit of employees and beneficiaries. Most training, however, focuses on disaster preparedness and early warning system, and not climate change adaptation.

During interviews, most of the MFIs officials recognize the impacts of climate change in the study area in the forms of temperature variation, rainfall irregularities (heavy rain in the off season and low rain in the rainy season), water stress, salinity intrusion and increase of frequency and severity of natural disasters. However, none of the MFIs in the study area have programs directly addressing food security issues of poor women in the context of climate change. They also have no programs to address climate change impacts and adaptation issues directly. But most MFIs officials recognize different impacts of climate change along with increase of food price, debts, , and food insecurity that have affected their beneficiaries, especially after Cyclone Aila in 2009.

After Cyclone Alia, most of the households received loans to start economic activities and housing loan (about Taka 20,000 or about US\$ 245) for construction. A major portion of this money was used to buy basic needs like foods, clothes, beds, and utensils. Since the housing loan was large compared to their income, it increased their debt burden. Most of MFIs beneficiaries spend 70% of their weekly income to pay back loans of different MFIs, increasing their food insecurity. The women claim that after the cyclone, they eat at least two times a day but now many one meal a day to repay loans. Currently MFIs are not tackling these issues. According to the responses of both men and women in the study area though the MFIs intend to create alternative income or business to start new life with the use of their loan authority never bother what beneficiaries do with the loan.

4.6 Problems, Constraints and Expectations Related to Present forms of Microfinance Institutions to Enhance Food Security of Rural Poor Women in the Climate Change Context

According to women beneficiaries of MFIs, there are different problems related to present forms of MFIs. Firstly, they claim that MFIs are very strict in their policy on loan recovery. Regardless of any emergency, family crisis, shocks or job loss due to natural disasters, they need to pay back loans on a weekly basis. Therefore, sometimes they become bound to borrow from other sources to pay back a loan, which increases their indebtedness. Furthermore, the high interest rate of MFIs' loan is significant problem for the beneficiaries. MFI officials claimed the interest rate is 15% but the beneficiaries stated that it is actually 33%-38%. Beneficiaries also claimed that the climatic condition and eventually their income earning opportunities are changing,; but MFIs have no concern related to.

Since women's job scarcity is increasing and income is decreasing day by day just to maintain their food security, poor rural women expect a lot from the MFIs. The MFIs are redesigning their policy so that loans are paid in six months or yearly. Such new mechanism could help, but in long term, the interest rate is too high to pay back for those rural poor communities.

Poor women demand support and training so that they can have alternative income earning opportunities rather doing daily labor and shrimp fry collection. Since most of their housing condition is poor against cyclone and tidal surges, overwhelming majority of the poor women expect housing materials as aid so that they can have secured homes. Provision of health and education supports by MFIs is also demanded by many beneficiaries. After experiencing cyclone SIDR and cyclone Aila, along with the women beneficiaries most of the villagers are interested to receive training from MFIs to learn about climate change impacts, adaptation and disaster preparedness.

5. Conclusion

Similar to other places in developing countries, women in the study area (Horikhali village, Paikgacha, Khulna, Bangladesh) have little understanding about climate change and its induced impact on their lives and livelihood. However, climate change is affecting coastal communities of Bangladesh, as well as other manmade factors. This is changing women's livelihoods, increasing hardship in their daily life, and lowering food security. A number of Microfinance Institutions (MFI) are trying to create alternative employment opportunities for women by providing microcredit. However, MFIs also have limited understanding about climate change and its impact on women's life. Therefore, there is a great need to conduct research on gender and climate change issues focusing on how institutional efforts, such as microfinance can help women adapt to impacts of climate change.

Building perception and awareness related to climate change among the local community is important. To build the sense of responsiveness to changes in the environment and biodiversity, messages are needed to communicate to the both men and women in the study area about these changes. It is important to communicate to the farmers (especially the shrimp farm owners) about the long term effect of uncontrolled shrimp farming and conversion of agriculture fields to shrimp farms. Female farmers need to be trained about the importance and ways of homestead gardening, plantation and alternative income generating activities for their food security beyond shrimp farming.

Policy makers need to address the problems, expectation and potentials of local communities, especially that of women. Policy makers need to highlight the role of MFI and their need to address climate change and food security when offering loans to women. Policy makers should also highlight the need to create a balance between agriculture and shrimp farming, and to evaluate the role of these two activities in climate change adaption and environmental protection. It is noticed that salinity intrusion due to climate change and shrimp farming has benefited mainly the upper class of the community (land owners). Therefore, concern about the majority who are poor is an urgent need.

Progress and further tasks to be done in next six months

Information collected through intensive field investigation, household questionnaire survey, survey of microfinance institutions and focused group discussion in last six months reveal that the progress to achieve objectives of this research project is satisfactory. The pace of work is also good to reach to the goal of this research project. So far no major constraints have been faced in collecting the information. It is expected that this project will go smoothly and will attain satisfactory outcomes in next six months.

Further tasks that will be done in next six months are:

- I) Data input and processing by using Statistical Package for Social Scientist (SPSS)
(already going on)
- II) Statistical analysis of collected data and interpretation
- III) Few Case Studies (among MFI beneficiaries)
- IV) Developing an expected Model of MFI that would facilitate to enhance food security of poor women in the context of climate change
- V) Writing of publishable international journal article
- VI) Writing final research report to submit to the donor.

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ANNEXES

ANNEX 1

Questionnaire for Household Survey

Research Title: Role of Microfinance Institutions (MFI) to Enhance Food Security in the Climate Change

Context: Gender based analysis of rural poor community of Bangladesh

Name of the MFI the Respondent belongs to.....	Questionnaire No.....
Year of membership.....	Interviewer:.....
Union, Ward &Village:.....	Date:.....

We are members of a Non-Government Organization named **Pathikrit- A Social and Human Development Organization, Khulna, Bangladesh**. The information collected for this study is confidential and nobody will be able to identify you or use the information against you. To make sure of this, we will not write down your name so you can speak to us freely. All information provided by you would be used only for academic research purpose.

PART A

Demographic and Household Information

1. Gender of the Head of the household a)Male, b) Female,
2. Age of the head of the householdyears
3. Education level of the head of household
4. Religion of the head of household.....
5. Age of the respondent (female member of HH who is member of MFI).....
6. Educational level of respondent.....
7. Occupation of the respondent.....
8. Average weekly Income of the respondent Tk.....
9. Household size.....
10. Number of dependent members in the household, Children No. (within 15years)..... Elder (60 + years).....
11. Condition of house- Kutcha Semi-pucca Pucca
12. What is the main source of drinking water? 1. Pond, 2.River/pool, 3. Well, 4. Tube-well, 5. Rain Water, 6. Other (specify),
13. What is the following toilet system your family currently uses?

a. No facility, bush, field	b. Latrine (i. Katcha, ii. Pit latrine, iii. Pacca Sanitary latrine)
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PART B

Nature of Income and Occupation and Perception about Climate Change

1. Information about occupation and income of the income earners of the household

Total No. of Income Earner:	Total amount of HH income/month :
The HH is primarily depends on: a) Agriculture, b) Fisheries, c) Livestock /poultry, d) Business, e) Day labor, f) Other (specify)	
Mention about any other source of income: Source.....Income (per month):	

2. To what extent are the main income earner satisfied with his/her present prime occupation?

- a) Highly Satisfied, b) Satisfied, c) Not so satisfied, d) Fully unsatisfied

Reasons behind the response above.....

3. If anybody else wants to do this job, how do you assess the future prospect (after 10- 20 years) of this occupation?

- a) Will flourish in future, b) Will remain as present, c) Will decline from its present condition, d) Cannot do this job at all, e) Don't know

Reasons behind such reply:.....

4. Since last 5-10 years how many times your family's main occupation changed?

- a) Never change, b) Once, c) Twice, d) Three times, e) Four to five times, f) Often

If changed, please mention the reasons for each time.....

5. Do you think environment or climate is somehow related with this reason? a) Yes b) No

6. Do you have any perception about climate change? a) Yes b) No

If yes, what you mean with it..... How.....

7. Among the following aspects what aspects of changes have you noticed in your area?

Aspect of changes	Aspect of changes
a) Temperature increased	f) Change of rainy season
b) More cold in winter	g) Water scarcity
c) Short winter	h) Salinity intrusion
d) More rainfall	i) Frequent natural disaster
e) Less Rainfall	j) Other (specify)

PART C (Objective I Oriented Questions)

Impacts of climate change on food security of rural poor women

1.1 What is the extent of change in the availability of food in your family since last 10-20 years?

- a) Significantly increased, b) Increased, c)No change, d)Decrease, e) Significantly decrease

1.2 If any change in food availability, what are the responsible causes behind this change? (If answer is no change, ignore this question) (multiple responses)

Causes	Rank	Role of climate change behind this
a) Reduction of income		Yes/No, if yes, How
b) Increase of income		Yes/No, if yes, How
c) Loss of Employment		Yes/No, if yes, How
d) Gain of Employment		Yes/No, if yes, How
e) Reduction of Crop yield		Yes/No, if yes, How
f) Increase of Crop yield		Yes/No, if yes, How
g) Increase of food price		Yes/No, if yes, How
h) Decrease of food price		Yes/No, if yes, How
i) Increase of family's other expenses		Yes/No, if yes, How
j)Decrease of family's other expenses		Yes/No, if yes, How
k) Increase of family's burden or dependent		Yes/No, if yes, How
l) Decrease of family's burden or dependent		Yes/No, if yes, How
m) Other (specify, e.g. availability of food from safety net program)		Yes/No, if yes, How

1.3 What is the extent of change in the accessibility of food in your family since last 10-20 years?

- a) Significantly increased, b) Increased, c)No change, d)Decrease, e) Significantly decrease

1.4 If any change in food accessibility, what are the responsible causes behind this change?(if answer is no change, ignore this question)

Causes	Rank	Role of climate change behind this
a) Distance of Food Market or Shops increased		Yes/No, if yes, How
b) Distance of Food Market or Shops Decrease		Yes/No, if yes, How
c)Access Road to the Food Market or Shops constructed/improved		Yes/No, if yes, How

d) Condition of Access Road to the Food Market or Shops deteriorated		Yes/No, if yes, How
e) Availability of Required food decreased in the nearest market		Yes/No, if yes, How
f) Availability of Required food increased in the nearest market		Yes/No, if yes, How
g) Other (specify)		Yes/No, if yes, How

1.5. What is the extent of change in the food consumption pattern your family since last 10-20 years? (Quality and Quantity of food consumption)

a) Significantly improved b) Improved, c) No change, d) Deteriorated, e) Significantly deteriorated

1.6 If any change in food consumption, what is the form of change?

Causes	Extent	Role of climate change behind this
a) Decrease of Number of meal per day	(e.g. before 3 meal but now 2 meal)	Yes/No, if yes, How
b) Increase of Number of meal per day		Yes/No, if yes, How
c) Deteriorated the quality of food		Yes/No, if yes, How
d) Improved the quality of food		Yes/No, if yes, How
e) Both decrease and deteriorated quality and quantity of food		Yes/No, if yes, How
f) Both increase and improve quality and quantity of food		Yes/No, if yes, How

1.7 If any change in food consumption, what are the responsible causes behind this change? (If answer is no change, ignore this question)

Causes	Rank	Role of climate change behind this
a) Reduction of income		Yes/No, if yes, How
b) Increase of income		Yes/No, if yes, How
c) Loss of Employment		Yes/No, if yes, How
d) Gain of Employment		Yes/No, if yes, How
e) Reduction of Crop yield		Yes/No, if yes, How
f) Increase of Crop yield		Yes/No, if yes, How
g) Increase of food price		Yes/No, if yes, How
h) Decrease of food price		Yes/No, if yes, How
i) Increase of family's other expenses		Yes/No, if yes, How
j) Decrease of family's other expenses		Yes/No, if yes, How
k) Increase of family's burden or dependent		Yes/No, if yes, How
l) Decrease of family's burden or dependent		Yes/No, if yes, How
m) Other (specify)		Yes/No, if yes, How

1.8 Is the food consumption pattern (both quantity and quality) of women is disproportionately lower than men in your family?

a) Yes, b) No,

If yes how, explain? i) women eat less no. of meal, ii) eat less quantity of food, iii) eat lower quality of food, iv) eat both less quantity and quality of food

1.9 If yes, what is the reason behind this consumption patter?

- a. Traditional, b. Due to impact/crisis induced by climate change, explanation.....
c. Due to other (specify) reason, explanation.....

PART D (Objective II Oriented Questions)

Changes in women daily labor and life style to ensure household food security in the climate change context

2.1 What are the changes in the daily labor/hardship of rural poor women to ensure food security since last 10-20 years? (multiple responses)

Aspects of Changes	Role of climate change behind this
a) Increase Working Hours to Earn Income for food	Yes/No, if yes, How
b) Increase Hardship to Earn Income for food	Yes/No, if yes, How
c) Increase Working Hours to Collect/process food	Yes/No, if yes, How
d) Increase Hardship to Collect/process food	Yes/No, if yes, How
e) Increase Working Hours to yield crops/food (including seedling to harvesting)	Yes/No, if yes, How
f) Increase Hardship yield crops/food (including seedling to harvesting)	Yes/No, if yes, How
g) Increase Working Hours to collect fuel	Yes/No, if yes, How
h) Increase Hardship to collect fuel	Yes/No, if yes, How
i) Increase Working Hours to collect water	Yes/No, if yes, How
j) Increase Hardship to collect water	Yes/No, if yes, How
k) Other (specify)	Yes/No, if yes, How

2.2 What are the changes in the life style and economic activities of rural poor women to ensure food security since last 10-20 years?

Aspects of Changes	Role of climate change behind this
a) Need to wake up more earlier	Yes/No, if yes, How
b) Need to go to bed late	Yes/No, if yes, How
c) Reduced sleeping time	Yes/No, if yes, How
d) Reduced leisure time	Yes/No, if yes, How
e) Reduced frequency/time to visit parents/relatives	Yes/No, if yes, How
f) Increased working hours in economic activities	Yes/No, if yes, How
g) Increased hardship in economic activities	Yes/No, if yes, How

h) Need to do low paid economic activities/decrease income	Yes/No, if yes, How
i) Need to do risky job	Yes/No, if yes, How
j) Lower the consumption of cosmetic/toiletries and cloths	Yes/No, if yes, How
k) Other (specify)	Yes/No, if yes, How

PART E (Objective III Oriented Questions)

Role of Microfinance Institutions to address the changes in the lives of rural poor women due to climate change and to ensure their food security

3.1 How many times you have received microcredit from MFI?.....

3.2 What are the total Number and Amount of loans at present?

Number/Sources of Loan..... Amount.....Tk.

3.3. Total amount of weekly installment.....Tk.

3.2 What are the main purposes of using your credit? a.....b.....

c.....d.....e.....

3.3 What do you think about the changes in your economic condition and food security after being member of MFI?

a) Significantly improved b) Improved, c) No change, d) Deteriorated, e) Significantly deteriorated
(If answer is No changes, go to question No. 3.4)

Reasons behind such changes

Reasons of Positive Changes	Reasons of Negative Changes
a) Credit received from MFI facilitated income earning	a) Increased indebtedness
b) Advice/training/motivation from MFI facilitated income earning	b) Large amount income spend to replay loan
c) Savings in MFI facilitated stress and disaster management	c) Decrease ultimate income level
d) Other (specify)	d) Other (specify)

3.4 What are the contribution/role/activities performed by Microfinance Institutions (MFIs) to enhance food security of rural poor women in climate change context? (put tic, multiple responses)

Contribution/Role of MFIs	Rank
a. Credit for employment diversification	
b. Credit/support for emergency preparedness/recovery from shocks and disaster	
c. Facilitate to do savings to face shocks and disaster and secure food	
d. Training and skill development (specify)	

e. Provision of consumption credit	
f. Provision of emergency food	
g. Provision of Material Aid (specify)	
h. Awareness building and Motivation /advice related to agriculture in climate change context	
i. Advices/non-financial support to have alternative income	
j. Drinking Water Supply	
k. Emergency medicine Supply or Medical Treatment	
l. Other (specify)	
m. No Support	

3.5 Whether the women’s food security has been improved after becoming member of MFIs or not (food access, availability, affordability and entitlement)?

Issues of Food Security	Status of improvement	Explanation
Accessibility	a).Yes, b).No	If yes, How
Availability	a).Yes, b).No	If yes, How
Affordability	a).Yes, b).No	If yes, How
Entitlement	a).Yes, b).No	If yes, How

3.6 Whether microfinance programs are lowering food security or not by increasing their indebtedness and poverty?

a).Yes, b).No If yes, How...

PART F (Objective IV Oriented Questions)

Problems, constraints and expectations related to present forms of Microfinance Institutions to enhance food security of rural poor women in the climate change context

4.1 What are the problems and expectation related to present forms of Microfinance Institutions to enhance food security of rural poor women in the climate change context?

Problems	Rank	Expectation	Rank
a) No consumption credit during disaster/slack season		a)Provision of consumption credit or food support during disaster/slack season	
b) No material aid or foods support		b) Provision of material aid or foods support	
c) No support for having alternative income		c) Supports and training for alternative employment generation in climate change context	
d) No support for alternative agriculture		d) Supports and training for both male and female	
e) High interest rate		e) Motivation and awareness generation for women’s right and food security	
f) Very strict in loan recovery		f) Relaxation of installment payment during disaster/slack season	
g) Cannot get back savings		g) Monthly installment	

timely/needs long waiting to get back savings			
h) No supports during crisis period/disaster		h) Low interest rate	
i) No support services for health and education		i) Provision of health and education supports	
j) No or limited support for housing		j)provision of housing support with low or no interest	
k)Other (specify)		K)Awareness generation for climate change impacts, adaptation and disaster preparedness	
		l)Other (specify)	

ANNEX 2

Questionnaire for MICRO-FINANCE INSTITUTIONS (MFI)

Research Title: Role of Microfinance Institutions (MFI) to Enhance Food Security in the Climate Change Context: Gender based analysis of rural poor community of Bangladesh

We are members of a Non-Government Organization named **Pathikrit- A Social and Human Development Organization, Khulna, Bangladesh**. The information collected for this study is confidential and nobody will be able to identify you or use the information against you. To make sure of this, we will not write down your name so you can speak to us freely. All information provided by you would be used only for academic research purpose.

Name of the MFI.....	Questionnaire No.....
Name of the Respondent.....	Interviewer:.....
Designation.....	Date:.....
Organization and Type	
Address:.....	
Tel.....E-mail:	

PART A

Introductory Information Related to MFI

1. Type of the Micro Finance Institution

- Government organization
- Local Non-Government organization (NGO)/National NGO/International NGO
- Private Initiative

2. Year of establishment..... Year of Activities Started in the area.....

3. Prime Sources of Funding.....
4. Coverage of Geographical Area
5. Programs/projects in the study area, Current programs
-
-
- Significant programs in past.....
6. What are the terms and condition of having micro-credit from your institutions
- i) Target Group.....
- ii) Process of being member.....
- iii) Process of group/community formation.....
- iv) Process/steps of credit disbursement and collection.....
- vi) Sectors and amount of credit disbursements, Sectors.....
-
- Amount of common sector: Max.....Min.....Usual amount.....
- Amount of special sector (if any, specify): Max.....Min.....Usual amount.....
- vii) Is there any different system of loan recovery during or just after disaster? 1. Yes 2. No
if yes, what is that?.....
7. What is the level of hardship to collect installment during or just after disaster?
- i) Impossible to collect ii) Extremely hard, iii) Hard, iv) Normal
8. What is the rate of recovery? 1.In normal situation.....2.During or just after disaster.....
9. Total No of Staff.....
10. Availability of climate change, environment or disaster management expert in your MFI.
- i)Yes ii) No, If yes, Number..... Field of Expertise.....
11. Level of understanding about climate change and its impacts among the staffs of MFI
- i) Very high, ii) High, iii) Moderate, iv) Poor, v) Not understand at all
12. Is there any efforts/attempt ever taken to train your staffs on climate change,
environment/disaster management? i)Yes ii) No, If yes,
Types and duration of the training.....

PART B

Climate Change, Gender and Food Security and Efforts to address these

1. What type of climate change impacts does your organization recognize in this study area? (put tic, multiple responses)

Phenomenon	The same	Decreasing	Increasing	Don't know
Flood				
Cyclone				
Temperature variation				
Rainfall				
Drought/water stress				
Salinity				
Other (specify)				

2. What is the impact of climate change in the lives of your beneficiaries? (put tic, multiple responses)

Impacts	Impacts
i) Change of livelihood	vi) hardship increased in daily life,
ii) income increase	vii) increased job opportunity,
iii) income decrease	viii) decrease job opportunity
iv) food security improved	Health problem increased
v) lowered the food security	ix) Other (specify
vi) Water scarcity	x) No impact

3. What are the principal Role of your MFIs to enhance food security of rural poor women (beneficiaries) in climate change context? (put tic, multiple responses)

Contribution/Role of MFIs	Rank
i. Credit for employment diversification	
ii. Credit/support for emergency preparedness/recovery from shocks and disaster	
iii. Facilitate to do savings to face shocks and disaster and secure food	
iv. Training and skill development (specify)	
v. Provision of consumption credit	
vi. Provision of emergency food	
vii. Provision of Material Aid (specify)	
viii. Awareness building and Motivation /advice related to agriculture in climate change context	
ix. Advices/non-financial support to have alternative income	
x. Drinking Water Supply	
xi. Emergency medicine Supply or Medical Treatment	
xii. Other (specify)	
xiii. No Support	

4. Is there any significant approach of works in your MFIs to enhance food security of rural poor women in climate change context? Please mention.....

5. Have you ever taken any alternative credit policy during or after disaster (specially during cyclone Aila)? i) Yes, ii) No.
If yes, mention the detail.....

6. With micro-credit program is there any activities/ efforts to address following issues related to climate change?

Issue Addressed/Sectors of Works	Details works related to the issue
Sea level rise	
Temperature Variation	
Saline intrusion	
Water stress	
Other (if any, specify)	
No Activities Related to the Abovementioned Issues	

7. Please mention your activities related to different disaster management (Multiple responses accepted)

Types of Disaster	Pre Disaster Activities	During Disaster Activities	Post Disaster Activities

Coding for Q. No.5

i) Emergency Food Supply (amount, type),	ii) Drinking Water Supply
iii) Emergency Medical Treatment	iv) Emergency medicine Supply
v) Credit Supply (amount)	vi) Financial Aid for consumption
vii) Material Aid (specify)	viii) Rehabilitation Facilities (type)
ix) Awareness Building Program and Motivation	x) Training
xi) Employment Generation	xii) Warning
xiii) Infrastructure development	xiv) Others (Specify)

8. With micro-credit program is there any other following programs/support services?

Supporting Sector	Nature of support	Terms & conditions of support
Housing or Rehabilitation Facilities (type)		
Water supply		
Sanitation		
Infrastructure development		
Warning		
Other (specify)		

Code of nature of support: i. Provision of credit, ii. Provision of material, iii. Credit and Material both, iv. Awareness creation and motivation

PART C

Problems and Shortcomings related to MFIs and Suggestion for a new and expected model of MFI to enhance food security of rural poor women in the climate change context

1. What problems/constraints MFIs face to pursue their activities/programs for rural poor women?
 - i) Financial crisis
 - ii) Donor's priority programs
 - iii) Social barriers,
 - iv) Non-cooperation of local leader,
 - v) Non-cooperation of family members,
 - vi) Natural barriers or disasters,
 - vii) Other (specify).....
2. What are the shortcomings related to the programs and approaches of MFIs to enhance food security of rural poor women in climate change context?

- i) Lack of trained manpower, ii) Lack of knowledge about food security and climate change, iii) Lack of priority, iv) Lack of fund, v) Other (specify).....
3. What actions/changes should be incorporated to redesign the present forms of MFIs and thus to ensure food security of rural poor women in climate change context?
 4. Presently do you have any future plan to readjust micro-credit program to cope with climate change and to contribute to enhance food security of rural poor women? i) Yes, ii) No.
 5. If yes, what kind of readjustment? Detail of the plan.....
.....
 6. Do you have any future plan/programs that would facilitate climate change adaptation? i) Yes, ii) No
 7. If yes, please mention about the details of that future plan/programs

ANNEX 3
Key Points that need to discuss in Focused Group Discussion (FGD)
And Some Queries Related to Study Area

Research Title: Role of Microfinance Institutions (MFI) to Enhance Food Security in the Climate Change
Context: Gender based analysis of rural poor community of Bangladesh

Location of FGD (Union, Ward & Village)	FGD No.....
Tentative Number of people discussed.....	Facilitator's Name:.....
Types of people discussed.....	Date:.....

We are members of a Non-Government Organization named **Pathikrit- A Social and Human Development Organization, Khulna, Bangladesh**. The information collected for this study is confidential and nobody will be able to identify you or use the information against you. To make sure of this, we will not write down your name so you can speak to us freely. All information provided by you would be used only for academic research purpose.

Climate change related discussion

1. Understanding level about climate change
2. What type of climate change the community feels/recognize since last 10-20 years
3. Which type of change is significant (among climate change and man-made change in the locality)

4. Types Impacts of climate change in the study area
5. Worries about climate change and related food security

Agriculture and Shrimp Farming related discussion

6. Extent of Land use changes in the locality since last 10-20 years (e.g. conversion of agricultural land to shrimp farming, how much % of village areas have been changed)
7. Is there any agricultural activities including homestead gardening? How much and when they produce rice (if any)?
8. Change in the crop production level
9. Poor's perception to shrimp farming, general people's perception to shrimp farming as well as conversion of agricultural land to shrimp farming
10. Extent of changes in general people's economic activities since last 10-20 years (e.g. agricultural workers became laborers in the shrimp farm, etc) Types of economic activities before and types of activities at present.
11. Any role of climate change behind such changes
12. Main reasons of shrimp culture expansion in the study area , Climate change or Man-made
13. Extent of change in the hardship of life, especially for women
14. Extent of change in the food security level of the poor.
15. Role of climate change behind such changes in hardship and food security

MFI related Queries/perception

16. What micro finance institutions are doing to enhance food security of the poor, especially for women
17. What MFIs are doing to face or adapt with climate change impacts
18. People's perception about the role of MFIs in climate change impact adaptation and food security of the poor
19. People's opinion about the problems or shortcomings related to present forms and roles of MFIs
20. People's expectation to MFIs to enhance their food security and
21. People's expectation to MFIs to facilitate the poor for climate change adaptation
22. What is the average amount of loan and average amount of weekly installment payment?

Solar Panel related Questions

23. What is the amount of loan for solar panel and how much need to pay, within how long.
24. Why does a family take loan for solar panel?
25. From when this solar panel has become popular, after Aila or before? Is there any link for taking solar panel and cyclone Aila?
26. Which organizations do set up of this solar panel? Why people are interested to take solar pane

Rain water harvesting plant related Questions

27. Rain water harvesting plant provided by which organization?
28. Do the villagers need to pay for it, if so how much?
29. Is it a burden for the villagers?
30. How many Rain water harvesting plant (RWHP) in each village?
31. Total number of families per RWHP?
32. Is it the main source of water? Is it available?
33. What is the main source of drinking water

Cyclone Aila

34. Cyclone Aila related discussion (impacts, sufferings, role of MFIs....)

General Information about the study area (village wise)

35. Demographic condition of the study area (village wise population, male, female, hindu, muslim, family size, family type etc.)
36. Overall socio-economic condition (% of poor and rich, land holding pattern, types of economic activities, general income level both for poor and rich and middle classes)
37. Level of social conflicts in the study areas and reasons
38. Women's status, especially poor women (e.g. Dowry, Gender violence, education)
39. Overall people's expectations and suggestion to enhance climate change adaptation and food security of the poor.