

Impact of CODEC Agricultural Unit's Interventions in Coastal Areas - A Study Among the Targeted Members of the Agricultural Unit at Laxmipur District



Community Development Centre (CODEC)





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**Impact of CODEC Agricultural Unit's intervention in the coastal areas
– A study among the targeted members of the agricultural unit at
Laxmipur District.**

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Preface

CODEC has been working in coastal areas since 1985. CODEC's vision and mission is to uplift the socio-economic conditions of the vulnerable coastal communities by providing multi-dimensional support to facilitate holistic development. Currently, CODEC is supporting the people of coastal areas in three divisions- Khulna, Barisal, and Chattogram. CODEC currently has 103 microfinance (MF) branches scattered around different coastal districts of these three regions. To understand the CODEC's presence as a supportive role and identify the future scope of development, CODEC always conducts systematic research. This study has been conducted by the Knowledge Management Cell of Community Development Centre (CODEC). The team was assigned to visit and observe the activities of Agricultural Unit supported by PKSF at Laxmipur which is being implemented by CODEC. Information on a total of 200 targeted members were taken to conduct this study from 4 Micro-finance (MF) branches of CODEC - Char Bongshi, Khasherhat, Mollarhat, Hajirhat, under Laxmipur Zone. The main aim of the study is to understand how the activities of CODEC Agriculture Unit and CODEC Microfinance (MF) have helped them develop their overall socio-economic situation. CODEC provides financial and agricultural input supports and training to the targeted members of this agricultural unit. Besides, understanding the nature of community participation and the future scope of program intervention has been focused on the study.

Through this study, CODEC has identified that the impact of overall support of the program has been very much fruitful. The targeted members of the program have been able to uplift their condition by raising income. The agricultural output has been increased and people are using and modern cultivation method. Furthermore, the community participation towards adopting modern agricultural methods and technology has made the program very much potent.

I want to thank Mr. Quazi Wafiq Alam, Deputy Director, CODEC, and his team who has worked very hard to bring out the actual situation of the targeted members of the region. I would also like to thank the people who have assisted the team to collect data from the field.

The study will help CODEC to understand how things are going on and where CODEC can work to improve the overall activity, as CODEC has always thrived to improve the livelihood of the coastal people of Bangladesh.

Khursid Alam, Ph.D.
Executive Director
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Exordium

This study has been conducted on 200 CODEC Agricultural Unit's targeted members supported by PKSF from Laxmipur district to analyze the impact of the program. Data of 200 randomly selected members from four CODEC microfinance branches in Laxmipur Zone- Chorbongshi, Hajirhat, Khaserhat and Mollarhat have been collected. Data have been collected by Questionnaire survey, organizing FGDs, Key Informant Interviews (KII) and Case Studies in the selected areas. During the survey, Upazilla Agricultural Officer of Raipur, CODEC Agricultural Units Officer and Branch Managers of those Micro-finance branches have been interviewed. The survey data have been collected from 28th January to 12th February. A warm acknowledgement should be given to Mr. Khursid Alam, Ph.D, Executive Director, CODEC, for his patience guiding throughout the survey and preparation of the report. Mr. Nazmul Islam, Laxmipur Zonal Manager, CODEC; Mr. Kawser Uddin, Agriculture Unit Officer; Branch Manager, Deputy Branch Managers and Field Officers of those branches should be thanked as well for helping in implementation of the overall visits and collecting data in every way possible to bring out the best output from the field visit.

Executive Summary

Coastal areas of Bangladesh are at high risk due to frequent natural disasters. Due to climate-induced natural disasters, the communities are facing several constraints to improve their condition. CODEC has been working in the coastal areas for the holistic development of these vulnerable communities since 1985.

CODEC is supporting coastal communities by implementing several programs on livelihood, education, health and nutrition, access to microfinance and access to justice. CODEC microfinance program plays an important role in this regard. With timely credit support, the microfinance department along with CODEC Agricultural Unit is providing various supports on agriculture, fisheries, and livestock to the targeted members. CODEC agricultural unit has backed more than 3000 targeted members from 2015 to 2020 in Laxmipur District. This study is designed to identify the impact of the initiatives of CODEC's Agriculture Unit supported by PKSF. The study was conducted on 200 targeted members of CODEC agricultural unit in four areas of Laxmipur – Chorbongshi, Hajirhat, Mollarhat, and Khaserhat. Both qualitative and quantitative approach has been used to conduct the study to identify the impact of the program. Among the respondents 84.84% were female and 15.15% were male. Most of the respondents (52.6%) have received primary education whereas 36% have no education and only 0.52% have completed higher secondary and above. 88.89% of people among the respondents can meet the basic needs and 11.11% people reported that they fail to meet basic needs. Agriculture is the main source of income for 82.83 % of people. The majority of the respondents (34.85%) belong to 31-40 years old. 53.54% of people have self-owned cultivation land.

The study finds that the production pattern varies from season to season. From January to April most of the farmers cultivate Boro, Soyabean, and Vegetables. Most farmers cultivate these three in combination. From May to August the people cultivate Aush and vegetables. More interestingly in this period, 24.75% of people reported that they do not produce anything. 66.16% of people produce Aman from September to December. Rickshaw/ van is regarded as key transport to carry crops from one place to another place.

Income has been increased as an impact of the Agriculture Unit's activities in the studied area. Before the support average income was around TK. 13166.78 and after receiving support average monthly family income is TK. 19295.63 and the difference between before and after support is statistically significant..

Before the support, the targeted members did not have adequate knowledge about the modern cultivation method. 95.43% of people reported that they did not have adequate knowledge about modern cultivation methods and 96.45% of people have said after using the modern cultivation method they have been able to increase production. This has been added a positive vibe in using land, the amount of land use has been increased. Average land use before program support was 69.26 decimal whereas it is 106.05 decimal now. However, it significantly noted during the study that the program has been very much successful to generate positive externality in the community. Non targeted members have also benefited from our program support; our targeted members have helped their neighbors to cultivate by adapting modern agricultural approaches. 90.72% of the targeted members have reported that other people (indirect targeted members) have come to seek advice from them and 96.72% have been benefited after using their advice or suggestions.

From the FGDs and KII, the study has observed several factors. For instance, the participation of males and females in agriculture is very much equal in this region. Females equally participate in decision-making processes. Women do not face any wage differential against men. There exist some problems too. Lack of irrigation and storage facilities, lack of manpower at post-harvest time, presence of middleman, farmer's inadequate knowledge about health and nutrition can be regarded as key barriers of the program.

The program is successful to achieve its goal. But still, there are some scopes of improvement. Introduction of data-driven agriculture, establishing market linkage between farmers and buyers, creating awareness among farmers on health and nutrition, awarding successful farmers to encourage others, training on entrepreneurship skills can be added in the future to enhance the efficiency of the program.

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STORIES OF OUR TARGETED
MEMBERS



Due to its geographical location, Bangladesh is highly exposed to climate vulnerability. The country has ranked 7th position in Global Climate Risk Index 2020. The issues of climate change are now creating more challenges to implement and achieve the SDG goals. The coastal areas of Bangladesh have been severely affected due to the adverse effect of climate change. Laxmipur district is one of those areas.

The people of Laxmipur region are mostly affected by the consequences of climate change. Cyclones, floods, river erosion, heavy rainfalls are frequent in these areas. Because of environmental factors like river erosion and flood, many people have lost their houses, lands, and other belongings. Individuals who have lost their homes have taken shelter in relative's houses, mosques, primary schools, government lands near embankments, etc. The misery extends every year during the rainy seasons. The areas surrounding the rivers, especially the water from the Meghna river increases the possibility of flooding. The communities of these areas are highly vulnerable. They are facing several constraints to uplift their socio-economic conditions. Due to resource constraints most of the time they do not get enough support from relevant stakeholders. Climate change has imposed a threat on agriculture as well as other traditional occupations like fishing.

Introduction

CODEC has been working with the vulnerable and neglected people of coastal Bangladesh since 1985. CODEC provides a range of financial, technical, and social services to neglected coastal people, small farmers, fisherman, petty businessmen, landless laborers, and poor women since its inception. CODEC micro-finance provides a window of opportunity for the poor to access borrowing and saving facilities. Our borrowers, most of whom are women (95% Women borrowers), use the loan for better managing their livelihood finances and engage in various income-generating activities to build a livelihood for themselves and their families. CODEC's implemented agricultural program with the support of PKSf has added a new dimension in poverty reduction and climate-induced agricultural adaption practice.

These adaptation practices include identification of suitable cropping patterns, choice of seed, irrigation water management, crop intensification suitable transplanting, crop diversification, technology adoption, investment, knowledge sharing, and so on. With financial and technical services, it provides free training on modern agricultural cultivation methods and provides input support free of cost. In the last 5 (2015-2020) years the program has been very much successful.

Climate change and agriculture possess an inverse relationship where climate impacts hamper agro-production. Among other sectors, agriculture is facing the deadliest experiences from climate change-related natural disasters, as agriculture is the major livelihood option for the coastal people of Bangladesh. Hence, the agricultural adaptation approach with proper financial support is one of the key aspects that are helpful to reduce agricultural crop vulnerability in the coastal zones of Bangladesh. In this connection, considering local level experiences, the main objective of this study is to find out the impact of the agricultural intervention by CODEC Agriculture Unit supported by PKSf implemented in Laxmipur which focuses to help farmers to adapt to climate change, increasing output, productivity, and positive externality in the community.

1. To observe the interventions of the CODEC agricultural unit and its impact on targeted members of the project implementation area.
2. To identify improvements in the productivity and livelihood condition of targeted members of CODEC agricultural unit.
3. To observe the entrepreneurship skills of the targeted members and their behaviours towards agricultural production and decision making.
4. To identify and observe if there is any spill over effects / positive externality (knowledge sharing among farmers, technology adoption, etc.) of the program & targeted members.
5. To identify the barriers towards market linkage.

Objective of the Study

The overall research is implemented to identify the impacts of agricultural intervention in the coastal communities and will seek possible pathways for climate-resilient and sustainable agriculture for a better future.

Literature Review

An extensive literature review has been conducted focusing on two major dimensions.

- 1) Impact of climate change on agriculture of Bangladesh and
- 2) Role of micro-finance on agricultural productivity

Impact of climate change on agriculture of Bangladesh

Bangladesh is one of the most vulnerable countries in the world when it comes to climate change. Due to extensive and regular changes in the climate in Bangladesh almost every other year, it is getting harder and harder for the people indulged in agricultural productions in Bangladesh. As Bangladeshis are mostly dependant on rice as their staple food, climate change is harming the production of rice.

A study found that 1°C rise in maximum temperature at vegetative, reproductive, and ripening stages there was a decrease in Aman rice production by 2.94, 53.06, and 17.28 tons respectively. With the change in temperature (by 2°C and 4°C), the prospect of producing wheat and potato would be brutally reduced. Production loss may surpass 60% of the attainable yields. Higher temperature hurts soil organic matter (Ministry of Environment and Forests, p. 2).

It was also found that a 1mm upsurge in rainfall at vegetative, reproductive, and ripening stages decreased Aman rice production by 0.036, 0.230, and 0.292 tons respectively. Shortage of water limits crop production while irrigation coverage is only 56% as delivered by the Bangladesh Agriculture Development Corporation (BADC) (Ministry of Environment and Forests, p. 3)

To tackle climate change, the government of Bangladesh has invested 10 billion USD to adopt policies that will help in minimizing the damage that climate change will leave on the farmers of the country. (Bangladesh Country Management Unit, 2011)

Rahman (2018) found that the volume of salty land has increased about 26% between 1979 and 2014, and it has been anticipated that the soil salinity will increase 39% by 2050. As a result, food production will be threatened and there are much evidence that salinity is already cutting into the crop yields in Bangladesh. Because of salinity, 272,000-ton rice would be lost in 2030 which is about 1.4 times higher compared to 1990 (196000 ton) although this impact is relatively lessened than the impacts of CO₂ fertilization, temperature change, and inundation.

Chowdhury (2015) states 1% increase in growing season maximum temperature and rainfall on average will reduce the yield of Boro rice by 1.68 and 0.18 metric ton/hectare respectively. On the other hand, a 1% increase in minimum temperature and humidity on average could raise Boro rice yields by 3.50 and 5.03 metric tons/hectare respectively.

To make an agricultural adjustment to manage cropping, it is important to consider the forecast distribution as well as the “all years” line, because it indicates the higher risk of drought. With the forecast line giving this extra information that an upcoming season will be drier than normal, it is possible to advise farmers to initiate their drought management practices (Ramamasy, 2007).

The relatively low temperature in the early stages of the dry season may be detrimental to crop growth, but as it gets warmer in the later stages, it becomes beneficial for the ripening and maturity of crops. In the case of rainfall, the trends for wet and dry seasons were found hill-shaped which indicates that early-stage rainfall in both seasons is favourable for crop farming in Bangladesh (Qian, 2018).

Hasnat *et al.*, (2016) used questionnaire survey and Focus Group Discussion (FGD) to study on impact of climate change and adaptive strategies of climate change in the coastal areas of Laxmipur District. The study contains both qualitative and quantitative approaches. 87.5% of respondents have experienced the impact of climate change in agriculture. An increase in temperature, drought, flood, cyclone, salinity intrusion, inadequate rain, unpredictable rain-fall is perceived by the coastal communities. Crop cultivation has changed, and it has decreased due to the damaging effect of this climate change. 40% of people were not familiar with the coping strategy of climate-related shocks. The study suggested that introduction to the new variety and making embankment will be helpful as an adaptive strategy.

Role of micro-finance on agricultural productivity

Agricultural credit plays a vital role in agricultural productivity. Several studies have identified that agricultural credit can improve agricultural productivity. Ahmed Chowdhury and Chowdhury (2011) used branches, deposits, loans and advances data during the period 2004-2008. Different trend equations and square of correlation coefficient (r^2) studied the impact of agricultural credit in Bangladesh. The study takes time-series data to evaluate the performance of formal credit mainly banks to evaluate the overall situation of agricultural credit flows in Bangladesh. The study found that a timely and adequate flow of agricultural credit is very much important for agricultural productivity. This study found some major challenges also. Many times, the credit is not used for the true purpose, the borrowers tend to use it for consumption expenditure., farmers are afraid about legal documentation process, discrimination in formal credit between men and women.

Bidisha *et al.*, (2015) provide evidence of how agricultural credit can create a positive effect on agricultural production. The study found that agricultural credit has a significant contribution towards household crop production by comparing the users and non-users of credit.

Zaman et al., (2020) identify the impact of different microfinance services for reducing poverty in Bangladesh. The study was conducted in Barisal Division. Using OLS regression the authors have found that micro-credit influences poverty reduction. Savings, micro-insurance, and training have also influence on poverty reduction in Bangladesh. The study concludes that micro-credit helps the low-income group, less educated and people engaged informal sector.

Chowdhury et al.,(2016) focused on the impact of rural financing on rural poverty reduction. The study considered several variables such as agricultural sector credit, rural employment, female employment, agricultural production, and credit to gross domestic product and per capita consumption. Estimation suggests that all the explanatory variables are statistically significant and are negatively related to rural poverty, the elasticity of rural poverty with respect to agricultural credit is -0.27 percentage on average. With means that a one percent increase in lending will reduce rural poverty by 0.27 percent on average.

Miah, Alam and Rahman (2006) respectively to know the requirements, utilization pattern and repayment system of credit and its effect on modern rice cultivation. A total number of 120 rice growers who obtained credit from Rajshahi Krishi Unnayan Bank (RKUB) found agricultural credit plays an important role in ensuring agricultural productivity. Rahman (2006) found that farmers who have taken loan, have achieved 1.21 times higher rice yield compared to non-borrowers. The study also shows that small farmers try to avoid the cumbersome of institutional credit and they feel better borrowing from NGOs.

The previous studies have focused on the issues of climate change and its impact on the agricultural sector of Bangladesh. The studies on micro-finance and agricultural productivity show that micro-finance is playing a vital role in improving agricultural productivity and over the period poverty has been reduced significantly. No such emphasis has been given on combining the effect of micro-credit programs along with various support in climate-vulnerable areas. This study wants to bring light to the impact of the micro-finance program including climate-resilient agriculture support to the coastal communities of Bangladesh.



Nutrition is one of the key elements to improve the overall livelihood of the coastal people



*Geographical, Social
& Economic
Characteristics of
Laxmipur*

Geographical Characteristics

Laxmipur is a district under Chattogram division. Laxmipur became a subdivision in 1979 and was upgraded to a district in 1984. There is an eminent saying regarding the naming of the region. Lakshmi Narayan Roy, a descendant of Raja Gour Krishna Roy, became very influential in the locality. It is believed by the locals that the naming of the district might have derived from the name of that famous man. Laxmipur district consists of 5 Sub-districts, 58 Unions, 459 *Mauzas*, 547 Villages, 4 *Paurashavas*, 39 Wards, and 66 *Mahallas*. The Sub-districts are Laxmipur Sadar, Raipur, Ramganj, Ramgati, and Kamalnagar. (Population & Housing Census, 2011)

Geographical characteristics of Laxmipur

The total area of the district is 1,440.39 sq. km (556.14 sq. miles) of which 202.34 sq. km is under forest. It lies between 22°30' and 23°10' north latitude and between 90°38' and 90°01' east longitudes. It is bounded on the north by Chandpur, on the east by Noakhali and Comilla, on the south by the river Meghna and Bhola, and on the west by the river Meghna, Barisal, and Bhola. Laxmipur Sadar consists of Laxmipur *Paurashava* and its adjoining one part of a *Mauza* as another urban area. Laxmipur *Paurashava* was established in 1976. It stands on the bank of the river Rahmatkhali. It consists of 12 wards and 22 mahallas. The total area of the town is 20.05 sq. km. of which 19.42 sq. km. is under *paurashava*.

Figure 2: Map of Laxmipur District



Laxmipur area had been a part of the kingdom of Bhulua at the beginning of the thirteenth century. Laxmipur is said to have been a military outpost during the Mughal and British periods. From the sixteenth to the nineteenth century this area used to produce a huge quantity of salt and exported it outside. It was on the issue of salt production that the Salt Movement occurred in this area. The inhabitants of this district had an important role in the Indigo Resistant Movement, Sannyasi uprising, Swadeshi Movement, and Debt Arbitration Movement. During the war of liberation in 1971, seventeen battles were fought between the freedom fighters and the Pakistan Army. There are 4 mass graves, 2 mass killing sites, 3 memorial monuments in the district.

The region is rich with archaeological heritage. Tita Khan Jami Mosque, Mita Khan Mosque, Majupur Matka Mosque, Madhu Banu Mosque, Dayem Shah Mosque, Abdullahpur Jamie Mosque, Sahapur Neel-kuthi, Sahapur Saheb-bari, Zamindar house at Dalal Bazar, Srigovinda Mahaprabhu Jau Akhra, Dalal Bazar Math, Khoa-sagordighi, Oidara Dighi, Kamala Sundari Dighi, Jinn's Mosque Bara Mosque, Rani Bhabani Kamada Math of Ramgati, Sreerampur Rajbari in Ramganj, Shyampur Dayra Sharif, Kachua Dargah, Harishchar Dargah, Kanchanpur Dargahare are some notable places in the district.

According to the Population and Housing Census 2011, the total household of Laxmipur district is 365,339 of which 55,201 (15.11%) are in urban area and 310138 (84.89%) in the rural area. In respect of household type, there are 364,255 (99.70%) general (dwelling), 225 (0.06%) institutional and 859 (0.24%) other household in the region.

The people of Laxmipur region are mostly affected by the consequences of climate change. Cyclone, flood, river erosion, heavy rainfalls are frequent in these areas. Because of environmental factors like river erosion and flood, many people have lost their houses, lands, and other belongings. Individuals who have lost their homes have taken shelter in relatives house, mosques and primary schools. The misery extends every year during the rainy seasons. The rivers surrounding area, especially the water from the Meghna river increases the possibility of flood.

Social Characteristics

The total population of the Laxmipur as enumerated in 2011 Census, is 1,729,188 of which 262,997 (15.21%) constitute urban population and the remaining 1,466,191 (84.79%) constitute rural population. The distribution of population by sex shows that 827,780 (47.87%) male and 901,408 (52.13%) females constitute the total population of 1,729,188. 39.50% of the total population is between 0-14 years of age, 40.51% ranges between 15-59 years of age and the rest of 7.99% of the people are aged more than 60 years. It is observed that the total population of both urban and rural areas has been increasing. This phenomenon is mainly attributed to the expansion of urban areas and possibly due to the migration of a section of people from the rural area to urban area. The population density of the urban area is much higher compared to the rural area. The dependency ratios for both sex, male and female in rural area are much higher than that of urban area. The lower rate of dependency ratio in urban area is mainly due to a section of people who are living in urban areas are leaving behind their family in rural areas.

Though Bangladesh is a Muslim dominant country with the state religion being Islam, people from different beliefs are always given equal rights. About 90% of the total population of the country is Muslim. The situation is identical in Laxmipur. About 96% of the total population in the district is Muslim, with the remaining 4% being people from other religions, mainly Hindu & Buddhist. About 50% of the total population of the region are literate with 59% of that belonging to the urban area.

Sources of drinking water are namely tap, tube-well and pond. It is found that tube-well is the major source of drinking water in the region in both urban and rural areas. Tube-well is also a source of drinking water of the general households. It is seen, the facility of tap water in urban area have increased to 20.71% from 7.81%. The toilet facility of the district has increased from 44.84% in 2001 to 74.29% in 2011(BBS, 2014).

Economic Characteristics

Laxmipur district is surrounded by the Meghna, Dakatia, Katakhal, Rahmatkhali and Bhulua rivers. Due to that, the main earning source for most of the people is through agriculture and fishery. Besides, poultry and farming are also becoming one of the most common way of earning livelihood for the people of the district. The annual average temperature of the district varies from maximum 34.3°C to minimum of 14.4°C and the average annual rainfall of is 3302 mm. This is also a reason why the people of the area tend to earn their living through producing crops.

Of the total population in Laxmipur, 30% of the people are working, 2% of the people are looking for jobs and 36% of the population does household works. Among the people working, more than half of the people, 53% to be precise, are into agricultural works. The rest of the 47% (9% industry & 38% service) of the population are working in other sectors. (Statistics, 2015)

In the farmlands, varieties of crops namely local and High Yielding varieties like - rice, jute, vegetables, spices, pulses, oilseeds, etc. are produced. Rice covers most of the gross temporary cropped area. Most of the trees grown in homestead forests are fruit-bearing. Mangoes, although poor in quality, grow in abundance. Almond is usually common. Other common trees are *gab*, blackberry, palm, tamarind, jackfruit, olive, wood apple, *chalta*, berry, guava, etc. Banana is seen almost everywhere but its quality is poor. Litchi, *kamranga*, custard apple, *haritaki*, *Amloki*, etc. also grow abundantly.



Targeted member's family is happy with the production

For the study, data have been collected from the members of four microfinance branches of CODEC in Laxmipur District where CODEC Agriculture Unit supported by PKSF is implementing different activities. These branches are Chorbongshi, Khaserhat, Mollarhat and Hajirhat. This study has been developed on primary data.

In the last 5 years CODEC agricultural unit has provided agriculture related training to 3492 targeted members along with capital and agricultural input supports. Both qualitative and quantitative approaches have been used to collect data. Structured and open-ended questions were included in the questionnaire. Data have been collected from 200 randomly selected targeted members who has received support from the CODEC Agriculture Unit among these four branches. This sample size covers 5% of the total targeted members .

A quantitative data collection approach has been used to collect data on household/targeted member's income, family size, the status of land ownership, usage of modern cultivation method, and attitudes of the community towards learning and helping others. To understand the market constraints several questions have been developed. Most of the questions involved simple options like "yes/no" answers.

The study has also collected data by using qualitative approaches. 8 case studies have been taken from 4 branches. The cases are presented as a piece of evidence to justify the findings of the paper. Four focus group discussions (FGD) were arranged where both males and females participated. Each group consisted of 8 members. Four of them were male and four of them were female. In focus group discussion (FGDs) the key questions were placed on participation in women in agriculture, women's access to land usage, problems in irrigation, post-crop collection strategy, coping strategy after natural disasters, women's access to credit. Questions on farmer's knowledge about different agricultural programs showed in different tv channels, newspaper articles have been asked to understand their behaviors on the different digital learning platforms. Questions on future needs and agricultural assistance have been asked to each group.

Besides, three interviews with key informants (KII) have been taken. These key informants are Raipur Upazilla Agricultural Officer, Agricultural officer of CODEC Agricultural Unit, and Branch Managers of the study area.

To collect qualitative data a structured questionnaire had been developed. Data have been collected from 29th January to 12th February. For collecting qualitative data KOBO toolbox has been used. Statistical data analysis software STATA-14 and Microsoft Excel have been used for performing cleaning data, statistical tests, and graphical analysis. Paired sample t-test has been used to justify several findings of this study.

Methodology

Findings & Discussions



Table 1 represents the number of respondents by area. After cleaning data of missing values, 198 responses have been analyzed. CODEC Agricultural Unit's support has been introduced recently in Hajirhat branch. Therefore, fewer respondents have been selected from there.

Table 1: Number of Respondents

Location	Number of Respondents
Chorbongshi	69
Hajirhat	10
Khaserhat	10
Mollarhat	40
Total	79

Table 2 represents an overview of the studied population. Among the total respondents, 84.85% were female and 15.15% were male. Most of the respondents have received primary education but the enrollment in higher education is very much low. 36% of people are illiterate or have no education. The targeted members are young households and their age ranges between 31 to 50 years old. Significantly, around 89% of people can meet their basic needs whereas around 12% of people have failed or struggles to do this. More than half of the respondents have self-owned cultivable land (53.54%) and 82.83% of respondents have said agriculture is their major source of income. 67.68% of respondents have a monthly average income between 11,000-20,000 BDT. 7.7% of people earn less than 10,000 BDT per month.

Table 2: Socio-economic status of respondents

Parameters	Respondents (Percentage)
Gender	
Male	15.15
Female	84.85
Education	
Primary (I-V)	52.6
Secondary	10.94
Higher Secondary and Above	0.52
No Education	36
Age group	
Below 30	21.21
31-40	34.85
41-50	32.32
51 and above	12.12
Land Ownership	
Have self-owned cultivable land	53.54
Ability to meet the basic needs	
Yes	88.89
No	11.11
Agriculture as the main source of income	82.83
The average income per month	
Below 10,000	7.07
11000-20,000	67.68
21,000-30,000	22.22
31,000 to above	3.03



Squash production has risen since last year

Production Pattern

From January to April, the key crops of this area are Boro paddy and soybean. Most of the farmers cultivate Boro during this season. A small number of farmers cultivate vegetables like gourd, chichinga, dhundal, shrimp, karla, etc. Figure 3 represents the scenario of cultivation from January to April. Most of the Farmers produce Boro , Soyabean and Vegetables in combination. Only 9.60% of total respondents cultivate Boro and 5.56% cultivate only soybean and 2.02% cultivate only vegetables. From January to April the cultivation is diversified. On the other side, the cultivation is very much different from May to August (Figure 4). 24.75% have said that they do not produce anything during this period. Aush is the main crop during this season. 18.18% of people cultivate only Aush and 23.23% people cultivate only vegetables. Most of the people (33.33%) during May-August cultivate Aush and vegetables together.

Figure 3: Production from January to April

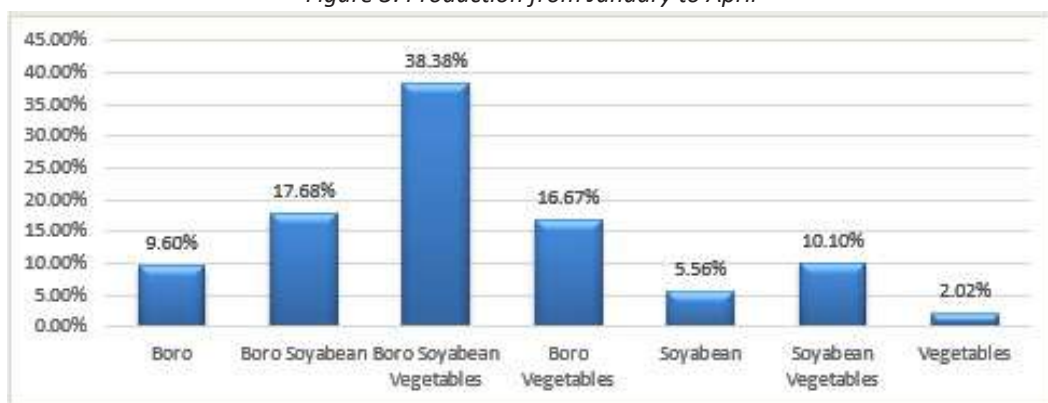
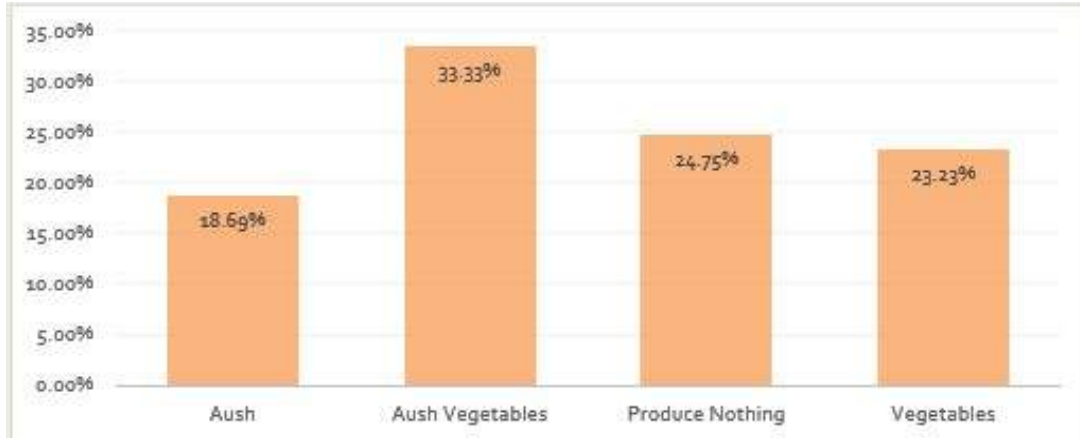
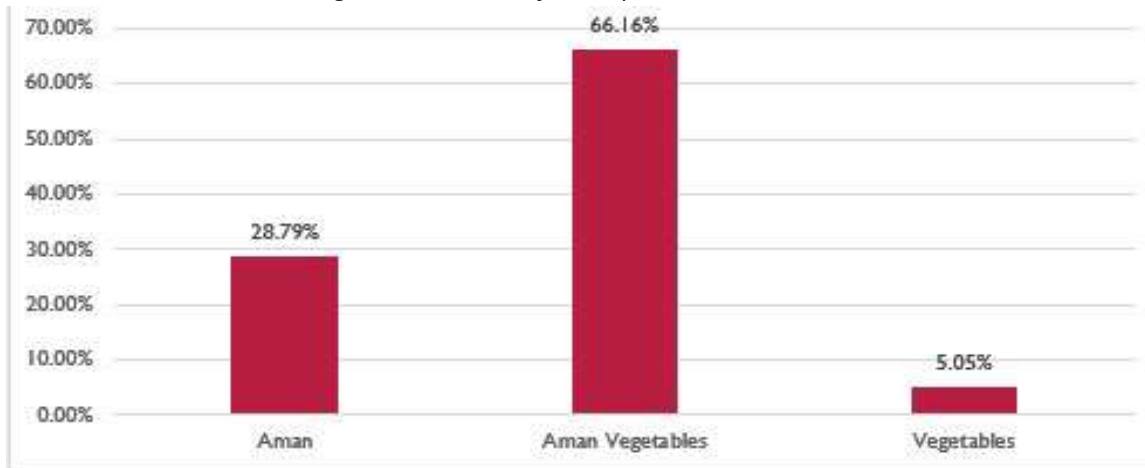


Figure 4: Production from May to August



From September to December Aman is regarded as the main crop. Those who do not cultivate Aman paddy cultivate vegetables like kheera, tomato, cauliflower, cabbage, chili, broccoli, squash, mustard, etc. from the last week of October.

Figure 5: Production from September to December

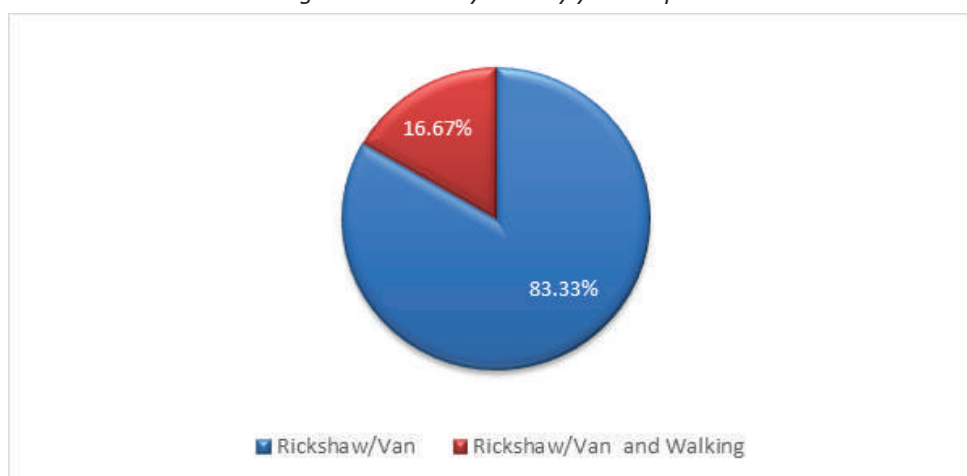


Production has increased due to use of modern technologies

Transportation

Rickshaws and Van are the key transportation system. 83% of respondents use rickshaws or van. 17% people transport their goods with rickshaw/van and by walking.

Figure 6: How do you carry your crops?

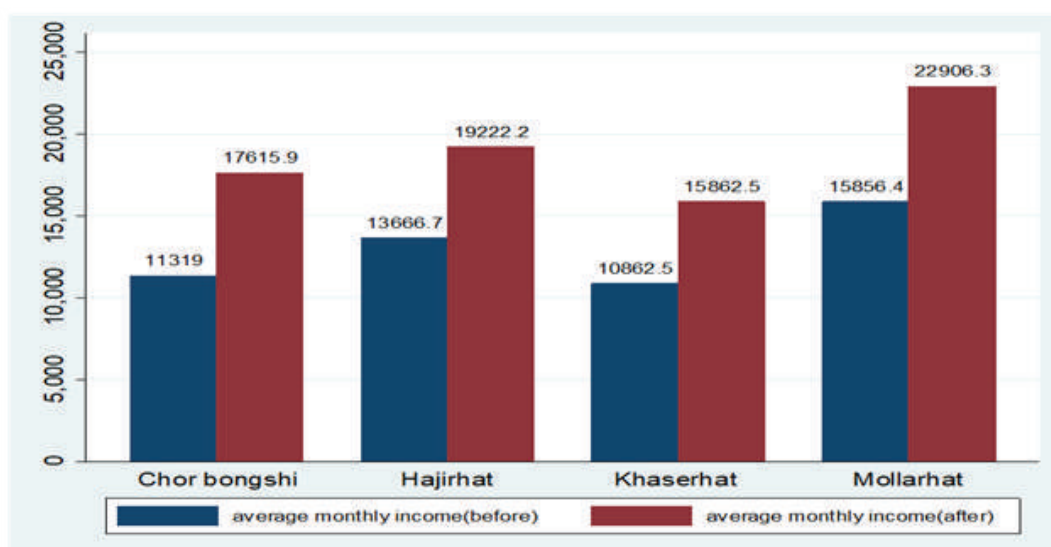


From the structured questionnaire and open-ended questions, this study has identified several positive outlooks. The targeted members were supported with capital and agricultural input supports. Short-term and seasonal loans have been provided to them as well as agricultural input materials have been given to them as free of cost. The targeted members have been trained with modern cultivation methods. This supportive program has been very much influential to improve their living condition and has generated a community-based spillover effect.

Increase in income

Figure 7 shows the mean comparison of monthly income before and after CODEC Agriculture Unit's support were provided across four branches. The mean monthly average income increase was highest in Mollarhat and lowest in Khaserhat. The income has been increased significantly after the support. In Chorbongshi the income rose 55.26%. In Hajirhat . Khaserhat and Mollarhat income rose 40.65%,46% and 44.46% respectively.

Figure 7: Distribution of average monthly income of targeted members across four area



Using paired sample t-test, we have found that the difference between after CODEC Agriculture Unit’s interventions average monthly income and before CODEC Agriculture Unit’s initiatives average monthly income is statistically significant. The P-value of the alternative hypothesis of mean not equal to zero and greater than zero are statistically significant. Therefore, the members are enjoying an increase in income currently.

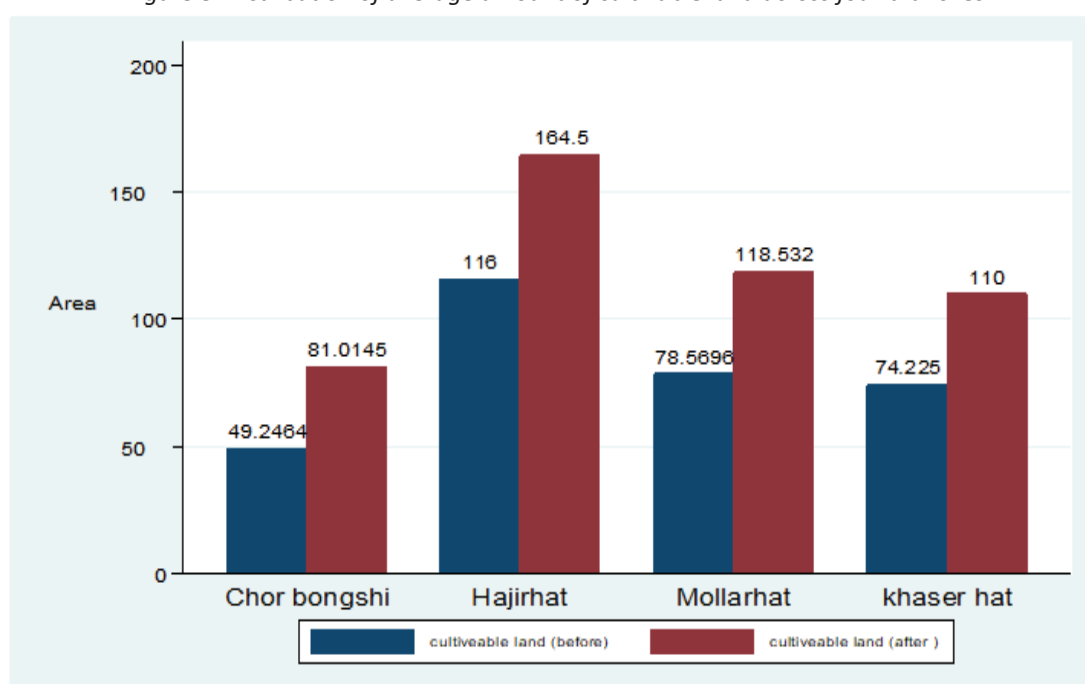
Table 3: Paired t-test results

Paired t test						
Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Aftertraining~e	198	19295.63	690.8329	9720.88	17933.25	20658.01
Beforetraining~e	198	13166.78	451.3419	6350.944	12276.7	14056.86
diff	198	6128.848	319.5833	4496.936	5498.605	6759.092
mean(diff) = mean(Aftertraining~e - Beforetraining~e)			t = 19.1776			
Ho: mean(diff) = 0			degrees of freedom = 197			
Ha: mean(diff) < 0		Ha: mean(diff) != 0		Ha: mean(diff) > 0		
Pr(T < t) = 1.0000		Pr(T > t) = 0.0000		Pr(T > t) = 0.0000		

Increase in amount of cultivatable land usage

Figure 8 shows the average amount of cultivatable land usage before and after CODEC Agriculture Unit’s support. It is clear from the figure that the amount of cultivatable land has been increased across all the studied area. In the vertical axis, we have measured the amount of cultivatable land using decimal measurements. The program becomes very much fruitful as the income from production has been increased and with the regular support, our members are using land efficiently.

Figure 8: Distribution of average amount of cultivatable land across four branches



There has been significant growth in the amount of cultivable land. In Chorbongshi 64.63% growth in the amount of cultivable land. In Khaser hat it is 50.87%. In Mollahrhat and Hajir hat the growth is 48.12% and 41.81%. (Please add how much percentage of land for cultivation has increased in each area after Agriculture Unit's interventions.)

Using paired sample t-test we can see that the mean difference is in the amount of cultivable land usage before and after the program support has been statistically significant (Table: 4). The null hypothesis was no difference between mean cultivable land usage whereas the alternative hypothesis was there is a difference in the amount of land usage. The null hypothesis can be rejected at a 5% level of significance and the alternative hypothesis are accepted.





Cultivation of high yield vegetable by Mr. Atik Ullah

Table 4: Result of paired t-test

Paired t test						
Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Aftertraining~v	198	106.0556	5.811866	81.78021	94.5941	117.517
Beforetraining~i	198	69.36364	4.426975	62.29306	60.63329	78.09398
diff	198	36.69192	2.67994	37.7101	31.40687	41.97697

mean(diff) = mean(Aftertraining~v - Beforetraining~i) t = 13.6913
 Ho: mean(diff) = 0 degrees of freedom = 197
 Ha: mean(diff) < 0 Ha: mean(diff) != 0 Ha: mean(diff) > 0
 Pr(T < t) = 1.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 0.0000

Adaption to modern cultivation method/ technology

The targeted members of the program have been supported by several training like production and usage of trico-compost fertilizers, usage of pheromone trap, improved vegetable cultivation method in Char areas, introduction to soybeans diseases and its controls methods, watermelon cultivation during summer, integrated crop management in safe crop production, the introduction of new varieties of rice which are tolerant of adverse environment and special importance, expansion of oil and pulse cultivation in coastal areas, usage of coco-dust to grow vegetable/crops seeds, etc.

Most of the people did not know about the usage of these modern cultivation methods (Figure: 9). Only 5.13% of people in Chorbongshi knew about some modern cultivation method. After the CODEC Agriculture Unit's support, they have been using the modern cultivation method. In total 90.7% of people did not know the use of modern cultivation methods before they were involved with CODEC Agriculture Unit. Only 9.23% of people have some knowledge about the modern cultivation method, but they have not applied this knowledge practically.

From Figure 10 we see, after CODEC Agriculture Unit's support, 95.43% of respondents have started using modern cultivation and only 4.57% of respondents have not used the learned techniques. The use of modern cultivation method is high in Mollarhat (38.55%) but in Hajirhat the use of modern technology is low because the program has been introduced recently to the targeted members and we had a smaller number of respondents from there.

The 96.45% targeted members of the program have said that after using the learned techniques and methods of cultivation they made augmentation in production while 3.45% targeted members have failed to increase production (Figure: 11). There are several reasons for their failure. Low land, waterlogging, changing the direction of airflow, soil digging are the key problems for their misfortunes.

The program has been very much successful in making people adaptive to modern cultivation methods. By using the modern cultivation method, the members have been able to increase their production. Currently, 98.26% of the members are using the learned techniques. (Figure 12).

Figure 9: Use of modern cultivation method before program support.

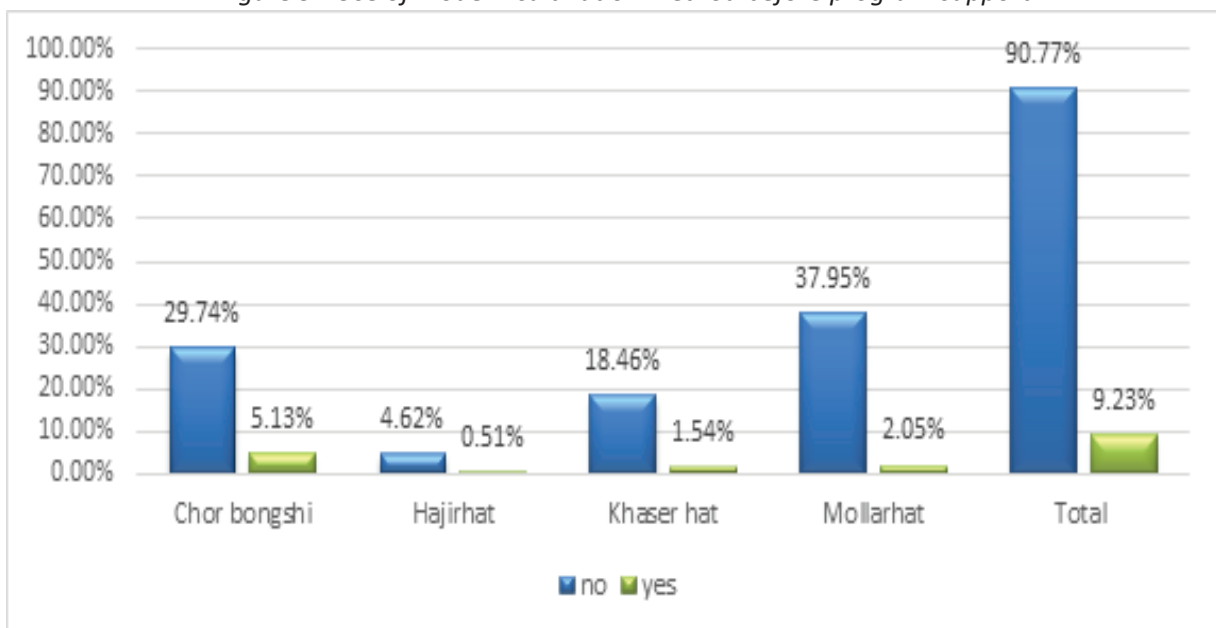


Figure 10: Use of modern cultivation method after program support.

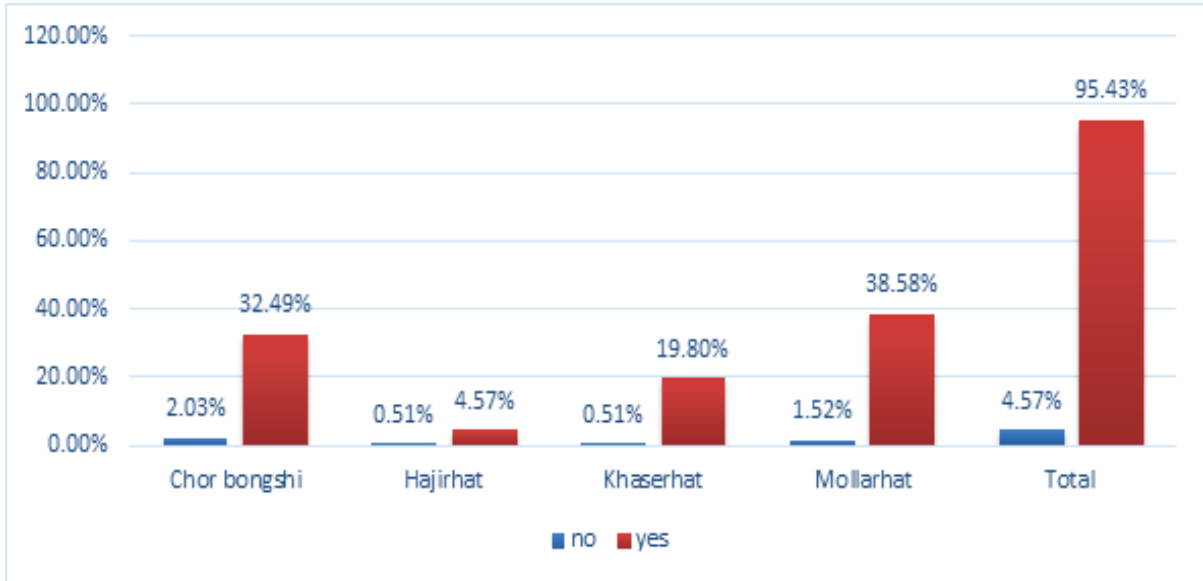


Figure 11: Response about production enhancement after using modern cultivation methods.

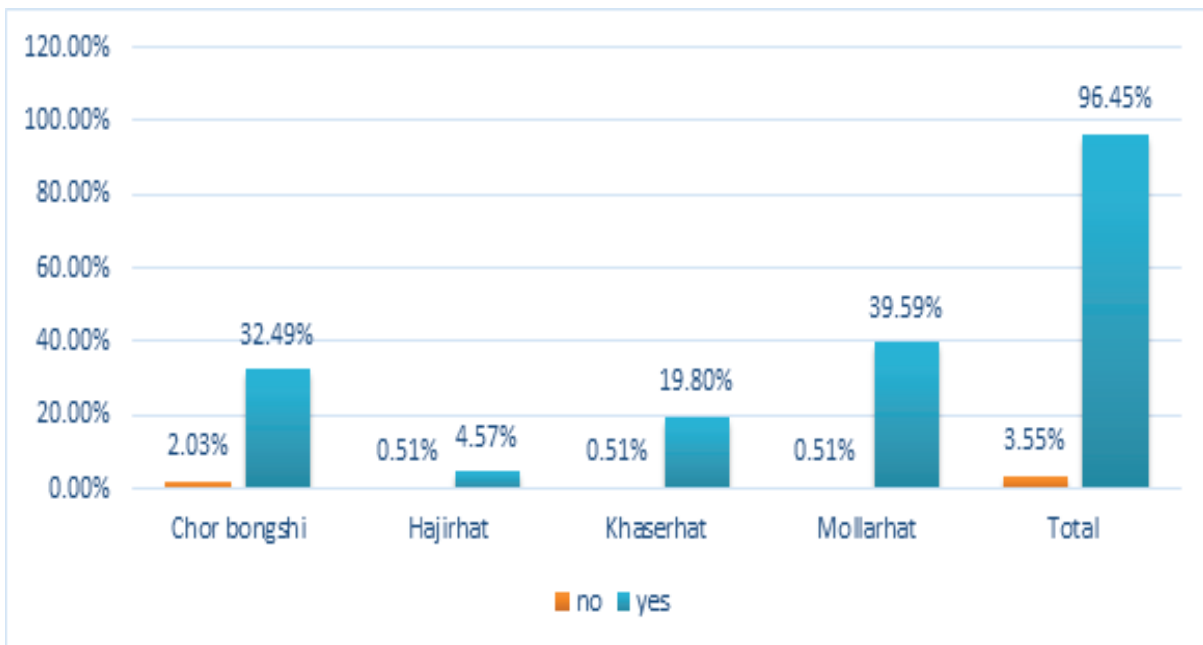
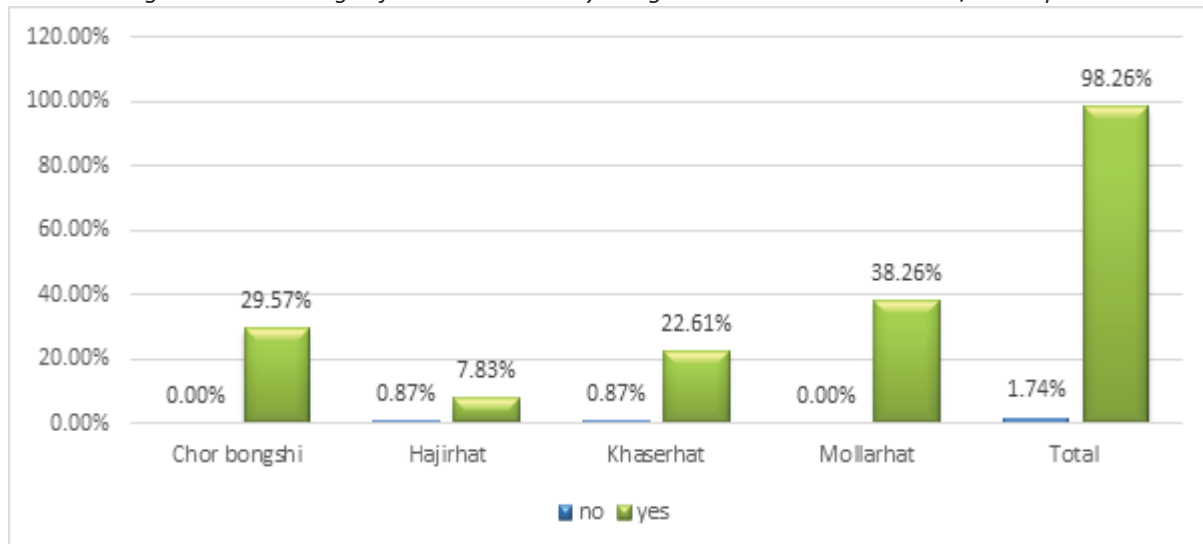


Figure 12: Percentage of members currently using modern cultivation method/techniques.



High Level of Community Participation

The study finds that the program has been successful in generating positive community participation, which creates positive externality and spillover effects. A positive externality is a benefit that is enjoyed by any third party due to any intervention. The agricultural unit's support has been very much effective in generating positive externality among the non-targeted members of the program. Mainly the farmers who are not under the program support are the non-targeted members of the program. They have taken support from our targeted members and used the modern cultivation methods for production and gets benefits from this.

Our members have active community participation. Figure 13 shows that 95.65% of the respondents are active to teach others. The overall attitude of sharing knowledge is very much positive in the studied areas.

Figure 13: Are you courageous to teach others?

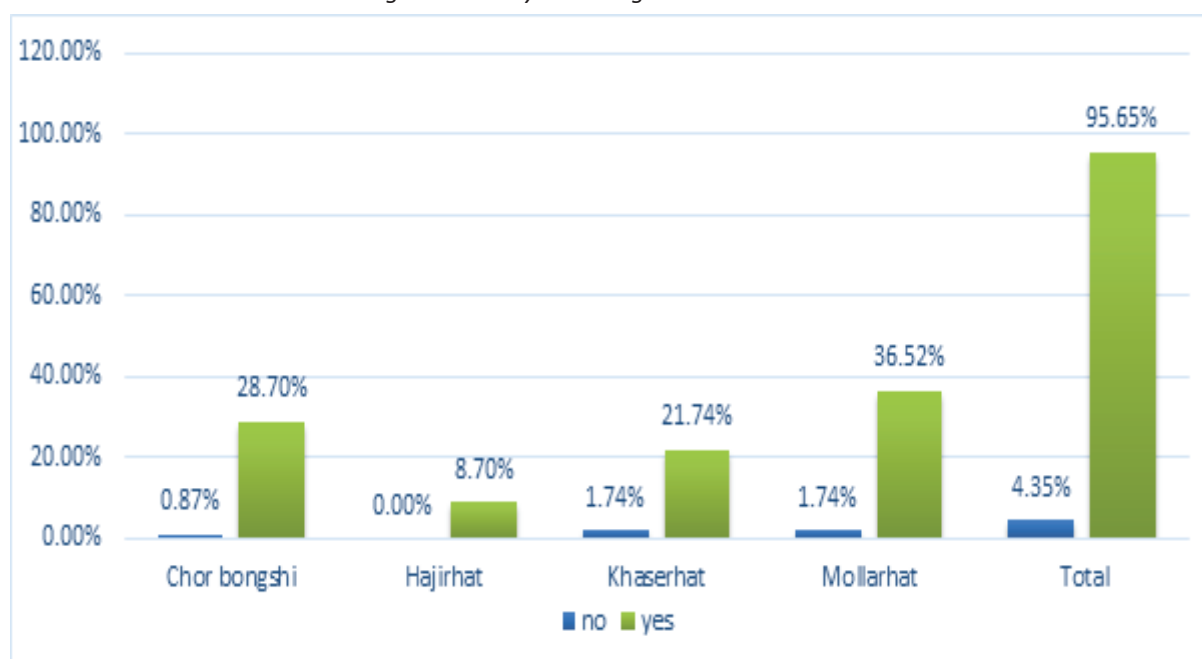


Figure 14 shows the status of the level of courageousness ,who have been courageous to teach others. Most of the respondents belong to medium level .46% of total respondent have said that they have medium courage to teach other and only 1.05% respondents have said they have a little courage in helping others. 25.65% of people show high courage to teach others.

90.43% of total respondents have said that their neighboring farmers have asked for their advice in agricultural production (Figure 15). The percentage of seeking advice to our members has a positive vibe across the studied area.

3.26% of total respondents have said that people who have used their advice in agricultural production have not been benefitted. Besides, 96.72% of respondents said using their advice other farmers have been benefitted (Figure: 16).

Figure 14: How much Courageous!

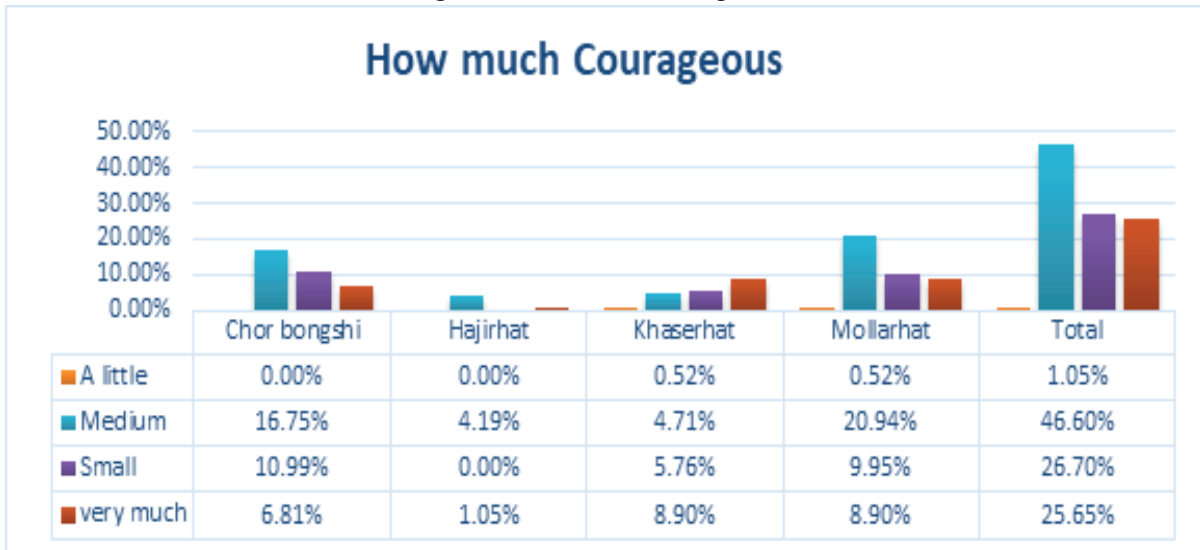


Figure 15: Do others come to you for advice?

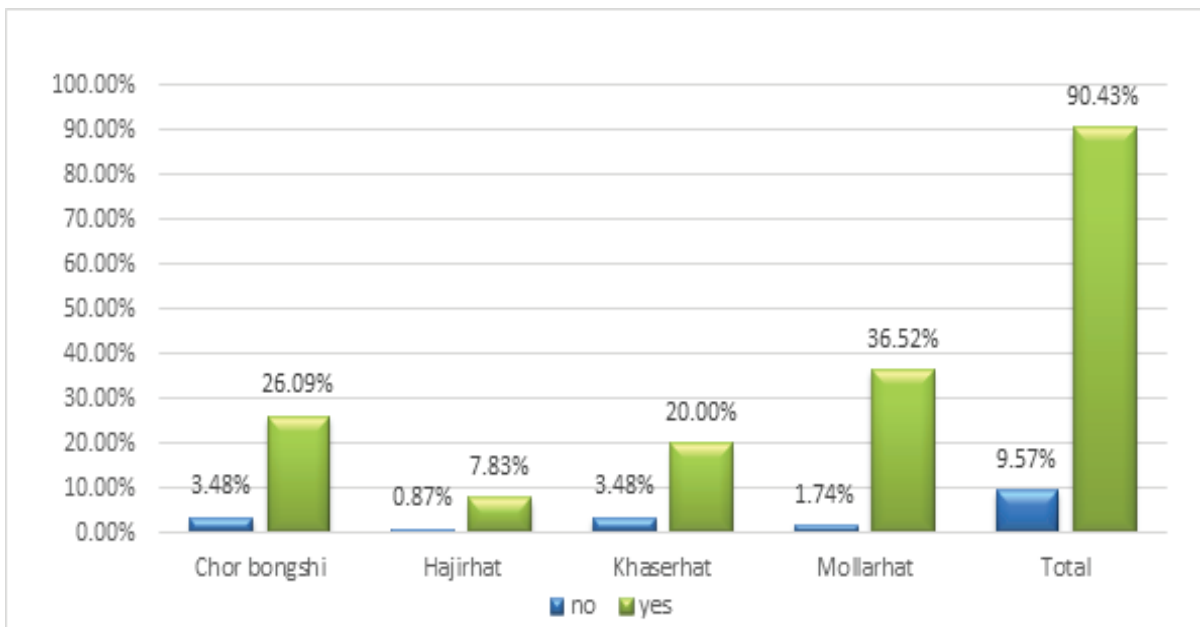
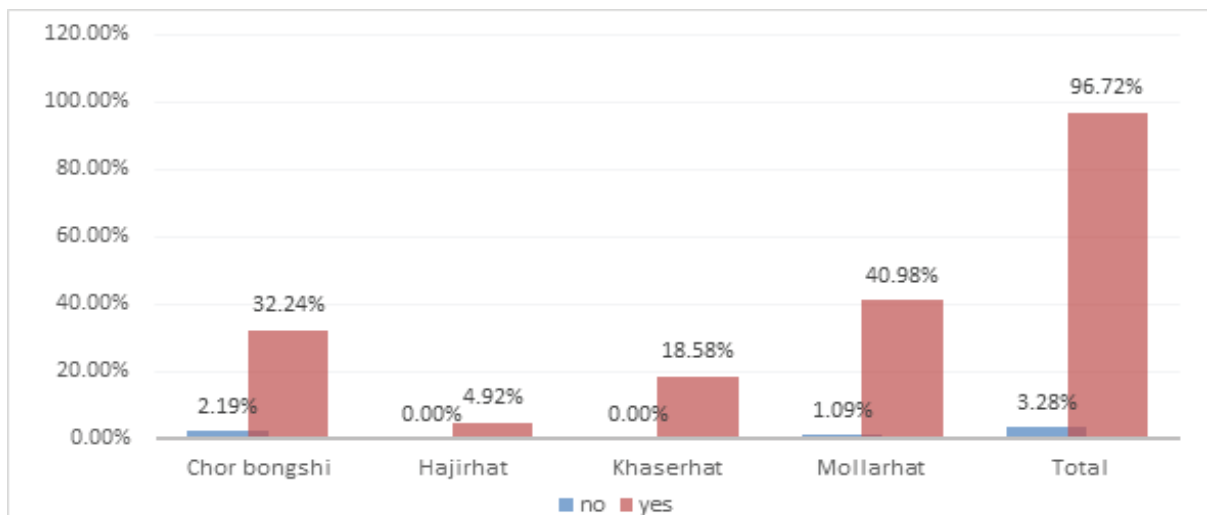


Figure 16: Have they got benefit from your advice?



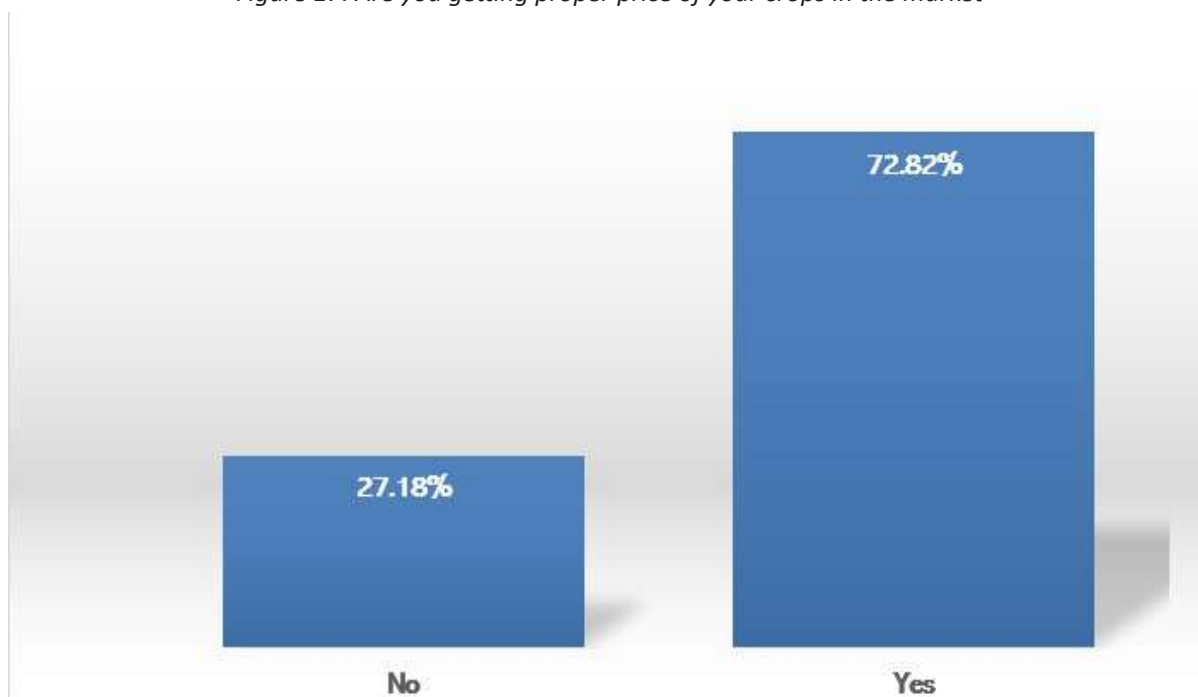
Case Study : Indirect Targeted Member Abdul Kadir, Village: Char Induriya, Khaserhat

Abdul Kadir is a marginal farmer of Khaserhat. He is not listed in our Agriculture Unit's program support. Our listed member Delu Sarkar and Mokton Kha is his neighboring peasant. Abdul Kadir saw their modern cultivation techniques and he was inspired and supported by them. Delu Sarkar and Mokton Kha supported Abdul to produce peeper and garlic. Abdul never produced pepper and garlic before. Mainly He used to produce tomato and cucumber in his field, but it was not profitable. In addition to this, he used to produce different types of seasonal vegetables, but he did not earn any significant profit. With the support and suggestion of our members last year he produced garlic and earned a huge profit. This year he has cultivated garlic in 16 decimals land and expecting a decent profit. He is also supporting his wife's brother Abdur Rahman (32) to cultivate garlic in his land.

Market Constraints

Agricultural market has several barriers. presence of middleman, faulty product weighting method, lack of storage facilities, not knowing about the potential product market is some of them. Farmers have been always exploited by getting the low price of their product. 27% of respondents have said they do not get the proper price of their crops. 73% of people have said that they get the proper price of their products.

Figure 17: Are you getting proper price of your crops in the market



From FGDs most of the farmers have reported that there is no storage in that area. They cannot preserve their products properly. The storage unavailability makes it difficult to preserve the product.

“I cultivated soybean and some other seasonal vegetables last year. I have less capacity to store soybeans in my house. In last flood (2020) a large portion of my soybean has perished”.

Osman Goni, Khaserhat

“Presence of middleman is very much common in the agricultural markets. Brokers influence the paddy and soybean market. ”

Jakir Hossain, Mollarhat

“I wanted to sell my paddy to the government. Due to the market syndicate, I could not sell my products. Some storekeepers have made a syndicate so that we can't sell products to the government directly.

Monir Hossain, Charbangshi



Improvement in land fertility and safety through adaptation of trico-compost



Safe vegetable sale centers supported by CODEC Agricultural Unit to establish local market linkages



Four Focus group discussions with targeted members were held during the study. Each group consists of 8 members. Both males and females have participated in FGDs. The FGDs have been focused on several issues like the status of current income and expenditure, post-harvest collection, the participation of women in agriculture, knowledge about modern cultivation method, the overall status of agricultural business expansion in those areas, irrigation status, public and private loan facilities, what kind of obstacles do they face in expanding their business, what are the problems faced in production, transportation, marketing; what steps have you taken them to deal with the problems /obstacles, do they notice any changes in your socio-economic field after training from CODEC.

FGD & Key Informants Survey

Three key informants' interviews have been taken during the study. The key informants were Upzaila Agricultural Officer of Raipur, Agricultural officer of the program, and Branch Managers of CODEC MF program in the studied area. It was an open-ended discussion with them about the effectiveness of the program. They have shared their experiences and thoughts on the program. Challenges and opportunities have been also discussed during the interview.

Insights from FGDs and interviews are the followings:

1. Our members produce diversified products. Farmers of Chorbongshi, Khaserhat, and Mollarhat mainly produce paddy, soybean, and vegetables. In Hajirhat, seasonal vegetables are regarded as the main crops. Varieties have been found in vegetable production. They cultivate broccoli, squash, lettuce, cucumber, tomato, etc.
2. Most of the respondents have been able to transform their lives with support from CODEC Agriculture Unit. In the last 5 years, they have seen improvements in their socio-economic condition.
3. Members face constraints to sell paddies at the right price because of the syndicate in the markets.
4. Most of the members do not have adequate knowledge about the input costs of production.
5. Members do not use all the credit on agricultural purpose, rather they use some of the credit on consumption, repay loans that they have taken from other MFIs, NGOs and banks.
6. They want recognition for their works.
7. They want support for market linkage to sell their product from remote areas. Members have a high willingness to pay for good seeds and other agricultural machinery.
8. Male and Female equally participate in agricultural works both in pre-and post-harvesting times. Women do not face any wage differential from men.
9. Farmers face a lack of manpower and machinery during post-harvest collection.
10. Access to irrigation service is very tough but no personal or community-based initiative has not been taken to solve the problem.
11. Members have less knowledge about agricultural programs of digital and print media.
12. Most of the members do not have adequate knowledge about the health hazards of using chemicals and don't take any precautionary measurement.

People do not use agricultural credit for the true purpose. A portion of agricultural credit is often found to be channeled into some other investment and consumption expenditure; while a portion of credit adopted formally for other purpose is also invested in agricultural spending. The latter is predominantly found in the case of NGO credit, which is taken for non-farm activity but is used in farm, especially crop activity (BIDISHA et al., 2015)



FGD at Chorbongshi



FGD at Mollarhat

The CODEC Agriculture Unit's program has been very much effective to improve the livelihood condition of these vulnerable people. Increasing production and productivity is the result of using modern and high-value crop production. To achieve the SDG goals, this supportive role of CODEC can be regarded as an example. Women empowerment, livelihood improvement, greater community participation can be regarded as key achievements of this program. Introduction to modern cultivation methods and inputs, trainings, and adequate financial support makes this program more effective. Though the program has been successful still some areas must be improved for achieving the program's sustainability.

Recommendations

1

Data-driven agriculture is necessary to overcome upcoming challenges. Most of the farmers have no idea about the input and output costs. They do not know about the actual cost and income from their production. Therefore, it requires an integrated data-based production system which will be helpful for the farmers to track the production year by year. This will also help them to improve their decision-making skills.

2

Farmers are not acquainted with proper nutrition knowledge. The program can take the necessary steps to help farmers to improve their health and nutrition status. Farmers must be encouraged to produce highly nutritious food.

3

The program can support the farmers to export their products. Maintaining the standard quality of products is very much essential for the farmers. To export products, certain quality standards are followed worldwide. The farmers can be supported to maintain the quality standard (from production to packaging) as well an effective market linkage.

Recommendations.....

4

The farmers face post-harvest loss due to lack of manpower. Also, post-harvesting collection and preservation are hampered due to the lack of required machinery. More machinery is required. There is high demand for cultivation machineries. Financing the targeted members can be a useful mechanism in buying harvesting machines ring about great improvements in production.

5

Access to irrigation service is tough in these areas. During FGDs the farmers have revealed that they are facing lack of irrigation support and do not get the services at right time. Helping farmers with irrigation support will be help-

6

Farmers need recognition of their work. Most of the farmers are not acquainted with government supports. The program must take initiative to incorporate these farmers with government supports. Awarding successful farmers to encourage others can be taken under consideration.

7

Farmers produce diversified vegetables. Most of the farmers sell their products in nearby markets. Establishing market linkage between farmers and vendors in different areas will help farmers to sell their products in the diversified market. Training on entrepreneurship skills will help farmers to improve their decision-making process.

Recommendations.....

8

Awareness sessions on health and hygiene can be addressed by the program. Most of the farmers use pesticides, fertilizers, and other chemical materials but they do not know the health hazards. To ensure their good health and hygiene different supports like masks, safety goggles PPP, farming shoes can be provided.

9

The current and future generation is at high risk of climate change. Awareness and training on climate education to farmers, their families, and children can be very much effective for future development.

10

There is a lack of storage facilities in the studied areas. There is a high demand for storage facilities. Due to a lack of storage facilities, farmers cannot preserve the products and face post-harvesting loss. Storage support to farmers will ensure post-harvesting food security by reducing losses.

11

To make the program more effective and influential, stakeholder incorporation through mapping and their activities is necessary to influence the local and national level policymakers.

The coastal community is a key priority of Bangladesh's development agenda. Due to climate change, these communities are at high risk. CODEC is always taking the responsibility to uplift the rural coastal communities of Bangladesh by providing various supports on livelihood, health, and education. CODEC microfinance program has been a key strategy to help these poor vulnerable people. While access to formal banking credit is very minimal, microfinance has become a useful tool. The combination of timely support with credit finance, providing input materials, and training on modern cultivation methods has created a new dimension. This study shows that the program has been very much successful to uplift these climate-affected vulnerable people. With timely adequate financial and technical support, the farmers have been able to increase their income, agricultural output has been increased and greater community participation shows the effectiveness of the program at meso level. Though the program has been successful in the implementation process, there still exists some scope of improvements. Data-driven agriculture, farmers market linkage, providing and promoting health education for farmers should be added to the program development plan to make the program more effective. Besides, the program can support farmers by introducing climate-related education programs to the next generations, arrange regular awareness programs, increase the stakeholder's engagements to influence both national and international level policy actions.

Conclusion



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Case Study : Direct Beneficiary Majeda, Char Bangshi

Majeda is a resident in Char Bongshi Sub-district of Laxmipur district. She lives in a family of 10 people. She and her husband have 8 children, 4 boys, and 4 girls. She studied till class 4. Majeda and her husband had a life full of struggle. In 1997, she only had a savings of 5 taka. Then, she came to know about CODEC's Micro Finance program through her neighbors. She took a loan of Tk. 3,000 at that time. And since then, she and her husband slowly and steadily started revamping their life. With the small loan, they did eggplant cultivation in a small plot that they owned. With the income they had, and taking some more loans from CODEC, day by day they expanded their agriculture cultivation. Their relationship with CODEC Micro Finance Program was just the start, and it has been carrying on for more than 23 years now. Besides eggplant cultivation, she has also cultivated many other crops. With the help of Agricultural Unit, she has received training which has made her cultivation more efficient. With the income she is making, she has been able to educate all her children one by one. Moreover, she has bought tailoring machine for her daughter, trained her to operate and gave her cloth worth Tk. 5,000. With that, her daughter stitched the clothes of neighbors and made profit, which she gave to her mother for buying household utilities. Majeda has also bought land with the income she made from cultivation. She informed that she has no leased land and has never sold any land. Majeda restructured her home with the funding of a co-operative society. She also informed that she has built a modern toilet and washroom with Tk. 80,000 from CODEC's loan and profit. The main issue she has is she does not maintain a cost/profit book to analyze the profit/loss she is making every month. But overall, she is very happy and grateful to CODEC and PKSF for the financial, technical, and mental support she has been receiving throughout the years.

Runia Begum, Char Khasia

Runia Begum is a 42-year-old working woman. She lives in Chor Ghashia, Chor Bongshi with her husband, Nur Md. Shahalam Gazi (55), 2 sons and 3 daughters. All her daughters and one of her sons has married, while the other son is in his teenage. Runia has been a member of CODEC Micro Finance program for the last 7 years. She took Tk. 30,000 loans the first time from CODEC. At present, she owns a cow and a calf. She has received various vegetable seeds, financial support, and training from CODEC. Nature has not been kind to her and her family. She started cultivating watermelon, cabbage, cauliflower, snake gourd, and bitter melon in her land. But luck didn't go her way. Due to the direction of airflow from the river and geographical issues of the land, the production was not feasible, and so she made a huge loss. At present, she owns 60 decimals of land. Due to the flood and the spread of Covid-19 last year, she has made an immense loss in her agricultural production. In last winter, all her chickens died due to flu. Her youngest son used to go to primary school. As the school is closed for a long time, she has sent her to work at garments now. Laxmipur region is known for its soybean and paddy cultivation due to the fertility of the soil. Accordingly, she planted soybean and boro paddy for cultivation. The market is about 2 km away from her home, so she needs a van to carry the crops. She has a debt of Tk. 3 lac now. Runia took a loan from Krishi Bank worth Tk. 40,000 which she couldn't pay off. Now, the interest is increasing as days are going by. She even owes Tk. 18,000 to the fertilizer shop. The current condition of her family is so bad that they don't even have proper sanitation options in their house. Runia and her family hope that one day they will be able to get out of this burden and live a good life.

Rahina Begum, Char Induria

Rahima Begum is a 40-year-old woman who lives in Chor-Induria, Khasherhat with her husband, Khorshed Pramonik (48), and 3 children (2 daughters and a son). 2 of her children go to school. Neither she nor her husband has any formal education. She is a successful entrepreneur now, but when she started, she had almost nothing. In 1997, she took Tk. 3,000 loan from CODEC. With the money, she bought a boat to catch fish in the nearby river. Later on, she took another loan of Tk. 5,000 from CODEC to utilize in agricultural production, like paddy and soybean, and made a profit of Tk. 20,000. Then, she again took Tk. 15,000 loan through which she made a profit of Tk. 30,000. With a loan of Tk. 25,000, she invested in tomato and cucumber cultivation, where her income was Tk. 70,000. She bought 28 decimals of land which has a current price of around Tk. 175,000. She used to cultivate cauliflower, cabbage, tomato, gourd in her land. Now, she also has some lands which are leased from others. At present, she cultivates paddy and soybean in 320 decimals of land. Besides, she also cultivates cucumber and snake gourd. Though she made a loss in soybean cultivation, that didn't affect much as she made a good profit in other crops. With the with-profit amount, she has restructured her house. She has been able to change the economic condition of her family. At present, she has taken Tk. 100,000 loan from CODEC which she is paying off regularly. The reason she is successful is that she is getting the proper amount for her crops. She hasn't invested in livestock farming yet. That can be an area that she can explore in the future.

Piyara Begum, Hajirhat

“Success only belongs to those who are willing to work more than anyone else” – Piyara Begum is a big believer of this quote. Piyara (35) is a business-oriented woman who lives with her husband Akkas (42), 2 sons and a daughter. Her daughter has married and her sons' study in class 10 and 8 respectively. Piyara 1st took a loan from CODEC in 2007-08 worth Tk. 10,000. Before she took the loan, her husband was a rickshaw-puller. With the loan amount, she helped her husband to buy an easy bike. Later on, they bought 2 more easy bikes. At present, Piyara has taken Tk. 100,000 loan from CODEC. They run a grocery shop in demesne. She has refurbished her house and bought lands. With leased land, she is cultivating boro paddy. They have made a profit of Tk. 15,000 by investing the loan amount. Now, they own 8 easy bikes which is running on rent. This year, they reaped 12 mounds of paddy which they sold in the market. Though a loss has been incurred due to flooding. With the help from CODEC, she cultivated bitter melon, red spinach, chili, and other vegetables. She also received 150 kg fertilizer and different seeds from CODEC. Piyara says that they are in a good condition at the moment, though she mentioned that she doesn't have any savings.

Kulsum, Hajirhat

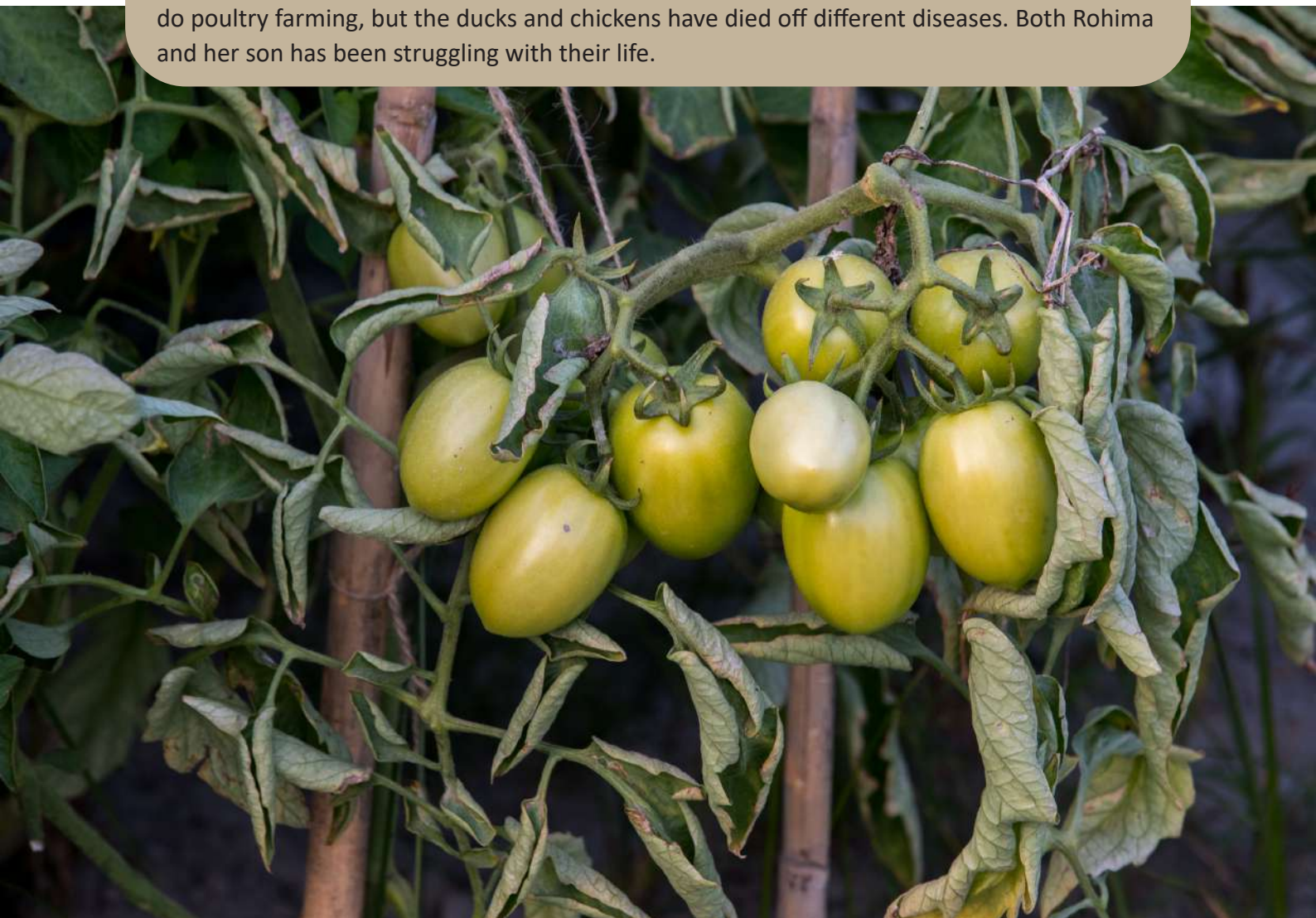
Kulsum lives in Hajirhat with her husband and 4 children. Both her daughters study at madrasah and her sons will be admitted to madrasah this year. Kulsum 1st took a loan of Tk. 10,000 from CODEC in 2005 to start a grocery shop. Then she shifted from grocery shop to agricultural farming. She leased 160 decimals of land to cultivate crops. At present, she cultivates agricultural crops in 350 decimals of land. She produces bitter melon, cucumber, chili, brinjal, gourd, broccoli, etc. Kulsum has a loan of Tk. 50,000 running in CODEC. The financial condition of her family was okay, but everything started going south in the last year. The huge flood that occurred last year in Laxmipur damaged most of her crops. They suffered a huge loss due to that. She used to own a cow, which she sold off later on to mitigate the loss. The loss equals around Tk. 11 lac. Her sister owned a cow which she took and sold to get money. She also sold her grocery shop. With the total amount, she has again invested this year and hoping that she will be able to make profit and improve her family's economic condition. Besides the loan, she has received fertilizer, seeds and training from CODEC. She informed that she does not have any access to meet or consult with any public representative. But she is very happy with the way CODEC staffs behave with her, as they try to keep her request during any need.

Morjina Begum, Khaserhat

Morjina Begum (40) and Dudu Mia (45) live in Chor Induria, Khaserhat. She has 3 daughters and a son. All her daughters go to school. Her son, aged 13-14 years, used to study in primary school, but later on, last year he was sent to Dhaka to work in tailoring. She joined as a member of the CODEC MF program in 2005. The 1st time she took a loan of Tk. 10,000 to invest in agriculture farming. She produces paddy, soybean, and other vegetables. But the land where she cultivates crop is a low-land and waterlogs, due to which the crops get wasted. Sometimes she makes some profit, but in most times, she incurs a loss. As her business has not been in a stable position, she has not been able to construct her house properly. At present, Morjina cultivates crop in 80 decimals of land, of which, 44 decimals are leased land. In the rainy season, her husband goes to the Meghna river to catch Hilsha fish. As the economic condition of her family is not in a stable condition, she needs to take loans from neighbors and relatives to maintain the daily necessities of her family. She has taken a loan from bank to recover her mortgaged land. Morjina received seeds of different vegetables and training on safe vegetable cultivation from CODEC. Though her land is low, she has not taken any initiative to dump soil and make it high.

Rohima, Mollarhat

Rohima is a 50-year-old single mother who has a son. Her husband died about 35 years ago when her son was only 28 months old. Since then, she has been taking care of her son. The situation demanded her to become an entrepreneur. In 1997, Rohima joined CODEC as a member by taking Tk. 5,000 loan. She used the loan for homestead crop cultivation. Then she bought a van and leased land to cultivate the crop. Initially, she cultivated amon paddy and soybean. Due to floods and cyclones, she could not make much profit. She did not have a house to live. As her husband died, she did not get anything from her husband's family. From her father's end, she bought 8 decimals of land from her sister where she has built a house to live. Her son has studied till primary school. She used to work in other's house to earn her living. She took a loan of Tk. 70,000 from CODEC about 5-6 years ago. Now, her son has also taken Tk. 100,000 loan. With the loan, her son cultivates soybean in 160 decimals of leased land. Without the land where she and her son live, they do not own anything else. Though they have taken a few loans, their economic condition has not improved much. they incur loss on most occasions. They are repaying their loan by taking credit from others. She doesn't have loan from any other organization. At present, they cultivate soybean and boro paddy. She didn't get any urea fertilizer from CODEC but have received training on preparing organic compost fertilizer. She has also received training on preparing slab from CODEC. She used to do poultry farming, but the ducks and chickens have died off different diseases. Both Rohima and her son has been struggling with their life.





About CODEC

CODEC is an inheritor of DANIDA Bangladesh derived from couple of project intervention explicitly DANIDA Boat Building Project and Boat Rental Scheme. CODEC has been working as a people centered development organization from 01 October 1985 according to recommendation of Government of Bangladesh (GoB) and the Royal Danish Embassy. From the beginning of its development intervention, CODEC started its activities only with the fisherfolk communities (seven villages) in Chittagong but over the period CODEC now extended its working area with other disadvantaged coastal communities along with the fisherfolk.

As a nonprofit organization committed to development, CODEC takes the pride in being the pioneer in representing the coastal and riverine folk in general and fisher-folk in particular. Their woes and wellbeing are in the center of CODEC's thinking, sources of its aspirations and basis for existence.



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