

Char Development and Settlement Project Phase IV Bangladesh



Technical Report No. 13

Household Impact Assessment Using the Five Capitals of Livelihood Approach



June 2017

Government of Bangladesh / IFAD / Government of the Netherlands

Implementing Government Agencies:

- Bangladesh Water Development Board (BWDB)
- Ministry of Land (MoL)
- Local Government Engineering Department (LGED)
- Department of Public Health Engineering (DPHE)
- Department of Agriculture Extension (DAE)
- Forest Department (FD)
and NGOs

BETS

Euroconsult Mott MacDonald

Socioconsult

Table of Contents

	Page
1. Introduction and background	1
2. Approach and methodology	
2.1 Approach	2
2.2 Methodology	2
3. Results - impacts on livelihood capitals	
3.1 Changes in natural capital	4
(a) Access to land	4
(b) Improvement in the productivity of land	5
(c) Forestry	6
3.2 Changes in human capital	7
(a) Training and skill development	7
(b) Health services	7
3.3 Changes in physical capital	7
(a) Physical infrastructure	8
(b) Household and productive assets	9
(c) Poultry and livestock assets	10
3.4 Changes in social capital	11
(a) Participation in Field Level Institutions	11
(b) Changes in women's empowerment	12
3.5 Changes in financial capital	13
4. Linkages between livelihood capitals	14
5. Impact of livelihood capital on household income	15
6. Conclusions	17

List of Figures, Tables and Appendices

	Page
Figure 1: Five Capitals of HH Livelihood Framework Approach	2
List of Tables	
Table 1: Potential farming HHs listed by PNGOs and study sample	3
Table 2: Total land assets of sample households	5
Table 3: Numbers of crops, vegetables and fruits cultivated	5
Table 4: No. of persons participating in training for on- and off-farm IGAs	7
Table 5: Direct and indirect benefits from different infrastructure	8
Table 6: Value of assets held by study households	10
Table 7: Numbers and types of poultry and livestock assets	11
Table 8: Number of households participating in FLIs	12
Table 9: Direct and indirect benefits from FLI membership	12
Table 10: Complementary linkages between livelihood capitals	14
Table 11: Number of sources of income	15
Table 12: Distribution of household income by source	16
Appendix I: Household Profiles	
1. Case Profile of Ms. Fatema (Husband: Md. Didarul Alam)	19
2. Case Profile of Ms. Noorjahan (Husband: Md. Bahar Uddin)	23
3. Case Profile of Ms. Bibi Hajera (Husband: Md. Alauddin)	27
4. Case Profile of Ms. Noorjahan (Husband: Md. Jashim Uddin)	31
5. Case Profile of Ms. Saleha (Husband: Md. Muslehuddin)	35
6. Case Profile of Ms. Aleya Begum (Husband: Md. Abdul Baten)	39
7. Case Profile of Ms. Ayesha Khaton (Husband: Md. Jabiul Hoq)	43
8. Case Profile of Ms. Ferdoushi Beauty (Husband: Md. Kamruzzaman)	47
9. Case Profile of Ms. Bibi Amena (Husband: Md. Babul)	51
10. Case Profile of Ms. Nargis (Husband: Md. Nurunnabi)	55
11. Case Profile of Ms. Saira Khaton (Husband: Md. Azhar)	59
12. Case Profile of Ms. Bijoy Lakshmi Das (Husband: Mr. Hiralal Chandra Das)	62
13. Case Profile of Ms. Shahida Khaton (Husband: Md. A. Shahid)	65
14. Case Profile of Ms. Roona (Husband: Md. Riazuddin)	69
15. Case Profile of Mrs. Raoshan (Husband: Md. Abdul Wadud)	73
16. Case Profile of Mrs. Khairon (Husband: Md. Abdul Khaleque)	77
17. Case Profile of Mrs. Amena (Husband: Md. Shamsuddin)	81
18. Case Profile of Mrs. Noorjahan (Husband: Md. Habibullah)	85
Appendix II: Data Tables	
Table A1: Land ownership and status of land title	89
Table A2: Total Land Assets of Sample Households	90
Table A3: Number of crops, vegetables and fruits cultivated	91
Table A4: Value of assets owned by sample households	92
Table A5: Distribution of sample households in the membership of FLI	93
Table A6: Household savings and microcredit loans	94
Table A7: Distribution of household income by source	95
Appendix III: Data Collection Format	96

Acronyms

BWDB	Bangladesh Water Development Board
CDSP	Char Development and Settlement Project
DAE	Department of Agricultural Extension
DPHE	Department of Public Health Engineering
DPS	Deposit Pension Scheme
DTW	Deep Tube Well
DUS	Dwip Unnayan Sangstha (NGO)
EKN	Embassy of Kingdom of Netherlands
FD	Forest Department
FF	Farmers Form
FFA	Farmers Forum Association
FFF	Farmers Forum Federation
FLI	Field Level Institution
HH	Household
HYV	High Yielding Variety
IFAD	International Fund for Agricultural Development
IPM	Integrated Pest Management
IGA	Income Generating Activity
KM	Knowledge Management
LGED	Local Government Engineering Department
LCS	Labour Contracting Society
LHR	Legal and Human Rights
MoL	Ministry of Land
M&E	Monitoring and Evaluation
PNGO	Partner nongovernmental organization
PtPs	Plot to Plot Survey
SDI	Society for Development Initiatives (NGO)
SFG	Social Forestry Group
SSUS	Sagorika Somaj Unnoyan Sangstha (NGO)
STW	Shallow tube well
TBA	Traditional Birth Attendant
Tk	Taka (BDT)
TUG	Tubewell User Group
WMA	Water Management Association
WMG	Water Management Group
WMF	Water Management Federation
WMO	Water Management Organization

Conversions

Area: 100 decimal = 1 acre = 0.4 hectares

Currency: Bangladesh Taka (BDT): Tk.80 = USD 1, Tk.90 = EUR 1

Acknowledgements

This report was prepared by the CDSP IV Monitoring and Evaluation Unit - Kiran Sankar Sarker, Monitoring & Evaluation and Knowledge Management Advisor, along with Md. Abdul. Kader and Most. Khaleda Akhter, M&E Officers. The report was edited by Edward Mallorie, CDSP IV Institutional Advisor.

1. Introduction and background

The Government of Bangladesh (GoB) aims to bring newly accreted coastal land (chars) under productive human settlement with the goal of improving the economic situation of char dwellers. Since 1994 the Government has been implementing the Char Development and Settlement Project (CDSP) in the coastal areas of Noakhali, Chittagong and Lakshmipur districts. The first three phases were supported by grants from the Kingdom of the Netherlands, with CDSP IV being a Tk. 6120 million collaborative project of the Government of Bangladesh with grant support from Kingdom of Netherlands and a loan from the International Fund for Agricultural Development (IFAD).

The overall objective of CDSP IV is to reduce poverty and hunger for poor people living on newly accreted coastal chars, which will be achieved via improved and more secure rural livelihoods with agricultural development, provision of legal title to land, and climate resilient infrastructure. The target group are an estimated 28,000 households living on five newly accreted chars - Char Nangulia, Noler char, Charing char, Urir char and Char Ziauddin covering 30,000 ha. CDSP IV started work in 2011 and will be completed in 2018.

Project implementation and activities: CDSP IV is being implemented by six GoB agencies and four partner NGOs. The GoB agencies are: (i) Bangladesh Water Development Board (BWDB), as the lead agency, BWDB coordinates the project and also has responsibility for land reclamation infrastructure (embankments, drainage sluices and channels (khals); (ii) Forest Department (FD) is planting mangrove plantations over newly accreted remote chars, with other plantations on embankments, roadsides, canals banks, foreshores and around institutional campuses, (iii) Local Government Engineering Department (LGED) is constructing climate resilient infrastructure (rural roads, bridges, culverts, cyclone shelters, killas (animal refuges), landing stages and markets);, (iv) Department of Public Health Engineering (DPHE) is constructing water supply deep tube wells and household latrines, (v) Ministry of Land (MoL) is providing settlers with titles to land through a modernized Land Records Management System; and (vi) Department of Agricultural Extension (DAE) is providing agricultural extension services (land productivity zoning, farmers training, introduction of HYV and hybrid varieties, improved technologies and good practices).

The four Partner NGOs (PNGO), BRAC, SSUS, SDI and DUS, are implementing the Social Livelihood Support component including micro-finance & group development, health & family planning, water & sanitation, homestead agriculture and value chain development, legal & human rights, disaster & climate change, and poultry, livestock & aquaculture development.

A Technical Assistance (TA) team from international and national consulting firms has been supporting implementation and, in particular, assisting with planning, management, quality control, monitoring and reporting.

Assessment of impact. CDSP development initiatives have resulted in many changes in the lives of poor char dwellers. The ME and KM (Monitoring & Evaluation and Knowledge Management) unit of the CDSP IV TA team have conducted a number of surveys and studies to assess these changes. To build on and expand this knowledge, the 2016 Supervision Mission fielded by IFAD and EKN recommended that CDSP IV initiate a household impact study. In response to this recommendation, the ME and KM unit has carried out a household impact assessment to assess the effectiveness and impact of CDSP IV initiatives on char households. Specifically this study seeks to assess how CDSP VI's interventions have impacted on the livelihood of char dwellers in terms of the five capitals of sustainable livelihoods.

The overall aim of the household impact assessment is:

- To assess the changes occurred in terms of improvement of life style of poor char dwellers due to different interventions carried out by CDSP IV

Specific objectives of in impact assessment are:

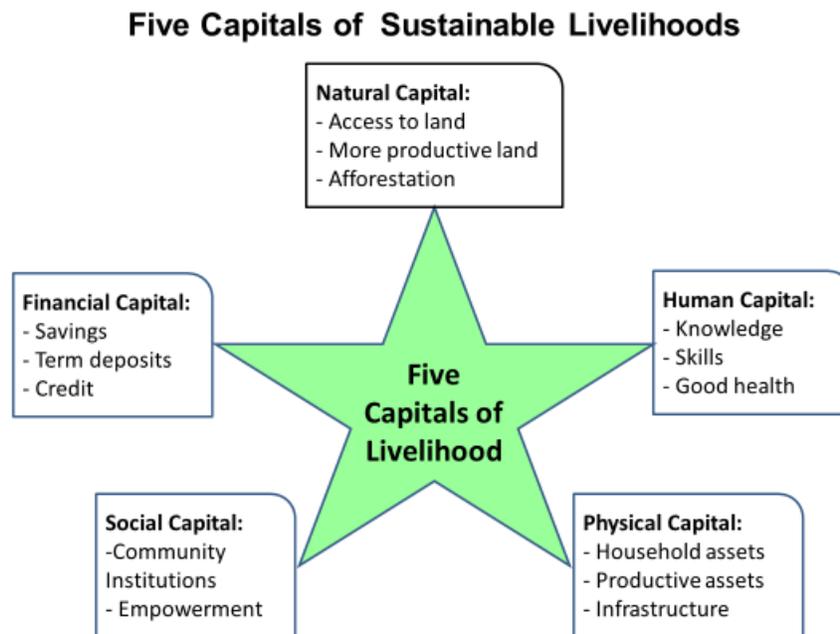
- To learn lessons about the effectiveness of different interventions carried out by CDSP IV
- To examine factors that have lead to changes in the lives of char households in terms of the five capitals of sustainable livelihoods
- To document with evidence the char dwellers' understanding of impact resulting from CDSP IV

2. Approach and methodology

2.1 Approach

The assessment approach in based around Robert Chamber's fundamental concept of five livelihood capitals, namely: human capital, social capital, physical capital, natural capital and financial capital. These form the pillars of the sustainable livelihood development approach, and have particular relevance as the interventions of CDSP have aimed the strengthen all of these five capitals. Figure 1 shows the five capitals and the interventions of CDSP IV for each of these capitals.

Figure 1: Five Capitals of sustainable Livelihood Framework



2.2 Methodology

A sample of 18 households were selected at random from a list of 2000 households drawn up by the managers of 10 of 13 PNGO branches in the project area. Households were selected for this list from the total of around 26,000 PNGO members on the basis that they had received benefits including micro-credit, IGA training and other interventions implemented by CDSP IV's six GoB agencies and four partner NGOs. The sample households were distributed over 10 PNGO branches in Char Nangulia, Noler Char,

Caring Char and Char Zia Uddin reflecting the relative number of households in these chars. Urir Char was excluded due to time constraints - it is an island char and not easy to reach.

Table 1: Potential farming HHs listed by PNGOs and study sample

PNGOs	Name of Branch	Chars	No. of HHs	Sample HH
BRAC	Char Ziauddin	Char Ziauddin	20	2
DUS	Bhumihin Bazar	Noler Char	20	1
DUS	Kaladur	Char Nangulia	20	2
SDI	Solaiman Bazar	Char Nangulia	20	3
BRAC	Idris Bazar	Char Nangulia	20	1
BRAC	Batan Khali	Caring Char	20	2
SSUS	Al-Amin Bazar	Noler Char	20	3
BRAC	Selim Bazar	Char Nangulia	20	1
SSUS	Janata Bazar	Char Nangulia	20	2
BRAC	Saddam Bazar	Noler Char	20	1
Total	Branches (10)	Chars (4)	200	18

The assessment has been done at a household level, and involved the collection of both quantitative and qualitative information. This included data on the before CDSP IV situation - which relied on the recall of respondents and so may not be entirely accurate - although some of the data can be compared with that from the 2011 baseline survey. Observations and findings have been also documented in the form of impact case profiles for each household including photography and video recording for evidence as when necessary. These profiles are in Appendix 1.

- **Household interviews:** Data was gathered from household members using a questionnaire containing both quantitative and qualitative indicators (see Appendix 3). Special attention has been taken to include all types of intervention and activities that would have impact on the household's livelihood. The key sections of questionnaire are: (i) profile of respondent, (ii) financial capital through participation in micro-finance, (iii) asset ownership, (iv) annual family income (net) by source, (v) crop, vegetable and fruit production, (vi) direct and indirect benefits from interventions by CDSP IV, (vii) adoption of new technologies, and (viii) crisis due to insufficient food.
- **Review of documents and registers:** Available records and relevant documents, such as micro-finance group saving and credit books, and training registers, have been reviewed and verified as and when available.
- **Data collection and analysis:** Data has been collected by two Monitoring Officers (MEOs) under the guidance and supervision of Monitoring Evaluation and Knowledge Management Adviser. Interviews were conducted with the selected women and their spouses. Related evidence has been captured in the form of pictures and videos. Data analysis was done by the ME&KM unit. Summarized information has been organized into individual impact case profile formats. Impact assessment findings and results have been shared with relevant sector/units.
- **Report writing:** First, a draft report and a summary on finding and results have been produced shared with relevant sectoral heads with a request of their comments and feedback. The feedback/suggestions received have been incorporated when finalizing the report. An assessment summary report will also be included in Knowledge Management section of upcoming CDSP IV Progress Report 13.

It should be remembered that the small sample size means that the aggregate of these sample households cannot be taken as representative of the population as a whole. Moreover, the sample of 18 households were selected from 200 households that were chosen by PNGOs as having received training and other support from CDSP IV. The information from these 18 households should therefore be treated as case studies that give insights into the process of building improved livelihoods. They are typical households rather than being truly representative of all CDSP households.

3. Results - impacts on livelihood capitals

3.1 Changes in natural capital

(a) Access to land

Access to land has significantly improved due to provision of secure land titles to households who had migrated to the newly accreted chars. In addition, some households have acquired additional land, mainly through some form of land leasing.

All 18 households have migrated to the chars from other parts of Bangladesh. Apart from one, who had come from the Chittagong Hill Tracts, all households had been forced by river erosion to leave Hatiya island and other coastal locations. Eleven households came from South Hatiya, two came from Bhola and remaining four came from neighbouring chars. The loss of assets per household due to migration and erosion varied from Tk.50,000 to Tk.1,200,000, with an average of Tk.521,563.

The Ministry of Land (MoL) is the only agency with the authority to provide a land settlement and titling document called a 'khatian'. There are about 24 steps to process a 'khatian', including: a plot to plot survey (PtPs), public hearing and disposal of objections with evidence, receiving agreement called 'kobiliot' from the holder of the land, registration of 'kobiliot' and distribution of 'khatian' to the new land holder. Since inception of CDSP IV, the project has successfully handed over khatians to more than 10,000 households for over 5,000 ha of land. The 'khatians' have been registered in the names of wife and husband with equal (50%) shares in the land ownerships, with the name of wife coming first to protect women in the event of the loss of their husbands from death or divorce.

Impact survey data shows that 9 of the 18 sample households have received 'khatian' for 2330 decimals (9.43 ha) through CDSP IV, two households have received 'khatian' for 658 decimals directly from MoL prior to CDSP IV, and the remaining seven are waiting for 'khatian' for 1042 decimals with the PtPS and hearings have been completed. Study data shows that average land holding size is 224 decimals (details for each household are in Table A1 Appendix 2). The following comments and feedback have been received during interviews with respondents:

- They are extremely happy and grateful to CDSP IV for providing them permanent settlement and titling document.
- They have got 100% ownership of the land and are no longer landless family and being free from the un-lawful eviction suffering faced during so-called reign of 'bahini' and 'jotder'.
- They are continually developing their land in productive manners to pursue their livelihoods though operating different income generating activities.
- They are constructing new houses replacing traditional huts. The value of their land has increased significantly
- Both wife and husband become equally 50% ownership of the land and women's name came first. As a result women's ownership of land assets have been established and women have become empowered.

Study data in Table 2 shows that total area occupied by all 18 households is now 6144 decimals (average 341 decimals per household), an increase of 44% over the total land area of 4280 decimals before CDSP IV (average of 238 decimals per household). This increase is due to the fact that 2234 decimals of land is mortgaged in or leased from others. In total 11 of the 18 households reported leasing additional land. Appendix 2, Table A2 has details for each household.

Table 2: Total land assets of sample households

	Total Land Owned (deci) Before CDSP IV	Total Land Owned (deci) now with CDSP IV	Total Land Mort/Leased (deci) Before CDSP IV	Total Land Mort/Leased (deci) now with CDSP IV	Total Land (deci) Before CDSP IV	Total Land (deci) now with CDSP IV	Percentage change in total land
Total	3980	3920	300	2234	4280	6144	44
Average per HH	221	218	17	124	238	341	44



Poor quality houses before CDSP IV



High quality houses with CDSP IV



(b) Improvement in the productivity of land

Households are also investing in improving the land that they own. Twelve of the 18 households reported increasing the homestead area - both to build new houses to replace old and traditional huts, and to grow more homestead vegetables and trees. Households are also expanding existing ponds or digging new ponds for fish culture and fish-cum-vegetable projects (11 out of 18 households report increasing the pond area). With this investment by households, and with the improvement in drainage and flood protection stemming from CDSP IV works (which has also reduced soil salinity), farmers are able to take up new crops and farm enterprises and increase production of existing crops. Cropping intensity has increased and farmers are using HYV and hybrid varieties of crops.

Table 3: Numbers of crops, vegetables and fruits cultivated

Total	Crops				Vegetables				Fruits			
	Before CDSP IV		Now CDSP IV		Before CDSP IV		Now CDSP IV		Before CDSP IV		Now CDSP IV	
	Local	HYV	Local	HYV	Local	HYV	Local	HYV	Local	HYV	Local	HYV
Total	30	0	13	19	91	1	44	143	37	0	31	32
Avg./hh	1.8		1.6	1.3	6.1		2.4	7.9	2.5		1.7	1.8
Max/hh.	4		3	3	10		10	11	3		3	3

Study data shows that households now cultivate more different types of crops, vegetables and fruits (Table 3). Prior to CDSP IV the average number of different crops per farmer was 1.8 and they did not

cultivate any HYV varieties. Now they are cultivating an average of 1.6 local and 1.3 HYV types of field crops. For vegetables, they now cultivate an average of 10.3 types (mostly HYV) in place of the 6.1 local types that they grew before. For fruit the number has increased from 2.5 to 3.5 types. Refer to Table A3 in Appendix 2 for details of individual household responses.

(c) Forestry

The increased tree cover is one of the most visible impacts of CDSP IV. Of the 18 sample households, eight are members of social forestry groups with rights to the products of the trees that they care for. Although these trees are not yet mature, three households report income from social forestry. Households have also planted many fruit and timber trees around their homesteads.

Living houses before CDSP in 2012



Living houses now CDSP in 2017



Traditional farming before: CDSP in 2012



Mechanized farming now: CDSP in 2017



3.2 Changes in human capital

CDSP IV has worked to build human capital by helping char dwellers acquire knowledge and new skills and by taking steps to improve the health of household members.

Household size: The average family size of the sample households is 6.7, which is higher than the baseline survey (2011) average family size of 5.34. This is because some households are joint families, and it was observed that a couple of families have given shelter to relatives who have lost their homes to erosion. There were seven households whose family size was between 10 and 13 persons. Average number of dependents was 4.6 per family.

(a) Training and skill development

To empower and enhance knowledge and skills of the project beneficiaries, CDSP IV initiated a skill development process, inviting char dwellers to participate in NGO groups and training them in more than 11 types of on- and off-farm income generating activities (IGAs). This training was organized by the four partner NGOs - BRAC, SSUS, DUS and SDI. The key objective in training on IGAs was to enable household members to pursue livelihoods and so generate income for their families. Table 4 shows that, out of 18 sampled households, 83% participated in fish culture training, 78% in agri-crop cultivation, 72% in cow rearing, 68% in poultry rearing and 67% in vegetable cultivation. Besides, the 9 women (50% of households) members received month-long residential training on tailoring and 6 women received training on cap sewing. All of the study respondents said that both on and off-farm training were very useful, and that they are now successfully operating IGAs. They said, "We would have no scope of such training on IGAs if CDSP IV has not included them in their development program".

Table 4: No. of persons participating in training for on- and off-farm IGAs

	Poultry rearing	Cow Rearing	Goat rearing	Beef fattening	Vegetable cultivation	Agri-crop cultivation	Fish culture	Small trading	Tailoring	Handicraft-Cap sewing
Number trained	12	13	8	7	12	14	15	9	9	6
% of households	68	72	44	39	67	78	83	50	50	33

(b) Health services

The PNGOs established 11 health clinics, providing services such health check-ups for pregnant women and lactating mothers along with family planning services such as contraceptive pills and injections for eligible couples. Besides this, NGOs have been operating a mobile clinic at each community/'somaj' to reach families from remote areas. The sample households reported that both NGOs clinics and mobile clinics have been very useful and they benefited from the health care services provided by doctors, health workers and traditional birth attendants (TBAs).

3.3 Changes in physical capital

CDSP IV has built physical capital at two levels. First, it directly invested in public assets - this being infrastructure to provide land drainage and flood control, protect people and livestock from loss at times of cyclones, and to improve communications and market access. CDSP IV also provided tubewells and latrines to provide households with domestic water and sanitation.

Secondly, households participating in CDSP built their own physical capital, acquiring household assets and productive assets (equipment for farming and other IGAs, livestock).

(a) Physical infrastructure

Before CDSP IV, there was no infrastructure such as sea dykes, sluice gates, embankments, roads, bridges, water management centres, multipurpose cyclone shelters and markets. These now been built and have had a major impact on the productivity of agricultural land and on the ability of producers to connect to markets. In addition, primary schools and madrassa have been set up in the cyclone shelters to educate children. Families are now able to easily access good quality drinking water and better hygiene has reduced ill-health.

Survey respondents from the 18 households gave the following comments and feedback on how they have benefited and how their life styles have been impacted by this infrastructure.

Table 5: Direct and indirect benefits from different infrastructure

Physical Infrastructures	Direct and indirect benefits as perceived by survey respondents
	<p>CDSP IV has built embankments and excavated 86.9 kms of drainage channels up to December 2016. Due to construction of canals and sluices excess water from rain and floods can drain out, and saline water cannot enter. Water management group (WMG) members are regularly operating the sluices in different places. Farms are free from salinity and grow more crops than before CDSP IV period. But households Nangulia said that they were again in danger due to severe river erosion, which has washed away the DS II sluice. They hope that CDSP IV will come forward to solve such problems as they have done in the past.</p>
	<p>CDSP IV has constructed 16 water management group (WMG) centres up to December 2016. The water management group (WMG) centres built by CDSP IV are used by WMOs (WVG, WMA and WMF) to hold monthly and other meetings when they discuss, plan to solve their problems. The nice structure will be very helpful for the 'somaj' people and there are opportunities for other service providing organizations to hire the premises.</p>
	<p>CDSP IV has built 30 multipurpose cyclone centres till December 2016. The multipurpose cyclone shelter built by CDSP IV is meeting one of their basic needs in educating children. These centres are being used as primary schools and Madrassa (religious institution). Besides this people will take shelter at the time of cyclones and other disaster situations. At the top of each cyclone centres, there is stand for hoisting 'disaster' signal flags which can be seen from very distant places to provide the char people with an early warning signal.</p>
	<p>CDSP IV has constructed 112 km of surfaced rural roads (BC and HBB) and 113 km of earthen roads till December 2016. The char people of the five new chars (e.g. Char Nangulia, Noler Char, Caring Char and Urir Char) had suffered from very poor and muddy road communications until the inception of CDSP IV. CDSP IV has built nice roads and bridges that has made travel very easy, comfortable and less time consuming. All kinds of transport can ply over these roads, and business and associated sectors have developed.</p>

	<p>CDSP IV has constructed 4 bridges and 65 box culverts till December 2016 to facilitate smooth running of vehicles and easy flow of water to avoid water logging. Char dwellers reported that due to construction of bridges and bridges there is no water logging problem and they do not need to use boats and trawlers to cross canals.</p>
	<p>A total of 1138 DTWs has been installed by CDSP IV at different locations of 5-chars of CDSP IV. Char dwellers have suffered for a long time due to lack of safe and drinking water. They had to drink water from ditches and rivers. They suffered from dysentery, diarrhoea and other water-borne diseases. CDSP IV's DTWs are great boon and blessings for char peoples. They are now drinking fresh water and they use DTWs water for other purposes like cooking and bathing. Sometimes, they also use DTWs water in their homestead vegetable gardens.</p>
	<p>A total of 19,417 hygienic latrines has been installed in 19,417 households by CDSP IV at different locations of 5-chars of CDSP IV. Sanitary latrines are the lowest cost method of separating faeces from people. A sanitary latrine decreases spread of pathogens between faeces and food by flies. Due to installation of hygienic latrines, they are now living in an improved and hygienic environment. All family members including their kids now know how to use and maintain a hygienic toilet using soap and sufficient water. They reported that they would like to end the era of open defecation.</p>

(b) Household and productive assets

Study respondents reported that, as they had migrated from other places, they were almost asset-less when they arrived in the chars. During the inception stage of CDSP IV, they only had a few assets of poor quality such as a hut as a living house, khat (bed), wooden kitchen cabinets and alna¹. As soon as they got a 'khatian' (or even before in some cases), they start build a much better living house and purchase new sets of quality furniture, solar panels and mobile phones along with agricultural implements like tractors, paddle threshers and shallow tubewells for irrigation.

The project has no provision to purchase such physical assets on behalf of households². Respondents reported that they have invested funds from multiple sources in procuring physical assets. The most common sources are (i) profits from different IGAs such as fish culture, agriculture and livestock rearing, (ii) micro-credit, (iii) temporary mortgaging land for a cash loan, (iv) sale proceeds from selling cows and trees, and (v) taking advances from farmers in return for a commitment to provide water for irrigation. There was no special programme or grants to support procurement of solar panels, yet 15 out of the 18 households now have solar panels. Study data shows that before CDSP IV, households had assets valued at an average of Tk.29,278, and at present the average asset value stands at Tk.132,778, an

¹ Alna is a traditional clothes hanger

² There was a limited provision to provide sewing machines for women who had received training in tailoring

increase of 354% over the value of assets before CDSP IV started. Refer to Appendix 2, Table A4 for details of individual responses.

Table 6: Value of assets held by study households

Assessment Variable	Value of Asset of HH –CDSP IV		Percent Change	Major Asset Types
	Before (Tk.)	Now (Tk.)		
Total	527,000	2,390,000	354	Solar panel, mobile phone, showcase, almira, tractor, shallow tube well, spray machine, paddle thresher
Average	29,278	132,778	354	

The average 354% increase in household assets from Tk.29,278 to Tk.132,778 can be compared with data from a much larger sample (200 households) in the 2016 Annual Outcome Survey (AOS). This shows that the value of household assets increased by 503% from Tk.35,162 to Tk.212,010 - this increase is larger, with higher baseline and current values, but assets in the AOS include livestock and trees.

(c) Poultry and livestock assets

Poultry and livestock assets are very valuable assets in the context of rural coastal chars. Not only do these assets provide an important source of income, but they are an important store of wealth that can be realised at times of emergency. Although they are vulnerable to disease, unlike growing crops, households may be able to move them to a place of safety in the event of severe flooding or a cyclone.

Before joining with CDSP IV, all the sample households kept some livestock and/or poultry, but most only had a few animals or birds. After joining CDSP IV, household members have been provided with training on rearing poultry, cows and goats, with some women being trained as poultry vaccinators, and some (educated youth) being trained as paravets for treating animal diseases.

Study data on poultry shows that the 18 sample households owned a total of 621 birds before CDSP IV, which has now (2017) increased to 895 birds – a 44% increase. On the other hand, the total number of animals (cattle, buffalo, sheep, goats) was 128 before CDSP IV and now it is 150 - an increase of only 17%. It certainly appears that more households have increased poultry numbers than other types of livestock. Out of the 18 households, 12 reported an increase in numbers of poultry with only 3 reporting a decrease. As Table 7 below shows, there has been a small decline in the number of ducks which partly offsets the much larger increase in numbers of chickens. The decline in ducks may be partly due to improved drainage reducing the area of vacant and, more important, reduced area of fallow land available for foraging.

The number of cattle owned by the 18 study households has increased by 20% - there has been a larger increase in the number of buffalo, but there are only a small number of these animals. However, some households report keeping fewer cattle - of the 18 households, 9 reported keeping more cattle and 6 reported having fewer. Reasons for reducing the numbers of cattle, or ceasing to keep them altogether, were the reduced need for draught animals as farming becomes mechanised, and scarcity of grazing land as the area of fallow land is reduced. On the other hand, respondents also said that rearing cattle is profitable, with prices of milk and meat increasing as demand rises. At least two households who reported lower cattle numbers had recently sold animals and might well re-stock with further animals to rear.

The number of goats owned by the study households has fallen by 42%. Before CDSP only eight households kept goats, and six of these households reporting that numbers have fallen, with five of them giving up goats altogether. One household reported no change in goat numbers, while two reported an increase (one of whom did not keep goats previously). The decline in interest in goat rearing is attributed to neighbours' complaints about goats browsing young plants and vegetables - as the area devoted to vegetables has increased. One of the two households keeping more goats is that of Mrs. Ferdousi Beauty (see Appendix 1) who has taken up rearing goats as an enterprise, increasing numbers from 2 to 18 and using improved methods including a special goat house.



An Improved Goat House

Table 7: Numbers and types of poultry and livestock assets

Physical asset: poultry birds and animals	No. of birds & animals before CDSP IV	No. of birds & animals now - with CDSP IV	Percentage Change
a. Chicken	306	466	52
b. Ducks	287	260	-9
c. Goose	8	31	288
d. Pigeon	20	138	590
e. Cow	65	78	20
e1. Buffalo	8	40	400
g. Goat/sheep	55	32	-42
Total Birds & animals	749	1045	40
Average	42	58	40

3.4 Changes in social capital

CDSP IV has built social capital in the char communities via establishing a range of Field Level Institutions (FLI) and building their capacity. As well as grass roots organisations based in each community, intermediate level associations have been set up to coordinate activities at the char level, with higher level federations at the district level to enable char dwellers to make joint representations to the government. In addition, CDSP IV has also had a programme, via the PNGOs, to raise women's awareness on gender and human rights, which has increased their social capital, and resulted, amongst other things, in women becoming more mobile and playing a larger role at the community level.

(a) Participation in Field Level Institutions

To ensure participation of char dwellers and the representation of local communities/'somaj', CDSP IV has formed 10 types of field level institutions (FLIs) in its four chars. These are: NGO group, LADC (Local Area Development Committees), WMG (Water Management Group), WMA (Water Management Associations), WMF (Water Management Federations), FF (Farmers' Forums), FFA (Farmers' Forum

Associations), FFF (Farmers' Forum Federations), SFG (Social Forestry Groups), TUG (Tubewell User Groups) and LCS (Labour Contracting Societies)³.

Membership of FLI's has empowered char dwellers to raise their voices in demanding their rights, increasing negotiation and bargaining power, and ensuring the participation women in all spheres of life. Study data in Table 8 shows that all the 18 sample households are members of NGO groups. This is because NGO group membership is needed to get access to micro-credit services. Next highest membership has been found to be in TUG (56%) and FF (50%). Individual household responses are in Table A5 of Appendix 2.

Table 8: Number of households participating in FLIs

	NGO Group	LADC	WMG	WMA	FF	FFA	FFF	SFG	TUG	LCS
Number of households	18	0	4	0	9	2	1	8	10	0
% of households	100	0	22	0	50	11	6	44	56	0

All the sample respondents said that they benefited in many ways by joining FLIs. Every type of FLI has had an impact on their lives. The following comments and feedback were recorded during study interviews.

Table 9: Direct and Indirect benefits from FLI membership

Field Level Institution (FLIs)	Direct and indirect benefits of participation in FLIs
NGO Group	Weekly meeting at group level by NGO, deposited group savings, health counselling & other issue based discussions held during meeting, micro-credit need assessment held.
Water Management Group (WMG)	WMG member operate water control structures like sluices, look after drainage congestion, discuss land settlement issues and disputes (if any)
Farmers Forum (FF)	FF members have gained knowledge and skills on agricultural technologies through attending FF meetings. Now, they now know how to practice integrated pest management (IPM) and use pheromone traps. As FF members, they have easy access to DAE field officers.
Social Forestry Group (SFG)	SFG members have got the right to 55% of forestry products when trees are matured. They are getting dry leaves and dead branches and twigs to use as fuel. Social forestry plantations are good for climate change protection.
Tubewell User Group (TUG)	CDSP IV has established DTWs as a safe drinking source. As a care taker family (CTF) member, they look after the DTW's. They repair and maintain the DTW. Ownership of DTWs has been established.
Labour Contracting Society (LCS)	LCS members (both women and men) are being benefited by getting short term employment. LCS members are investing their incomes in gainful on-farm IGAs like goat and poultry rearing, and also in off-farm IGAs like door-to-door selling of ladies garments

(b) Changes in women's empowerment

CDSP IV interventions to build the social capital of women have included legal aid and human rights counselling, a campaign program against violence to women, celebration of World Women's Day and other human rights issues. Both women and men reported that they are now more aware of the issues of

³ Water Management / Farmers' Associations and Federations are apex level (at char and district level) for Water Management Groups and Farmers' Forums

legal and human rights. They have been positively motivated not to arrange early marriages, both at family and 'somaj' levels. Men and women are united to resist violence against women, and are giving equal opportunities to boys and girls in their families.

The sample households reported that, before CDSP IV, women were very restricted in terms of making visits alone in the public areas like market places for shopping, visiting relative's homes and meeting places, and going to medical centres. But now, they can move alone to go for shopping, selling vegetables in markets, visiting health clinics, and participating in various meetings organized by CDSP IV and PNGOs. This was due to joining with CDSP IV and PNGOs. They have been empowered by the development initiatives in regard to gender development, and by the legal and human rights programmes.

Traditional Cropping: Before CDSP



Traditional threshing before CDSP



Modern 'Sorjon' Method: Now CDSP



Mechanized threshing now CDSP



3.5 Changes in financial capital

The Social and Livelihood Support Component of CDSP IV has been being implemented by four partner NGOs. These PNGOs have organized 984 micro-credit groups (NGO groups) involving 26,373 women members for the operation of group savings and micro-credit. The micro-credit fund has made a significant impact on the livelihood 24,826 women group members who have taken loans. Up to December 2016, group members have generated Tk. 95.88 million in savings and PNGOs have delivered micro-credit loans of Tk.1,245 million.

As mentioned before, all sample households have actively participated in group savings and micro-credit. All of them are practicing group savings with PNGOs. The average savings balance per member was Tk.8,995 (minimum Tk.327 and maximum Tk.20,000). In addition, six (33%) out of the 18 households are operating deposit pension schemes (DPS) with PNGOs for a period of 5 to 10 years.

Access to micro-credit for all group members has been a great opportunity for economic growth and increased family income. All sampled members have utilized micro-credit loans. One member had only taken two loans with a total value of Tk.30,000 to invest in a non-farm enterprise (shop). The other 17 members had taken between three and five loans totalling between Tk.46,000 and Tk.195,000, mainly invested in farm-related activities (such as cattle, vegetables, crops, aquaculture). The overall average borrowing for all 18 households is a total of Tk.93,000 per household in 4.2 loans. Details are in Table A6 in Appendix 2.

4. Linkages between livelihood capitals

The five different livelihood capitals interact with each other, with each one supporting and enhancing the other four capitals. This is shown in Table 10 below. The horizontal rows show how each of the capitals named in the left-hand column enhance and support each of the capitals named across the top row of the table.

Table 10: Complementary linkages between livelihood capitals

	Natural	Human	Physical	Social	Financial
Natural			Income from farming land used to purchase assets	Obtaining a secure title to land is empowering, especially for women,	Formal ownership of land makes household more credit-worthy
Human	Improved knowledge and skills helps make land more productive		Knowledge and skills is needed to use livestock and productive assets	Improved knowledge is socially empowering	Reduced danger from ill health reduces risk in taking micro-loans
Physical	Water control infrastructure makes land more productive	Schools in cyclone shelters educate children. Roads improve access to health services.		Roads enable social connectivity. WMG centre buildings strengthen these institutions.	Roads make micro-finance provision easier. Water control infrastructure means loans are less risky.
Social	FLI monitor land allocation and titling process.	FF disseminate knowledge on farming	WMG operate water control infrastructure. TUG maintain DTW		NGO groups operate micro-finance services
Financial	Loans invested to lease in and improve productivity of land	Loans also used for education and health expenses	Loans and savings invested in assets and livestock	Social awareness raising at micro-finance meetings	

It has been observed in this study that households usually first develop their land (natural capital) and then accumulate physical capital in terms of productive assets and livestock. The process can be described thus:

- Having acquired title to land (or for this to be in progress), and with less risk of flooding and salinity, farmers invest, using their own capital or micro-credit loans, in new or much expanded on-farm enterprises such as vegetable cultivation, plant nurseries, fish ponds, fish-cum vegetables ('sorjan') cultivation, fruit trees, poultry rearing, and cattle rearing. This may be supported by production of compost. Most of the study households have expanded the area of fish ponds and homesteads, often at the expense of cultivable land, although this loss may be offset by leasing additional land.
- Second, they diversify into off-farm activities like small trading, shops, tailoring and handicrafts (making baskets, mats, cap sewing).

5. Impact of livelihood capital on household income

This study shows that there has been a substantial increase in all five of the livelihood capitals. But has this lead to an increase in income and, if so, where has this income come from?

The study data shows that all the 18 sampled households report increased income relative to the pre-project period. On average annual income has risen from Tk.80,444 to Tk.398,036 - an increase of almost five times (up 395%), but with considerable variation between households - from only 29% to as much as 1,289% (see Table A7 in Appendix 2). This is significantly more than increase of 164% in average household income recorded in the 2016 AOS compared with that in the 2011 baseline survey, suggesting that the 18 sample households may have done better than average - although four of them reported an increase in income of less than 164%.

Income sources have diversified. The number of sources of income have increased for 16 of the 18 households, as households took advantage of new opportunities (see Table 11). The average number of on-farm sources increased from 4.8 to 6.3 and number of non-farm sources from 0.7 to 1.6. Previously 7 of 18 households had no non-farm income, now there is only one household that relies entirely on farming for their income⁴. Two households reported a reduction in the number of sources of farm income, and altogether eight households said they had ceased getting income from one or two farm enterprises. These were primary goats (due to problems with grazing) and crops (land converted into fish ponds and used for vegetables). However, overall farm income has increased by as much as non-farm income.

Table 11: Number of sources of income

		farm	non-farm	all sources
Average number of income sources per household	Before CDSP IV	4.8	0.7	5.5
	Now	6.3	1.6	7.9
	Change	1.5	0.9	2.4
Number of households reporting a change in number of sources	Reduction	2	0	0
	No change	5	4	2
	Increase	11	14	16

Agricultural growth has focused on aquaculture (income growth of 1816%), high value crops (fruit up 860%, vegetables up 849%) and livestock (cattle up 362%, poultry up 201%) - see Table 12. The major sources of farm income are now cattle rearing, closely followed by vegetables, and then aquaculture and crops. Prior to CDSP, crops and cattle rearing were the main sources, with vegetables some way behind. Aquaculture now generates a slightly larger share of income than crops. Many more households have diversified sources of farm income, with all 18 households reporting income from vegetables and poultry, and 17 from fruit, cattle, and aquaculture. Previously 17 households got income from crops (this has now fallen to 13) and from poultry.

On average the sample households get 65% of their income from farming and 35% from other sources. This is the same proportion as reported for the pre-CDSP situation, although at this time five households received over 70% of their income from non-farm sources - not only one does. The survey households seem to get more income from agriculture than the average CDSP IV household - the 2016 AOS shows that only 42% of total income comes from farm sources, compared to 65% in this survey.

⁴ Plus one household who have a poultry farm classed as a non-farm enterprise.

Diversification of income sources seems to be linked to increased income - the eight households who have increased income sources by more than the average 2.4 additional sources have increased their income by almost eight times, while the other 10 households only increased income by 280% - but it would be wrong to conclude that diversification results in increased income - it may be that better off households are in a better position to diversify their income sources.

Table 12: Distribution of household income by source

Sources of HH Income	Before CDSP IV			Now, with CDSP IV			% Change
	No. HH	Taka/year ¹	share	No. HH	Taka/year ¹	share	
On-farm Activities							
a. Crop	17	295,000	31.3%	13	649,100	13.9%	120%
b. Vegetables	15	126,000	13.4%	18	1,188,000	25.5%	843%
c. Fruits	8	24,000	2.6%	17	230,500	4.9%	860%
d. Plant Nursery		-	0.0%	2	80,000	1.7%	>100%
e. Cow rearing	13	294,000	31.2%	17	1,358,300	29.2%	362%
e1. Buffalo rearing		-	0.0%	1	100,000	2.1%	>100%
f. Goat rearing	5	79,000	8.4%	3	69,000	1.5%	-13%
g. Poultry rearing	17	85,000	9.0%	18	255,500	5.5%	201%
h. Aquaculture	10	37,000	3.9%	17	709,000	15.2%	1816%
i. Social forestry		-	0.0%	3	12,250	0.3%	>100%
j. Others	1	1,000	0.1%	2	7,000	0.2%	600%
Total on-farm		941,000	100.0%		4,658,650	100.0%	395%
Off-farm Activities							
a. Wage/labour/salary	8	300,000	59.2%	9	566,000	22.6%	89%
b. Drivers-Van/CNG ..		-	0.0%	1	2,000	0.1%	>100%
c. Small business	3	205,000	40.4%	8	998,000	39.8%	387%
d. Tailoring		-	0.0%	3	78,000	3.1%	>100%
e. Handicraft	1	2,000	0.4%	1	7,000	0.3%	250%
f. Others		-	0.0%	5	855,000	34.1%	>100%
Total off-farm		507,000	100.0%		2,506,000	100.0%	394%
Total HH Income		1,448,000			7,164,650		395%
Average per h'hold							
On-farm activities		52,278	65.0%		258,814	65.0%	395%
Off-farm activities		28,167	35.0%		139,222	35.0%	394%
Total income		80,444	100.0%		398,036	100.0%	395%

¹ Total Taka per year for all households

Refer to Table A9 in Appendix 2 for details at individual households

Study households have also diversified their sources of non-farm income, although not to the extent of farm income. With the development of the char economy, wage labour opportunities have increased with the number of wage earning households increasing from eight to nine, and seven of the nine households reporting increased wage income - typically it has more or less doubled. Two households report slight falls in wage income - one of which is now earning much more from a non-farm enterprise. As a proportion of non-farm income, wages have fallen from 59% to 23%. The larger sample in the 2016 AOS

reported that wages were a much larger share of non-farm income (52%), but the share has also fallen (it was 73% in 2011).

The 18 study households reported a big increase in income from small business and other forms of self-employment. Prior to the project only three households reported income from small business (mostly shops) and one from handicraft. Now there are eight households with small business, three have also started tailoring businesses (having been trained by CDSP IV), and five have businesses providing inputs and services to farmers. Some households have more than one business, and overall 14 of the 18 households have some form of non-farm business. Overall the proportion of non-farm income from these sources has increase from 40% to 74% (compared with an increase from 15% to 28% in the 2016 AOS). One of the four remaining study households now has substantial remittance income from two sons working in Dubai.

Although these enterprises are classed as non-farm, some of them have been set up in response to increased opportunities in agriculture. Two households have tubewells and are selling irrigation water to other farmers (which might have an adverse impact on water supplies for domestic use). Another four households are now renting out agricultural machines - in particular threshing machines. One shop owning household has moved into selling of farm inputs.

6. Conclusions

This impact assessment has identified positive changes in the five livelihood capitals: natural, human, physical, social and financial. Highlights of these changes and their impacts are:

- Natural capital has been improved - with households getting secure access to land, and with flooding and salinity being reduced (via the development of the physical capital of water control infrastructure). Households have also invested in making land more productive - building fish ponds and fish-vegetable systems, raising land for homesteads and horticulture, and planting trees. As a result, land is now more intensively cropped, and it is possible to grow a greater range of high yielding and high value crops and to cultivate fish ponds.
- Human capital has been strengthened via the development of the capacity, skills and knowledge of char dwellers. This has come about through CDSP IV training programmes and also via the development of social capital, with community organisations such as Farmers' Forums, disseminating information and advice and helping to organise training. This knowledge and new skills have enabled people to take up new livelihoods, such as tailoring, and improve the productivity of crops and livestock. In addition, the physical capital of cyclone shelters is being used as schools to educate children. Clinics supported by CDSP IV have also provided health services - so reducing risk to people earning a livelihood and improving the welfare of the wider community.
- Physical capital has been increased via the construction of water management and communications infrastructure. Water management infrastructure has improved the natural capital, and communications infrastructure has improved market access and social connectivity. Cyclone shelters and killas protect people and animals at times of disaster, and the shelters also house schools, while tubewells and latrines provide households with domestic water and sanitation. In addition, households have invested earnings from more productive natural capital and their better access to financial capital, in better housing and household assets, in productive assets (farm equipment and non-farm businesses) and in livestock. These productive assets and animals have, in their turn, also generated more income, leading to further investment in physical capital.
- Social capital has been generated via a range of community institutions and by programmes to empower women and build human rights. These community institutions have in turn supported

efforts to get secure access to land and have disseminated knowledge to build human capacity. Water Management Groups operate and maintain the vital water control infrastructure, Tubewell User Groups maintain water supply tubewells, and NGO groups enable access to financial capital.

- Financial capital - savings and access to micro-credit loans have provided resources for investment in natural and physical capital, and provides a buffer against unexpected health expenses, which along with loans for education, has strengthened human capital.

These five capitals have combined to significantly increase household income and enable households to diversify their livelihoods into new farm and non-farm enterprises. However, many char households still do not have enough work at home year-round, and household members still migrate seasonally to find work in other parts of the country. There is therefore a need to continue to intensify agriculture and develop more off-farm income sources. In particular, respondents of this survey were keen to get more training in profitable non-farm enterprises and occupations.

Appendix I: Household profiles

1. Case Profile of Ms. Fatima Khatoon (Husband: Md. Didarul Alam)

General and Demographic Profile: Ms. Fatema Khatoon (30 yrs), wife of Md. Didarul Alam (38 yrs) of Char Noman Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-SDI. Fatema's family consists of 4 members who are:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	2	-	-	-	4

Shelter and Migration Profile: They migrated from Munshir Hat with the expectation of better shelter and life style. They have lost land, houses and other assets valued at Tk.500,000 due to erosion.



Participation into Group and Skill Development Process: Fatema joined CDSP IV's partner NGO (SDI) on 3 Jun 2012. Her family is associated with three types of field level institutions (FLIs) - NGO group, TUG and SFG. Fatema has participated in 3 types of IGA training (cow rearing, vegetable cultivation and fish culture) organized by SDI with financial assistance from CDSP IV. She is a member of a care taker family (CTF) to look after DTWs operation and maintenance. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, growing crops and vegetables in their land and rearing cows and buffalos commercially.

Status of Financial Capital: She has accumulated a group savings of Tk. 20,000 and her family is operating two deposit pension schemes (@ Tk. 1,000 pm and Tk. 2,000 pm with SDI. Fatema and her husband have taken micro-credit 5 times for a total amount of Tk. 195,000 (*1st Tk. 10,000 for homestead gardening, 2nd Tk. 15,000 and 3rd Tk.20,000 for agriculture, 4th Tk. 50,000 for cow rearing and agriculture and 5th Tk. 1,00,000 for purchasing buffalos and cows*).

Status of Land Settlement & Titling by CDSP IV: Fatema's family has not received any Khatian during the CDSP IV period. They had 3 govt. settlements of 150 deci each in 2005, so CDSP IV's settlement process was not applicable for them.

Status of Natural Capital: Before CDSP IV, Fatema's family had 450 decimals of own land (10 decimals as homestead, 6 decimals as water body and 434 as poor quality agri-land). They have got three permanent settlement documents (khatians) in the year 2005, long before CDSP IV project initiation. After participation of CDSP IV development interventions, they have developed their land in productive manners. For example, an increased homestead area to 100 decimals in place of 10 decimals, the water body area to 200 decimals in place of 6 decimals. Besides, they have mortgaged in an area of 300 decimals and taken lease (cod) on an area of 300 decimals. They have constructed a big tin-shed living house replacing a tiny hut.



Living House



Large Homestead with Fruit Garden



Mixed Vegetable Farm

Status of Poultry and Livestock Assets: Before joining CDSP IV development initiatives, they reared poultry and livestock (cows and buffalo). Now that she is trained on rearing of cows and poultry, Fatema has increased the number of livestock, especially cattle and buffalo.



Table 1.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	4	12	200
b. Duck	10	14	40
c. Cow	5	15	200
d. Buffalo	6	22	266

Status of Physical Capital: Fatema's family has both household assets and agricultural implements valued about Tk. 250,000 which is 400% more against Tk. 50,000 as was before CDSP VI. The assets have been shown in the table below:

Table 1.2: Value of Assets and Sources of Fund

	List of Assets	Value of Assets
Before CDSP -IV	Wooden safe 1, mobile 1, bicycle 1, ornament 20 gm, chair 3 and table 1, alna (cloth hanger) 1.	Tk. 50,000
Now	Box plunk (wooden truck) 2, wooden plunk 4, showcase 2, chair 7, solar 1, alna 2, table 2, wooden safe 2, sprayer 3, motor cycle 1, ornament 30 gm.	Tk. 250,000 Source of fund for assets: Micro-credit, income from vegetables, crops, cattle and poultry



Annual Family Income and Sources: Fatema informed that before joining with CDSP IV they had a very limited number of income sources. Before, the main source of income was cultivation of rice, rearing of cows and poultry. But, now they are cultivating HYV & hybrid types of vegetable, and rearing more poultry, cows and buffaloes than before. They are now earning good amount of money (yearly Tk. 770,000 an increase of 1085%). This was because of introduction of new technologies in vegetable and cultivation of rice crops.



Table 1.3: Distribution of HH Income by Sources (On & Off-Farm)

Sources of HH Income	HH Income (TK.)		% Share by Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	30000	100000	15	233
b. Vegetables	-	150000	22	>100
c. Fruits	-	20000	3	>100
e. Cow rearing	30000	200000	30	567
e1. Buffalo rearing	-	100000	15	>100
g. Poultry rearing	5000	20000	3	300
.h. Aquaculture	-	80000	12	>100.
Total Tk. (On-farm)	65000	670000	100	931
Off-farm Activities				
c. Small business	-	100000	100	>100
Total Tk. (Off-farm)	-	100000	100	>100
Total HH Income (Tk.)	65000	770000		1085

Table 1.3 shows that major sources of farm income are now cow rearing (30%), vegetables (22%), field crops (15%) and aquaculture (15%). The contribution from off-farm activities to HH income is 12.9%.

Visible Changes and Benefits of infrastructure Development: Fatema explains how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Fatema said that, during pre-project period, she was restricted by 'community'/'somaj' from free mobility to areas like market places, community meetings, towns and more distant places. Now-a-days, she can freely move around market places for shopping, and health centres for getting health care services. She is participating in IGA training and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events, and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** due to construction of roads and bridges, they can now move from one place to another very easily. They can sell field crops and vegetables at a good price. The value of land has been increased significantly e.g. 100% to 125%
- **Construction of embankment canals and sluices:** They are free from intrusion of saline water and can drain out excess water due to rains. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** They have now opportunity to take shelter in the situation of cyclone attack. Their kids can go to schools established in newly build cyclone centres. We know that the signalling flags for warning will be hoisted at the roof of cyclone centre.
- **Drinking water from DTWs:** They can drink safe water from DTWs. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly. They are using excess water into homestead garden for vegetable production.
- **Sanitary latrine:** They are using sanitary latrines supplied by CDSP IV. Now, their homestead is free from bad smell and they are living in hygienic and healthy environment.

- **Health and family planning services:** Their health has improved. Family size is decreasing in char areas due to acceptance of family planning methods.
- **Nutritional food for children and pregnant mothers:** Pregnant mothers are getting counselling services from the doctors and health workers.
- **Legal and human right/disaster management:** They have become more aware LHR and disaster issues and management. Now, they do not support early marriage of girls and they united to resist early marriages.
- **Social Forestry:** Her family has participation in social forestry group (SFG). Trees in social forestry plantation are still very young. They will enjoy 55% share of forest produces when extracted.

2. Case Profile of Ms. Noorjahan (Husband: Md. Bahar Uddin)

General and Demographic Profile: Ms.Noorjahan (45 yrs), wife of Md. Bahar Uddin (57 Yrs) of Mohammedpur Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-DUS. Noorjahan's family consists of 4 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	0	2	-	-	4

Shelter and Migration Profile: They migrated from Hatiya with the expectation of better shelter and life style. They have lost land, houses and other assets valued at Tk.200,000 due to river erosion and migration.



Participation into Group and Skill Development Process: Noorjahan joined CDSP IV's partner NGO (DUS) on 2 Jan 2007. Her family is associated with two types of field level institutions (FLIs) - NGO group and SFG. As a NGO group member, Noorjahan has participated in 3 types of IGA training (poultry rearing, agri-crop cultivation and fish culture) organized by DUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening and vegetables in their land.

Status of Financial Capital: She has accumulated a group savings of Tk. 11,000 and her family is operating a deposit pension scheme (@ Tk. 200 pm for 5 years and generated Tk. 4500. Noorjahan has taken micro-credit 5 times with a total amount of Tk. 164,000 (1st Tk. 5,000 for cow rearing, 2nd Tk. 20,000 for business, 3rd Tk.29,000 for fish culture, 4th Tk. 40,000 for repair of house & agriculture and 5th Tk. 70,000 cow rearing and fish culture).



Status of Land Settlement & Titling by CDSP IV: Noorjahan and her husband received Khatian in 2017 through CDSP IV. Noorjahan told her name has been put as the first name and her husband's name as the second. She has been empowered by ownership and as a result she has been honoured both in her family and in the 'somaj'. The price of land has increased after receiving 'khatian'. They are no more a landless family. Nobody can evict them. They will develop their land as soon as they have the financial capacity.

Status of Natural Capital: Before CDSP IV, Noorjahan's family had 104 decimals of land (30 decimal as homestead, 74 decimal as water body). They have developed and increased their homestead to 74 decimal in place of 30 decimal. They have constructed a big tin-shed living house replacing a tiny hut. For a better livelihood, they have taken a mortgage on 120 decimals where they are doing vegetable and fish culture.



Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they only had one cow. Noorjahan has been trained on rearing of poultry. Her family now have a good number of chickens and ducks along with two cows.

Table 2.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	0	9	100
b. Duck	0	20	100
c. Cow	1	2	100

Status of Physical Capital: Noorjahan's family has both household assets and agri-cultural implements valued about Tk. 120,000 which is 990% more against Tk. 12,000 as was before CDSP VI. The HH assets have been shown in the table below:

Table 2.2: Value of Assets and Sources of Fund

	List of Household Assets	Value of Assets
Before CDSP -IV	Wooden trunk 2, ornament 5 gm, alna 1	Tk. 12,000
Now	Plunk 4, showcase 1, chair 6, solar 1, alna 1, table 2, sewing machine 2, ornament 30 gm, mobile 5	Tk. 120,000 Source of fund for assets: Micro-credit, income from fish culture, vegetables, crops, cattle and poultry, tailoring



Annual Family Income and Sources: Noorjahan informed that before joining with CDSP IV they had very limited number of earning sources. Before, the main source was labour, rearing of cow and crop production. But, now they are now cultivating HYV & hybrid types of vegetable, and rearing more poultry and cows than before. They are earning good amount of money from selling vegetables and aquaculture (yearly Tk. 290,000 and increase of 219% over Tk. 91,000 before CDSP-IV). This was because of availability of micro-credit, introduction of HYV and variety of vegetables and crops.

Table 2.3 shows that major sources of farm income were vegetables (48%), cow rearing (22%) and aquaculture (13%). The contribution from off-farm sources to HH income was 20.7%.

Table 2.3: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	10000	0	0	-
b. Vegetables	5000	110000	48	2100
c. Fruits	-	15000	7	>100
e. Cow rearing	35000	50000	22	43
g. Poultry rearing	700	20000	9	186
h. Aquaculture	4000	31000	13	675
i. Social forestry	-	4000	2	>100
Total Tk. (On-farm)	61000	230000	100	277
Off-farm Activities				
a. Wage/labour/salary	30000	60000	100	100
Total Tk. (Off-farm)	30000	60000	100	100
Total HH Income (Tk.)	91000	290000		219

Visible Changes and Benefits of infrastructure Development: Noorjahan explains how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Noorjahan has informed that during pre-project period, as women she was restricted by 'community'/'somaj' for free mobility to the areas like market places, any community meetings and town/distant places. Now-a-days, she can freely move around-market places for shopping, health centres for getting health care services. She has participated in IGA training like fish culture, poultry rearing, agri-crop cultivation and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events, incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** due to construction of roads and bridges, water logging has reduced significantly. they are getting good prices for the products grown by them.
- **Construction of embankment canals and sluices:** Incidence flood and chance of crop damage due to unwanted inundation have reduced. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** Their kids can go to schools established in newly build cycle centres. In case of cyclone and disaster risks, they would take shelter to save their lives and livestock animals.
- **Drinking water from DTWs:** They can drink safe water from DTWs. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly.
- **Sanitary latrine:** They have now better and healthy environment.
- **Health and family planning services:** They are more aware than before about family planning.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced.
- **Legal and human right/disaster management:** They do not support early marriage of girls. Now early marriage has reduced.

- **Social Forestry:** Trees give us shade and fruits. They are planting more and more trees. They are getting both fuel and timber from. When, Forest Department will cut grow-up plantations of social forestry, they will get 55% benefit share.

3. Case Profile of Ms. Bibi Hajera (Husband: Md. Alauddin)

General and Demographic Profile: Ms. Bibi Hajera (28 yrs), wife of Md. Alauddin (37 Yrs) of Al-Amin Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-SDI. Hajera's family consists of 4 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	1	1	-	-	4

Shelter and Migration Profile: They have migrated from Shahbajpur, District-Bhola with expectation of better shelter and life style. They were landless and have lost other assets valued at Tk.50,000 due to river erosion and migration.



Participation into Group and Skill Development Process: Bibi Hajera joined with CDSP IV's partner NGO (SDI) on 08 Feb 2007. Her family is associated with two types of field level institutions (FLIs) - NGO group and SFG. As a NGO group member, Bibi Hajera has participated into 7 types of IGA training (poultry rearing, cow rearing, vegetable cultivation, small business and fish culture) organized by SDI with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system⁵ (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, plant nursery, vegetables and fish culture in their land and water bodies including non-farm IGA-tailoring.

Status of Financial Capital: She has accumulated a group savings of Tk. 7,500 and her family is operating a deposit pension scheme (@ Tk. 200 pm for the period of 10 years and has so far deposited Tk. 6,000 in her DPS account. Bibi Hajera has taken micro-credit 5 times with a total amount of Tk. 60,000 (1st Tk. 5,000 for cow rearing, 2nd Tk. 10,000 for business, 3rd Tk.10,000 for fish culture, 4th Tk. 15,000 for agri-crop and fish culture and 5th Tk. 20,000 cow rearing).

Status of Land Settlement & Titling by CDSP IV: Bibi-Hajera and her husband had not yet received Khatian. Plot to plot survey (PTPS) has been completed for 150 deci by CDSP IV. They hope very soon (this year) they will get 'khatian' through CDSP IV.

Status of Natural Capital: Before CDSP IV, Bibi Hajera's family had 150 decimals of own land (30 deci as homestead, 20 deci as water body and 100 deci as cultivable land). They are now residing in tin-shed living house replacing the earlier hut. They have developed their land in productive manner i.e. 50 deci homestead in place 30 deci, increased water body of 50 deci replacing 20 deci.



Table 3.1: Distribution of Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	30	50	67
b. Water body	20	50	150
c. Cultivable land (own)	100	50	-50
Total own land (in deci)	150	150	0

⁵ Environment friendly cooking stove made of cement and sand

Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing only 1 cow plus a good number of poultry and some goats. Now they are rearing 7 cows (600% increase), but no longer have any goats



Table 3.2: Poultry and Livestock Assets with Changes (%)

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	30	38	27
b. Duck	40	8	-80
c. Goose	3	0	-100
e. Cow	1	7	600
g. Goat	10	0	-100

Status of Physical Capital: Bibi-Hajera's family has household assets valued about Tk. 40,000 which is 300% more than before (value Tk. 10,000). The HH assets have been shown in the table below:

Table 3.3: List of household assets and value with sources of fund

	List of Assets	Value of Assets
Before CDSP – IV	Wooden plunk 2, table 1, mobile 1, alna (cloth hanger) 1, bicycle 1,	Tk. 10,000
Now	Box plunk 1, wooden plunk 2, solar 1, alna 1, almira 1, table 1, mobile 3, bicycle 1,	Tk. 40,000 Source of fund for assets: Micro-credit, income from vegetables, crops, cattle and poultry rearing,



Annual Family Income and Sources: Bibi Hajera informed that before joining in CDSP IV, they have several earning sources. Before, the main source was labour, vegetable cultivation, rearing of goats, poultry and fish culture. Now they are cultivating HYV & hybrid types of vegetable, and rearing more cows than before. This was because of availability of micro-credit, introduction of HYV and variety of vegetables and crops and knowledge and skills from training provided by CDSP IV. They are operating IGAs on small business (timber selling), Easy Bike (electrically powered 3-wheel taxi) and a water pump. The cost of the Easy Bike was Tk. 140,000, which was accumulated from selling cows, and cost of water pump was Tk. 15,000 paid from income from tailoring and fish culture. A good income has been earned. They have a net income of Tk. 522,500 (641% increase over before CDSP IV) from on- and off-farm sources.

Table 3.4 shows that major sources of farm income are now cow rearing (52%), vegetables (18%), aquaculture (16%) and field crops (5%). The contribution from off-farm sources to HH income is 47.6%.

Table 3.4: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	10000	14000	5	40
b. Vegetables	3000	50000	18	1567
c. Fruits	500	5000	2	900
e. Cow rearing	-	141000	52	>100
f. Goat rearing	20000	0	0	-100
g. Poultry rearing	6000	12000	4	100
h. Aquaculture	1000	45000	16	4400
i. Social forestry	-	6500	2	>100
Total Tk. (On-farm)	40500	273500	100	575
Off-farm Activities				
a. Wage/labour/salary	30000	65000	26	117
c. Small business	-	8000	3	>100
d. Tailoring	-	38000	15	>100
Total Tk. (Off-farm)	30000	249000	100	730
Total HH Income (Tk.)	70500	522500		641

Visible Changes and Benefits of infrastructure Development: Bibi-Hajera explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Bibi-Hajera said that due to operation of successful IGAs with the technical assistances provided by CDSP IV and PNGO (SDI), her family has an honourable position in their 'somaj'. She now can attend meetings, demonstrations, trainings alone. In their family matters, they themselves (she and her husband) jointly decide and implement decisions.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** due to construction of roads and bridges, prices of land have increased significantly, they are getting good prices for the products grown by them.
- **Construction of embankment canals and sluices:** No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improved market places:** Due to development of markets with sheds, toilet facilities and DTWs for water supply, whole sellers and brokers regularly coming to the markets to purchase products directly from the farmers. They are taking those products to distant markets.
- **Establishment of cyclone centres:** They would be able to shelter in case of cyclones and disaster risks. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** The incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from DTWs established by CDSP IV. They informed that before, they have to collect water very far from their residences or they will have to drink water from local pond and ditches. But, now CDSP IV has provided a DTW for each 25 families.
- **Sanitary latrine:** They have now better and healthy environment. Each family has sanitary latrine.

- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. They can get health services as when required from the health centres and mobile clinics.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils and reduce the force of cyclones. SFG members can collect leaves and branches from social forestry plantations.

4. Case Profile of Ms. Noorjahan (Husband: Md. Jashim Uddin)

General and Demographic Profile: Ms. Noorjahan (40 yrs), wife of Md. Jashim Uddin (48 Yrs) of Azimpur Somaj, Noler Char, Upazila-Hatiya, District-Noakhali, PNGO-SSUS. Noorjahan's family consists of 5 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	-	3	-	-	5

Shelter and Migration Profile: They have migrated from South Hatiya, District-Noakhali with the expectation of better shelter and life style. They lost their land and homes along with other assets valued at Tk.950,000 due to river erosion, displacement and migration.



Participation into Group and Skill Development Process: Noorjahan joined with CDSP IV's partner NGO (SSUS) on 22 Feb 2013. Her family is associated with three types of field level institutions (FLIs) - NGO group, farmers' forum (FF) and TUG. As a NGO group member, Noorjahan has participated into two types of IGA training (cow rearing and agricultural crop cultivation) organized by SSUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like plant nursery, cow rearing, vegetables and poultry rearing in their homestead and land.

Status of Financial Capital: She has accumulated a group savings of Tk. 6,390. Noorjahan has taken micro-credit 3 times with a total amount of Tk. 51,000 (1st Tk. 6,000 and 2nd Tk. 15,000 for plant nursery and 3rd Tk.30,000 for plant nursery and children education).

Status of Land Settlement & Titling by CDSP IV: Noorjahan and her husband received Khatian for 124 deci in 2017 through CDSP IV. The 'khatian' is in two names (her name and her husband's name). They have equal share (50%). They developed part of their land as plant nursery. They are running the plant nursery commercially. The price of land has increased after receiving 'khatian'. They are no more a landless family. Nobody can evict them.

Status of Natural Capital: Before CDSP IV, Noorjahan's family had 124 decimals of own land taken from the then 'bahinis' (30 deci as homestead, 20 deci as water body and 100 deci as cultivable land). They are now residing in tin-shed living house replacing the earlier hut. They have developed their land in productive manner i.e. 50 deci homestead in place 30 deci, increased water body of 50 deci replacing 20 deci.



Table 4.1: Distribution of Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	12	92	667
b. Water body	20	32	60
c. Cultivable land (own)	92	0	-100
Total own land (in deci)	124	124	0

Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing 40 poultry birds and cows, but now they have 30 birds only due to selling in the markets. They are still rearing cows.



Cow Rearing Farm



Vermi- Compost Farm

Status of Physical Capital: Noorjahan’s family has both household assets and agri-cultural implements valued about Tk. 90,000 which is 1700% more than before (value Tk. 5,000). The HH assets have been shown in the table below:

Table 4.2: Asset value and sources of fund

	List of Assets	Value of Assets
Before CDSP – IV	Wooden plunk 3, wooden safe 2, table 1, mobile 1, trolley van 1, bicycle 1, ornament 1 gm.	Tk. 5,000
Now	Wooden plunk 3, box plunk 1, chair 2, solar 1, table 2, wooden safe 1, mobile 3, showcase 1, almira 1, sprayer 1, cloth hanger 1, bi-cycle 1, ornament 20 gm.	Tk. 90,000 Source of fund for assets: Income from vegetables, crops, cattle and poultry, remittance from abroad



Annual Family Income and Sources: Noorjahan informed that before joining in CDSP IV, they have several earning sources. Before, the main source was labour, vegetable cultivation, rearing of goats and poultry birds. Now they are cultivating HYV & hybrid types of vegetable, rearing more poultry and cows than before. This was because of availability of micro-credit, introduction of HYV and variety of vegetables and crops and knowledge and skills from training provided by CDSP IV. They are operating IGAs of plant nursery. They are receiving foreign remittance Tk250,000 annually from their two sons

working in hotels of Dubai, United Arab Emirates (Middle-East). A good income has been earned. They have a net income of Tk. 4,10,000 (486% increase over Tk. 70,000 before CDSP IV).

Table 4.3 shows that major sources of farm income are now vegetables (44%), plant nursery (25%), cow rearing (19%), and fruits (7%). The contribution from off-farm sources to HH income is 61% (i.e. foreign remittances).

Table 4.3: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	16000	0	0	-100
b. Vegetables	5000	70000	44	1300
c. Fruits	2000	12000	7	500
d. Plant Nursery	-	40000	25	>100
e. Cow rearing	29000	30000	19	3
f. Goat rearing	12000	0	0	-100
g. Poultry rearing	6000	8000	5	33
Total Tk. (On-farm)	70000	160000	100	129
Off-farm Activities				
f. Others/remittance		250000		>100
Total Tk. (Off-farm)	-	250000		
Total HH Income (Tk.)	70000	410000		486

Visible Changes and Benefits of infrastructure Development: Noorjahan explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Noorjahan said that, due to operation of successful IGAs with the technical assistance provided by CDSP IV and PNGO (SSUS), her family has better position in their 'somaj'. She said that she now can have a decision-making role in their family matters.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** due to construction of roads and bridges, prices of land has increased significantly, they are getting good prices for the products grown by them.
- **Construction of embankment canals and sluices:** No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improved market places:** They sell vegetable and crops to market. The retailers and whole sellers are getting the necessary goods and products in one stop services mode.
- **Establishment of cyclone centres:** Now, people have a good place to take shelter at the event of storms and cyclones. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** There was a demand of safe drinking for the char people. CDSP IV has fulfilled their demand. At present they are getting safe water. The incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from DTWs established by CDSP IV.

- **Sanitary latrine:** They have now better and healthy environment. Each family has sanitary latrine.
- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. They can get health services as when required from the health centres and mobile clinics.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils and reduce force of cyclones. They are collecting leaves and branches from social forestry plantations.

5. Case Profile of Ms. Saleha (Husband: Md. Muslehuddin)

General and Demographic Profile: Ms. Saleha (32 yrs), wife of Md. Muslehuddin (40 yrs) of Al-Amin Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-SDI. Saheha's family consists of 5 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	1	2	-	-	5

Shelter and Migration Profile: They have migrated from Rangamati, Chittagong Hill-Tracts with the expectation of better shelter and life style. They were living there on government khash land.

Participation into Group and Skill Development Process: Saleha joined CDSP IV's partner NGO (SDI) on 26 Jan 2012. Her family is associated with two types of field level institutions (FLIs) - NGO group and TUG. Saleha participated in 4 types of IGA training (poultry rearing, agri-crop cultivation and fish culture) organized by SDI with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, growing crops and vegetables in their land and rearing cows and buffalos commercially.



Status of Financial Capital: She has accumulated a group savings of Tk. 4693. Saleha and her husband have taken micro-credit 5 times with a total amount of Tk. 95,000 (*1st Tk. 5,000 for earth work, 2nd Tk. 10,000 for cow rearing, 3rd Tk.15,000 for housing, 4th Tk.35,000 for cow rearing and repair of house and 5th Tk. 30,000 for purchasing cow and fish culture*).

Status of Land Settlement & Titling by CDSP IV: Saleha shared that they have got a 'khatian' in 2017. Saleha and her husband received Khatian in 2017 through CDSP IV. The 'khatian' received is in two names (her name first and her husband's name in the second with equal share (50% each)). They have developed part of their land in the way of increasing the size of both homestead and water body. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will treat them as being landless. Nobody or any "bahini" can evict them.

Status of Natural Capital: Before CDSP IV, Saleh's family had 150 decimals of own land (25 deci as homestead, 25 deci as water body and 100 as poor quality agri-land). After participation of CDSP IV development interventions, they have developed their land in productive manners. For example, an increased homestead area of 35 deci in place of 25 deci, water body area to 36 deci in place of 25 deci.

Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on to rearing poultry birds and fish culture. They now have more chickens along with three cows.

Table 5.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	15	55	267
b. Duck	30	20	-33
c. Cow	0	3	100

Status of Physical Capital: Saleha's family had household assets valued Tk. 9,000 before joining with CDSP IV. Now, she has assets valued Tk. 85,000 that includes the value of khat, show case, rack, solar, mobile) She has received month long residential training on tailoring. She got one tailoring/sewing machine after training.



Table 5.2: Assets value with sources of fund

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 1, table 1, cloth hanger 1, mobile 1,	Tk. 9,000
Now	Wooden plunk 2, semi-box plunk 1, table 2, showcase 1, char 3, ornament 10 gm, solar 1, sewing machine 1, mobile 2, sprayer 1	Tk. 85,000 Source of fund for assets: Micro-credit, income from vegetables, day labour



Water Pump for Irrigation

Annual Family Income and Sources: Saleha said that, before joining with CDSP IV, they only had a limited number of income sources. Before, the main source was cultivation of rice, and rearing of cow and poultry birds. But, now they are cultivating HYV & hybrid types of vegetable, and rearing more poultry, cows and fish culture than before. They are now earning good amount of money (yearly Tk. 259,500 an increase of 446%). This was because of participation in both on and off-farm IGAs. She is successfully operating tailoring enterprise and earning a net income of Tk.30,000.



n inc

13%) and cow

leading (27%). The contribution from on-farm sources to total income is 26%.

Table 5.3: Distribution of HH Income by Sources (On & Off-Farm)

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	2500	4500	2	80
b. Vegetables	12000	105000	54	775
c. Fruits	-	17000	9	>100
e. Cow rearing	-	23000	12	>100
g. Poultry rearing	500	20000	10	300
h. Aquaculture	3000	25000	13	733
Total Tk. (On-farm)	22500	194500	100	764
Off-farm Activities				
a. Wage/labour/salary	25000	35000	54	40
d. Tailoring	-	30000	46	>100
Total Tk. (Off-farm)	25000	65000	100	160
Total HH Income (Tk.)	47500	259500		446

Visible Changes and Benefits of infrastructure Development: Saleha explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Saleha said that, during pre-project period, she was restricted by 'community'/'somaj' from having free mobility to the areas like market places, any community meetings and towns/distant places. Now-a-days, she can freely move around-market places for shopping, health centres for getting health care services. She is participating in IGA training and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events, and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, they can now move from one place to another very easily. Children are more interested to go to schools for study. Farmers can mobilize their products for selling to distant markets.
- **Construction of embankment canals and sluices:** Saline water cannot enter into their land area. They can cultivate land for cropping. They are free from intrusion of saline water and can drain out excess water due to rains. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** They will be able to take shelter in case of disasters. Their kids can go to schools established in newly build cycle centres. We now that the signalling flags for warning will be hoisted at the roof of cyclone centre.
- **Drinking water from DTWs:** They can drink safe water from DTWs. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly. We are using excess water into homestead garden for vegetable production.
- **Sanitary latrine:** They are using sanitary latrines supplied by CDSP IV. Now, our homestead is free from bad smell and we are living in hygienic and healthy environment. Incidence of worms and skin diseases are nearly absent.

- **Health and family planning services:** Their health has improved. Family size is decreasing in char areas due to acceptance of family planning methods.
- **Nutritional food for children and pregnant mothers:** Pregnant mothers are getting counselling services from the doctors and health workers.
- **Legal and human right/disaster management:** They have become more aware LHR and disaster issues and management. Now, they do not support early marriage of girls and they united to resist early marriages.
- **Social Forestry:** Her family has no membership with social forestry groups. Other peoples are getting fuel wood and leaves for coking.

6. Case Profile of Ms. Aleya Begum (Husband: Md. Abdul Baten)

General and Demographic Profile: Ms. Aleya Begum (40 yrs), wife of Md. Abdul Baten (49 yrs) of Al-Amin Somaj, Noler Char, Upazila-Hatiya, District-Noakhali, PNGO-SSUS. Aleya's family consists of 6 members having the following composition:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	2	2	-	-	6

Shelter and Migration Profile: They have migrated from South Hatiya, district-Noakhali with the expectation of better shelter and life style. They have lost land, houses and other assets valued at Tk.50,000 due to erosion and migration.



Participation into Group and Skill Development Process: Aleya joined with CDSP IV's partner NGO (SSUS) on 1 Nov 2012. Her family is associated with three types of field level institutions (FLIs) - NGO group, WMG and SFG. As a member of NGO group, Aleya has participated in 3 types of IGA training (cow rearing, vegetable cultivation and fish culture) organized by SSUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, growing crops and vegetables in their land and rearing cows.

Status of Financial Capital: She has accumulated a group savings of Tk. 9,334 and her family is operating a deposit pension scheme (@ Tk. 500 pm) with SSUS. Aleya has withdrawn Tk. 5000 from savings. Aleya and her husband have taken micro-credit 5 times with a total amount of Tk. 1,00,000 (1st Tk. 10,000 for plant nursery, 2nd Tk. 15,000 for agriculture, 3rd Tk.20,000 for cow rearing, 4th Tk. 25,000 for development of water body and 5th Tk. 30,000 for agriculture farming).



Crop Field



Plant Nursery

Status of Land Settlement & Titling by CDSP IV: Aleya informed that they have got a 'khatian' in 2016 for 160 deci. The 'khatian' has been in the names of herself and her husband. Her name is the first place with 50% share and right. They have developed part of their land in the way of increasing the size of both homestead and water body. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will treat as they are landless. No body or any 'bahini' can evict them.

Status of Natural Capital: Before CDSP IV, Aleya's family had 160 decimals of own land (14 deci as homestead, 12 deci as water body and 120 as poor quality agri-land). After participation of CDSP IV development interventions, they have developed their land in productive manners. For example, an increased water body area to 80 deci in place of 12 deci. Besides, they have taken mortgaged in an area of 48 deci for agriculture. They have constructed a big tin-shed living house replacing a tiny hut.



Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on to rearing cows, goat and poultry birds. Aleya has been trained on rearing of cow and poultry birds. At present, her family has increased number of birds only, but has no animals having recently sold two cows.

Table 6.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	15	20	33
b. Duck	5	7	40
c. Cow	6	0	-100
g. Goat	3	0	-100

Status of Physical Capital: Aleya's family has both household assets and agri-cultural implements valued about Tk. 50,000 which is now 100% more than before and value is Tk. 100,00 as was before CDSP VI. The HH assets include solar panels, mobile phones, showcase, almira and khat. The agri-implements include water pump for irrigation and fishing nets.

Status of Physical Capital: Aleya's family has both household assets and agricultural implements valued about Tk. 1,00,000 which is 100% more against Tk. 50,000 as was before CDSP VI. The HH assets have been shown in the table below:

Table 6.2: List of Assets and their Value with Sources of Fund

	List of Assets	Value of Assets
Before CDSP – IV	Wooden plunk 2, wooden safe 2, almira 1, ornament 10 gm, bi-cycle 1, mobile 1	Tk. 50,000
Now	Wooden plunk 2, wooden semi-box 1, wooden safe 2, almira 1, showcase 1, table 1, char 6, ornament 15 gm, bi-cycle 1, solar 1, mobile 2, trolley van 1, sprayer 1	Tk. 100,000 Source of fund for assets: Micro-credit, income from plant nursery, fish culture, poultry farm

Annual Family Income and Sources: Aleya said that before joining with CDSP IV they had 5 earning sources. These were: poultry and cow rearing, cultivation of rice and vegetables, and a fish pond. They now have 9 sources of income as shown below. Now they are cultivating HYV & hybrid types of vegetable, rearing more poultry than before. They sold two cows @ Tk. 45,000 each three months before the survey date. They are now earning good amount of money (yearly Tk. 361,500, an increase of 890%). This was because of introduction of new technologies in vegetable, cultivation of rice crops and use of mechanized agricultural implements like tractor, water pump, and rice husking, along with a small business (a poultry farm established using sale proceeds from plant nursery seedlings and saplings).

Table 6.3 shows that major sources of farm income are vegetables (25%), aquaculture (25%), cow rearing (19%), and plant nursery (17%). The contribution from off-farm sources to HH income is 33.2% (but this is a poultry farm which could be classed as farm income).

Table 6.3: Distribution of HH Income by Sources (On & Off-Farm)

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	10000	15000	6	50
b. Vegetables	5000	60000	25	1100
c. Fruits	-	15000	6	>100
d. Plant Nursery	-	40000	17	>100
e. Cow rearing	15000	45000	19	200
g. Poultry rearing	1500	5000	2	233
h. Aquaculture	5000	60000	25	1100
i. Social forestry	-	1500	1	>100
Total Tk. (On-farm)	36500	241500	100	562
Off-farm Activities				
c. Small business (poultry farm)	-	120000	100	>100
Total Tk. (Off-farm)	0	120000		
Total HH Income (Tk.)	36500	361500		890

Visible Changes and Benefits of infrastructure Development: Aleya explains how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Aleya said that, during pre-project period, she was restricted by 'community'/'somaj' from having free mobility to the areas like market places, any community meetings and town/distant places. Now-a-days, she is working in her nursery, and operating the poultry farm along with her husband. She can freely move around-market places for shopping, health centres for getting health care services. She is participating in IGA training and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, their journey time has reduced. They can now quickly move one place to another. Water logging has reduced.
- **Construction of embankment canals and sluices:** They are free from intrusion of saline water and can drain out excess water due to rains. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** They have now opportunity to take shelter in the situation of cyclone attack. Their kids can go to schools established in newly build cycle centres. We now that the signalling flags for warning will be hoisted at the roof of cyclone centre.
- **Drinking water from DTWs:** They can drink safe water from DTWs and safe is being used by all kinds of HH works. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly. We are using excess water into homestead garden for vegetable production.

- **Sanitary latrine:** They are using sanitary latrines supplied by CDSP IV. Now, their homesteads are free from bad smell and we are living in hygienic and healthy environment.
- **Health and family planning services:** Their health has improved. Family size is decreasing in char areas due to acceptance of family planning methods.
- **Nutritional food for children and pregnant mothers:** Pregnant mothers are getting counselling services from the doctors and health workers.
- **Legal and human right/disaster management:** They have become more aware LHR and disaster issues and management. Women violence has reduced. Now, they do not support early marriage of girls and they united to resist early marriages.
- **Social Forestry:** Her family has participation in social forestry group (SFG). The trees in the social forestry plantation are still very young. They will enjoy 55% share of forest produces when it is extracted.

7. Case Profile of Ms. Ayesha Khaton (Husband: Md. Jabiul Hoq)

General and Demographic Profile: Ms. Ayesha Khaton (34 yrs), wife of Md. Jabiul Hoq (45 Yrs) of Uttar Musapur Somaj, Noler Char, Upazila-Hatiya, District-Noakhali, PNGO-DUS. Ayesha's family consists of 10 members having the following composition:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	5	2	-	1	10

Note: Others- 1mother-in-law

Shelter and Migration Profile: They migrated from South Hatiyar, District-Noakhali with the expectation of better shelter and life style. They lost their land and homes along with other assets valued at Tk.1,200,000 due to river erosion, displacement and migration.

Participation into Group and Skill Development Process: Ayesha joined with CDSP IV's partner NGO (DUS) on 1 Nov 2012. Her family is associated with three types of field level institutions (FLIs) -NGO group, farmers' forum (FF) and WMG. As a NGO group member, Ayesha has participated into three types of IGA training (poultry rearing and vegetable cultivation and fish culture) organized by DUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like cow rearing, vegetables and poultry rearing in their homestead and land.

Status of Financial Capital: She has accumulated a group savings of Tk. 9,500. Ayesha has taken micro-credit 4 times with a total amount of Tk. 146,000 (1st Tk. 8,000 for agriculture, 2nd Tk. 20,000 for cow rearing, 3rd Tk.48,000 for cow rearing and small business and 4th Tk. 70,000 for fish culture).

Status of Land Settlement & Titling by CDSP IV: Ayesha said that they have got four 'khatian' in 2016 for 576 deci. In every 'khatian', name of women has been included in the first place and ensuring 50% share. After getting 'khatian' They have increased her homestead area to 66 deci in place of 40 deci. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will treat them landless. Nobody or any 'bahini' can evict them.

Status of Natural Capital: Before CDSP IV, Ayesha's family had 576 decimals of own land (40 deci as homestead, 28 deci as water body and cultivable 508 deci). They are now residing in tin-shed living house replacing the earlier hut. They have developed their land in productive manner i.e. 66 deci homestead in place 40 deci, increased water body of 188 deci replacing 28 deci. They have mortgaged in 600 deci to make an integrated fish cum agri-project.



Table 7.1: Distribution of Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	40	66	65
b. Water body	28	188	571
c. Cultivable land (own)	508	322	-37
Total own land (in deci)	576	576	0
a. Cultivable land mortgaged in	0	600	>100
Total land mort. (in deci)	0	600	100
Total own land (in deci)	576	1176	104



Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing more than 100 poultry birds, 4 cows and 20 goats, but now they have very few birds and goats due to lack of fallow land. They are rearing 40 pigeons and have increased the number of cows to 13.



Table 7.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	100	12	-88
b. Duck	20	30	50
c. Cow	4	13	225
C, Goose	0	14	>100
g. Goat	20	5	-75

Status of Physical Capital: Ayesha's family has both household assets and agricultural implements valued about Tk. 500,000 which is 525% more against Tk. 80,000 as was before CDSP VI. The HH assets have been shown in the table below:

Table 7.2: Assets, asset value and sources of fund

	List of Assets	Value of Assets
Before CDSP – IV	Wooden plunk 3, wooden safe 1, almira 1, mobile 1, ornaments 20 gm	Tk. 80,000
Now	Box plunk 3, wooden plunk 4, showcase 1, almira, chair 15, solar 2, table 4, sprayer 3, motor cycle 1, wooden safe 1, ornament 160 gm. Mobile 4	Tk. 500,000 Source of fund for assets: Income from vegetables, crops, cattle and poultry, water pump, fish culture, brick-field 'majhi'

Annual Family Income and Sources: Ayesha informed that, before joining CDSP IV, they had several earning sources. Before, the main sources were cow and poultry rearing, fish culture, vegetable cultivation, rearing of goats and small business. Now they have expanded most of earlier income sources. are cultivating HYV & hybrid types of vegetable, rearing less poultry but more cows than before. The reason of few poultry, there are now lack of open spaces than before. This was because of the establishment of an integrated fish-cum-agri project, use of micro-credit, introduction of HYV and a variety of vegetables and crops with the knowledge and skills from training provided by CDSP IV. A good income has been earned. They now have a net income of Tk. 1,280,800 (433% increase over before CDSP IV) from both on and off-farm activities. Ayesha's husband is working as a labour broker called a 'majhi'⁶ for two brick fields. Her husband owns the sites of two shops which have been rented to local businessmen. He has re-invested the income from fish culture, cow rearing and agriculture crops.

⁶ locally 'majhi' means broker of labour suppliers

Table 7.3 shows that the major sources of farm income are cow rearing (48%), aquaculture (28%), and field crops (14%). The contribution from off-farm sources to HH income is 43.8%.

Table 7.3: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	52500	102000	14	94
b. Vegetables	5000	45000	6	800
c. Fruits	1000	15000	2	1400
e. Cow rearing	50000	343800	48	588
f. Goat rearing	10000	4000	1	60
g. Poultry rearing	15000	5000	1	67
h. Aquaculture	4000	200000	28	4900
j. Others/Pigeon	1000	5000	1	400
Total Tk. (On-farm)	138500	719800	100	420
Off-farm Activities				
c. Small business	100000	500000	89	400
e. Handicraft-Cap ..	2000	7000	1	250
f. Others/Renting Shop	-	54000	10	>100
Total Tk. (Off-farm)	102000	561000	100	450
Total HH Income (Tk.)	240500	1280800		433

Visible Changes and Benefits of infrastructure Development: Ayesha explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by the Forest Department.

Status of Social Capital: Ayesha said that, due to operation of successful IGAs with the technical assistance provided by CDSP IV and PNGO (SSUS), her family has better position in their 'somaj' than was before. She said that now she can participate in decision making roles in their family matters.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, prices of land have increased significantly, and they are getting good prices for the products that they grow. Travel time has reduced significantly, but the fares for transport have increased. They are to pay more prices for the travel.
- **Construction of embankment canals and sluices:** No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improve market places:** They can sell vegetable and crops to the markets. The retailers and whole sellers are getting their necessary goods and products in one stop services mode.
- **Establishment of cyclone centres:** Now, people have a good place to take shelter at the event of storms and cyclones. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** There was a demand of safe drinking for the char people. CDSP IV has fulfilled their demand. At present they are getting safe water. The incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from DTWs established by CDSP IV.

- **Sanitary latrine:** They have now in better and healthy environment. Each family has sanitary latrine.
- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. They can get health services as when required from the health centres and mobile clinics.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils, reduces force of cyclones. They are collecting leaves and branches from social forestry plantations.

8. Case Profile of Ms. Ferdoushi Beauty (Husband: Md. Kamruzzaman)

General and Demographic Profile: Ms. Ferdoushi Beauty (35 yrs), wife of Md. Kamruzzaman (42 yrs) of Mohammedpur Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-DUS. Beauty's family consists of 3 members having the following composition:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	1	-	-	-	3

Shelter and Migration Profile: They migrated from South Hatiya, District-Noakhali with the expectation of better shelter and life style. They have lost other assets valued at Tk.200,000 due to river erosion and migration.



Participation into Group and Skill Development Process: Beauty joined with CDSP IV's partner NGO (DUS) on 2 Jun 2012. Her family is associated with one field level institution (FLI) - NGO group. As a NGO group member, Beauty has participated in 3 types of IGA training (poultry rearing, vegetable cultivation and fish culture) organized by DUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, vegetables and fish culture in their land and water bodies including non-farm IGA-tailoring.

Status of Financial Capital: She has accumulated a group savings of Tk. 4119 and her family is operating a deposit pension scheme (@ Tk. 1000 pm for the period of 5 years and deposited Tk. 24,000 in her DPS account. Beauty has taken micro-credit 5 times with a total amount of Tk.135,000 (1st Tk. 10,000 for cow rearing, 2nd Tk. 15,000 for pond development, 3rd Tk.20,000 for cow rearing, 4th Tk. 40,000 for vegetable cultivation and 5th Tk. 50,000 cow rearing and goat rearing).



Status of Land Settlement & Titling by CDSP IV: Ferdoushi told the survey team that they had got two 'khatian' in 2016 for 208 deci. In every 'khatian', name of women has been included in the first place and ensuring 50% share. After getting 'khatian' they have increased their homestead area to 50 deci in place of 20 deci. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will treat them as being landless. Nobody or any 'bahini' can evict them.

Status of Physical Capital: Beauty's family has both household assets agri-implements valued about Tk. 1,00,000 which is now 400% more than before Tk. 20,000. The HH assets include solar panels, mobile phones, showcase, almira and khat. The agri-implements include and fishing nets.

Table 8.1: Assets, their value and sources of fund

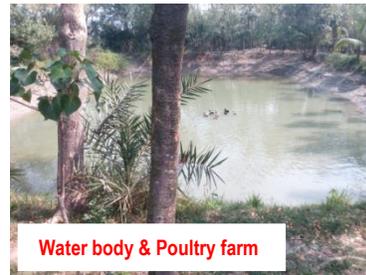
	List of Assets	Value of Assets
Before CDSP -IV	Wooden safe 2, wooden plunk 1, mobile 1, bi-	Tk. 20,000
Now	Showcase 1, Box plunk 1, wooden plunk 2, chair 4, solar 1, alna 1, table 1, wooden safe 2, sprayer 3, mobile 2, almira 1, ornament 30 gm.	Tk. 100,000 Source of fund for assets: Micro-credit, income from vegetables, crops, cattle and poultry, fish culture



Status of Natural Capital: Before CDSP IV, Beauty's family had 208 decimals of own land (20 deci as homestead, and 188 deci as cultivable land). They are now residing in tin-shed living house replacing the earlier hut. They have developed their land in productive manner i.e. 50 deci homestead in place 20 deci, developed a waterbody of 40 deci. In addition 40 decimals has been rented in.

Table 8.2: Distribution of Land Area of Bibi-Hajera

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	20	50	150
b. Water body	0	40	100
c. Cultivable land (own)	188	118	-37
Total own land (in deci)	208	208	0
f. Leased in cultivable land-cod ⁷	0	40	
Total land (in deci)	208	248	19



Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing a limited number of poultry birds, goats and cows. Now they are rearing more goats and poultry, along with pigeons. They built a new separate a goat shed and a cow rearing platform.



^{7 7} 'Cod' means mortgaging a piece of land in lieu of cash money

Table 8.3: Quantity of Poultry and Livestock Assets with Changes (%)

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	12	30	150
b. Duck	10	20	100
c. Goose	0	6	>100
d. Pigeon	0	40	>100
e. Cow	3	4	33
g. Goat	2	18	800

Annual Family Income and Sources: Beauty informed that before joining in CDSP IV, they had several earning sources. Before, the main source was crop cultivation, and rearing of cow and poultry. Now they are cultivating HYV & hybrid types of vegetable, and rearing more poultry and cows than before. This was because of availability of micro-credit, introduction of HYV and improved varieties of vegetables and crops and knowledge and skills from training provided by CDSP IV. They are operating IGAs on small business, auto rice husking machine and water pump. A good income has been earned. They have a net income of Tk.514,000 (1289% increase over Tk. 37,000 before CDSP IV).



Table 8.4 shows that major sources of farm income are cow rearing (43%), vegetables (17%), field crops (11%), goat rearing (11%) and aquaculture (11%). The contribution from off-farm sources to HH income is 9.7%.

Table 8.4: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	12000	52000	11.2	333
b. Vegetables	-	80000	17	>100
c. Fruits	-	15000	3.2	>100
e. Cow rearing	20000	200000	43	900
f. Goat rearing	-	50000	11	>100
g. Poultry rearing	5000	15000	3.2	200
h. Aquaculture	-	50000	11	>100
j. Others/Pigeon	-	2000	0.4	>100
Total Tk. (On-farm)	37000	464000	100	1154
Off-farm Activities				
a. Small business	-	50000	100	>100
Total Tk. (Off-farm)	-	50000	100	>100
Total HH Income (Tk.)	37000	514000		1289

Visible Changes and Benefits of infrastructure Development: Beauty explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Beauty said that, due to operation of successful IGAs with the technical assistances provided by CDSP IV and PNGO (DUS), her family has an honourable position in their 'somaj'. She now can attend meetings, demonstrations, trainings alone. In their family matters, they themselves (she and her husband) jointly decide and implement decisions.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, prices of land has increased significantly, they are getting good prices for the products grown by them. Their travelling time has reduced.
- **Construction of embankment canals and sluices:** No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improve market places:** Due to development of markets with sheds, toilet facilities and DTWs for water supply, whole sellers and brokers regularly coming to the markets to purchase products directly from the farmers. During rainy season, people can shelter under the shed. Their products sold in the market, are going outside from char areas.
- **Establishment of cyclone centres:** They would be able to take shelters in case of cyclones and disaster risks. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** The incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from DTWs established by CDSP IV. They informed that before, they had to collect water very far from their residences or they will have to drink water from local pond and ditches. But, now CDSP IV has provided a DTW for each 25 families.
- **Sanitary latrine:** They have now better and healthy environment. Each family has sanitary latrine.
- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. Family size is becoming smaller. They can get health services as when required from the health centres and mobile clinics.
- **Nutritional food for children and pregnant mothers:** Mal-nutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils, and reduces the force of cyclones. They are collecting leaves and branches from social forestry plantations.

9. Case Profile of Ms. Bibi Amena (Husband: Md. Babul)

General and Demographic Profile: Ms. Bibi Amena (37 yrs), wife of Md. Babul (46 yrs) of Ziar Bazar Somaj, Char Zia Uddin, Upazila-Sunarna Char, District-Noakhali, PNGO-BRAC. Amena's family consists of 8 members having family composition:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	3	3	-	-	8

Shelter and Migration Profile: They migrated from South Hatiya, district-Noakhali with the expectation of better shelter and life style. They have lost land, houses and other assets valued at Tk.1,000,000 due to river erosion, displacement and migration.



Participation into Group and Skill Development Process: Amena joined with CDSP IV's partner NGO (BRAC) on 25 Mar 2012. Her family is associated with 5 types of field level institutions (FLIs) - NGO group, farmers' forum (FF), FFA and TUG. As a member of NGO group, Amena has participated in 3 types of IGA training (poultry rearing, vegetable cultivation and fish culture) organized by BRAC with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, growing crops, cow rearing, poultry rearing, fish culture and non-farm IGA-van driving.

Status of Financial Capital: She has accumulated a group savings of Tk. 16,117. Amena and her husband have taken micro-credit 5 times with a total amount of Tk. 120,000 (*1st Tk. 5,000, 2nd Tk. 10,000 and 3rd Tk.20,000 for agri-crop cultivation, 4th Tk. 35,000 for cow rearing and van purchase and 5th Tk. 50,000 for purchasing tractor*).



Vertical Garden



Processing Cabbage

Status of Land Settlement & Titling by CDSP IV: Bibi Amena told the team that they have got a single 'khatian' in 2015 for 140 deci. In every 'khatian', name of women has been included in the first place and ensuring 50% share. After getting 'khatian' they have increased their homestead area to 32 deci in place of 20 deci and water body to 20 deci in place of 5 deci. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will now treat as if they are landless. Nobody or any 'bahini' can evict them.

Status of Natural Capital: Before CDSP IV, Amena's family had 140 decimals of own land (20 deci as homestead, 5 deci as water body and 115 as poor quality agri-land). After participation of CDSP IV development interventions, they have developed their land in productive manners. For example, an increased water body area to 20 deci in place of 5 deci, homestead area 32 deci in place of 20 deci. Besides, they have taken on mortgage an area of 60 deci for agriculture crop production. They have constructed a big tin-shed living house replacing a tiny hut.



Amena's Living House



Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on rearing cows and poultry birds. Amena has now been trained on rearing of poultry birds. At present, her family has increased number of birds, but has reduced the number of cows (having recently sold two animals).

Table 9.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	6	20	233
b. Duck	8	15	88
c. Cow	5	1	-80
d. Pigeon	10	20	100

Status of Physical Capital: Amena's family has both household assets and agricultural implements valued about Tk. 100,000, which is 67% more against Tk. 60,000 as was before CDSP VI. The HH assets include solar panels, mobile phones, showcase, almira, and khat. The agri-implements include water pump for irrigation, fishing net and a new tractor. The HH assets have been shown in the table below:

Table 9.2: Assets, asset value and sources of fund

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 2, wooden safe 1, mobile 1, bi-cycle 1, ornament 2 gm, chair 2, bi-cycle 1.	Tk. 60,000
Now	Box plunk 2, wooden plunk 2, showcase 1, chair 6, table 2, solar 1, wooden safe 1, mobile 2, ornament 20 gm, trolley van 1, tractor 1, bi-cycle 1, sprayer 1, water pump 1	Tk. 100,000 Source of fund for assets: Income from vegetables, crops, cattle and poultry and fish culture

Annual Family Income and Sources: Amena said that, before joining with CDSP IV, they had several earning sources. Before, the main sources were agri-cropping, poultry bird and cow rearing, and cultivation of rice. But now they are cultivating HYV & hybrid types of vegetable, rearing poultry, cows and earning more than before. They had sold two cows before Eidul Azha (great Muslim festival). They are now earning good amount of money (yearly Tk. 236,000 an increase of 232%). This was because of introduction of new technologies in vegetable cultivation of rice crops and use of mechanized agricultural implements like tractor, water pump, and rice husking.

Table 9.3 shows that major sources of farm income are field crop (30%), vegetables (25%) and cow rearing (24%). The contribution from off-farm sources to HH income is 16.1%.

Table 9.3: Distribution of HH Income by Sources (On & Off-Farm)

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	20000	60000	30	200
b. Vegetables	4000	50000	25	1150
c. Fruits	-	15000	8	>100
e. Cow rearing	20000	48000	24	140
g. Poultry rearing	2000	5000	3	150
h. Aquaculture	5000	20000	10	300
Total Tk. (On-farm)	51000	198000	100	288
Off-farm Activities				
a. Wage/labour/salary	20000	36000	95	80
b. Drivers-Van/CNG ..	-	2000	5	>100
Total Tk. (Off-farm)	20000	3800	100	90
Total HH Income (Tk.)	71000	236000		232

Visible Changes and Benefits of infrastructure Development: Amena explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Amena said that during pre-project period she was restricted by 'community'/somaj' from having free mobility to the areas like market places, any community meetings and town/distant places. Now-a-days, she is working in her vertical gardens, and operating a poultry farm and fish culture along with her husband. She can freely move around market places for shopping, and go to health centres for getting health care services. She is participating in IGA training and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, their journey time has reduced. They can now quickly move one place to another. Water logging has reduced. They can mobilize agri-products very quickly.
- **Construction of embankment canals and sluices:** They are free from intrusion of saline water and can drain out excess water due to rains. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** They have now opportunity to take shelter in the situation of cyclone attack. Their kids can go to schools established in newly build cyclone centres. We now that the signalling flags for warning will be hoisted at the roof of cyclone centre.
- **Drinking water from DTWs:** They can drink safe water from DTWs and safe is being used by all kinds of HH works. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly. We are using excess water into homestead garden for vegetable production.
- **Sanitary latrine:** They are using sanitary latrines supplied by CDSP IV. Now, their homesteads are free from bad smell and we are living in hygienic and healthy environment.
- **Health and family planning services:** Their health has improved. Family size is decreasing in char areas due to acceptance of family planning methods.

- **Nutritional food for children and pregnant mothers:** Pregnant mothers are getting counselling services from the doctors and health workers.
- **Legal and human right/disaster management:** They have become more aware LHR and disaster issues and management. Women violence has reduced. Now, they do not support early marriage of girls and they united to resist early marriages.
- **Social Forestry:** Peoples are getting leaves and small branches for cooking. Besides, trees are good for stabilizing soils and improving soil quality, and protecting slopes from erosion.

10. Case Profile of Ms. Nargis (Husband: Md. Nurunnabi)

General and Demographic Profile: Ms.Nargis (30 yrs), wife of Md. Nurunnabi (40 Yrs) of Mollagram Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-SSUS Nargis's family consists of 6 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	1	3	-	-	6

Shelter and Migration Profile: They have migrated from South Hatiyar, District-Noakhali with the expectation of better shelter and life style. They lost their land and homes along with other assets valued at Tk.50,00,000 due to river erosion, displacement and migration.

Participation into Group and Skill Development Process: Nargis joined with CDSP IV's partner NGO (SSUS) on 3 May 2012. Her family is associated with only one field level institution (FLI) - NGO group. As a NGO group member, Nargis has participated into four types of IGA training (poultry rearing and vegetable cultivation, agri-crop cultivation and fish culture) organized by SSUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like plant nursery, cow rearing, vegetables and poultry rearing in their homestead and land.

Status of Financial Capital: She has accumulated a group savings of Tk. 12,600. Nargis has taken micro-credit 5 times with a total amount of Tk. 104,000 (1st Tk. 5,000 and 2nd Tk. 10,000 for small business, 3rd Tk.20,000 for fish culture, 4th Tk. 49,000 agri-crop cultivation and Tk. 20,000 for earth work). Small business refers to stocking and sale of agri-crops such as paddy, soyabean, ground nuts and dry chillies

Status of Land Settlement & Titling by CDSP IV: Nargis told that they have got a single 'khatian' in 2016 for 150 deci. In their 'khatian', name of women has been included in the first place and ensuring 50% share. After getting 'khatian' they have increased their homestead area to 35 deci in place of 15 deci and water body to 35 deci in place of 15 deci. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will treat as they are landless. No body or any 'bahini' can evict them.

Status of Natural Capital: Before CDSP IV, Nargis's family had possession of 300 decimals of land (15 deci as homestead, 15 deci as water body and 270 deci as cultivable land). They are now residing in tin-shed living house replacing the earlier hut. They have developed their land in productive manner i.e. 35 deci homestead in place of earlier 15 deci, increased water body of 35 deci replacing 15 deci. They have mortgaged in 150 deci to make an integrated fish cum agri-project, and have sold 150 deci to a neighbour.



Table 10.1: Distribution of Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	15	35	133
b. Water body	15	35	133
c. Cultivable land (own)	270	80	-70
Total own land (in deci)	300	150	-50
a. Cultivable land mortgaged in	0	150	>100
Total land mort. (in deci)	0	150	>100
Total own land (in deci)	300	300	0

Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing only 11 poultry birds and they are now rearing 60 birds. They are operating 3 vermi-compost plants, but have fewer cows than before.



Table 10.2: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	4	20	400
b. Duck	7	40	471
c. Goose	3	0	-100
c. Cow	4	1	-100

Status of Physical Capital: Nargis's family has both household assets and agricultural implements valued about Tk. 100,000 which is 400% more against Tk. 20,000 as was before CDSP VI. The HH assets have been shown in the table below:

Table 10.3: HH Assets and Costs with Sources of Fund

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 1, chair 2, ornaments 5 gm.,.	Tk. 20,000
Now	Wooden plunk 2, chair 2, solar 1, wooden safe 1, ornament 20 gm, water pump 1 and DTW 1	Tk. 100,000 Source of fund for assets: Micro-credit, income from vegetables, crops, cattle and poultry, fish culture, DTWs

Annual Family Income and Sources: Nargis informed that before joining in CDSP IV, they had several earning sources, the main source was labour outside the home, cow and poultry rearing, and vegetable cultivation, but on a small scale. Now they have expanded most of earlier income sources. and are cultivating HYV & hybrid types of vegetable,



rearing more poultry and cows than before. They have installed a DTW at their own cost and are irrigating their own land. The cost (Tk.140,000) of the DTW and water pump was accumulated partly from micro-credit, partly from farmers as advances for water sales, and partly from income from fish culture and vegetables. They are selling the DTW water with payment from other farmers growing irrigated rice. CDSP IV discourages the installation of DTWs for irrigation purpose, but Nargis said that there are several farmers who have installed DTWs and are selling water from DTW to other farmers.

Before, their annual income was Tk. 77,000. Now, their annual income has increased significantly. This was because of availability of establishment of integrated fish cum agri project, use of micro-credit, introduction of HYV and variety of vegetables and crops and knowledge and skills from training provided by CDSP IV. A good income has been earned. They have a net income of Tk. 372,750 (384% increase over Tk. 77,000 before CDSP IV) from both on and off-farm sources.

Table 10.4 shows that major sources of farm income are now cow rearing (31%), aquaculture (25%), vegetables (15%), field crops (14%) and poultry rearing (12%). The contribution from off-farm sources to HH income is 56.3% - largely from water sales.

Table 10.4: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	1000	22000	14	2100
b. Vegetables	5000	25000	15	400
c. Fruits	-	5500	3	>100
e. Cow rearing	7000	50000	31	614
g. Poultry rearing	4000	20000	12	400
h. Aquaculture	-	40000	25	>100
i. Social forestry	-	250	0	
Total Tk. (On-farm)	17000	162750	100	857
Off-farm Activities				
a. Wage/labour/salary	60000	50000	24	-17
f. Others/Water selling	-	160000	76	>100
Total Tk. (Off-farm)	60000	210000	100	250
Total HH Income (Tk.)	77000	372750		384

Visible Changes and Benefits of infrastructure Development: Nargis explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Nargis has informed that due to operation of successful IGAs with the technical assistances provided by CDSP IV and PNGO (SSUS), her family has better position in their 'somaj' than was before. She can now participate in decision making roles in their family matters.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, prices of land have increased significantly, and they are getting good prices for their products. Travel time has reduced significantly, but the fares for transport have increased.

- **Construction of embankment canals and sluices:** No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improved market places:** They can sell vegetable and crops to the markets. The retailers and whole sellers are getting their necessary goods and products in one stop services mode.
- **Establishment of cyclone centres:** Now, people have a good place to take shelter at the event of storms and cyclones. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** There was a demand of safe drinking for the char people. CDSP IV has fulfilled their demand. At present they are getting safe water. The incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from DTWs established by CDSP IV. They are using excess DTW water to cultivate homestead vegetables.
- **Sanitary latrine:** They have now in better and healthy environment. Each family has sanitary latrine.
- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. They can get health services as when required from the health centres and mobile clinics.
- **Nutritional food for children and pregnant mothers:** Mal-nutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils, and reduce the force of cyclones. They are collecting leaves and branches from social forestry plantations.

11. Case Profile of Ms. Saira Khaton (Husband: Md. Azhar)

General and Demographic Profile: Ms. Saira Khaton (44 yrs), wife of Md. Azhar (52 yrs) of Chowdhury Majhi Somaj, Char Ziauddin, Upazila-Hatiya, District-Noakhali, PNGO-BRAC. Saira's family consists of 13 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	1	4	-	6	13

Note: others are 2 daughter-in-law, 3 grandsons, 1 granddaughter

Shelter and Migration Profile: They have migrated from Char Darbeshi, Noakhali with expectation of better shelter and life style. They have lost their and other assets valued at Tk.400,000 due to river erosion and migration.



Participation into Group and Skill Development Process: Saira joined with CDSP IV's partner NGO (BRAC) on 5 Jun 2013. Her family is associated with 3 field level institutions (FLIs) - NGO group, Farmers Forum (FF) and FF Association. As a NGO group member, Saira has participated in 2 types of IGA training (vegetable cultivation and fish culture) organized by BRAC with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, vegetables, agri-crop cultivation and fish culture in their land and water bodies.

Status of Financial Capital: She has accumulated a group savings of Tk. 17,883. Saira has taken micro-credit 3 times with a total amount of Tk. 1,04,000 (**1st Tk. 10,000 and 2nd Tk. 44,000 for agriculture crop cultivation, 3rd Tk.50,000 for cow rearing**).

Status of Land Settlement & Titling by CDSP IV: Saira told that they have not got any 'khatian' through CDSP IV. But, they have got 'khatian' from govt. (MoL) for 730 deci in 2008. After receiving settlement, they have developed their land.

Status of Natural Capital: Saira's family now own 730 decimals of land (200 decimals as homestead, and 50 decimals as water body, and 480 decimals cultivable land). They are now residing in tin-shed living house replacing the earlier hut.



Large Agri-farm of Saira

Table 11.1: Distribution of Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	2008	CDSP IV	Change
a. Homestead	200	200	0
b. Water body	50	50	0
c. Cultivable land (own)	400	480	20
Total own land (in deci)	650	730	12
f. Cultivable land-cod	0	0	0
Total land (in deci)	650	730	12



Cumber harvested

Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing poultry birds and cows, but now cow rearing has been reduced due to use of mechanized cultivation.

Table 11.2: Quantity of Poultry and Livestock Assets with Changes (%)

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	20	25	25
b. Duck	15	5	-67
c. Goose	0	1	>100
d. Pigeons	6	14	133
e. Cow	15	10	-33

Status of Physical Capital: Saira's family has both household assets and agricultural implements valued about Tk. 200,000 which is 300% more against Tk. 50,000 as was before CDSP VI. The HH assets have been shown in the table below:

Table 11.3: Assets and sources of funds

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 4, wooden safe 1, mobile 2, ornament 20 gm,	Tk. 50,000
Now	Wooden plunk 4, box plunk 4, table 4, chair 10, showcase 1, wooden safe 1, solar 1, mobile 3, ornament 60 gm, thresher 1, chair 1	Tk. 200,000 Source of fund for assets: Income from vegetables, crops, cattle and poultry and fish culture

Annual Family Income and Sources: Saira informed that before joining in CDSP IV, they have several earning sources. Before, the main sources were crop cultivation-and poultry rearing. Now they are cultivating HYV & hybrid types of vegetable and fish culture. This was because of availability of micro-credit, introduction of HYV and a variety of vegetables and crops, along with the knowledge and skills from training provided by CDSP IV. They have a net income of Tk. 333,000 (104% increase over before CDSP IV).

**Table 11.4: Distribution of HH Income by Sources from On and Off-Farm**

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	90000	140000	42	56
b. Vegetables	50000	100000	30	100
c. Fruits	5000	10000	3	100
e. Cow rearing	10000	13000	4	30
g. Poultry rearing	3000	60000	18	1900
h. Aquaculture	5000	10000	3	100
Total Tk. (On-farm)	163000	333000	100	104
Off-farm Activities				
Total Tk. (Off-farm)	0	0	0	0
Total HH Income (Tk.)	163000	333000		104

Table 11.4 shows that major sources of farm income are field crops (42%), vegetables (30%) and poultry rearing (18%). It was observed that there was no contribution from off-farm activities to HH income.

Visible Changes and Benefits of infrastructure Development: Saira explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Saira said that due to operation of successful IGAs with the technical assistances provided by CDSP IV and PNGO, her family now has an honourable position in their 'somaj'. She now can attend meetings, demonstrations, trainings alone. In their family matters, they themselves (she and her husband) jointly decide and implement decisions.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, prices of land have increased significantly, and they are getting good prices for their products. Their travelling time has reduced.
- **Construction of embankment canals and sluices:** Different types of light vehicles are moving easily over the embankment. No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improved market places:** Due to development of markets with sheds, toilet facilities and DTWs for water supply, wholesalers and brokers regularly coming to the markets to purchase products directly from the farmers. During the rainy season, people can shelter under the shed. Their products sold in the market, are going outside from char areas.
- **Establishment of cyclone centres:** They would be able to take shelters in case of cyclones and disaster risks. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** The incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from DTWs established by CDSP IV. They informed that before, they had to collect water from their residences or they will have to drink water from local pond and ditches. But, now CDSP IV has provided a DTW for each 25 families.
- **Sanitary latrine:** They have now better and healthy environment. Each family has sanitary latrine.
- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. Family size is becoming smaller. They can get health services as when required from the health centres and mobile clinics.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils and reduces the force of cyclones. They are collecting leaves and branches from social forestry plantations.

12. Case Profile of Ms. Bijoy Lakshmi Das (Husband: Mr. Hiralal Chandra Das)

General and Demographic Profile: Ms. Bijoy Lakshmi Das Husband (37 yrs), wife of Mr. Hiralal Chandra Das (45 yrs.) of Jagannathpur Somaj, Caring Char, Upazila-Hatiya, District-Noakhali, PNGO-BRAC. Bijoy Lakshmi's family consists of 4 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	1	1	-	-	4

Shelter and Migration Profile: They migrated from South Hatiya, district Noakhali with expectation of better shelter and life style. They have lost land and houses due to river erosion and migration.



Participation into Group and Skill Development Process: Bijoy Lakshmi joined CDSP IV's partner NGO-BRAC on 8 Dec 20012. Her family is associated with 5 types of field level institutions (FLIs) - NGO group, WMG, FF, TUG and SFG. As a NGO group member, Bijoy Lakshmi has participated in 3 types of IGA training (poultry rearing, agriculture cultivation and fish culture) organized by BRAC with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like agri-crop production, homestead gardening, vegetables in their land.

Status of Financial Capital: She has accumulated a group savings of Tk. 12,416. Bijoya has taken micro-credit 4 times for a total amount of Tk. 51,000 (*1st Tk. 6,000 for goat rearing, 2nd Tk. 10,000 for agri-crop cultivation 3rd Tk15,000 for cow rearing and 4th Tk.20,000 for cow rearing*).



Status of Land Settlement & Titling by CDSP IV: Bijoy Lakshmi told that they have not got yet any 'khatian' through CDSP IV. They have 150 deci in their possession. They are afraid of losing the land due severe river erosion going on. Several 'somaj' of Caring Char are already eroded and washed away.

Status of Natural Capital: Before CDSP IV, Bijoya's family had 150 decimals of land (13 deci as homestead, 13 deci as water body, 120 as cultivable land and 4 deci as fellow land). They had also mortgaged 300 deci before CDSP IV. They are still living in a thatched hut.

Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on to rearing livestock e.g. cow but with only 2 cows. Bijoya has been trained on rearing of poultry and fish culture. At present, her family has increased number of birds and animals (100% than before).

Table 12.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	8	20	150
b. Duck	4	6	50
c. Cow	2	6	200
g. Goat	3	3	0

Status of Physical Capital: Bijoya's family has both household assets and agricultural implements valued about Tk. 35,000 which is 775% more against Tk. 4,000 as was before CDSP VI. The HH assets have been shown in the table below:

Table 12.2: Household assets

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 1, ornament 1	Tk. 4,000
Now	Wooden plunk 2, wooden safe 1, chair 3, ornament 5 gm.	Tk. 35,000 Source of fund for assets: Micro-credit, income from vegetables, crops, cattle and poultry

Annual Family Income and Sources: Bijoya informed that before joining with CDSP IV they had few sources of income. Before, the main sources were labour, poultry, vegetable cultivation and agriculture. But, now they are cultivating HYV & hybrid types of vegetable, rearing livestock and poultry and fish culture. They are earning good amount of money. Their total annual income is now Tk. 107,000 (29% increase over before CDSP IV).

Table 12.3 shows that major sources of farm income are now field crop (23%), fruits (19%), goat rearing (19%), fruits (19%), vegetables (13%), and cow rearing (12%). The contribution from off-farm sources to HH income is 50.4% - although this has declined since the start of CDSP IV.

Table 12.3: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	7000	12000	23	71
b. Vegetables	3500	7000	13	100
c. Fruits	5500	10000	19	82
e. Cow rearing	-	6500	12	>100
f. Goat rearing	-	10000	19	>100
g. Poultry rearing	2000	4500	8	125
h. Aquaculture	-	3000	6	>100
Total Tk. (On-farm)	18000	53000	100	194
Off-farm Activities				
a. Wage/labour/salary	65000	54000	100	-17
Total Tk. (Off-farm)	65000	54000	100	-17
Total HH Income (Tk.)	83000	107000		29

Visible Changes and Benefits of infrastructure Development: Bijoya explains how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Bijoy has informed that during pre-project period they were enjoying quite a nice environment and still are enjoying the same status. They can go to market of social meetings alone. She is participating in IGA training like fish culture, poultry rearing, agri-crop cultivation and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in

such gender mainstreaming activities, women are now playing active roles in preventing early marriage events, and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, water logging has reduced significantly. they are getting good prices for the products grown by them.
- **Construction of embankment canals and sluices:** Incidence flood and chance of crop damage due to unwanted inundation have reduced. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** Their kids can go to schools established in newly build cyclone centres. In case of cyclone and disaster risks, they would take shelter to save their lives and livestock animals.
- **Drinking water from DTWs:** They can drink safe water from DTWs. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly.
- **Sanitary latrine:** They have now better and healthy environment in their family. There is bad smell from toilet. Their kids are also using latrines hygienically.
- **Health and family planning services:** They are more aware than before about family planning.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced.
- **Legal and human right/disaster management:** They do not support early marriage of girls. Now early marriage has reduced.
- **Social Forestry:** Trees give us shade and fruits. They planting more and more trees. They are getting both fuel and timber from. When the Forest Department will cut the grown-up plantations of social forestry, they will get a 55% benefit share.

13. Case Profile of Ms. Shahida Khaton {Husband: Md. A. Shahid}

General and Demographic Profile: Ms. Shahida (55 yrs), wife of Md. A. Shahid (62 yrs) of Mohammedpur Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-SSUS. Shahida's family consists of 13 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	2	4	-	5	13

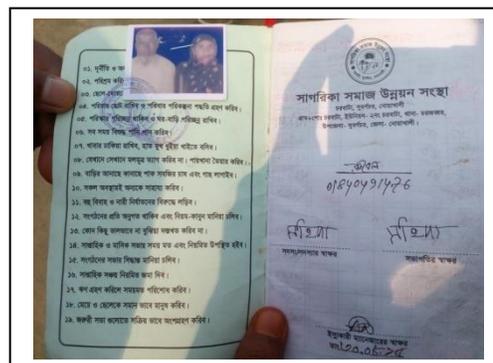
Note: others are 2 daughter-in-law, 2 grandsons, 1 grand daughter

Shelter and Migration Profile: They have migrated from Subarna Char, District-Noakhali with expectation of better shelter and life style. They have lost their land and other assets valued at Tk.50,000 due to displacement.



Participation into Group and Skill Development Process: Shahida joined with CDSP IV's partner NGO-SSUS on 8 Sep 2012. Her family is associated with two field level institutions (FLIs)-NGO group. As an NGO group and farmers' forum (FF) member, Shahida has participated in 3 types of IGA training (cow rearing, agri-crop cultivation and fish culture) organized by SSUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, vegetables and fish culture in their land and water bodies.

Status of Financial Capital: She has accumulated a group savings of Tk. 2,830 Shahida has taken micro-credit 4 times for a total amount of Tk. 65,000 (1st Tk. 10,000 for agriculture, 2nd Tk.15,000 for earth work & fish culture, 3rd Tk.20,000 for cow rearing and 4th Tk.20,000 for vegetable cultivation).



Status of Land Settlement & Titling by CDSP IV: Sahida Khaton told that they have got a single 'khatian' in 2016 for 150 deci. In their 'khatian', name of women has been included in the first place and ensuring 50% share. They are growing vegetables and other crops in their land. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will now treat as being landless. Nobody or any 'bahini' can evict them.

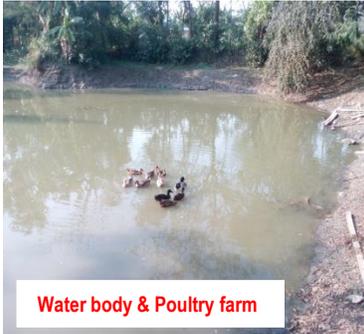
Status of Physical Capital: Shahida's family has household assets valued about Tk. 300,000 which is now 900% more than before Tk. 30,000. They are maintaining a joint family structure. The HH assets have been shown in the table below:

Table 13.1: Assets

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 2, almira 1, chair 2, ornament 10 gm	Tk. 30,000
Now	Wooden plunk 6, wooden safe 2, chair 4, showcase 2, table 2, alna 1, solar 1, almira 2, mobile 3, sprayer 1, ornament 50 gm.	Tk. 300.000 Source of fund for assets: Micro-credit, income from vegetables, crops, cattle and poultry, fish culture, fruit business



Status of Natural Capital: Before CDSP IV, Shahida's family had 150 decimals of own land (52 deci as homestead, 32 deci as water body and 32 deci as cultivable land). They are now residing in tin-shed living house replacing the earlier hut.



Water body & Poultry farm



Rain Water Harvester

Table 13.2: Distribution of Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	52	52	0
b. Water body	32	32	0
c. Cultivable land (own)	66	66	0
Total own land (in deci)	150	150	0
f. Cultivable land-cod	0	0	0
Total land (in deci)	150	150	0



Vegetable Cultivation

Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing a few poultry birds and cows. Now they are rearing birds and cows in larger numbers. They built separate poultry shed and cow shed. They are operating vermi-compost plants.



Poultry Shed & Vermi- Compost Plant



IGA-Cow Rearing

Table 13.3: Quantity of Poultry and Livestock Assets with Changes (%)

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	6	50	733
b. Duck	10	10	0
e. Cow	2	8	300

Annual Family Income and Sources: Shahida said that before joining in CDSP IV, they had several earning sources. Before, the main sources were vegetable and crop cultivation, cow rearing, poultry birds rearing and fish culture. Now they are cultivating HYV & hybrid types of vegetable, rearing more poultry and cows than before. This was because of availability of micro-credit, introduction of HYV and variety of vegetables and crops and knowledge and skills from training provided by CDSP IV. They are operating IGAs on small business (stationary, grocery and fruit shop), and fishing in the river. They have a good amount of income from both on and off farm IGAs. Total average annual net income is Tk. 510,000 (increased by 395% over Tk.103,000 before CDSP IV).



Table 13.4 shows that major sources of farm income are now vegetables (43%), cow rearing (25%), aquaculture (18%) and poultry rearing (11%). The contribution from off-farm sources to HH income is 72.5% (these being the shop and fishing in the river).

Table 13.4: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	10000	0	0	-100
b. Vegetables	5000	60000	43	1100
c. Fruits	-	5000	4	>100
e. Cow rearing	5000	35000	25	600
g. Poultry rearing	4000	15000	11	275
h. Aquaculture	4000	25000	18	525
Total Tk. (On-farm)	28000	140000	100	400
Off-farm Activities				
c. Small business (shop)	75000	120000	32	60
f. Others/Fishing in river	-	250000	68	>100
Total Tk. (Off-farm)	75000	370000	100	393
Total HH Income (Tk.)	103000	510000		395

Visible Changes and Benefits of infrastructure Development: Shahida explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Shahida said that, due to operation of successful IGAs with the technical assistances provided by CDSP IV and PNGO-SSUS, her family has an honourable position in their 'somaj'. As a woman, she can now attend meetings, demonstrations, trainings alone. In their family matters, they themselves (she and her husband) jointly decide and implement decisions.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, prices of land have increased significantly, and they are getting good prices for the products. Their travelling time has reduced significantly. Most their roads either carpeted or herring-bond, they do not have to face muddy conditions even in the rainy season.
- **Construction of embankment canals and Sluices:** No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improved market places:** Due to development of markets with sheds, toilet facilities and DTWs for water supply, wholesalers and brokers regularly coming to the markets to purchase products directly from the farmers. During rainy season, people can shelter under the shed. Their products sold in the market, are going outside from char areas. In the all necessary commodities are available. They very rarely visit district HQ Maizdee for shopping.
- **Establishment of cyclone centres:** in the past char peoples did not have a place to take shelter before and during cyclones and disasters. CDSP IV built many multipurpose cyclone shelters. They would be able to take shelters in case of cyclones and disaster risks. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** There has been long demand of safe and drinking water. As CDSP IV has installed many DTWs, the incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from those DTWs. They informed that before, they had to collect water very far from their residences or they would have to drink water from local pond and ditches. But, now CDSP IV has provided a DTW for each 25 families.
- **Sanitary latrine:** They told that they were bound to use open and un-hygienic latrines due to lack of sanitary latrines. They have now better and healthy environment. Each family has sanitary latrine.
- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. Family size is becoming smaller. They can get health services as when required from the health centres and mobile clinics.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils, and reduce the force of cyclones. They are collecting leaves and branches from social forestry plantations.

14. Case Profile of Ms. Roona (Husband: Md. Riazuddin)

General and Demographic Profile: Ms. Roona (28 yrs), wife of Md. Riazuddin (36 yrs) of Jagannathpur Somaj, Caring Char Upazila-Hatiya, District-Noakhali, PNGO-BRAC. Roona's family consists of 6 members having family composition:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	-	2	-	2	6

Note: Others- 1 brother-in-law and 1 mother-in-law:

Shelter and Migration Profile: They have migrated from South Hatiya, district-Noakhali with the expectation of better shelter and life style. They have lost land, houses and other assets valued at Tk.5,00,000 due to river erosion and migration.



Participation into Group and Skill Development Process: Roona joined with CDSP IV's partner NGO (BRAC) on 3 April 2013. Her family is associated with 3 types of field level institutions (FLIs) - NGO group, farmers' forum (FF) and TUG. As a member of NGO group, Roona has participated in 3 types of IGA training (vegetable cultivation, cow rearing and fish culture) organized by BRAC with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, growing crops, cow rearing, poultry rearing, fish culture and non-farm IGA-business.

Status of Financial Capital: She has accumulated a group savings of Tk. 5,324. Roona and her husband have taken micro-credit 4 times with a total amount of Tk. 86,000 (1st Tk. 10,000 for agri-crop cultivation, 2nd Tk. 19,000 for cow rearing, 3rd Tk.28,000 for agri-crop cultivation and 4th Tk. 29,000 for agri-crop cultivation)



Vegetable Field



Processing Country Beans

Status of Land Settlement & Titling by CDSP IV: Roona told that they have not got any 'khatian' through CDSP IV. PTPS has been completed for 48 deci land in possession. They are waiting a call for hearing.

Status of Natural Capital: Before CDSP IV, Roona's family had 48 decimals of own land (38 deci as homestead, 18 deci as water body). After participation of CDSP IV development interventions, they have developed their land in productive manners. For example, an increased water body area to 20 deci in place of 10 deci. Besides this, they have taken mortgaged an area of 328 deci for agriculture crop production and cod⁸ /leased 112 deci for agri-crop cultivation. They have constructed a big tin-shed living house replacing tiny hut.

⁸ 'Cod' means mortgaging a piece of land in lieu of cash money



Fish Pond



Fruit Garden

Table 14.1: Distribution of Total Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	38	28	0
b. Water body	10	20	0
c. Cultivable land (own)	0	0	5
d. Fellow land	0	0	
Total own land (in deci)	48	48	0
f. Cultivable land-mortgage in	0	328	0
g. Cultivable land-cod	0	112	
Total land (mort/leased in)	0	440	438
Total land (deci)	48	488	917

Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on fish culture and operation of small business (dealership of agriculture inputs (fertiliser, pesticides). Roona has been trained on rearing of cows and fish culture. At present, her family has increased number of birds, and now also owns three cows and six goats.



Roona's Cow Rearing

Table 14.2: Quantity of Poultry and Livestock Assets

No. of birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	4	15	275
b. Duck	3	15	400
c. Cow	0	3	>100
g. Goats	0	6	>100

Status of Physical Capital: Roona's family has both household assets and agricultural implements valued about Tk. 60,000 which is now 300% more than before Tk. 15,000. The HH assets have been shown in the table below:

Table 14.3: Assets

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 4, table 2, char 4	Tk. 15,000
Now	Wooden plunk 4, table 2, char 4, solar 1, wooden safe 1, ornament 20 gm. Sprayer 2, almira 1	Tk. 60,000 Source of fund for assets: Income from vegetables, crops, fertilizer and pesticide dealership. cattle and poultry, fish culture

Annual Family Income and Sources: Roona informed that before joining with CDSP IV they have only two types of income sources. These were fish culture and small business (i.e. rural grocery shop). But, now they are cultivating HYV & hybrid types of vegetable, rearing poultry and cows, and so earning more than before. They now earn a good amount of money, Tk.300,000, an increase of 809% over Tk. 33,000 before CDSP-IV. This was because of introduction of new technologies in vegetable, cultivation of rice crops and use of mechanized agricultural implements like tractor, water pump, rice husking, and from moving into selling agri-inputs in their shop.

Table 14.4 shows that major sources of farm income are field crop (35%), vegetables (22%), aquaculture (15%) and fruits (13%). The contribution from off-farm sources to HH income was 23.3%.

Table 14.4: Distribution of HH Income by Sources (On & Off-Farm)

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	-	80000	35	>100
b. Vegetables	-	50000	22	>100
c. Fruits	-	30000	13	>100
e. Cow rearing	-	1500	7	>100
f. Goat rearing	-	5000	2	>100
g. Poultry rearing	-	15000	7	>100
h. Aquaculture	3000	35000	15	1067
Total Tk. (On-farm)	3000	230000	100	7567
Off-farm Activities				
c. Small business (ag input)	30000	70000	100	133
Total Tk. (Off-farm)	30000	70000	100	133
Total HH Income (Tk.)	33000	300000		809

Visible Changes and Benefits of infrastructure Development: Roona explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Roona said that the during pre-project period, she was restricted by 'community'/somaj' in going to areas like market places, any community meetings and town/distant places. Now-a-days, she is working in her vegetable field, operating poultry farm and fish culture along

with her husband. She can freely move around market places for shopping, and health centres for getting health care services. She is participating in IGA training and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events, and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, their journey time has reduced. They can now quickly move one place to another. Water logging has reduced. They can mobilize agri-products very quickly.
- **Construction of embankment canals and sluices:** They are free from intrusion of saline water and can drain out excess water due to rains. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** They have now opportunity to take shelter in the situation of cyclone attack. Their kids can go to schools established in newly build cyclone centres. We know that the signalling flags for warning will be hoisted at the roof of cyclone centre.
- **Drinking water from DTWs:** They can drink safe water from DTWs and safe is being used by all kinds of HH works. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly. We are using excess water into homestead garden for vegetable production.
- **Sanitary latrine:** They are using sanitary latrines supplied by CDSP IV. Now, their homesteads are free from bad smell and we are living in hygienic and healthy environment.
- **Health and family planning services:** Their health has improved. Family size is decreasing in char areas due to acceptance of family planning methods.
- **Nutritional food for children and pregnant mothers:** Pregnant mothers are getting counselling services from the doctors and health workers.
- **Legal and human right/disaster management:** They have become more aware LHR and disaster issues and management. Women violence has reduced. Now, they do not support early marriage of girls and they united to resist early marriages.
- **Social Forestry:** Peoples are getting leaves and small branches for cooking. Besides, trees are good for stabilizing soils improving soil quality and in protecting slopes from erosion.

15. Case Profile of Mrs. Raoshan (Husband: Md. Abdul Wadud)

General and Demographic Profile: Mrs. Raoshan (55 yrs) wife of Md. Abdul Wadud (62 yrs.) of Azimpur Somaj, Noler Char, Upazila-Hatiya, District-Noakhali, PNGO-SSUS. Raoshan's family consists of 12 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	1	2	-	7	12

Note: Others- 6 grandsons and 1 grand daughter

Shelter and Migration Profile: They have migrated from Monpura, district Bhola with the expectation of better shelter and life style. They have lost land and houses valued at Tk.200,000 due to river erosion, displacement and migration.

Participation into Group and Skill Development Process:

Raoshan joined CDSP IV's partner NGO (SSUS) on 10 Jan 2013. Her family is associated with 3 types of field level institutions (FLIs) - NGO group, TUG and SFG. As a NGO group member, Raoshan has participated in only one IGA training on vegetable organized by SSUS with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening in their land.



Status of Financial Capital: She has accumulated a group savings of only Tk. 327, because she has withdrawn Tk. 20,000 from her savings. Raoshan has taken micro-credit 2 times total amount of Tk.30,000 (**1st Tk. 10,000 and Tk. 20,000 for business**). Raoshan was very irregular in giving her contribution to group savings.



Status of Land Settlement & Titling by CDSP IV: Raoshan said that they have got a single 'khatian' in 2016 for 150 deci. In their 'khatian', name of women has been included in the first place and ensuring 50% share. After getting 'khatian' they have developed their homestead area and built tin-shed living house. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will now treat them as landless. Nobody or any 'bahini' can evict them.

Status of Physical Capital: Raoshan's family has household assets valued about Tk. 25,000 which is now 1150% more than before Tk. 2,000. The HH assets include solar panels, mobile phones, small almira and traditional khat.



Table 15.1: HH Assets and Costs with Sources of Fund

	List of Assets	Value of Assets
Before CDSP – IV	Wooden plunk 2, mobile 1	Tk. 2,000
Now	Wooden plunk 3, table 2, chair 2, solar 1, mobile 1, ornament 5 gm and amirah 1	Tk. 25,000 Source of fund for assets: Income from vegetables, income from business (local hotel & tea stall)

Status of Natural Capital: Before CDSP IV, Raoshan's family had 150 decimals of land (70 deci as homestead, 20 deci as water body, 60 as cultivable land).

Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on to rearing livestock e.g. cow, goat and rearing poultry birds. At present, her family has an increased number of birds, but now no cows or goats.

Table 15.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	20	25	25
b. Duck	5	16	220
c. Goose	2	0	-100
e. Cow	5	0	-100
g. Goat	3	0	-100

Status of Physical Capital: Raoshan;s family has household assets valued about Tk. 25,000 which is 1150% more than before CDSP IV status (Tk. 2000). The HH assets have been shown in the table below:

Table 15.2: HH Assets and Costs with Sources of Fund

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 2, mobile 1	Tk. 2,000
Now	Wooden plunk 3, almira 3, mobile 1, solar 1, table 2, char 2, ornament 5 gm.	Tk. 25,000 Source of fund for assets: Income from vegetables, crops, hotel cum tea stall

Annual Family Income and Sources: Raoshan informed that before joining with CDSP IV, they have several income sources. Before, the main source was goat rearing, poultry birds, vegetable cultivation, fish culture and agriculture. But, now they are cultivating HYV & hybrid types of vegetable, rearing poultry and fish culture. They do not now rear goats and cows due to lack of sufficient land. They are also operating small business (rural grocery shop / tea stall). They are earning good amount of money. Their total annual income was Tk.166,600 (227% increase over Tk. 51,000 before CDSP IV).

Table 15.3 shows that major sources of farm income are now vegetables (35%), aquaculture (27%), fruits (18%) and poultry rearing (14%). The contribution from off-farm sources to HH income is 66.0%.

Table 15.3: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	6000	3600	6	-40
b. Vegetables	5000	20000	35	300
c. Fruits	-	10000	18	>100
e. Cow rearing	25000	0	0	-100
f. Goat rearing	10000	0	0	-100
g. Poultry rearing	2000	8000	14	300
h. Aquaculture	3000	15000	27	400
Total Tk. (On-farm)	51000	56600	100	11
Off-farm Activities				
a. Wage/labour/salary	-	30000	27	>100
c. Small business (shop)	-	80000	73	>100
Total Tk. (Off-farm)	.-	110000	100	>100
Total HH Income (Tk.)	51000	166600		227

Visible Changes and Benefits of infrastructure Development:

Raoshan explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Raoshan said that, during the pre-project period, they were enjoying quite a nice environment and still are enjoying the same status. She can go to markets and social meetings alone. She is participating in IGA training like fish culture, poultry rearing, agri-crop cultivation and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, water logging has reduced significantly. They are getting good prices for the products grown by them. Their travel cost has reduced significantly.
- **Construction of embankment canals and sluices:** Incidence flood and chance of crop damage due to unwanted inundation have reduced. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** Their kids can go to schools established in newly build cycle centres. In case of cyclone and disaster risks, they would take shelter to save their lives and livestock animals.
- **Drinking water from DTWs:** They can drink safe water from DTWs. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly.
- **Sanitary latrine:** They have now better and healthy environment in their family. There is bad smell from toilet. Their kids are also using latrines hygienically.
- **Health and family planning services:** They are more aware than before about family planning.
- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced.

- **Legal and human right/disaster management:** They do not support early marriage of girls. Now early marriage has reduced.
- **Social Forestry:** Trees give us shade and fruits. They are planting more and more trees. They are getting both fuel and timber from. When, Forest Department will cut the grown-up plantations of social forestry, they will get a 55% benefit share.

16. Case Profile of Mrs. Khairon (Husband: Md. Abdul Khaleque)

General and Demographic Profile: Mrs. Khairon (42 yrs), wife of Md. Abdul Khleque (52 yrs) of Madhya Azimnagar Somaj, Noler Char, Upazila-Hatiya, District-Noakhali, PNGO-BRAC Khairon's family consists of 4 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	2	-	-	-	4

Shelter and Migration Profile: They migrated from South Hatiya, District-Noakhali, with the expectation of better shelter and life style. They had lost their land and houses valued Tk. 1,80,000 due to river erosion.



Participation into Group and Skill Development Process: Khairon joined CDSP IV's partner NGO (BRAC) on 20 Mar 2012. Her family is associated with four types of field level institutions (FLIs) - NGO group and farmers' forum (FF), TUG and SFG. Kairon participated in 3 types of IGA training (poultry rearing, agri-crop cultivation and fish culture) organized by BRAC with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, growing crops and vegetables in their land and rearing cows commercially.

Status of Financial Capital: She has accumulated a group savings of Tk. 3845. Khairon and her husband have taken micro-credit 4-times total amount of Tk. 64,000 (*1st Tk. 10,000, 2nd Tk. 20,000 and 3rd Tk.20,000 for earth work, and 4th Tk.10,000 for fish culture*).

Status of Land Settlement & Titling by CDSP IV: Khairon said that they have got a single 'khatian' in 2016 for 150 deci. In their 'khatian', name of women has been included in the first place and ensuring 50% share. After getting 'khatian' they have increased their homestead area to 50 deci in place of 30 deci and water body to 30 deci in place of 10 deci. They are very happy and grateful to CDSP IV for giving permanent settlement status. Nobody will treat them now as being landless. Nobody or any 'bahini' can evict them.

Status of Natural Capital: Before CDSP IV, Khairon's family had 150 decimals of own land (30 deci as homestead, 10 deci as water body and 110 as poor quality agri-land). After participation of CDSP IV development interventions, they have developed their land in a productive manner. For example, an increased homestead area of 50 deci in place of 30 deci, water body area to 30 deci in place of 10 deci. They are now also leasing in 40 decimals of land.

Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on to rearing poultry, cows and goats. They now have more chickens but no goats and fewer cows. In addition, they are now rearing pigeon and goose.

Table 16.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	12	35	2132
b. Duck	15	15	0
c. goose	0	10	>100
d. Pigeon	0	14	>100
c. Cow	5	3	-100
g. Goat	7	0	

Status of Physical Capital: Hairon's family has assets valued about Tk. 85,000 which is 113% more than before CDSP IV status (Tk. 40,000). The assets have been shown in the table below:

Table 16.2: Assets

	List of Assets	Value of Assets
Before CDSP – IV	Wooden plunk 1, wooden safe 1, ornaments 3 gm	Tk. 40,000
Now	Wooden plunk 3, wooden safe 1, table 1, chair 1, thresher 1, almira 1, mobile 1, ornament 10 gm.	Tk. 85,000 Source of fund for assets: Income from vegetables, crops, fish culture, poultry I



Annual Family Income and Sources: Khairon informed the survey team that before joining with CDSP IV the main sources of income were cultivation of rice, and the rearing of cows, goats and poultry birds. But now they are cultivating HYV & hybrid types of vegetable, while rearing poultry and cows as before. Rearing cow is more profitable due to high price of milk and meat. They sold two cows and invested the money in purchasing a rice thresher and in the new IGA of fish culture. They now earn a good amount of money of Tk.184,000 which is an increase of 156% over Tk. 72,000 before CDSP-IV). This was because of participation in both on and off-farm IGAs. She is also renting out a paddle thresher to other farmers and has earned Tk. 3,000 from this.



Table 16.3 shows that major sources of farm income are now cow rearing (40%), vegetables (32%), poultry rearing (10%) and fruits (9%). The contribution from off-farm sources to HH income is 31.5%.

Table 16.3: Distribution of HH Income by Sources (On & Off-Farm)

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	4000	10000	8	150
b. Vegetables	7000	40000	32	471
c. Fruits	6000	11000	9	83
e. Cow rearing	18000	50000	40	178
f. Goat rearing	7000	0	0	-100
g. Poultry rearing	5000	12000	10	140
h. Aquaculture	-	3000	2	>100
Total Tk. (On-farm)	47000	126000	100	168
Off-farm Activities				
a. Wage/labour/salary	25000	55000	95	120
f. Others (thresher rental)	-	3000	5	>100
Total Tk. (Off-farm)	25000	58000	100	132
Total HH Income (Tk.)	72000	184000		156

Visible Changes and Benefits of infrastructure Development: Khairon explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Khairon said that during the pre-project period, she was restricted by 'community'/'somaj' from having free mobility to the areas like market places, any community meetings and town/distant places. Now-a-days, she can freely move around to market places for shopping, and to health centres for getting health care services. She is participating in IGA training and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events, and in preventing the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, they can now move from one place to another very easily. Shopkeeper can bring necessary good from Choumohini and Maizdee. Children are more interested to go to schools for study. Farmers can mobilize their products for selling to distant markets.
- **Construction of embankment canals and sluices:** Saline water cannot enter into their land area. They can cultivate land for cropping. They are free from intrusion of saline water and can drain out excess water due to rains. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centres:** They will be able to take shelter in case of disasters. Their kids can go to schools established in newly build cycle centres. We know that the signalling flags for warning will be hoisted at the roof of cyclone centre.
- **Drinking water from DTWs:** They can drink safe water from DTWs. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly. We are using excess water into homestead garden for vegetable production.
- **Sanitary latrine:** They are using sanitary latrines supplied by CDSP IV. Now, our homestead is free from bad smell and we are living in hygienic and healthy environment. Incidence of worms and skin diseases are nearly absent.

- **Health and family planning services:** Their health has improved. Family size is decreasing in char areas due to acceptance of family planning methods.
- **Nutritional food for children and pregnant mothers:** Pregnant mothers are getting counselling services from the doctors and health workers.
- **Legal and human right/disaster management:** They have become more aware LHR and disaster issues and management. Now, they do not support early marriage of girls and they united to resist early marriages.
- **Social Forestry:** Her family has a membership with social forestry groups. They are collecting fuel wood from plantations of social forestry. Sometimes, other peoples are also collecting leaves and twigs for cooking purposes.

17. Case Profile of Mrs. Amena (Husband: Md. Shamsuddin)

General and Demographic Profile: Mrs. Amena (35 yrs), wife of Md. Shamsuddin (43 yrs) of Islampur Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-BRAC. Amena's family consists of 6 members having:

Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	3	1	-	-	6

Shelter and Migration Profile: They have migrated from South Hatiya, District-Noakhali, with the expectation of better shelter and life style. They have a loss of only Tk.15,000 because of migration. They were living on govt. khas land. They had 15 deci land at Subarna Char.



Participation into Group and Skill Development Process: Amena joined CDSP IV's partner NGO (BRAC) on 22 Mar 2012. Her family is associated with two types of field level institutions (FLIs) - NGO group and TUG. Amena participated in 3 types of IGA training (poultry rearing, agri-crop cultivation and tailoring organized by BRAC with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management and health & family planning. She and husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, growing crops and vegetables in their land and rearing cows commercially.

Status of Financial Capital: She has accumulated a group savings of Tk. 5,630. Amena and her husband have taken micro-credit 3 times for a total amount of Tk. 46,000 (*1st Tk. 8,000 earth work and agriculture, 2nd Tk.15,000 for agriculture cultivation and 3^d Tk.23,000 cow rearing and agriculture crop cultivation*).

Status of Land Settlement & Titling by CDSP IV: Amena told that they have not got any 'khatian' through CDSP IV. But, they have possession of 120 deci land.

Status of Natural Capital: Before CDSP IV, Amena's family had 120 decimals of own land (10 deci as homestead, 25 deci as water body and 85 as poor quality agri-land). After participation of CDSP IV development interventions, they have developed their land in a productive manner. For example, an increased homestead area of 25 deci in place of 10 deci, water body area to 20 deci in place of 25 deci and 75 deci in place of cultivable land in place of 85 deci.. They now lease in 36 decimals.

Status of Poultry and Livestock Assets: Before joining with CDSP IV development initiatives, they were very dependent on to rearing poultry birds. Now they have more chickens and also 3 cows.

Table 17.1: Quantity of Poultry and Livestock Assets

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	10	20	100
b. Duck	15	10	-33
c. Cow	0	3	>100

Status of Physical Capital: Amena's family has household assets valued about Tk. 70,000 which is 250% more than before CDSP IV status (Tk. 20,000). The HH assets have been shown in the table below:

Table 17.2: Household Assets

	List of Assets	Value of Assets
Before CDSP – IV	Wooden plunk 3, table 1, char 2, wooden safe 1,	Tk. 20,000
Now	Wooden plunk 3, showcase 1, char 2, table 1, wooden safe 1, mobile 1, sewing machine 1, ornament 10 gm.	Tk. 70,000 Source of fund for assets: Micro-credit, Income from vegetables, crops, tailoring, fish culture, poultry and day labour



Annual Family Income and Sources: Amena said that before joining with CDSP IV the main source of income was wage labour, cultivation of rice and poultry birds. But, now they are cultivating HYV & hybrid types of vegetable, rearing more poultry and cows. and have also taken up fish culture. They earned a good amount of money Tk.143,000, an increase of 147% over Tk.58,000 before CDSP-IV. This was because of participation in both on and off-farm IGAs like tailoring.



Table 17.3 shows that major sources of farm income are now aquaculture (35%), vegetables (33%), cow rearing (19%) and poultry rearing (13%). The contribution from off-farm sources to HH income is 66.4%.

Table 17.3: Distribution of HH Income by Sources (On & Off-Farm)

Sources of HH Income	HH Income (TK.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	7000	0	0	-100
b. Vegetables	1500	16000	33	967
c. Fruits	2000	0	0	-100
e. Cow rearing	-	9000	19	>100
g. Poultry rearing	2500	6000	13	140
h. Aquaculture	-	17000	35	>100
Total Tk. (On-farm)	13000	48000	100	269
Off-farm Activities				
a. Wage/labour/salary	45000	85000	89	89
d. Tailoring	-	10000	11	>100
Total Tk. (Off-farm)	45000	95000	100	111
Total HH Income (Tk.)	58000	143000		147

Visible Changes and Benefits of infrastructure Development: Amena explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Amena informed the survey team that during pre-project period, she was restricted by 'community'/'somaj' from having free mobility to the areas like market places, any community meetings and town/distant places. Now-a-days, she can freely move around to market places for shopping, and to health centres for getting health care services. She is participating in IGA training and other awareness & motivational sessions organized by NGOs, FLIs and GoB agencies. Due to participation in such gender mainstreaming activities, women are now playing active roles in preventing early marriage events, and the incidence of dowry for girls' marriages.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Due to construction of roads and bridges, they can now move from one place to another very easily. Shopkeeper can bring necessary good from Choumohini and Maizdee. Children are more interested to go to schools for study. Farmers can mobilize their products for selling to distant markets.
- **Construction of embankment canals and sluices:** Saline water cannot enter into their land area. They can cultivate land for cropping. They are free from intrusion of saline water and can drain out excess water due to rains. Water structures are being operated water management groups (WMGs).
- **Establishment of cyclone centre:** They will be able to take shelter in case of disasters. Their kids can go to schools established in newly build cycle centres. We know that the signalling flags for warning will be hoisted at the roof of cyclone centre.
- **Drinking water from DTWs:** They can drink safe water from DTWs. Incidence of diseases like diarrhoea, dysentery and jaundice has reduced significantly. We are using excess water into homestead garden for vegetable production.
- **Sanitary latrine:** They are using sanitary latrines supplied by CDSP IV. Now, our homestead is free from bad smell and we are living in hygienic and healthy environment. Incidence of worms and skin diseases are nearly absent.
- **Health and family planning services:** Their health has improved. Family size is decreasing in char areas due to acceptance of family planning methods.

- **Nutritional food for children and pregnant mothers:** Pregnant mothers are getting counselling services from the doctors and health workers.
- **Legal and human right/disaster management:** They have become more aware LHR and disaster issues and management. Now, they do not support early marriage of girls and they united to resist early marriages.
- **Social Forestry:** Her family has a membership with social forestry groups. They are collecting fuel wood from plantations of social forestry. Sometimes, other peoples are also collecting leaves and twigs for cooking purposes.

18. Case Profile of Mrs. Noorjahan (Husband: Md. Habibullah)

General and Demographic Profile: Mrs. Noorjahan (40 yrs), wife of Md. Habibullah (50 Yrs) of Ekram Bazar Somaj, Char Nangulia, Upazila-Hatiya, District-Noakhali, PNGO-BRAC. Noorjahan's family consists of 7 members having:

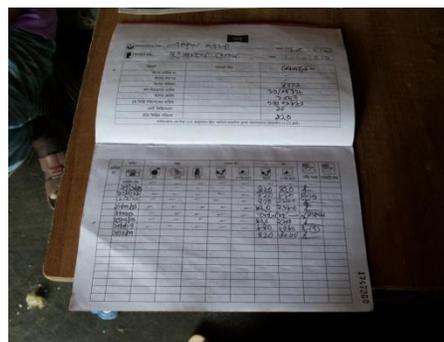
Wife/women	Husband	Daughter(s)	Son(s)	Parent(s)	Others	Total
1	1	2	3	-	-	7

Shelter and Migration Profile: They migrated from South Hatiya, district-Noakhali with the expectation of better shelter and life style. They have lost both land and other assets valued at Tk.1,000,000 due to river erosion, displacement and migration.



Participation into Group and Skill Development Process: Noorjahan joined with CDSP IV's partner NGO (BRAC) on 3 July 2012. Her family is associated with 5 types of field level institutions (FLIs) - NGO group, WMG, FF, TUG and SFG. As a NGO group member, Noorjahan has participated into 4 types of IGA training (cow rearing, vegetable cultivation, agri-crop cultivation and fish culture) organized by BRAC with financial assistance from CDSP IV. She has also participated in couple of socio-cultural counselling sessions like legal & human rights, disaster management, improved cooking system (ICS) and health & family planning. She and her husband are successfully utilizing their knowledge and skills in operating income generating activities (IGAs) like homestead gardening, vegetables and fish culture in their land and water bodies.

Status of Financial Capital: She has accumulated a group savings of Tk. 7,065. Noorjahan has taken micro-credit 4 times for a total amount of Tk. 57,000 (1st Tk. 7,000 for agri-crop cultivation, 2nd Tk. 10,000 for fish culture, 3rd Tk.20,000 for vegetable cultivation and 4th Tk. 20,000 for cow rearing).



Status of Land Settlement & Titling by CDSP IV: Noorjahan said that they have not got any 'khatian' through CDSP IV. But, they have possession of 200 deci land

Status of Natural Capital: Before CDSP IV, Noorjahan's family had 200 decimals of own land (10 deci as homestead, and 190 deci as cultivable land). They are now residing in tin-shed living house replacing the earlier hut. They have developed their land in a productive manner i.e. 60 deci homestead in place of 10 deci, increased water body of 40 deci. They have also leased in 100 decimals

Table 18.1: Distribution of Land Area

Total Land (in deci)	Before	Now-2017	Percent
Types of land owned	CDSP IV	CDSP IV	Change
a. Homestead	10	60	67
b. Water body	0	40	150
c. Cultivable land (own)	190	100	-50
Total own land (in deci)	200	200	0
e. Cultivable land-mortgaged in	0	80	>100
f. Cultivable land-cod	0	20	>100
Total land-mortgaged/leased in	0	100	>100
Total land (in deci)	200	300	50

Status of Poultry and Livestock Assets: Before joining in CDSP IV development initiatives, they were rearing only 3 cows, but now they are rearing 5 cows (67% increase). In the case of poultry, chicken rearing has increased by 150%, but they have fewer ducks and no goats



IGA-Cow Rearing

Table 18.2: Quantity of Poultry and Livestock Assets with Changes (%)

No. of Birds/animals	Before CDSP IV	Now 2017 (CDSP IV)	Percentage Changes (%)
a. Chicken	20	50	150
b. Duck	70	6	-91
d..Pigeon	0	10	>100
e. Cow	3	5	67
g. Goat	8	0	-100

Status of Physical Capital: Noorjahan;s family has household assets valued about Tk.130,000 which is 160% more than before CDSP IV status (Tk 50,000). The HH assets have been shown in the table below:

Table 18.3: Household Assets

	List of Assets	Value of Assets
Before CDSP -IV	Wooden plunk 1, ornament 20 gm,	Tk. 50,000
Now	Wooden plunk 5, solar 1, almira 1, table 2, chair 3, mobile 3, bicycle 1, ornament 40 gm.	Tk. 130,000 Source of fund for assets: micro-credit, and income from vegetables, crops, fish culture, poultry and livestock

Annual Family Income and Sources: Noorjahan said that, before joining in CDSP IV, the main sources of income were rearing livestock and poultry along with vegetable cultivation. Now they are cultivating HYV & hybrid types of vegetable, and rearing more poultry and cows than before. This was because of availability of micro-credit, introduction of HYV and variety of vegetables and crops and knowledge and skills from training provided by CDSP IV. They are operating IGAs on small business, auto rice husking machine and water pump. A good income has been earned. They have a net income of Tk. 404,000 (411% increase over before CDSP IV) from on-farm and off-farm sources.



Table 18.4 shows that major sources of farm income are vegetables (42%), cow rearing (28%), aquaculture (14%) and field crop (9%). The contribution from off-farm sources to HH income is 11.3%.

Table 18.4: Distribution of HH Income by Sources from On and Off-Farm

Sources of HH Income	HH Income (Tk.)		% Share By Sources	% Change over before
	Before	Now		
On-farm Activities				
a. Crop	7000	34000	9	386
b. Vegetables	10000	150000	42	1400
c. Fruits	2000	20000	6	900
e. Cow rearing	30000	99000	28	230
f. Goat rearing	20000	0	0	-100
g. Poultry rearing	10000	5000	1	-50
h. Aquaculture	-	50000	14	>100
Total Tk. (On-farm)	79000	358000	100	353
Off-farm Activities				
a. Small business	-	46000	100	>100
Total Tk. (Off-farm)	-	46000	100	>100
Total HH Income (Tk.)	79000	404000		411

Visible Changes and Benefits of infrastructure Development: Noorjahan explained how char dwellers are being benefited by various infrastructure developments like construction of roads, bridges, culverts and cyclone shelters by LGED, deep tube wells and single pit latrines by DPHE, embankments and sluices by BWDB, social forestry plantations along roadsides, bank of canals, foreshores and into newly accreted char land by Forest Department.

Status of Social Capital: Noorjahan said that, due to operation of successful IGAs with the technical assistance provided by CDSP IV and PNGO (BRAC), her family now has an honourable position in their 'somaj'. She can now attend meetings, demonstrations, trainings alone. In their family matters, they themselves (she and her husband) jointly decide and implement decisions.

Types of Direct and indirect Benefits from CDSP IV Interventions:

- **Improved roads, bridges and culverts:** Traditionally, char dwellers were suffering due to lack of good road communications. CDSP IV has fulfilled their long demand. Due to construction of roads and bridges, prices of land have increased significantly, they are getting good prices for the products grown by them.
- **Construction of embankment canals and sluices:** No saline water can enter due to operation sluices by WMG members. Incidence of flood and chance of crop damage due to unwanted inundation have reduced.
- **Improved market place:** Due to development of markets with sheds, toilet facilities and DTWs for water supply, wholesalers and brokers regularly coming to the markets to purchase products directly from the farmers. They are taking those products to distant markets.
- **Establishment of cyclone centres:** They would be able to shelters in case of cyclones and disaster risks. Their kids are now studying in the schools established in newly built multipurpose cyclone shelters.
- **Drinking water from DTWs:** The incidence of diseases like dysentery, jaundice, diarrhoea has reduced due use of safe water from DTWs established by CDSP IV. They informed that before, they had to collect water very far from their residences or they will have to drink water from local pond and ditches. But, now CDSP IV has provided a DTW for each 25 families.
- **Sanitary latrine:** They have now better and healthy environment. Each family has sanitary latrine.
- **Health and family planning services:** Many eligible couples are practicing family planning method due getting such free. They can get health services as when required from the health centres and mobile clinics.

- **Nutritional food for children and pregnant mothers:** Malnutrition among children and others has reduced. They are getting polio drops for children and iron tablets for pregnant mothers.
- **Legal and human right/disaster management:** They now know the sections of legal and human rights. They understand the disaster warning signals.
- **Social Forestry:** Trees stabilises loose soils and reduce the force of cyclones. They are collecting leaves and branches from social forestry plantations. When the Forest Department will cut grown-up plantations of social forestry, they will get a 55% benefit share.

Appendix II: Data Tables

Table A1: Land ownership and status of land title

Name of household	ID number	Land area (decimals)		Status of land title
		Before	Now	
Norjahan-1	2	104	224	Waiting for khatian
Bibi Hajra	3	150	150	Waiting for khatian
Bijoy Lakhsmi	12	150	150	Waiting for khatian
Roona	14	48	48	Waiting for khatian
Raoshaon	15	150	150	Waiting for khatian
Amena	17	120	120	Waiting for khatian
Norjahan-3	18	200	200	Waiting for khatian
Sub-total		922	1042	
Norjahan-2	4	124	124	Khatian from CDSP IV
Saleha	5	150	150	Khatian from CDSP IV
Aleya Begum	6	160	160	Khatian from CDSP IV
Ayesha Khatoon	7	576	576	Khatian from CDSP IV
Bibi Amena	9	140	140	Khatian from CDSP IV
Nargis	10	300	150	Khatian from CDSP IV
Saira	11	650	730	Khatian from CDSP IV
Sahida Khaton	13	150	150	Khatian from CDSP IV
Khairon	16	150	150	Khatian from CDSP IV
Sub-total		2400	2330	
Fatema Khatoon	1	450	450	Khatian before CDSP IV
Ferdouse (Beauty)	8	208	208	Khatian from CDSP IV
Sub-total		658	658	
Total		3980	4030	

Table A2: Total Land Assets of Sample Households

RespID	Name	Total Land Owned (decimals)		Total Land Mortgage/Leased (decimals)		Total Land (decimals)		Percent Change
		Before	Now-2017	Before	Now-2017	Before	Now-2017	
1	Fatema Khatoon	450	450	0	600	450	1050	133
2	Norjahan-1	104	104	0	120	104	224	115
3	Bibi Hajra	150	150	0	0	150	150	0
4	Norjahan-2	124	124	0	0	124	124	0
5	Saleha	150	150	0	0	150	150	0
6	Aleya Begum	160	160	0	48	160	208	30
7	Ayesha Khatoon	576	576	0	600	576	1176	104
8	Ferdouse (Beauty)	208	208	0	40	208	248	19
9	Bibi Amena	140	140	0	60	140	200	43
10	Nargis	300	150	0	150	300	300	0
11	Saira	650	730	0	0	650	730	12
12	Bijoy Lakshmi	150	150	300	0	450	150	-67
13	Sahida Khaton	150	150	0	0	150	150	0
14	Roona	48	48	0	440	48	488	917
15	Raoshaon	150	150	0	0	150	150	0
16	Khairon	150	150	0	40	150	190	27
17	Amena	120	120	0	36	120	156	30
18	Norjahan-3	200	200	0	100	200	300	50
	Total Land Area in decimal	3980	3920	300	2234	4280	6144	44
	Average Land Area in decimal	221	218	17	124	238	341	44

Table A3: Number of crops, vegetables and fruit cultivated

Resp ID	Name of HH Member	Crops				Vegetables				Fruits			
		Before CDSP IV		Now CDSP IV		Before CDSP IV		Now CDSP IV		Before CDSP IV		Now CDSP IV	
		Local	HYV	Local	HYV	Local	HYV	Local	HYV	Local	HYV	Local	HYV
1	Fatema Khatoon	2	0	2	1	0	0	1	11	0	0	1	2
2	Norjahan-1	1	0	0	1	4	0	2	8	0	0	3	1
3	Bibi Hajra	1	0	0	1	7	1	2	9	0	0	2	1
4	Norjahan-2	2	0	0	0	4	0	3	7	2	0	3	2
5	Saleha	1	0	0	1	9	0	2	5	1	0	2	2
6	Aleya Begum	1	0	1	1	5	0	2	10	3	0	1	2
7	Ayesha Khatoon	3	0	2	1	7	0	1	9	3	0	1	3
8	Ferdouse (Beauty)	1	0	0	1	0	0	2	9	3	0	1	2
9	Bibi Amena	4	0	3	1	1	0	1	11	2	0	1	2
10	Nargis	1	0	0	1	6	0	2	7	3	0	1	1
11	Sahera Khatoon	4	0	2	3	9	0	3	8	3	0	3	2
12	Bijoy Lakhsmi	3	0	1	3	8	0	2	5	2	0	1	1
13	Sahida Khaton	1	0	0	0	8	0	2	8	2	0	1	1
14	Roona	0	0	1	1	0	0	1	9	1	0	1	3
15	Raoshan	1	0	1	0	3	0	2	9	3	0	1	2
16	Khairon	2	0	0	1	9	0	3	7	3	0	3	2
17	Amena	1	0	0	1	10	0	3	8	3	0	2	1
18	Noorjahan	1	0	0	1	1	0	10	3	3	0	3	2
Total number		30	0	13	19	91	1	44	143	37	0	31	32
Average per household		1.8		1.6	1.3	6.1		2.4	7.9	2.47		1.72	1.8
Maximum number		4		3	3	10		10	11	3		3	3

Table A4: Value of assets owned by sample households

HH id	Name	Total asset value Tk.		Increase	Major assets
		before	Now	%	
1	Fatema Khatoon	50,000	250,000	400	Solar, Mobile, motor cycle, sprayer
2	Norjahan-1	12,000	120,000	900	Solar, Mobile, sewing machine, ornament
3	Bibi Hajra	10,000	40,000	300	Solar, Mobile, sewing machine, cycle
4	Norjahan-2	5,000	90,000	1700	Solar, Mobile, ornament, cycle
5	Saleha	9,000	85,000	844	Solar, Mobile, ssewing machine, sprayer
6	Aleya Begum	50,000	100,000	100	Solar, Mobile, water pump, thresher, ornament
7	Ayesha Khatoon	80,000	500,000	525	Solar, Mobile, showcase, water pump
8	Ferdouse (Beauty)	20,000	100,000	400	Solar, Mobile, ornament, showcase
9	Bibi Amena	60,000	100,000	67	Solar, Mobile, Tractor, water pump, cycle
10	Nargis	20,000	100,000	400	Solar, Mobile, water pump, ornament
11	Sahera Khatoon	50,000	200,000	300	Solar, Mobile, ornament, thresher, sprayer
12	Bijoy Lakshmi	4,000	35,000	775	Solar, Mobile, ornament
13	Sahida Khaton	30,000	300,000	900	Solar, Mobile, ornament, showcase,
14	Roona	15,000	60,000	300	Solar, Mobile, ornaments, sprayer
15	Raoshan	2,000	25,000	1150	Solar, Mobile, ornaments
16	Khairon	40,000	85,000	113	Solar, Mobile, thresher, ornaments
17	Amena	20,000	70,000	250	Solar, Mobile, sewing machine, ornaments
18	Noorjahan	50,000	130,000	160	Solar, Mobile, cycle, ornaments
Total (of 18 HH)		527,000	2,390,000	354	
Average per household		29,278	132,778	354	

Table A5: Distribution of sample households in the membership of FLI

RepID	Name of HH Member	NGO Group	LADC	WMG	WMA	FF	FFA	FFF	SFG	TUG	LCS	Participated in FLIs-Multiple times
1	Fatema Khatoon	√							√	√		3
2	Norjahan-1	√							√			2
3	Saleha	√							√			2
4	Aleya Begum	√				√				√		3
5	Saleha	√								√		2
6	Aleya Begum	√		√					√			3
7	Ayesha Khatoon	√		√		√						3
8	Ferdouse (Beauty)	√										1
9	Bibi Amena	√				√	√	√		√		5
10	Nargis	√										1
11	Sahera Khatoon	√				√	√					3
12	Bijoy Lakshmi	√		√		√			√	√		5
13	Sahida Khaton	√				√						2
14	Roona	√				√				√		3
15	Raoshan	√							√	√		3
16	Khairon	√				√			√	√		4
17	Amena	√								√		2
18	Noorjahan	√		√		√			√	√		5
## of Members in Each FLIs		18		4		9	2	1	8	10		52
% of Members in Each FLIs		100	0	22	0	50	11	6	44	56	0	

Table A.6: Household savings and microcredit loans

HH/Respondent ID	Name of member	Group savings generated	Operating Deposit Pension Scheme	Total value of micro-credit loans	Number of loans	Size of last loan	Areas of investment of micro-credit loans
1	Fatema Khatoon	20,000	2 DPS @Tk.1000 for 10 yrs	195000	5	100000	Agriculture, Cow & Buffalo rearing
2	Norjahan-1	11,000	1 DPS @Tk.200 pm for 5 yrs	164000	5	70000	Business, Fish culture, Repair house and Agri
3	Bibi Hajra	7,500	1 DPS @Tk.500 pm for 10 yrs	60000	5	20000	Cow, Agriculture, Fish culture
4	Norjahan-2	6,390		51000	3	30000	Plant nursery, Education of children
5	Saleha	4,693		95000	5	30000	Earth work, cow rearing, repair house, Fisl culture
6	Aleya Begum	9,334	1 DPS @Tk.500 pm for 5 yrs	100000	5	30000	Nursery, Agri, cow,pond digging,
7	Ayesha Khatoon	9,500		146000	4	70000	Agriculture, Cow, Business & Fish proj.
8	Ferdouse (Beauty)	4,119	1 DPS @Tk.1000 pm for 5 yrs	135000	5	50000	Cow, podd dev, earth work, goat rearing
9	Bibi Amena	16117		120000	5	50000	Cow rearing, agri, tractor purchase, van purchase
10	Nargis	12,608	1 DPS @Tk.500 pm for 10 yrs	104000	5	20000	Business, Fish culture, agri, earth work
11	Sahera Khatoon	17,883		104000	3	50000	Agri- and cow rearing
12	Bijoy Lakshmi Das	12,416		51000	4	20000	Goat and cow rearing, Agriculture
13	Sahida Khaton	2,860		65000	4	20000	Agri, earth work, cow rearing and fish culture
14	Roona	5,324		86000	4	29000	Agriculture, cow rearing,
15	Roshanara Begum	,327		30000	2	20000	Small business
16	Khairon	3,845		64000	4	10000	Land lease, earth work, fish culture
17	Amena	5,630		46000	3	23000	Agri & earth work, cow rearing and agri
18	Noorjahan-3	7,065		57000	4	20000	Agri, fish culture, vegetable & cow rearing
Total (Tk.)		143,916		1570000	68	619000	
Average (Tk.)		8,995		98125	4	38688	

Table A7: Distribution of household income by source

	Name of HH Member	On farm income		Off-farm income				total Income		Increase
		before CDSP	now 2017	before CDSP		now 2017		before CDSP	now 2017	
		Taka	Taka	Taka	% off farm	Taka	% off farm	Taka	Taka	
1	Fatema Khatoon	65,000	670,000	-	0%	100000	13%	65,000	770,000	1085%
2	Norjahan-1	61,000	230,000	30,000	33%	60000	21%	91,000	290,000	219%
3	Bibi Hajra	40,500	273,500	30,000	43%	249000	48%	70,500	522,500	641%
4	Norjahan-2	70,000	160,000	-	0%	250000	61%	70,000	410,000	486%
5	Saleha	22,500	194,500	25,000	53%	65000	25%	47,500	259,500	446%
6	Aleya Begum	36,500	241,500	-	0%	120000	33%	36,500	361,500	890%
7	Ayesha Khatoon	138,500	719,800	102,000	42%	561000	44%	240,500	1,280,800	433%
8	Ferdouse (Beauty)	37,000	464,000	-	0%	50000	10%	37,000	514,000	1289%
9	Bibi Amena	51,000	198,000	20,000	28%	38000	16%	71,000	236,000	232%
10	Nargis	17,000	162,750	60,000	78%	210000	56%	77,000	372,750	384%
11	Sahera Khatoon	163,000	333,000	-	0%	0	0%	163,000	333,000	104%
12	Bijoy Lakshmi Das	18,000	53,000	65,000	78%	54000	50%	83,000	107,000	29%
13	Sahida Khatoon	28,000	140,000	75,000	73%	370000	73%	103,000	510,000	395%
14	Roona	3,000	230,000	30,000	91%	70000	23%	33,000	300,000	809%
15	Roshonara Begum	51,000	56,600	-	0%	110000	66%	51,000	166,600	227%
16	khairun	47,000	126,000	25,000	35%	58000	32%	72,000	184,000	156%
17	Amena	13,000	48,000	45,000	78%	95000	66%	58,000	143,000	147%
18	Norjahan-3	79,000	358,000	-	0%	46000	11%	79,000	404,000	411%
	Total	941,000	4,658,650	507,000	35%	2506000	35%	1,448,000	7,164,650	395%
	Average per household	52,278	258,814	28,167		139,222		80,444	398,036	

Appendix III: Data collection format

CHAR DEVELOPMENT AND SETTLEMENT PROJECT (CDSP IV)

Resp-ID ##:

HH Impact Assessment Format (Integrating all Interventions of CDSP IV)

A. Profile of Respondent:

A1.Name:.....A2.Father/Husband’s name:.....A3.Age:.....A4.
Somaj:.....

A5.Char:..... A6.PNGO: A. Mobile No.:.....

A6.Category of Respondent by (economic status):...Pro-poor/Marginal/Large farming family

A7.Marital status:.....A8.Family
members:.....A9.Son(s):.....A10.Daughter(s):.....

A8-A10: Family members:

Wife/Women	Husband	Daughters	Sons	Parents	Others	Total Members

A11. Shelter and Migration Info:

Suffered displacements how many times?

Reasons of migrations	a. b.
Qty and value of assets lost (Tk.)	

A11.Residential status: Own home/Father’s home/Relative/Rental (Pl. use tick mark)

A12: Field Level institution (FLIs) members:

FLIs	NGO Gr.	LADC	WMG	WMA	FF	FFA	FFF	SFG	TUG	LCS
Put <input checked="" type="checkbox"/>										

A13.Types of living houses: Hut/Tin shed/Semi Pacca (Pl. use tick mark)

Period	Hut/Thatched	Tin-shed	Semi-pacca
Before 2011			
Now			

B. Generating Financial Capital through Participation in MF Group and Micro-finance:

B1. Date of Joining into NGO (.) MF Group (mm/dd/yyyy): . . / . . / 20 . . . B2. Member ID:

B3. Saving generated (Tk.): B4. Operating DPS (.Tk./month for years.

B4. Borrowing loan from PNGOs:

Micro credit	1 st Time	2 nd Time	3 rd Time	4 th Time	5 th Time
Amount (Tk.)					
Investment in					

B5.1 Improving Human capital through Participation into IGA Training (Y/N, put Tick mark)::

Poultry Rearing	Cow Rearing	Goat Rearing	Beef Fattening	Vegetable Cultivation	Agri-crop Cultivation	Fish culture	Small Trading	Tailoring	Handicraft

B52 Participated into other types training and counseling? (Y/N put Tick mark)::

LHR	ICS	H&FP	.TBA	Disaster Mngt					

B6. Information on Mobility of Women:

Please respond whether you can perform alone (Y/N) put tick mark?

Measuring Parameters	Responses		Remarks
	Before /2011	Now 2017	
a) Visit to town and distant places			
b) Visit market places for selling and shopping			
b) Visit to health centre/hospitals			
c) Visit to community meetings and FLIs			
d) Participation in democratic bodies			
e) Respond to social calls/invitation/recognition			

B7. Information on Gender Status:

Please respond whether incidence of following events reduced (Y/N)?

Measuring Parameters	Response
a) Status on violence against women	
b) Participation in household decision making	
c) incidence of early marriage	
d) incidence of dowry/jaotok by parents	

C. Information on Types of Assets:

C1. Status of Settlement:

Have you got Khatian through CDSP IV (Y/N)?..... When (Year xxxx)?.....

How you have benefited?	
Any changes In your family?	

Measuring Parameters	Responses		Remarks
	Before/2011	Now 2017	
C2. Land Assets			
a) Total land (in decimal.) a=b+c+d+e			
b) Homestead			
c) Water body			
d) Cultivable land (own)			
e) Fellow land			
f) Cultivable land (rented/mortgaged in)			
g) Cultivable land (lease/cod in)			
C3. Livestock Assets (in numbers)			
a) Chicken			
b) Duck			
c) goose			
d) Pigeon			
e) Cow			
5) Buffalo			
g) Goat/sheep			
C4. Physical assets/furniture (in Tk.)			
(like Khat, Almira, mobile, Solar, showcase)			
List name of physical assets (Before CDSP IV):			
List name of physical assets (at Present/now):			
Sources of Fund:			

D. information on Annual Family (net) Income by Sources (in Tk.):

Parameters	Responses	
	Before 2011	Now 2017
D1. On Farm activities		
a) Crop		
b) Vegetables		
c) Fruits		
d) Plant nursery		
e) Cow rearing		
f) Goat rearing		
g) Poultry rearing		
h) Aquaculture		
i). Social forestry		
j) Others (specify.....)		
D2. Off Farm activities		
a) Wage/labour/salary		
b) Drivers (Van, motor cycle, CNG, easy-bike)		
c) Small business (specify. . . .)		
d) Tailoring		
e) Handicraft (Cap making, mat, baskets)		
f) Others (specify.....)		
Total Family income (in Tk.)		

E. Growing Crops, Vegetable and Fruits (Put Tick mark)

Before/ 2011			Now 2017		
E1: Crops	Local	HYV/Hybrid	E1: Crops	Local	HYV/Hybrid
a. Paddy			a. Paddy		
b. Pulses			b. Pulses		
c. Soya bean			c. Soya bean		
d. Ground nut			d. Ground nut		
e. others specify . .					
E2. Vegetables			E2. Vegetables		
a. Tomato			a. Tomato		
b. Country bean			b. Country bean		
c. Cucumber			c. Cucumber		
d. Okra			d. Okra		
e. Sweet gourd			e. Sweet gourd		
f. Ridge gourd			f. Ridge gourd		
g. Bottle gourd			g. Bottle gourd		
h. Snake gourd			h. Snake gourd		
i. Yard long bean			i. Yard long bean		
j. Brinjal			j. Brinjal		
E3. Fruits			E3. Fruits		
a. Banana			a. Banana		
b. Papya			b. Papya		
c. Guava			c. Guava		
d. Water melon			d. Water melon		

F. Major Direct and Indirect Benefits from interventions by CDSP IV Programs

Please provide your comments over the following issues?

F1. Areas of Improvements	Description
a. improved roads and bridges	
b. Improved embankments and canals	
c. Improved market places	
d. Establishment of cyclone centers	
e. Supply of drinking water	
f. Sanitary latrine	
g. Health and family planning services	
h. Nutritional food for children and pregnant mothers	
i. Legal/ human right areas/disaster	
j. Social forestry plantations	

G. Adoption of New Technologies introduced by CDSP IV

G1. Technologies	Description
a. Quick compost	
b. Vermi- compost	
c. Sorjan method	
d. Feromen trap	
e. others (Specify)	

H. Period of Suffering from Crisis due to In-Sufficient Food

Measuring Parameters	Responses		
	Before 2011	Now 2017	
a. Number of months suffering			
b. How to cope with?			

I. Please provide your comments about CDSP IV and PNGO you are associated?

J. Please provide some good practices you observe?

K. Please provide some development opportunities you observe?

Thank you very for your cordial cooperation

H. Comments of the

Interviewer:.....

.....

.....

.....

Name and Signature (with date) of the Enumerator/MEO:.....