

Char Development and Settlement Project Phase IV Bangladesh

Progress Report No 14

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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

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List of Abbreviations/ Glossary

ADP	Annual Development Plan
AE	Assistant Engineer
AEO	Assistant Extension Officer
<i>Aman</i>	Monsoon season rice
<i>Bahini</i>	Armed gang
BC	Bitumen Carpeted
<i>Boro</i>	Winter season rice
BWDB	Bangladesh Water Development Board
CDS	Coastal Development Strategy
CDSP	Char Development and Settlement Project
DAE	Department of Agriculture Extension
DG	Director General
DC	Deputy Commissioner
DPC	Deputy Project Coordinator
DPHE	Department of Public Health Engineering
DPP	Development Project Pro forma
DTL	Deputy Team Leader
EKN	Embassy of the Kingdom of the Netherlands
EMG	Embankment Maintenance Group
FE	Field Engineer
FF	Farmers Forum
FO	Field Officer
<i>Ghat</i>	Landing place for boats
GMC	Group Management Committee
HBB	Herring bone bond
HFPF	Health and Family Planning Facilitator
ICS	Improved Cooking Stove
ICZM	Integrated Coastal Zone Management
IFAD	International Fund for Agricultural Development
IMED	Implementation Monitoring and Evaluation Division
IRRI	International Rice Research Institute
<i>Jamabandi</i>	Settlement case
<i>Jotdar</i>	Powerful person having big agricultural farm
KAP	Knowledge Attitude Practice
<i>Khabuliyat</i>	Deed of agreement
<i>Khal</i>	Canal, creek
<i>Khas</i>	Government owned land
<i>Khatian</i>	Record of right
<i>Killa</i>	Earthen raised field, used as shelter for cattle
LADC	Local Area Development Committee
LCS	Labour Contracting Society
LGED	Local Government Engineering Department
LGI	Local Government Institution
<i>Madrassa</i>	Religious school
MoL	Ministry of Land
<i>Mouza</i>	Small geographical unit

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MRA	Micro finance Regulatory Authority
NGO	Non-Governmental Organization
O&M	Operation and Maintenance
PA	Project Agriculturist
PC	Project Coordinator
PCD	Project Coordinating Director
PD	Project Director
PIM	Project Implementation Manual
PMC	Project Management Committee
PP	Project Pro-forma
PSF	Pond with Sand Filter
PTO	Project Technical Officer
PTPS	Plot To Plot Survey
PWD Datum	Public Works Department Datum (local topographical level)
(S) QCE	(Senior) Quality Control Engineer
QC team	TA Quality Control team
<i>Rabi</i>	Crop season from November/ December to March
RDC	Revenue Deputy Collector
RDPP	Revised Development Project Pro-forma
RFLDC	Regional Fisheries & Livestock Development Component (former DANIDA funded Project)
RIMS	Result and Impact Monitoring Survey
RMG	Road Maintenance Group
RPA	Reimbursable Project Aid
<i>Samaj</i>	Local community
SAE	Sub assistant Engineer
SDE	Sub divisional Engineer
SE	Superintendent Engineer
SFG	Social Forestry Group
SO	Sectional Officer
SLS	Social and Livelihood Support
TA	Technical Assistance
TBA	Traditional Birth Attendant
TL	Team Leader
ToT	Training of Trainers
TUG	Tube Well User Group
UP	<i>Union Parishad</i>
<i>Upazila</i>	Sub-district
WARPO	Water Resources Planning Organisation
WBM	Water Based Macadam
WMA	Water Management Association
WMF	Water Management Federation
WMG	Water Management Group
WMO	Water Management Organization
XEN	Executive Engineer
XO	Extension Overseer

1. Introduction

The fourth phase of the Char Development and Settlement Project, CDSP IV, started on 1 March 2011, with the mobilisation of the TA team. The financing agreement between IFAD and the Government of Bangladesh was signed in Rome on 9 May 2011, while the Administrative Arrangement between the Netherlands and Bangladesh was signed in Dhaka on 4 January 2012. The Inception Report of CDSP IV was submitted to the Embassy of the Kingdom of the Netherlands (EKN) and IFAD on 31 May 2011. The Inception Report serves as the Project Document, alongside the DPPs of the six project implementing agencies, which provide detailed information on the project. The Annual Work Plan and Budget 2017 – 2018 was submitted to EKN and IFAD in May 2017, and approved subsequently. The arrangement between GoN and IFAD regarding CDSP IV was amended in December to align the GoN contribution with the IFAD project implementation period till 31 December 2018. The TA contract between GoN and consultants was extended accordingly till 31 December 2018, with staffing reduced to those essential for project completion.

The focus of the activities of CDSP IV is on the development of five new chars: Char Nangulia, Noler Char and Caring Char (these three chars are contiguous to each other); Urir Char and Char Ziauddin. The total extent of these chars is now around 25,000 ha, with an estimated population of 170,000 in 29,000 households. The six components of the project are: protection from climate change; climate change resilient infrastructure and water supply and sanitation; land settlement and titling; livelihood support; institutional development; studies and surveys. The project continues support for CDSP I, II and III areas with Operation and Maintenance activities and land settlement (in particular in Boyer Char). It also looks to the future by conducting feasibility studies in areas where future char development programs might be undertaken.

Second Revision of DPPs of all six Implementing Agencies to cover the extended project period is completed, except for DAE: The Ministry of Agriculture did not agree to extend the project period for DAE.

Main activities and achievements during this half year reporting period were the completion of infrastructure development and other works as planned under the AWPB 2017 – 2018, in particular executing the major part of the remaining works.

For a table wise overview of overall project achievements and financial progress and planning, expenditure – and component wise, please refer to **Annex 4**, which presents the IFAD format.

After this introductory chapter, the present Progress Report No 14 deals in succession with the objectives of CDSP IV (next chapter) and the project areas and population (in Chapter 3). Chapter 4 gives an overview of the project activities during the reporting period, grouped under the six project components. Chapter 5 is on the project organization. The project finances are in Chapter 6. The concluding Chapter 7 pays attention to the risks facing the project and its manifestation during the reporting period.

2. Objectives of CDSP IV

The Logical Framework (see **Annex 1**) gives a clear indication of the objectives of CDSP IV at three levels: goal (or long-term development objective), purpose (as intermediate objective between interventions and goal) and outputs (direct result of interventions).

The **overall objective** of the project is to reduce poverty and hunger for poor people living on newly accreted coastal chars, which will be achieved via improved and more secure livelihoods. The **purpose** is therefore to improve and enhance the security of the livelihoods of the settlers in the project areas. This applies in particular for the 29,000 households in the CDSP IV project areas. The purpose would be achieved through the following **outputs**:

- effective management of water resources, protection against tidal and storm surges, improved drainage;
- climate resilient internal infrastructure for communication, markets, cyclone shelters, provision of potable water and hygienic sanitation;
- provision to the settlers of a legal title to land;
- improved livelihoods and household resilience;
- institutional development in order to create an enabling institutional environment;
- knowledge management through undertaking and disseminating surveys and studies and by learning from and contributing to Integrated Coastal Zone Management (ICZM) efforts.

The objectives at output level directly follow the results of the actual project activities and do indeed address the major problems that exist in the chars. Major challenges can, in substance, be addressed independently from each other to a large extent. There are however interconnections at a practical level. For example, the number and size of bridges and culverts (part of output “climate resilient infrastructure”) have a direct bearing on the water management in the area concerned (output “water resources managed effectively”). Having a title to the land that a family occupies (output “secure land titles”), will substantially contribute to their socio-economic position and capability to cope with the vulnerabilities in the chars (output “improved livelihoods and household resilience”). And all these four outputs feed, for a large part via the Monitoring and Evaluation system, into the output “knowledge management and into lessons for ICZM”, and vice versa.

3. Project areas and population

3.1 Introduction

As stated in Chapter 1, the focus of the activities of CDSP IV is on five chars. The total area of these chars was estimated by the 2008 feasibility study to be about 30,000 ha, but recent calculations of the land lost to erosion has reduced this to about 25,500 ha. At the time of project design in 2009 the population of the five chars was estimated to be around 155,000 in 28,000 households. Consultations with WMGs has now updated this to 29,000 households with 171,000 people (household size as per mid-term RIMS survey of 2014).

Table 3 - 1 Coverage of area and population

Char	Area in hectares		Population estimate in 2009		Updated estimate 2017	
	2008	2017	Households	Population	Households	Population
Nangulia	8,990	8,530	12,000	67,000	15,113	89,167
Noler	2,690	2,560	6,000	33,000	6,152	36,297
Caring	6,850	2,200	6,000	33,000	2,638	15,564
Ziauddin	1,943	1,943	2,000	11,000	2,380	14,042
Urir	10,300	10,300	2,000*	11,000	2,725	16,078
Total	30,773	25,533	28,000	155,000	29,008	171,147

* For Urir Char, population as per survey of 2008

CDSP IV also continues attention for CDSP I, II and III areas. The main subject of this attention is Operation and Maintenance (O&M) of infrastructure involving WMGs. For the CDSP III area (Boyer Char), considerable efforts have still to be directed to the completion of the land settlement program. **Annex 2** provides an overview map of all CDSP IV areas.

3.2 Char Nangulia, Noler Char, Caring Char

The area consists of the following three main chars:

- Char Nangulia, with an area of about 8,530 ha (21,325 acres) and an estimated population of 89,000 in 15,000 households;
- Noler Char of about 2,560 ha (6,400 acres) and a population of approximately 36,000 in 6,000 households;
- Caring Char of about 2,200 ha (880 acres), with around 15,500 people in roughly 2,600 households.

The total area amounts to 13,290 ha (33,225 acres) with a current population of about 141,000 in 24,000 households. Nangulia and Noler Chars appeared around the 1970s. Present land levels for Char Nangulia are between 2.75 and 4.75 m PWD and for Noler Char between 2.25 and 3.75 m PWD. Caring Char appeared later and is less developed and inhabited (land levels between 2.00 m and 4.00 m PWD). Nangulia and Noler chars are next to each other, only separated by the Mamur Khal. To the south of these two chars is Caring Char, only separated from them by the Caring - and Mamur Khals. Nangulia Char is further bordered by polders 59/3B and Char Majid (in the north and west) and by a developing, yet to be named, char. Noler Char is further bordered by the Hatiya river in the west (with on the other side Boyer Char), the Meghna River in the southwest and by Caring Khal in the south and southeast, at the other side of which is Caring Char. Caring Char is for a greater part still an emerging char in the Meghna River, by which it is bordered in the south and east sides.

All three chars are located within Noakhali District. The whole area is part of two Upazilas (Subarnachar and Hatiya) and of three Unions (Char Clerk of Subarnachar Upazila, and Chanandi and Mohammadpur of Hatia Upazila).

3.3 Urir Char

In the Meghna Estuary, erosion and accretion along the boundaries of the chars or islands are very common morphological processes. Urir Char is a perfect example. Since its emergence in the early 1970s, Urir Char has shown a very dynamic character and developed through erosion, accretion and shifting of several kilometres. During the last 35 years the landmass of Urir Char increased from 12 km² to 100 km². At the same time the char shifted about 8 kilometres towards the north.

The land levels in Urir Char vary from 3.67 m to 4.78 m PWD in the north to south direction and from 3.85 m to 4.03 m PWD in the east to west direction. Average land level can be taken as 4.08 m PWD. The total land area of Urir Char including fallow and muddy land is about 10,824 ha (around 27,000 acres) of which about 36.8 % has been brought under cultivation. About 48.7 % of the area is fallow and muddy land. At present the fallow lands are partially used for grazing. Mangrove forest land has been developed and is occupying 7.8% of the total area. The estimated total population is 16,500, distributed over 2,725 households.

There are two parts of the area broadly known as “Urir Char”. One part falls under Urir Char Union of Sandwip Upazila of Chittagong District, comprising an area of approximately 21,694 acres (*mouzas*: Char Lakshmi, Piadogi, Shamaserabad and Char Badu). Another part of 10,760 acres is located in Char Elahi Union of Companiganj Upazila under Noakhali District (*mouzas*: Char Umed, Char Rahman, Char Balua and Char Gazi Mijan).

3.4 Char Ziauddin

Char Ziauddin accretion was started in 1970 and people started living there in 2001. It is named after a district magistrate. The char is under the jurisdiction of Char Jubilee Union. The char is located west of Char Mora Dona near Boyer Char, in the southwest corner of Subarnachar Upazila under Noakhali District. Boyer Char lies to the south, CBD-1 to the north and the Baggardona River to the west. The area is on an average about 5 km in length and 3 km wide approximately. Present land levels vary from 3.20 m to 3.71 m PWD.

Settlers of Char Ziauddin mainly came from Ramgati (50%), South Hatia (25%) and the mainland (25%). The estimated total population is 14,000 and the number of households 2,380. However, some new squatters (around 200 households) have moved in and are occupying the Matua and Elahi's fish project in this char. According to the survey and information from Department of Forest, the size of the area is 1,943 hectares (4,799 acres). The settlers occupied 2,114 acres land without official title. Six big fishery projects occupy approximately 1,000 acres. Of these six, the two biggest projects each occupy 300 acres.

4. Implementation status per component

4.1 Introduction

This chapter gives an overview of the status of project interventions on 31st December 2017. It sums up the activities that have taken place during the reporting period, grouped under the six project components: protection from climate change (4.2), climate resilient infrastructure and water supply and sanitation (4.3), land settlement and titling (4.4), livelihood support (4.5), institutional development (4.6) and knowledge management (4.7).

4.2 Protection from climate change

This component concerns construction of water management infrastructure in CDSP IV by the Bangladesh Water Development Board (BWDB) for protection from climate change, consisting of embankments, drainage sluices, drainage channels (khals) and closures. Also, provisions are made for buildings for Water Management Groups (WMGs) and for maintenance of water management infrastructure in CDSP I, II and III areas, and for maintenance during construction in CDSP IV areas.

In addition, this component concerns social forestry activities by the Forestry Department (FD), including establishment of shelter belts to protect chars from storms and cyclones (see 4.2.2).

4.2.1 Construction of water management infrastructure by BWDB

For a complete overview of BWDB activities reference is made to the Inception Report paragraph 4.2.1. Up to 30th June 2014, construction work was completed for the entire sea facing embankment (16.762 km) both in Char Nangulia and Noler Char. But during the past few years the sea dyke from the Mamur khal outlet in the direction of sluice DS-2 and Char Maksumul Hakim has been eroded over a length of 11 km by a transverse current of the Hatiya/Sandwip Channel; bank erosion is also severe along the Meghna river bank at Caring Char and Noler Char. To construct a safe retired sea facing embankment, the alignment of the embankment has been shifted inside the polder, both at Nangulia and Noler Char; consequently, the embankment length increased from the original length of 16.762 km to 32.28 km, which was proposed in RDPP-2. A second revision of Development Project Proforma (DPP) was approved by the Planning, and concerned, Ministries, including the extension of the project to the end of 2018, as suggested by the Mid Term Review (MTR) of March 2015. Construction work started on 3.5 km of retired dyke at Noler Char and 9.5 km at Char Nangulia out of a new target of 23.78 km; overall 71% progress has now been achieved. Construction for carried over work from 2016-17 has started and work order under process for new construction of 4.09 km sea dyke and expected to be completed before June 2018.

Interior dyke construction (31.3 km) is completed for all sections at Char Nangulia, Noler Char and at Char Ziauddin.

Construction work of dwarf embankment at Noler Char is completed, but the dwarf embankment maintenance is required at some locations of Noler Char for making a separate hydrological polder and is to be done from GoB maintenance funds.

For an overview of progress and planning of works under BWDB, see **Annex 3**, Table 1. For a summary of achievements and financial progress and planning of the same, see **Annex 4**, Table A1, which presents the IFAD format.

Up to 31st December 2017 overall physical progress in BWDB activities was 90%, against 88% planned. A major change was made in quantity and budgeted amounts in RDPP2.

Considerable Physical progress was not achieved during this project period because of the monsoon but soft work activities such as design data collection and design preparation, detailed survey, cost estimate

and tender floating for initial excavation of Caring khal, initial and re-excavation of secondary drainage khals at Char Nangulia and Noler Char, retired sea dykes at Char Nangulia and maintenance of embankment, sluice outfall and sluice gates (Flap and Lift gates with hoisting device) at CDSP old areas were done.

Monitoring of coastal erosion along Meghna River East bank and Hatiya /Sandwip Channel

In December 2013 the Institute of Water Modelling (IWM) completed their Assessment of Erosion Vulnerability of the East Bank of Meghna River; the study recommended a relocation of sluice DS-3, which was done accordingly. The study also gave an indication of the stability and rate of erosion of the coast from Jarirdona River in the north along Boyer Char and Noler Char up to Caring Char in the south. As a follow up to the erosion study and in line with discussions and advice of the 2014 Supervision Mission, TA Project Engineers have installed benchmarks along the coast line of the project for regular monitoring of the erosion. The latest measurement was taken in early December 2017 and it was found that present erosion is still alarming from the location of Chatla khal sluice at Boyer Char to the North-east of drainage sluice DS-2 through Noler Char and Caring Char. In the meantime, sluice DS-2 is engulfed. Two thirds of Caring Char is already eroded. However, the erosion rate at sluice Gabtali in Boyer Char has reduced significantly.

Average erosion at **Boyer Char** during the last seven months was found to be about 10 m with maximum 13 m near Chatla sluice at the south part of the polder, and at Gabtoli sluice erosion during last seven months was 10 m at the North side and 6m at the South side where average erosion per year is 22 m.

Average **Noler Char** erosion during the last seven months was found to be about 107m. Erosion at Musapur Mosque, close to proposed sluice DS-3 was 107m. Present setback distance of DS-3 from west bank is 685m and from D/S diversion khal outfall is 573m which was more than 1000m when shifted in early 2015. The Forest Department (FD) has already completed foreshore plantation close to sluice DS-3 and at the mouth of the Hatiya River.

At **Caring Char**: Since measurement started in September 2014, up to late May 2017 total erosion at sluice DS-1 is 1,042m; in the last seven months, it was 275m. At the southern part near Bathankhali ghat it is 1,320 m in total and 126m during the last seven months. At the eastern side near Gour Nitai Mondir road it is 2,388m in total. The Forest Department completed foreshore plantation on the river side of DS-1 enclosing 15 ha. The envisaged construction sites of cyclone shelters in the southern part of Caring Char have been relocated further away from the coastline, but because of the severe recent erosion two cyclone shelters at Bathankhali Bazar, Dhanshiri Samaj became vulnerable and Gour Nitai Mondir is already engulfed. However, the decision was taken to stop construction work but not to go for auction immediately as more than 90% of work is completed and local people can get refuge during cyclones for some time at least.

In an unexpected development, from monsoon July/August 2014 onwards at **Char Nangulia**, at the coastal stretch from sluice DS-2 to Bashar Bazar, more than 11 km length of foreshore plantation and embankment have been immersed in the Hatya/ Sandwip Channel. The most likely cause of this severe erosion is the formation of a new char in the Hatya/ Sandwip Channel in front of this location, diverting the river flow towards the bank. A revised alignment for construction of a retired embankment was adopted for the eroded part of the embankment. Further development of the erosion is closely monitored by the project. Since measurement started in September 2014, up to December 2017 the average erosion was 923m, with a maximum of 1,208m in total at Sluice DS-2, which was engulfed by the river in August 2016. Average erosion in the last seven months was 49 m.

Construction of peripheral embankment

Construction work was completed for the full RDPP-1 mentioned length of 16.762 km (12.22 km at Char Nangulia and 4.542 km at Noler Char) of sea facing embankment along the Meghna River and Hatya/ Sandwip Channel by June 2014. But due to Sandwip Channel erosion and shifting of the alignment to a safer place, the total length of sea dyke increased to 32.28 km (Char Nangulia: 23.78 km and Noler Char:

8.50km). During the reporting period construction was started for 11.30 km of retired sea dyke in 9 packages at Char Nangulia and Noler Char and achieved progress 28% and 84% respectively. Carried over work already started this year and work orders are under process for new 4.09 km of retired dyke at Char Nangulia.

Overall physical progress achieved for sea dyke construction up to 31st December 2017 was 71% whereas planned was 85%.

Construction work is completed for the length of 21.09km of interior dyke (13.828 km in Char Nangulia and 7.26 km in Noler Char) as per RDPP-2 planning along the eastern bank of the Hatiya River, Southern bank of Caring khal and at the Northeast side of Char Nangulia. Physical work is complete for 8.73 km in five schemes for retired dyke at Char Ziauddin proposed along Jarirdona and Baggardona River in Char Ziauddin and Boyer Char as per RDPP-2.

Overall physical progress achieved for Interior dyke up to 31st December 2017 was 95% which shows 100% completion of construction as per field requirement.

Construction of dwarf embankment

Construction work of 13.88 km of dwarf embankment stated in RDPPs along Caring khal and Mamur khal in Noler Char is already completed in full length. A few portions will be maintained this year from GoB maintenance funds of the project in FY 2017 - 2018.

Construction of drainage sluices

Sluice DS-1 (10v-1.5x1.8m) over Caring khal for Char Nangulia: Construction work was completed including gate fabrication and installation by June 2015, the sluice is functioning since May 2017 draining the Char Nangulia water through Mamur khal -2/ Caring khal and the borrow-pit khal via Noler Char.

Sluice DS-2 (5v-1.5x1.8m) over Katakhal khal-2 at Char Nangulia: Construction work was completed including gate installation by June 2015 and it was opened before monsoon in 2015. By this sluice drainage congestion and salinity intrusion were fully controlled at Katakhal khal -1 catchment area. But due to severe erosion of Sandwip channel the structure was lost in the 2016 monsoon.

Sluice DS-3 (7v-1.5x1.8m) over Hoar khal-1 at Noler Char: Construction work started last year and achieved 90% physical progress including flap gate installation and opened in June 2017. The structure was shifted to a safe place against Meghna river erosion as per instruction of IFAD MTR Mission in March 2015. 100% construction work will be completed by February 2018.

3 Sluices over Dighir khal, Mutuki khal and Baggard khal at Char Ziauddin: Construction work was completed including gate fabrication and installation by June 2015. The sluices are functioning well.

Overall physical progress for all 6 sluices is 97% against planed 99%.

Construction of closures

Construction work was completed for Mamur khal-1 closure at Char Nangulia in FY 2012 - 2013. Construction of closure over Katakhal khal-2 was completed within the contract of sluice DS-2 in May 2015. Closure over Millon khal at Noler Char was completed in May 2016.

BWDB reviewed the location of Mamur khal-2 closure following the recommended option of IFAD MTR Mission, as the river bank erosion at Char Nangulia and Caring Char is very severe. Construction work for the closure over Mamur khal-2 including Mamur khal closing, the closure over Caring khal in Char Nangulia and 2 closures over Hoar khal-1 & 2 at Noler Char were completed by June 2017. As per recommendation of IFAD Supervision Mission held during the period 17-23 March a second closure was constructed at 400 m inside the closure over Hoar khal-2 as the first was threatened by the Meghna river bank erosion.

Initial excavation and final re-excavation of drainage khals

In RDPP-2 there is a program for 145 km initial excavation of drainage khals in the 5 chars. On a priority basis in relation to drainage congestion, initial excavation is going on. Up to 31st December 2017, initial excavation of drainage khals was completed for 59.17 km including major Nangulia khal and Bhuiyar khal at Char Nangulia, 37.55 km at Noler Char including the major Millon khal, Hoar khals 1 & 2, Adarsha khal, Masjid khal etc. 18.5 km at Char Ziauddin, 1.85 km at Caring Char and 10.5km in Urir Char, in total 127.6 km, has been completed.

Overall physical progress is 85% against planned 86%. During the reporting period, no major field work was done but field survey, design and estimate were done and tender floated for initial excavation of major Caring khal and initial excavation of remaining portion of secondary drainage khals at Char Nangulia and Noler Char and also re-excavation of drainage khals of 12.00 km in Noler Char, as mentioned in RDPP-2.

Construction of WMG Centre Buildings

In RDPP 2 there is provision for 24 WMG centres. Construction work is completed for 11 WMG Centres at Char Nangulia, 3 at Noler Char, 2 at Urir Char and 2 at Char Ziaudin by WMGs as Labour Contracting Societies (LCSs).

During the reporting period construction started for 2 at Noler Char and 3 at Caring Char and achieved 25% physical progress. Overall physical progress is 84%.

Acquisition/ purchase of land and landed properties or assets

Land acquisition processing is final for 48.80 Acres for Char Ziauddin and Boyerchar part under Noakhali and Lakshmipur District and Cheque has been handed over to DC office for payment.

Under Char Nangulia and Noler Char, proposals for acquisition of 466.66 acres are submitted to the Deputy Commissioner's (DC's) Noakhali office which is already scrutinized and sent to Land Ministry for approval.

Rehabilitation of affected households

Selection and listing of affected households during construction of embankment and sluices were done and 92 families have already received compensation. All processing is completed for 16 more families and expected distribution to be completed by January 2018. During the ongoing construction of retired dyke at Noler Char and Char Nangulia there is less possibility of this type of compensation as most of the construction will be done on acquired land and compensation is included with acquisition cost. Until today, 28% of the target of 384 families. has been fulfilled and there is limited possibility of increasing this number since it may not be necessary. However, the budget will be there if it is required.

O&M of infrastructure of CDSP I, II, III & IV areas

Since inception, maintenance work has been completed of Tk.834 lakh for the maintenance of sluices, embankments and drainage khals in the CDSP I, II & III areas under CDSP IV (Sluices: Tk. 303.64 lakh, embankments: Tk. 329.96 lakh and re-excavation of khals/ channels: Tk. 200.00 lakh) from the O&M fund for the maintenance of CDSP-I, II & III area. River bank protection by permeable spurs on left bank of Jarirdona Shortcut channel and Baggardona river meeting point is done where contract amount was Tk. 149.85 and work is completed for BWDB building maintenance for Tk. 59.75 lakh from the GoB maintenance fund for the CDSP-IV area during construction.

During the project reporting period estimate prepared/ Tender floated/ W.O issued for 55.3 lakh for Repair and maintenance of sluices, Tk. 70 lakh for embankment maintenance in CDSP-I, II & III area and Tk. 470 lakh for the maintenance work in CDSP-IV area.

Over all progress in maintenance work is 60%

Maintenance of Gabtali sluice

Protective work of Gabtali sluice up-stream and down-stream diversion canals was completed from CDSP-IV maintenance fund at cost of Tk. 269 lakh since March 2014 and protection from erosion of the Meghna left bank at the mouth of the outlet channel of Gabtali sluice was completed by June 2015 for a contract amount of Tk. 597 lakh, from the GoB Climate Change Trust Fund (CCTF), providing concrete block

placement and dumping. The erosion rate at the outlet of the Gabtali sluice along the Meghna left bank is no longer alarming.

4.2.2 Social forestry by Forest Department

The Forest Department is responsible for all plantation activities, except on homesteads. NGOs look after homestead forestry and provide support to private nurseries. Training is organized for staff of the Forest Department, NGOs, SFGs, WMGs, Local Government Institutions and others. Also, information and awareness campaigns are organized under the social forestry program. For an overview of achievements and financial progress and planning by FD, see **Annex 4**, Table A2, which presents the IFAD format.

By following the Social Forestry approach, the settlers are involved in planning and implementation. Through a benefit sharing agreement, the forestry component of CDSP IV has a poverty reduction impact as well.

During the reporting period the Social Forestry Adviser and the Social Forestry Coordinators jointly with the FD personnel contributed to the implementation of AWPB 2017 - 2018.

Formation of groups for social forestry

At the core of the social forestry approach are the Social Forestry Groups (SFG). Such groups are formed for every 2 km of roadside plantation, 1-1.5 km of embankment plantation, 1 km of canal plantation, 10 ha of foreshore plantation and 25 ha of mangrove plantation. Each group has about 20-25 members, with roughly 70% men and 30% women. The formation itself is implemented by a team consisting of staff of the Forest Department. Before the formation of SFGs is taken up, the population of the different chars is informed about the social forestry program through mass meetings and motivational workshops.

In the reporting period 26 meetings have been organized in Char Nangulia, Noler -, Caring Char and in Char Ziauddin to introduce the social forestry approach and explain about plantation activities, the modalities of the program and the roles and responsibilities of the different parties, including the beneficiaries themselves. During the reporting period 13 SFGs have been formed following the approved format in consultation with local people, NGOs, field staff of the Forest Department and the TA team. The cumulative number of SFGs up to 31 December 2017 is 581.

Land lease and benefit sharing workshop

On the basis of the number of SFGs formed land lease and benefit sharing agreement workshops are conducted. The process of establishing such agreements between the Forest Department, land owning agencies (for instance Ministry of Land, LGED, BWDB), the SFGs, the Union Parishad and, if applicable, the community-based organisation such as WMOs, is taken care of. For the long-term sustainability and successful implementation of the social forestry plantation program, the appropriate and proper sharing of benefits among the stakeholders is essential. The agreements create a sense of ownership and ensure the rights on government land and usufruct rights on trees and produce that will be derived from the plantation programs, both in the short and in the long run. In addition, they stipulate the plantation activities, the modalities of protection, maintenance, management and harvesting.

During the reporting period a total of 73 SFGs (1,825 members) received tri-partite signed agreements and the cumulative number of SFGs which received agreements is 494 out of 568.

Establishment of nurseries

For all kinds of plantations, the Forest Department is ensuring quality seedlings from their own existing nurseries, from newly established nurseries or from other sources. Nurseries have been established on various locations. Soil collection and preparation is going on for raising seedlings for non-mangrove species in poly bags. Seedbeds have been prepared for non-mangrove species in poly bags for 15 km of embankment, 54 km of canal, and 13 ha non-mangrove block plantations, and for the maintenance of the last two years' non-mangrove plantations.

Embankment-, non-mangrove block – and canal plantations

As per RADP, FD has a plan for 15 km of embankment, 13 ha non-mangrove block and 54 km of canal-plantations in 2017 - 2018. In the reporting period, preparatory work for the entire plantation is going on.

Plantation Maintenance

Mangrove forestation, predominantly with Keora, Gewa and Baen species, was established on 1,750 ha in Char Nurislam, Char Nangulia (char Amin) and Jaliar Char in 2015-2016 and on 650 ha in Char Balua and Char Nur Islam in 2016 - 2017. The maintenance work of the above-mentioned mangroves are partly done. The maintenance of strip, canal, foreshore, block and Institute plantations established in 2016 - 2017 and 2015 - 2016 is also done partly in the reporting period.

Watcher Recruitment

To make the plantations a success, in the reporting period 64 new watchers have been deployed for non-mangrove plantations for a period of two years.

Capacity building

In order to familiarize with the CDSP IV program and in particular with the social forestry methodology and to enhance the capabilities of the SFGs for the year 2017 - 2018, FD have planned 62 batches of two day duration training courses and 62 batches of one day duration benefit sharing agreement workshops, and in this reporting period SFG formation is going on. FD has completed 82 batches of one day duration follow-up training for the FY 2017-2018. A total of 13 batches of one day duration workshops with LGI, NGO and Public will be conducted in the year 2017-2018. FD will also provide two day duration training courses for the 3 batches of watchers; each batch contains 25 members.

Outcome of plantations

- 4,975 SFG members collected 34,87,310 kg fuel wood (tree branches) from the plantations of 2012-2013, 2013-2014, 2014-15 and 2015-16 which provided additional supply of cooking material for the settlers, which is very scarce in the chars, especially in the lean season. From Arhar (Pigeon pea) of a 20 km area, settlers collected seeds as a pulse, which is rich in protein. The leaf of the pigeon pea is used as a fodder crop for the live-stock and the branch as fuel wood. It has also an ecological impact through nitrogen fixation into the soil.
- During the reporting period, 6,800 Beneficiaries received ownership of 936,840 non-mangrove trees from embankment, road, canal, foreshore and block plantations. Trees are also protecting the embankment and habitants inside the embankment from tidal floods and cyclone surges.
- Storage of carbon in plants takes place through accumulation in living biomass
- Mangrove forests are rich in biodiversity providing a habitat for a wide variety of animal and plant species and making a green belt. This also helps in sediment deposits through burial as well and enhances the process of formation of new chars.

4.3 Climate-resilient infrastructure and water supply and sanitation

This component concerns construction of climate-resilient infrastructure by LGED, including (rural) roads, bridges and culverts, cyclone shelters, killas, and markets. In addition, in the water supply and sanitation program, DPHE is providing test tube wells; deep tube wells and single pit latrines (see 4.3.2).

4.3.1 Construction of internal infrastructure by LGED

At the start of LGED activities progress was hampered due to several tender failures for abnormal quoted rates and price hike of construction materials and labour with respect to the LGED scheduled rate. This problem was solved in June 2013 by joint assessment of market prices by LGED and the TA team. Now, up to 31st December 2017, overall physical progress achieved by LGED is 88% over planned progress of 86%. During the reporting period, the physical progress achieved was 2%.

Benefits/ outcomes from construction of internal infrastructure by LGED

Thanks to the construction of over 315 km of paved/ earthen roads and a large number of culverts and bridges, a huge improvement in the road communication system has been realised for the 155,000 people of the five project chars. At present, Char Nangulia and Noler Char are connected to Boyer Char and

Noakhali mainland by roads and may be travelled without river or khal crossing, using all kinds of vehicles in all seasons.

Since the full completion of 33 cyclone shelters and 90% of another 5, the char dwellers of the five project chars have scope to take shelter during any disaster and also to use the buildings as schools.

Paved Roads (BC paved width- 3.70m)

Out of 25.61 km paved roads as proposed in RDPP-2, work is completed for 25.16 km as per field requirement (11.7 km in Char Nangulia, 7.39 km in Noler Char and 6.07 km in Char Ziauddin).

Paved Roads (BC paved width- 2.40m)

15.00 km paved roads, as proposed in RDPP-2, has been completed (10.4 km in Char Nangulia, 3.60 km in Noler Char and 0.90 km in Char Ziauddin). *All work was completed by 31st December 2017 and work is completed as per RDPP-2.*

HBB Roads (paved width- 3.70m)

Out of 32.86 km HBB roads, as proposed in RDPP-2, work is completed / ongoing / work order under process, for 32.40 km (Noler Char 18.45km, Caring 6 km and Urir Char 7.95 km).

Up to 31st December 2017 physical progress achieved was 79%. and progress achieved during the reporting period was 5%; further work could not be started before completion of BWDB Mamur khal closure-2, Caring khal closure with approach embankments and Noler Char retired dykes, as these remaining roads are planned to be built over the BWDB embankments. However, tenders were floated for the remaining 6.51km roads over embankments through Noler Char and are expected to be completed within the project target period.

Herring Bone Brick (HBB) Roads (paved width- 3.00m)

Out of 93.00 km HBB roads as proposed in RDPP-2, work is completed/ on going or tender floated for 91.19 km (44.61 km in Char Nangulia, 20.35 km in Noler Char, 4.00 km in Caring Char, 10.58 km in Char Ziauddin and 11.60 km in Urir Char).

Up to 31st December 2017 physical progress achieved is 89% where planned was 92%. Only 1% physical progress was achieved during the reporting period as it was the monsoon.

Earthen roads (5.50m/ 4.3m crest width)

Out of 148 km earthen roads as proposed in RDPP-2, work is complete, ongoing, work order under process or tender floated for 137.38 km (59.51 km in Char Nangulia, 24.30 km in Noler Char, 16.66 km in Caring Char, 13.32 km in Char Ziauddin and 23.6 km in Urir Char).

Up to 31st December 2017 physical progress achieved was 91%, where planned was 93%. 5% physical progress was achieved during the reporting period.

Construction of RCC Girder Bridges

Out of 4 RCC Girder Bridges (Bridge length: 20 m - 36 m) as proposed in RDPP-2 work is completed for all 4; 2 in Char Nangulia and the other 2 in Char Ziauddin, since 2016.

Out of the other 3 bridges as proposed in RDPP-1, the bridge over Mamur khal in Noler Char was designed and construction completed as a 4 vent box culvert, considering no navigation, low cost and time-saving for construction. The bridge over Caring khal was dropped for budget saving for BWDB and the bridge over Bhuiyar khal is also planned to be built as a multi vent box culvert for the same reasons as mentioned above; work order is under process and construction will start soon as BWDB Mamur khal Closure-2 and its link khal is already done.

Construction of Box Culverts

In the original DPP only 18 RCC box culverts were proposed, which were increased to 69 in RDPP-1 and again to 93 in RDPP-2 as per field necessity and replacement of RCC girder bridges. Out of these 93 RCC

box culverts, work is completed/ ongoing or tender floated for 87 (41 in Char Nangulia, 24 in Noler Char, 6 in Caring Char, 6 in Char Ziauddin and 10 in Urir Char).

Up to 31st December 2017 over all physical progress was 81% against planned 92%. No considerable physical progress was achieved during the reporting period as it was the monsoon.

Construction of U-drains/ Pipe Culverts

In original DPP, 70 U-drains / pipe culverts were proposed, which were increased to 123 in RDPP-1 and again to 140 in RDP-2 as per field requirement. Out of these 140 U-drains / pipe culverts, work is completed, ongoing or tender floated for 135 (68 in Char Nangulia, 22 in Noler Char, 2 in Caring Char, 18 in Char Ziauddin and 25 in Urir Char).

Up to 31st December 2017 over all physical progress was 92% against planned 96%. 6% Progress was achieved during the reporting period also soft work as design, estimate and tender floating were completed for 7 U drains at Noler Char and Char Nangulia.

Construction of Cyclone Shelters

Due to abnormal price hike of construction materials and labour in the present market the number of cyclone shelters was reduced from 60 to 42 in the revised DPP. Out of 42 cyclone shelters cum primary schools proposed in RDPP-1 and later in RDPP-2, work is completed/ ongoing / work order issued/ tender floated for all 42 (16 in Char Nangulia, 9 in Noler Char, 2 in Char Ziauddin, 4 in Urir Char and 2 in Char Maximul Hakim; one at Char Mozammel, one at Dhal Char and the other at Char Kolatoli, which is designed as a 3 storied building considering office/ lodging facilities for the possible CDSP-V period.

Up to 31st December 2017 over all physical progress was 94% against planned 95%. Physical Progress achieved during the reporting period is 4%. Still today 33 cyclone shelters are fully completed for taking refuge during natural disaster or to be used as schools. 3 (Three) cyclone shelters are dropped from construction which were tendered, one at Char Nangulia, one at Char Maksumul Hakim and the other at Char Kolatoli considering time constraint / river erosion.

Cyclone shelter field raising;

Cyclone shelter field raising: completed / started 33, and 70% physical progress achieved.

Construction of Public Markets

Out of 7 village markets as per RDPP, work started/ work order issued/ tender floated for all 7, with 3 by LCS (1 at Janata bazaar in Char Nangulia - completed, 1 at Thanarhat Bazar in Noler Char - 95% done and the other at Boyer Char- construction done); and for the other four through contractors; work is completed at Zia Bazar in Char Ziauddin, at Kaladur Bazar in Char Nangulia, and at Bathankhali Bazar in Caring Char; and work started and achieved 40% physical progress at Urir Char.

Up to 31st December 2017 over all physical progress achieved was 91% against planned 100%, where 6% progress was gained during the reporting period.

Construction of Union Parishad Complexes (UPCs)

Out of 2 UPC as per RDPP, construction work is completed for Chanandi Union Parisad Complex at Janata bazaar in Char Nangulia and Horoni Union Parisad Complex at Mainuddin Bazar in Boyer Char.

Construction of Cluster Villages (CVs)

In RDPP-2 Cluster Village construction is planned at Char Nangulia and Noler Char. A new concept is adopted here to make the CVs sustainable by giving allotment of 50 decimal of agricultural land along with the allotted homestead for livelihood purpose. Both cluster villages are proposed to be constructed at Char Nangulia considering availability of free Khas land. A new location safe from erosion is achieved, design and estimate are completed and tender floated for construction of these cluster villages, which are expected to be completed by June 2018, within the target period.

However, progress is delayed in search of a new location following the severe erosion of Sandwip Channel at the Sluice DS-2 location.

Construction of Killas (earth mound refuges)

There is a program for construction of 17 *killas* in RDPP-2: 7 at Caring Char, 6 at Urir Char and 4 in surrounding chars. Work is completed/ for 7 *killas* at Caring Char and 6 at Urir Char (3 Noakhali District & 3 Chittagong District) which are completed by this time. Work order was issued for 2 *killas* at Dhal Char and Char Mozammel which are not yet started.

Up to 31st December 2017 overall physical progress achieved was 76%, against planned 88%.

Construction of Ghats (jetties)

Construction of 1 *ghat* was in RDPP-1, which was dropped in RDPP-2 as low cost ghat is not feasible in char area and to save money for BWDB/ LGED other Items.

Construction of bus stand

There was a program for construction of a bus stand at Char Nangulia in RDPP-1, which is dropped in RDPP-2 as there is no necessity at present and to save budget for BWDB.

Widening of bus road

This item is dropped in RDPP-2, as there is no field necessity at present and to save budget for BWDB.

Roads and culverts in Other Chars

Up to 31st December 2017 over all physical progress achieved was 85% against planned 90%. As per RDPP-2 revised budget is Tk 338.4 lakh in place of Tk. 120 lakh mentioned in RDPP-1 which was completed by June 2016.

Women staff shed

Construction of women's accommodation at Kaladur Bazar in Char Nangulia was shifted to Janata Bazar close to Chanandi UP.

Construction of the structure was completed by June 2017.

O&M of infrastructure CDSP I, II, III & IV area

From the road pavement maintenance and periodic maintenance of road items under CDSP IV, work is completed for the following sections:

- i) Char Jabbar–Steamer Ghat– Boyer Char road chainage 00-5,500m.
- ii) Hatiya Bazar- Moyinuddin Bazar-Tankir bus-stand road ch. 00-5000m at Boyer Char in CDSP-III area.
- iii) RHD (Totar Bazar)-Shantirhat-Kazir Dokan road ch. 00-3000m in 1st contract and
- iv) Ch. 3022m- 4813m in the 2nd contract at Char Majid in CDSP-I area.
- v) Maintenance of paved road RHD-Bhuirhat-Banskhali sluice-Kazir shop road ch 00-3022 at Char Majid in CDSP-I area.
- vi) Char Laxmi-Boyerchar road at Boyerchar ch 6092m-10150m.
- vii) Mobile maintenance of emergency work at CDSP old areas and CDSP-IV.
- viii) Periodic maintenance of Char Majid Janata Bazar via Bhumihin Bazar road – ch 00-3450m.
- ix) Periodic maintenance of Manjumiar Bazar-Kazir Dokan road ch. 00-3845m.
- x) Periodic maintenance of Jubair Miar Raster Matha-Banskhali sluice –Manumiar Bazar-Bhumihin Bazar road ch 1000-3900m.
- xi) Periodic maintenance of Chiyakhali Bazar-Bhuyiarhat Bazar-Kanchan Bazar-Pariskar Bazar-Atkopalia Bazar GC road ch 10231-12811m.
- xii) Work started for the maintenance work of HBB road Part A: Banskhali sluice-Darbesh Bazar-Chamoaghat road Ch. 1990-7856 m and Part B: Thanarhat Bazar-Champaghat Ch 00-2600 m at Noler Char through two LCS groups.
- xiii) Periodic maintenance of Roads by LCS: 4 Roads
- xiv) Part A: Periodic maintenance of Siddique Market-Rob Bazar-Komalar dokan road ch00-1926m.

Part B: Periodic maintenance of Ziauddin Bazar –Asrayan Market connecting road ch505- 2725m
Total contract amount was Tk. 879.75 lakh

From the road off-pavement (earth) maintenance, work is completed for:

- xv) RHD –Bhuiyarhat- Banshkhali sluice-Kazir shop road ch 00-3022 at Char Majid in CDSP-I area.
Total contract amount for road off pavement maintenance was Tk. 20.27 lakh.

From the repair and maintenance of buildings and structures, work was completed for;

- xvi) Maintenance work of cyclone shelter cum primary school at A) Ali Bazar, B) Hatiya Bazar, C) Nabinagar, D) Mainuddin Bazar in Boyer char, CDSP-III area by 1st contract.
xvii) Maintenance work of cyclone shelter cum primary school at A) Tankir Bazar, B) Mohammadpur bazaar in Boyer char, CDSP- III area by the 2nd contract.
xviii) Maintenance work of cyclone shelter cum primary school at A) Jalil Commander Bazar, B) Nabipur Bazar, C) Didar Bazaar and D) Dasdag Bazar in Boyer char, CDSP-III area by the 3rd contract.
xix) Maintenance work of cyclone shelter cum primary school at A) South Char Clerk, B) Noapara and C) South Char Laxmi- Polder 59/3B in CDSP-II area at Subarnachar by the 4th contract.
Total expenditure made for building maintenance is Tk. 61 lakh.
xx) Maintenance work of cyclone shelter cum primary school at for 5 at Char Bhatirtek polder and one at Char Majid CDSP-I,II,III old area at Subarnachar. Contract amount Tk. 42.00 lakh.

Total contract amount was Tk. 118.8 lakh

Overall progress achieved for maintenance work is 86% up to 31st December 2017. Total expenditure was made for Tk. 864 lakh. In RDPP-2 maintenance budget is reviewed from Tk. 904.73 lakh to 1004.73 lakh, considering necessity of maintenance at CDSP-IV areas during construction.

4.3.2 Water supply and sanitation by DPHE

One deep tube well is provided for 15 to 20 households and one for each cyclone shelter will also be installed. Test tube wells are sunk to get advance information on the aquifers of the project area. One latrine is given to each individual household, which will take care of the superstructure itself. For an overview of progress and planning of works under DPHE see **Annex 3**, Table 3. For an overview of achievements and financial progress and planning of the same, see **Annex 4**, Table A4, which presents the IFAD format.

Up to the end of December 2017 overall physical progress for DPHE was 90% against planned 90%, 5% progress was achieved during the reporting period.

DPHE activities are discussed below in detail.

Benefits from water supply and sanitation activities

Due to sinking and installation of around 1,400 DTW in the five project chars and also in the surrounding chars, most of the population are getting the benefit of pure drinking water. And in combination with the installation of around 20,600 sanitary latrines contamination leading to diarrhoeal diseases has reduced to a minimal level, which can be concluded e.g. from the PNGO statistics of saline packet demand and distribution, which saw no demand of saline packets during the last few years, while it was 2,00,000 on average during the early days of the project.

Deep hand Tube Wells

Since inception of the project in March 2011, out of 1,532 DTWs as per RDPP-2, sinking and installation is completed for 1,410 (Char Nangulia 661, Noler Char 321, Caring Char 171, Char Ziauddin 110, Urir Char 66 and 75 at other Chars). Platform construction is completed for 1,331.

Up to 31st December 2017 overall physical progress of deep tube wells was 91% against planned 92%, 7% physical progress was added during the reporting period.

Test Tube Wells

Sinking and installation of 6 test deep tube wells as mentioned in RDPP was done: 3 at Char Ziauddin and 3 at Char Nangulia including platform construction.

Total progress achieved is 100%, as per RDPP allotment.

Single pit latrines

Since inception of the project in March 2011 till the end of December 2017 construction was completed for 22,622 single pit latrines (SPLs), 20,892 were distributed and 20,643 installed.

Up to 31st December 2017 physical progress achieved was 86% over planned 89%, work order has been issued for all SPLs.

Pond with sand filter

If required, as per RDPP-2, 2 ponds with sand filter will be installed where ground water is found unusable due to salinity or other reasons at Char Nangulia. There is a plan for PSF construction in AWPB 2016 – 2017, if required.

Rain water harvesting schemes

If required, as per RDPP, 2 rain water harvesting schemes will be installed where ground water is found unusable due to salinity or other reasons at Char Ziauddin. There is no plan for RWHS construction in AWPB 2016 – 2017.

O&M of infrastructure of CDSP I, II and III

Works were completed for maintenance of 12 public toilets at Boyerchar from GoB maintenance funds under CDSP IV amounting to Tk. 3.88 lakh, sinking and installation of 9 non-functioning tube wells at the cost of Tk. 6.95 lakh and all functioning well. One public toilet was constructed at Noler Char at cost of Tk. 4.99 lakh in Total Tk. 15.82 lakh. Field survey is ongoing for selection of deep tube wells' maintenance in CDSP I, II & III and also in CDSP-IV areas from the balance Tk. 2.2 lakh.

4.4 Land settlement and titling by Ministry of Land (MoL)

As per DPP of CDSP IV (Land part), the Ministry of Land is involved in the following activities of the project:

- i. Completion of the residual settlement activities of CDSP III
- ii. Settlement of the landless households in government khas lands of CDSP-IV areas of Hatiya and Subarnachar Upazilas of Noakhali District
- iii. Modernization of the Land Records Management System (LRMS).

The Deputy Commissioner Noakhali acts as the Project Director of the Land part of the project on behalf of the Ministry of Land. The Additional Deputy Commissioner (Revenue) acts as the Additional Project Director. RDC and UNOs act as the Deputy Project Directors while the AC (Land)s act as the Assistant Project Directors of the project in their respective Upazilas. Land settlement is an essential component of the CDSP IV project. According to Government regulations, newly emerged land has to be distributed to the landless (Policy for settlement of agricultural khas land of 1997), including a title on the land to a maximum of 1.5 acres per household. It is the task of the Government to apply the law and initiate and complete the process of land settlement, i.e. providing eligible households with a title. The Ministry of Land is one of the six partner implementing agencies of CDSP. In the project, innovative procedures are followed which brings the whole settlement process closer to the people, is more transparent, shortens the duration and makes it far less costly for the settlers. During the reporting period, the new UNO of Subarnachar Upazila and New AC (Land) of Hatiya Upazila have joined after the transfers of their predecessors. Currently all the posts of UNOs and AC (Land)s are filled.

In the month of November 2017, a formal Khatian (Title deed of land) distribution program was held during the visit of the IFAD Implementation Support mission. On 13th November 2017, the festive and colourful land title (Khatian) distribution ceremony was held at Saddam Bazar, Noler Char area. IFAD support mission members were present and distributed as many as 225 land titles (Khatians) among the landless families. Mission members were Land Tenure Specialist, Ms Sherina Tabassum, and Institutional Support Specialist, Ms Wanaporn Yangyuentham. 1st Secretary of EKN, officials of implementing agencies and other distinguished guests were also present in this auspicious gathering. The Khatian distribution meeting was conducted by the District Administration, Noakhali and chaired by the Deputy Commissioner Mr. Md. Mahbub Alam Talukder. Progress on the various stages of settlement activities is presented below. For an overview of achievements and financial progress and planning of MoL, see **Annex 4**, Table A6, which presents the IFAD format.

Completion of the settlement cases of CDSP III

Due to the court case No.4/2009 regarding boundary issue of Noakhali and Lakshmipur districts all residual works have been stopped in the CDSP III areas for the last several months. So, during the last six months, no progress has been achieved here. The stage wise activities so far achieved before the status quo imposed by the court are as follows:

Table 4 - 1 Status and progress of land settlement activities in CDSP III area

Stages of work	Total CDSP IV Target (HHs)	Target for 2017 - 2018 (HHs)	Progress during the period (HHs)	Overall progress (HHs)
Hearing & landless selection	1,000	0	0	393
Jamabondi preparation	1,885	0	0	1,181
Jamabondi approval by:				
Upazila Committee	1,885	0	0	1,181
District Committee	2,272	0	0	1,609
Kabuliyat:				
Execution	2,630	0	0	1,093
Registration	2,698	0	0	1,130
Khatian Preparation	2,883	0	0	1,144
Khatian Distribution	3,842	0	0	2,138

Land Settlement in CDSP IV areas

The stage wise activities of the land settlement program have been performed during the period under review as detailed hereunder:

Table 4 - 2 Status and progress of land settlement activities in CDSP IV areas

Stages of work	Total CDSP IV Target (HHs)	Target for 2017 - 2018 (HHs)	Progress during the period (HHs)	Overall progress (HHs)
Hearing & landless selection	14,000	1,298	859	15,559
Jamabondi preparation	14,000	1,375	677	15,066
Jamabondi approval by:				
Upazila Committee	14,000	1,375	677	15,066
District Committee		1,375	677	15,066
Kabuliyat:				
Execution	14,000	2,369	888	13,262
Registration		2,369	765	12,909
Khatian Preparation	14,000	2,735	1,189	12,048
Khatian distribution	14,000	2,735	1,053	11,854

Eventualities in PTPS and other settlement activities

I. Meetings of the Monitoring and Management Committees

During the reporting period 2 PMC MoL (Project Monitoring Committee of Ministry of Land) meetings were held on 20/07/2017 and 09/11/2017 in the Ministry of Land. Six DPMC (District Project Management Committee) monthly meetings were held at the Deputy Commissioner's office as well as the PD office in Noakhali. In these meetings month-wise project progress and target were reviewed thoroughly and many contemporary important issues were discussed and disposed of. Land Settlement Advisor and ALSA of TA Team regularly attended these meetings.

II. Court Case related to boundary dispute

Judgement of the court case No.330/94, related to the boundary dispute between Noakhali and Lakshmipur districts, has gone against the Noakhali district administration's interest. Noakhali district administration has filed an appeal case in the higher court. Till the disposal of the appeal case stalemate will continue in the settlement activities of Baggar Char Mouza (1,559.50 acres) under Char Ziauddin.

III. Implementation of LRMS

Work on the up-grading and modernization of the existing LRMS software has already been completed. Online based modified LRMS (Land Records Management System) software is now running smoothly in the district and Upazila level project offices.

Outcome of Khatian (Land title) distribution

Since inception of CDSP IV 11,854 Khatians (land title documents) have been distributed and received by the landless families. In each Khatian husband and wife have equal share over the land and women's name is written first in the Khatian with a view to empowering her. Monitoring exercises indicate that providing this title has directly contributed to the main objective of CDSP: already the women and men beneficiaries have improved their livelihoods, since this process considerably broadens the asset base of the households. The families are now eligible to take loans from banks, keeping the land titles as mortgage security. The legal security that the documents are giving to the settlers is certainly stimulating them to invest in their newly acquired land, which has a positive effect on the agricultural production. Being legal landowners, the social status of the households has been enhanced and the self-confidence of the settlers has increased. In addition, when the wife's name is mentioned first in the legal document, landless women are feeling more honoured, illegal selling of land has become harder and empowerment of women has been raised.

4.5 Livelihood support

4.5.1 Agricultural support by DAE

The unprotected coastal chars are vulnerable to regular flooding and have saline soils. Only one rice crop is possible in the T. Aman season, when heavy rains temporarily decrease the salinity of the higher layers of the soil. In the winter (Rabi season), an additional crop is possible at some places. The agriculture benchmark survey revealed that the overall cropping intensity in the CDSP IV project area was 127%, which is very low compared to the national average of 191%. Crop yield was also low at 1.5-2.0 tons per hectare. The salinity will gradually decline over the years when the area is protected. Introduction of high yielding crop varieties is an important element of the extension development strategy in CDSP IV.

Agricultural support in CDSP IV has the following sub- components:

- strengthening of agricultural extension services;
- support for homestead agriculture and agro-forestry by contracted NGOs;
- surveys and monitoring.

For an overview of achievements and financial progress and planning of DAE, see **Annex 4**, Table A5, which presents the IFAD format. For homestead by contracted NGOs and agro-forestry, see the paragraph on social and livelihood support (4.5.2).

Status of RDPP- 2 revision of DAE

IFAD Midterm Review Mission 2015 recommended a second revision of DPPs of all CDSP IV implementing agencies by recasting unspent money for an extended period up to December 2018. Accordingly DAE submitted their RDPP-2 to the concerned authority for approval. But the Ministry of Agriculture has regretted to extend the proposed RDPP- 2, 2nd time and advised to complete the project activities of DAE within 31st December 2016, vide MoA memo 270 dated 30th August, 2016 and memo 367 dated 22nd November, 2016. Hence the present report is prepared based on project target and cumulative progress up to December, 2016 and follow up of activities by the DAE from January-June, 2017.

After phase out, the Deputy Director deployed 5 Sub-Assistant Agricultural Officers in 5 project chars. The field officers are engaged to implement the DAE activities as per their Annual Development Programme (ADP) with the support of TA team. Also, they are closely monitoring the Farmers Organizations for sustainability which is reflected in the report.

Strengthening and development of extension services

In line with the New Agricultural Extension Policy of 1996 and 2014, formation of Farmers Forums (FF) is a core approach of extension services. In the initial years of the project, i.e. from 2011 to 2013, formation of FF started with an average number of 30 members in a group and 90 FFs had been formed; after formation 106 orientations were organized. A total of 2,700 farmers were involved in these 90 FFs with 38% of female representatives. In 2013 - 2014 a strengthening of Farmers Forums was launched and 30 more 30 farmers (30+30=60) were included in each FF group with 42% female, hence a total of 5,400 farmers are involved in 90 FFs. Remaining farmers of the project are reached through activities such as demonstration plots and field days. In 2014-15, 6 Farmers Associations were formed and on 22nd November, 2016 a Farmers' Federation as per Guidelines for Participatory Farmers Organization (GPFO). All management committees at all tiers of farmer's organization were elected by the general members.

The Char wise distribution of the Farmers Organizations (FO) is as follows:

Table 4 - 3 Char wise distribution of Farmers Organizations

Name of Char	Farmers Forums	Associations	Federation
Char Ziauddin	7	1	1
Char Nangulia	37	2	
Noler Char	25	1	
Caring Char	15	1	
Urir Char	6	1	
Total	90	6	

DAE field officers with the support of TA team have been continuing a strengthening program of FF groups to develop institutional capacity, record keeping and refresh their individual tasks and responsibilities. In these meetings, detailed discussions were held on objectives of FF formation, stakeholder's participation, GPFO, AWPB 2017 - 2018, involvement of NGOs and project interventions by DAE. A total of 78 batches of FF, 36 FA and 6 Farmers Federation meetings were held during the reporting period.

Training of Trainers (TOT) and technical update of project staff

A total of 13 ToT training courses of project staff and field staff (FO & SAAO) of DAE and Agriculture Coordinators of PNGOs working in the project area were organized as per project plan. A detailed technical training module was developed and agricultural experts of various organizations, BADC, DAE,

SRDI, BARRI, BARI, BWDB, ATI and Private Entrepreneurs contributed to the trainings as resource persons, with the support of TA team. Duration of the training was 14 days.

Guidelines for Farmers Organizations

The draft “Guidelines for Participatory Farmers Organizations” (GPFO) were developed in Bengali and English in line with the New Agricultural Extension Policy 1996 and approved in a seasonal workshop held on 22nd January, 2013. As per decision of PMC, DAE is now practicing these in the project area.

Technology dissemination

One day technical training

DAE with the support of TA team conducted at field level one day technical training of FF members in Kharif-I, II and Rabi seasons for 1,100 batches (Char Ziauddin 106, Char Nangulia 475, Noler Char 303, Caring Char 104 and Urir Char 102) as per project target. To conduct this program season wise, three separate training modules have been developed. The contents of training are covering the three seasons. Hand-outs of topics were provided to the participants. A total of 5,400 farmers (30 per batch) participated in the trainings in different events and contents as per project target. Training contents covered all technologies of crop production, IPM, processing and post-harvest technology of 3 seasons. Various technological posters, leaflets, booklets, banners and festoons were presented and also inputs were distributed such as seeds, fertilizers as practical training materials.

Four days technical training (residential)

Four days technical trainings (residential) on Kharif-I, Kharif-II and Rabi season were conducted by DAE for 95 batches, as per project target, at N-RAS training centre, Noakhali. There were 20 participants in each batch, so a total of 1,900 participants attended the trainings. Officers of related departments such as DAE, BARI, SRDI, Bina, BADC, ATI, Market actors and TA team were the resource persons on their respective subjects. Practical hands-on training was organized in the fields of BADC agro-service centre, BADC seed processing centre Feni, BADC Horticulture Centre Comilla, Horticulture Centre DAE Feni, 3 private farms in Noakhali and Feni. Hand-outs of topics and HYV seeds/ saplings were provided to the participants.

Motivational tours

In total 72 events (batches) of motivational tours were organized with 15 members (farmers and market actors) in each group, as per target. Hence a total of 1,080 FF members/ market actors participated from all the chars.

The participants visited the following places:

- BADC Agro-service centre, Noakhali
- BADC/ DAE Horticulture centre, Comilla/ Feni
- BADC Seed processing centre, Feni and BADC Seed Multiplication farm, Feni
- Individual farmers plots at CDSP areas
- Private agro-farms, Noakhali/ Feni
- Nimshar Bazaar of Comilla for value chain market linkage
- Shitakundu, Mirersorai of Chittagong country bean production and value chain area
- Private Mushroom centre, Feni /Comilla.

Demonstration plots

A total of 1,080 demonstrations have been established at farmer’s fields in the 5 chars in all cropping seasons during the entire project period. Out of these 360 were of high value crops (HVC) and 720 of low value crops (LVC). These demo activities have resulted in significant changes in technology and variety adaptation in the project area. These changes are reflected in the following paragraphs i.e. on field days and yield performance of different crops. During the period 8 demos on 2 boro, 5 maize, 1 ground nut in Rabi have been established on different crop varieties.

Introduction of Boro crop

Boro crop has been introduced and is practiced by the farmers in the last 3 - 4 years in Char Nangulia, irrigated by pond water, shallow tube wells etc. It covers about 4,000 ha, where earlier no crop was cultivated during rabi season; they are harvesting 6.5 -8.5 tons/ ha.

Organizing field days

As planned for the entire project period, 84 field days were organized during Rabi, Kharif-I and II seasons for showing the success of adaptability and technology dissemination through demonstration among the farmers of the project. Some new crops and varieties of rice, pulses and oil crops were introduced in the area such as short duration (105-110 days) variety BADC hybrid-2 in T.aman season, which yielded 4.5-6.5 ton/ha, BRRIdhan 52 (yielded 4.5-5.0 ton/ha), BRRIdhan 62 a zinc fortified variety (yielded 3-3.5 ton/ha), SL-8 hybrid (yielded 7.2 ton/ha) and hybrid Hira (yielded 7.3 ton/ha) and varieties of other crops. Regarding hybrid vegetables in Rabi and Kharif I season, it was found that the farmers harvested 2-3 times higher yields than from their existing traditional varieties. More than 6,720 farmers, market actors, agri-entrepreneurs, FLI representatives and local elites attended the result demos and technology transfer ceremonies of the area. They all showed their interest to cultivate these HYVs, hybrid varieties, saline tolerant, short duration, submerging tolerance and nutritional support varieties, which were introduced, and adaptable from following cropping seasons onwards.

Yield performance of main crops (t/ha)

Rice:	Aus: HYV	3.2-3.9
	T.aman: HYV	4.0-5.2
	Hybrid	4.5-6.5
Boro:	Hybrid	6.5-8.5
Vegetables	Various:	10-30
	Potato:	30-35
	Water melon:	20-30.

Seasonal workshops

Twelve seasonal workshops were organized by DAE in the project period, following the 3 cropping seasons: Kharif-I, Kharif-II and Rabi. DAE officers and field staff, representatives of related departments such as BADC, BARI, BIRRI, Bina, SRDI, ATI, Seed Certification, NGOs, TA team members and farmers' representatives of all chars participated in these workshops. After each presentation, a general discussion and group exercise was held. Recommendations of the workshops were incorporated in seasonal and annual reports.

Value chain workshops

Six value chain workshops were organized as planned. Representatives of related departments, market actors, and wholesalers, agricultural entrepreneurs from outside project/ districts, loan giving agencies, producers, NGOs and farmers representatives of all chars participated in these workshops. After each presentation a general discussion and group exercise was held. Recommendations of the workshops were recorded properly for future implementation. Of those some issues such as linkages between local and up market actors, provide training and support of inputs for weighing materials, establishment of collection centre, supply plastic crates etc. have been established from the project. Financial support from banks and other financial institutions are essential for continued future development of value chain in the CDSP-I, II, III and IV areas.

Annual workshops

Three annual workshops were organized during the project period. All DAE officers and staff, representatives of all research organizations, all members of farmer's federation, concerned departments, value chain market actors and PNGOs attended the workshops. In the workshop, detailed activities of DAE were discussed including bottlenecks and recommendations for future technology.

Seasonal reports

During the project period 48 seasonal reports have been published by DAE with the support of TA team up to December 2016, containing the implementation status of project interventions. In these reports the details of all activities of DAE are documented and presented with supporting pictures.

Annual report

In total, 2 Annual reports of 2014-15 and 2015-16 have been published during the project period, containing information on all aspects of project objectives, activities, progress, performances, constraints, char-wise salinity status and results in the project chars.

Awareness raising technical leaflets, festoons etc

A total of 9,000 posters, 27,000 folders/booklets and 1,600 festoons were published and distributed among the farmers for awareness building and used as materials in above mentioned practical trainings. These contain various adapted technologies on modern agricultural practices, applicable for coastal areas. These training materials were distributed to the farmers in various trainings and orientations and also used as training materials.

Input distribution

Input support to the farmers is an effective tool to disseminate technology for immediate implementation of field activities. Hence, 18 tons of HYV seed, 149 tons non-urea fertilizer, 140 hand sprayer, 1,500 plastic drums, 180 rice threshing machines, 20 digital balances and 3,900 sex pheromone traps have been distributed among the farmers of the area. During input distribution ceremonies among others PD, DAE, Upazilla Chairman, UNO, Upazilla officials of Subarna char and TA team members attended. During the period 2.7 t of HYV T. Aman seed have been distributed to the farmers of the area.

Surveys and adaptive research

Monitoring of soil salinity is a regular activity of the DAE field officers and the average comparative test results are given below:

Table 4 - 4 Salinity monitoring test result (EC_e, ds/m)*

Name of Char	Nov 2011	April 2012	Dec 2012	April 2013	Nov 2013	April 2014	Nov 2014	April 2015	Nov 2015	April 2016	Nov 2016
Char Nangulia	11.2	25.3	5.3	16.1	2.0	7.2	1.7	6.3	2.9	7.6	2.0
Noler Char	4.8	28.0	4.2	13.0	4.0	9.8	3.7	13.0	4.7	7.6	6.0
Caring Char	6.6	32.2	3.9	15.1	4.5	11.0	4.0	11.0	4.7	10.1	6.0
Char Ziauddin	10.6	14.2	2.3	3.1	1.6	2.8	1.1	1.6	1.5	2.5	1.6
Urir Char	8.5	16.1	7.1	11.1	4.6	10.3	2.3	14.0	4.1	10.9	3.7
Average	8.2	23.2	4.6	11.7	3.3	8.2	2.6	9.2	3.6	7.7	3.8

*EC in dS/m= Electrical Conductivity (decisiemens/metre). Top soil=0-10 cm.

Through different studies and research findings and from the above test results of CDSP IV, it is observed that salinity in char areas is lowest in November - December and highest in April. From the above test results, it is revealed that average salinity levels show a declining trend from the previous years except in Caring Char and Urir Char as these chars are unprotected. However, it will take more time to draw a conclusion on the salinity trend in the future after completion of all project interventions such as embankments, canal re-excavation and construction of sluices.

Soil nutrient status in the project area

Soil nutrients of the area were surveyed by SRDI and it was found that the overall status of the soil fertility is poor in the project chars, except sulphur, which is abnormally high compared to the optimum level. To improve the soil health, a number of activities have been undertaken, like Daincha cultivation for green manuring, quick compost and Vermi compost preparation.

Table 4 - 6 Nutrient status of soil in the CDSP IV areas

Sl No	Component	CZ	CN(S)	CN(H)	NC	CC	UC	Optimum
1	Nitrogen (%)	0.09	0.1	0.09	0.08	0.09	0.1	0.27
2	Phosphorus (ppm)	14.14	12.78	11.17	6.26	16.41	7.45	22.5
3	Potassium (me/100g)	0.21	0.29	0.17	0.18	0.17	0.24	0.27
4	Sulphur (ppm)	173.37	143.25	127.86	45.82	87.68	156.01	22.5
5	Zinc (PPM)	0.86		0.92	0.91	0.85	0.85	1.35
6	Boron (PPM)	0.11	0.1	0.09	0.1	0.1	0.15	0.45
7	PH	7.63	7.79	7.72	8.16	8.03	7.97	-
9	O.M	1.87	2.1	1.82	1.53	1.87	1.93	5%

Note: ppm = parts per million, me=mili equivalent, CZ-Char Ziauddin, CN(S)-Char Nangulia Subarna char, CN (H)- Char Nangulia Hatiya, NC-Noler Char, CC-Caring Char.

Rain water harvest technology

Rain water harvest technology was introduced at farmer's fields for pit crop irrigation during the dry period Rabi and Kharif-I season to combat salinity. This resulted in above mentioned cultivation of Water melon, Cucumber, Sweet gourd etc. contributing to increasing cropping intensity of the area. This is a new innovation and adaptable technology for the area, so it needs further extension to combat the salinity and ensure irrigation in homesteads and around in dry season.

Established vermi compost technology

The field staffs of DAE and PNGOs are working to establish vermi compost plants in every HH with the concept of extension of organic manure to develop soil texture, soil improvement and reduction of inorganic fertilizer use. During the period a cumulative number of 1487 of vermi compost plants have been established in the project area. Now this has been replicated in project area and tends to commercial production of worms at Tk 1.00 each.

Sorjan method of technology in Kharif I season

Vegetable (HYV/Hybrid variety) cultivation by Sorjan method is a new innovation technology and successful dimension in the CDSP-IV area. In the low-lying areas T. Aman crop was hampered due to water logging in the rainy season and it was very difficult to grow rice and other crops except an indigenous variety Bontil/Talmakna. By introduction of the sorjan method, farmers started to cultivate both vegetables in the raised beds and fish culture in the ditches between. The total area covered by sorjan crops (Cucumber, Bitter gourd, Snake gourd, Yard-long bean etc.) is approximately 5,911 hectares.

Findings of surveys in 2015 - 2016

Following a decision of the Project Management Committee (CDSP IV) DAE part meeting held on 5 April, 2016 at DG, DAE conference room, the Planning, Project Implementation & ICT Wing of DAE has formed a team consisting of seven members headed by Director (PP&ICT wing) DAE to monitor the on-going project activities and to measure the impact of the project interventions. The objective of the study is to know the present status of the farmers' living standards and how many technologies or approaches are adopted, practiced and implemented by them. It also has ascertained what the changes are in socio-economic development of the project area and the percentage increase of crop production by irrigation facilities and other infrastructural facilities. The monitoring team completed the study from 19 to 23 May 2016 at Char Nangulia, Noler Char, Caring Char and Char Ziauddin of Noakhali district. The monitoring report revealed that about 55% of households are in the category small, 28% in marginal and the remaining 17% in the medium category. The land under cultivation indicator showed that field crops covered the maximum cultivable land at 56%, followed by vegetables 35%, orchards 2% and others 7%.

The M&E report stated that the average cropping intensity in all chars has increased from (MTAS) 172% to 184%. The maximum cropping intensity was found to be 206% in Char Ziauddin (same as before) followed by 183% (3% increase) in Caring Char, 180% (+5%) in Noler Char and 165% (+6%) in Char Nangulia. Cropping intensity increases indicate improved cropping pattern and introduction of a new pattern in the project area. For irrigation pond and canal water are the main sources. Farmers adopted modern production technologies learned by various extension activities such as one day training, four day

training, motivational tour, demonstrations and field days. Farmers cultivated modern rice variety BRRI dhan 27, 48, 55, 65 Binadhan 14 in Kharif-I season and BRRI dhan 40, 52, 56, 57 and 62 in Kharif-II season. It was found that the farmers harvested 2-3 times higher yields than that of their existing traditional varieties. All the farmers have shown their interest to cultivate these HYVs. Majority of the farmers collect their seed from seed dealers (44%), followed by farmers' own seed (23%). Farmers also collect seed from other farmers (17%) and other seed sources (16%). For the livelihood development of project beneficiaries six government agencies work together. The sample farmers were evaluated on agricultural and non-agricultural income versus expenditure indicators to observe the overall progress at individual level. Of the sample farmers 91% responded "Yes" to the comments on changing living pattern. They claimed that the project contributed positively to bring a dramatic change in their lives.

Project yield contribution

During the pre-project period farmers used their traditional local rice varieties such as Rajashail, Kajalshail etc, with unknown quality seeds and they harvested only 1.5-1.8 ton/ ha. After introduction of HYV/ hybrid varieties and modern technologies the yield with ensured quality seed became 3.5-7.5, depending on the different seasons.

Overall Impact of agricultural development

After CDSP-IV intervention of six GoB agencies (BWDB, LGED, DPHE, MoL, DAE, and Forest Department) and 4 partner NGOs started their activities as per project design. So, the picture of CDSP-IV areas has rapidly changed. In DAE, the farmers were organized through Farmers Organization, and provided with modern technical training/advice, supplied with HYV/hybrid seed and fertilizer, innovation technologies, agril-machinery demonstration of HYV/hybrid, motivational tours to potential areas and field days etc. In Farmers Forums, monthly meeting and use of agricultural machinery enriched their knowledge and capacity. At their meetings, all FFs have discussed production problems and possible solutions as well as providing advice on marketing and input supply, involving links with buyers and suppliers. Demonstration have been carried out, with quality seed and fertilizer distributed among the farmers. As a result, farmers increased their crop yield 2-4 times more than pre project.

Yield projection in pre-project (during the period 2011)

Crop name	Total area coverage ha	HYV coverage ha	HYV yield in mt	Local Variety coverage ha	Local variety yield M.ton	Total yield M.ton
Aman	22000X90% =19800	19800X5%=990	<u>990@4.0t/ha=</u> 3960	19800X95% =18810	<u>18810@1.8</u> t/ha=33858	40139
Aus	22000X15% =3300	3300 X2%=66	<u>66@3.3t/ha=</u> 218	3300 X98% =3234	<u>3234@1.5</u> t/ha=4851	5069
Baro	0	0	----	-----	----	0
Grand total Yield of Rice						45208
Rabi	22000X22% =4400	All farmers used local traditional variety of Rabi crops (Chili, Methi, Soybeans, Bottle gourd, Country bean, Sweet potato etc) and their yield was very low				

After completion of 6 years of the project intervention the following yield produced from rice and Rabi crops cultivation from the project area.

Crop name	Total area coverage ha	HYV coverage ha	HYV yield M.ton	L. Variety coverage ha	L.V. yield M.ton	Total yield M.ton
Aman	22000X96% =21120	21120X94% =19853	<u>19853@5.1/ha</u> =101250	21120X6%=12 67	1267@1.9 t/ha=2407	103657
Aus	22000X15% =3300	3300 X58%=1914	<u>1914@3.2t/ha=</u> 6125	3300X40% =1320	1320@1.6 t/ha=2112	8237
Boro	22000X18% =3960	3960	<u>3960@7.98</u> t/ha=31601	----	-----	31601

Grand total Yield of Rice after 5 years of project		143,495t
Grand total Yield of Rice before project intervention		45,208t
Yield increased		98,287 t
% of yield increased		217%
Rabi	22,000X76% =16,720	All farmers used HYV and local traditional variety of Rabi crops (Chilli, Methi, Soybeans, Country Bean, Groundnut, Watermelon, Potato, Sweet potato etc) many new crops are introduced and their yield is 2-3 times higher than that of previous times.
Rabi area increased	After 5 years 16,720 ha - Before project 4,400 ha=12,320 ha or 312 % increase	

Yield of other crops such as water melon, pulses and oil seed crops also increased significantly.

Publications of DAE in CDSP IV

- Technical Reports 2 and 3
- Guidelines for Participatory Farmers Organization (GPFO)
- Resource Book "Coastal Agriculture under Unfavorable Ecosystem"
- Training Modules - 3
- Seasonal Reports - 48 volumes
- Periodic Agriculture Survey Report, 2014
- Mid-Term Agriculture Survey Report, 2015
- Monitoring and Evaluation report, 2016
- Strategic Plan for Value Chain Development
- Annual Reports – 2.

Inter-agency coordination

Support to BADC for appointment of seed dealers in project chars

Six seed dealers were appointed by BADC and they are active to make HYV seeds available in different locations of the project with the support of DAE and TA team. In addition, the project has active co-ordination with all the NARS (National Agricultural Research Systems) agencies under the MoA.

Support to Bangladesh Jute Research Institute (BJRI)

Continued support was given to BJRI for conducting a trial research project in Boyer Char and Noler Char to develop a saline tolerant variety. The institute is planning to extend their activities to Caring Char as well, to be sure of sufficiently extreme saline conditions.

4.5.2 Agricultural support by DAE

The social and livelihood support component has been phased out from 1st January 2018 excepting only Agriculture and Forest Coordinators' input, which will continue; this is looking after Homestead Agriculture and Value Chain Development activities up to September 30, 2018. Also a Short Term Consultant will support Water and Sanitation implementation activities up to June 30, 2018.

The focus of the Social and Livelihood Support (SLS) component of the project is on social and economic development of households in the five chars, especially women and children. Approximately 28,000 households live in these five chars. So far 27,654 households have been identified in the whole project area. The sub-component is implemented at field level by partner NGOs. Four PNGOs were selected to perform the assignment. The selected partner NGOs with their working areas are given in the table below:

Table 4 - 6 PNGOs' assigned areas

SI #	Name of NGO	Number of branches	Name of working chars
1	BRAC	2	Char Nangulia, , Char Ziauddin
2	Sagorika Samaj Unnayan Sangstha (SSUS)	2	Char Nangulia, Noler Char
3	Dwip Unnayan Songstha (DUS)	1	Noler Char
4	Society for Development Initiatives (SDI)	1	Urir Char,

Human resources and management set up of the NGO component

Each PNGO has deployed a program coordinator to supervise its activities in the various branches. The higher management of the PNGOs are providing management support and at the same time the TA team is providing both technical and management support. In each branch there are: one Branch Manager, six Credit Officers, an Accountant and an Assistant Accountant cum office assistant, Coordinators: 2 for WatSan, 6 for Homestead Agriculture & Value Chain Development, 6 for Fisheries, 6 for Poultry & Livestock and for the Health and Family Planning Program; 6 Medical Assistants and 3 Health and Family Planning Facilitators. The Branch Manager is responsible for coordination of all the activities of the social and livelihood component in the branch. The Credit Officers take care of the base line survey, group area demarcation, group formation, group meetings, borrower selection, loan disbursement, savings and loan instalment collection and other project activity related issues. The Accountant and Assistant Accountant are responsible for the microfinance and financial transactions in the branch and they prepare the financial reports. Coordinators and other staff are responsible for implementation of the sector programs.

The recruitment of staff in the project was completed in 2012. Staffs were recruited as per design and need of the project. Among recruited staff the male female ratio is 3:1. In the month of October 2014 two new sub-components were started. For this purpose, TA team recruited one NSS for Fisheries and another for Poultry & Livestock. Moreover, PNGOs recruited 6 coordinators for Fisheries and 6 for the Poultry & Livestock programs to cover the five chars through 6 branches. The status of the staff of PNGOs by end December 2017 is given in the table below.

Capacity building and skill development of beneficiaries

To involve beneficiaries in income generating activities and at the same time to increase knowledge and awareness of different income generating sectors, trainings and refresher courses are offered to group members of PNGOs. The participants have already taken loans from the PNGOs to utilize the loan as per learning from the training. The training on IGAs is continuing and all beneficiaries will receive training on various courses during the remaining project period. In the reporting period 74 beneficiaries received training on non-farm income generating activities. The cumulative number up to December 2017 is 22,101 (farm 21,902; non-farm 199).

Table 4 - 7 Status of staff of PNGOs

PNGO	NGO Coordinating Office Staff						Branch office Staff													Total Staff			% Female staff
	NGO Director	NGO Coordinator	Area manager	Accountant	Office assistant	Sub-Total	Branch Manager	Accountant	Assist A/C cum office assist	Credit Officer	LHR/ Disaster Coordinator	WatSan Coord	Agriculture Coordinator	Paramedics	HFPF	Support staff	Fisheries coordinator	P/ Livestock coordinator	Sub-Total	Female	Male	Total	
BRAC	1	1	1	1	1	5	2	2	2	17	0	1	2	2	6	1	2	2	33	7	31	38	18
SSUS	1	1	1	1	1	5	2	2	2	20	0	1	2	2	6	1	2	2	42	15	32	47	32
DUS	1	1	1	0	1	4	1	0	1	06	0	0	1	1	3	1	1	1	16	3	17	20	15
SDI	1	1	1	0	1	4	1	0	1	05	0	0	1	1	3	1	1	1	15	3	16	19	16
Total	04	04	04	02	04	18	06	04	06	42	0	02	06	06	18	04	06	06	106	28	96	124	23

Sub components of the Social and Livelihood Support component

The Social and Livelihood Support component is divided into the following sub components:

- a. Health and Family Planning;
- b. Water and Sanitation;
- c. Homestead Agriculture and Value Chain Development;
- d. Fisheries (started since October 2014)
- e. Poultry & Livestock (started since October 2014)

Follow up currently continued for the Social and Livelihood Support component

- i. Legal and Human Rights;
- ii. Disaster Management and Climate Change.
- iii. Group Formation, Microfinance and Capacity Building;

The performance of the 8 sub components is briefly described below, for a more extensive description of the activities reference is made to Progress Report No 9.

Health and Family Planning program

Health forum is an important tool to make participants aware through imparting health education on various issues. In the health forum the HFPP creates awareness among the community on family planning, nutrition, hygiene, immunization, on pregnancy related care and on common diseases. During the reporting period 2,434 health forums were conducted and **46,420** forums were conducted up to December 2017. Medical Assistants of the health and family planning program have been paying visits to the health forums to monitor and develop the quality of the forum. 151 health forums were visited in the reporting period and in total **3,971**. In addition, HFPP is paying visits to households. Normally a HFPP visits five households per day in an afternoon session. At the time of house visits they also monitor the oral pill consumption. 5,331 HH were visited (repeated) in the reporting period and in total 15,2110.

In the **static and mobile clinics**, 6,201 patients received treatment during the reporting period and 178,514 beneficiaries received treatment up to December 2017. Medical Assistants of the clinics usually refer the patients, which they cannot diagnose or to whom they are unable to give proper treatment, to the doctors of Upazilla and District General Hospitals. So far in total 2,879 patients were referred. Usually the people in the project area had circumcision of boys performed by local unskilled people. After intervention of the project, the people are performing the same by the Medical Assistant (MA) of the clinic. In the reporting period 34 baby boys were circumcised and 903 up to December 2017. 90 TBAs (Traditional Birth Attendants) attended the refresher trainings 4 times and HFPPs and MAs have visited all TBAs 4 times in the reporting period. In the reporting period 389 pregnant women received treatment and check-up and in total 12,424. 101 Pregnant women and 90 lactating mothers were served iron tablets and 7,002 and 5,541 respectively were given tablets up to December 2017. TBAs handled 494 deliveries in the reporting period, which makes in total 13,100. Extremely poor pregnant women received financial support and the total is 85.

Contraceptive distribution: Reduction of the birth rate in the project area is one of the objectives of the Health and Family Planning program. Medical Assistants are discussing with male groups or individuals to make them aware of family planning and to convince them to adopt family planning methods; if the husband of the couple is convinced, the female can easily use the family planning method. 776 group counsellings were performed in the reporting period and in total **5,483** in the reporting period **13,418** cycles were distributed and in total 390,137 cycles of pills were distributed; **2,226** injections for the reporting period and in total 17,192 were given. Family planning method user rate in the project stands at 66% (Eligible couple by health baseline survey 23,879)

To reduce diarrhoea the Health and Family Planning Facilitators are working for raising awareness on safe drinking water and cleanliness. No Packets of ORS have been distributed among the households during the reporting period, and 896,268 were distributed up to December 2017, which covered 27,654 households.

To create **awareness among the local influential persons** on the health and family planning program and various health issues, a day long orientation is given to the local elite (Imams, school teachers, UP chairmen and members, etc). They are involved in implementing the project activities. Medical Assistants and HFPPs conduct the orientation as per CDSP IV guidelines. No local leaders received orientation in the reporting period and 2,342 up to December 2017. In addition, several meetings were conducted with Civil Surgeon, Deputy Director of family planning Noakhali, Upazilla Health & Family Planning Officer (UH&FPO) Subornachar Upazilla. CDSP IV interventions, achievements and future plans were discussed with them.

Training and practical session on food processing and cooking system: To develop the capacity of staff on methods of modern and hygienic food processing and cooking system, first the staffs of the program were given training on the subject. The duration of the training was 3 days. Two batches of training were completed with 48 participants, both Health and Family Planning Facilitators (HFPP) & Medical Assistants. Both theory and practical sessions were included in the training module. Trainers from BRAC conducted the training. Up to reporting period refreshers training was given to all 48 participants at the time of field visits, through individual contacts.

Orientation on food processing and cooking system: The project char dwellers usually cook their food using traditional methods; huge nutrient loss occurs and there is misuse of food through this traditional food processing and cooking system. Most of the families do not prepare any special food for pregnant and lactating mothers, or special food for babies. To make the people aware about loss and misuse of traditional food processing and cooking system and to save nutrients especially for pregnant women, lactating mothers and babies, HFPPs of the program are conducting orientation sessions in the field and subsequently it is discussed in the health forum as an important issue. In the reporting period 79 orientation sessions were conducted in different Samaj, and up to December 2017. 179 sessions were held.

Height & Weight measuring of babies (0-5 years): The RIMS surveys revealed that stunting among babies and small children is a problem in the project area. Medical Assistants are measuring the height and weight of the babies/ children less than five years of age. The measurement is taken quarterly for each baby. 90 babies are under observation and their height and weight are recorded.

Exploring patients' fee collection: For the sustainability of clinics in the project area even after phasing out of the project, TA team and partner NGOs were conducted 48 mass meetings in the area with all stake holders. In the mass meetings and an workshop conducted in CDSP IV office with all stakeholders such as Civil Surgeon and Upazilla Health officers, Deputy Director Family Planning and other related departments, NGOs, etc. In that workshop it was decided to collect Tk 50.00 per patient after and before office hour by the MA of PNGOs.

Medicine sale by PNGOs: For the convenience of the beneficiaries, project management decided to create a revolving fund for medicines of BDT 10,000 for each PNGO branch. Medicines are purchased and sold among the beneficiaries with minimum profit made by PNGOs. In the reporting period PNGOs sold medicines worth BDT **316,569** and cumulatively it became BDT 60,09,151 up to December 2017.

Outcome of the health and family planning program

Knowledge on health and family planning of staff and volunteers like Traditional Birth Attendants has been developed significantly, resulting in good development of the program, and eventually good practices among the beneficiaries in the CDSP project areas are established. Superstition regarding family planning methods has been reduced and use has gone up to 89%. Population is controlled as per suggestion and counselling by NGO staff and based on joint decision taken by husband and wife. The birth rate in the project area has reduced significantly, resulting in better health of mother and children in each family. Growth rate of babies is normal and stunting is becoming less as we are observing and collecting information. Rate of immunization of 0-1 year old babies is increasing and at the same time tetanus has been reduced significantly as women are given anti tetanus vaccination. Safe drinking water use is about 100%. Quality of home delivery is significantly improved, so that women seldom need to go to hospital or clinic for delivery. Infection and complication due to traditional circumcision has been reduced as it is now performed by the Medical Assistants. Treatment cost and monthly patient turnover in the project clinics is reducing.

Water and Sanitation Program

Access to safe drinking water and safe sanitation is a basic human right and essential for achieving, gender equality, sustainable development and poverty alleviation. But paucity of safe water and inadequate sanitation are the vector of water and excreta borne diseases. Improving water and sanitation is known to have significant beneficial impact on health and hygiene in families and households. Providing

physically accessible safe water is essential for enabling women and girls to devote more time to the pursuit of education, income generation and even construction and management of water and sanitation facility.

Staff Capacity Building

The WATSAN sub-component of CDSP IV was under implementation at field level through the PNGOs. TA team has trained 13 coordinators and providing on the job training and refresher courses with field finding issues for implementation and to enhance skills and capability of work for effective program activities.

Awareness meetings

WATSAN coordinators have conducted meetings with credit groups and so far 2,500 (two or more times a group). Separately monthly follow-up meetings were held with TUG members and 11,980 up to December 2017. They discuss issues of sanitation and hygiene, for changing behaviour and attitude and to develop skills on DTW operation and maintenance.

Tube well User's Group (TUG) formation

The groups consist of 15 to 18 women members were involved in the location selection of tube wells are formed into a Tube-well User Group (TUG). The group is also involved in the collection of the contribution money of the households for the installation of the tube well. The money is given to the NGO. The NGO transfers the funds to DPHE through TA team. Only after the funds for a DTW are collected, DPHE would start the installation through local contractors. Attention should be given to the feedback mechanism from these TUGs to DPHE. During the project period the channel that is used is through the NGO or the member of TA team. It is required to involve local government from the beginning of the process of group formation, since it then feels more responsible to keep the water supply functioning. A TUG is formed for each DTW. 78 TUGs were formed in the reporting period and 1,532 up to December 2017. 1,532 selected sites were submitted to DPHE. PNGOs collect beneficiaries' contribution money at the rate of Tk.4, 500 per tube-well. So far contribution money for 1,446 tube wells has been submitted to DPHE.

DTWs use and platform

DTW installation and platform construction update information from field is collected by PNGOs; if any kind of dispute takes place in the field during installation then the PNGO informs the TA team and DPHE take necessary measures to solve the problems. Thus, a relation mechanism is developed with PNGOs and community on water and sanitation issues. So far, **1,410** DTWs were installed and 1,398 functioning tube wells are being used. In the reporting period 50 platforms were constructed and 1,331 up to December 2017. Tube well management groups have maintained 30 platforms in the reporting period, in total 205, with 760 small repairs being done by CTF members at their own cost.

Care Taker Family training and kit box distribution

PNGOs have distributed tube well maintenance kit boxes to trained caretaker families 1,446 up to December 2017. In total 3,018 CTF members received training with focus on water and sanitation issues, repair and maintenance of tube well.

Single pit latrines

Through coordination with DPHE, PNGOs ensured distribution of 1,265 sets latrines in the reporting period and 20,892 up to December 2017. 1,373 latrine sets were installed in the reporting period and in total **20,643**. 1,426 superstructures were completed in the reporting period and 20'643 up to December 2017.

The drive to ensure 100% Sanitation and Outcome of the activities

No open defecation, use of hygienic latrines by all, proper maintenance of latrines for continual use and improved hygienic practice are the factors of 100% sanitation. Special drives and campaigns were organized to meet this sanitation target. 243 Imams of mosques were mobilized to discuss awareness building on hygienic use of latrines. 578 School meetings were conducted (5 or more times) with students and teachers which 31,224 participants attended. 237 adolescent orientation meetings were organized where **3,105 adolescent girls** participated to create awareness on basic sanitation and hygiene. Water, sanitation and hygiene promotional activities progress, with focus on household water treatment, safe storing of water, hand washing with soap at critical moments and hygienic disposal of human excreta.



Relation mechanisms with the line agency (DPHE) ensured

The DPHE, CDSP-IV and PNGOs at times organize special issue meetings to solve problems arising in the sector sub-component especially in the DPHE part. Thus, a linkage mechanism has developed with DPHE, NGOs and beneficiaries

The key indicators of behavioural outcomes for the Water and Sanitation sub-component are:

Major intervention	Outcome/ Indicators
Availability of safe drinking water	98 % of HHs has access to safe water available within average 55 m distance from DTWs installed by the project.
Safe storage of water	93% HHs are used to store water in safe storage containers in safe places.
Access to basic sanitation service	74% of HHs has access to an improved sanitary facility.
Use of soap or ashes in the latrine	79% of HHs has soap and water at a hand washing point inside latrine.
Hand washing with soap at critical moments	75% of HHs with soap and water at a hand washing point commonly used by family members.
Changes due to safe water and sanitation	Significant reduction of water borne diseases like Diarrhoea, Hepatitis, Scabies etc. and 80% health improvement.

NGO support for DTWs site selection in other Chars

In CDSP-IV, NGOs have taken responsibility for site selection in other Chars. This first step is that NGO staff raise the issues of tube wells in the groups that have been formed by NGOs themselves. Subsequently, discussions were held with the women of the groups of 15 to 18 household living close to each other. In these meetings, they fill up a group form and the location of the tube-well is decided upon.

PNGOs have formed 95, TUGs in Char Kolatoli, Dhal Char , Char Muzammel, Char Muksumul Hakim and Telier Char, assisted DPHE to install the same DTWs at the following Chars and trained 190 CTF members and 95 tool box provided for DTW repairing and maintenance activities. In the TUG site selection, the following DPHE criteria are taken into consideration:-

- no tube well should be located within the inner compound of any family or group
- the location of the tube well should sufficiently far away from any source of pollution
- the location of the tube wells should have proper drainage, not be susceptible to normal flooding or any other influence that can cause damage to the platform.

NGO assistance has ensured that DTW's Contribution has been collected and provided to DPHE. After confirmation of the site, contribution money is collected with the consensus of the group formed to use the tube well. This contribution also generates a demand to DPHE for repairing and maintenance of the installed DTW. PNGOs collect beneficiaries' contribution money at the rate of Tk.4,500 per tube-well. Up to the project period Tk. 6,507,000 contribution money for 1,446 DTWs was collected by PNGO and already provided to DPHE. For water and sanitation infrastructure, formal and informal women's organization and networks can play an important and stimulating role in mobilizing resources for sustainable and equitable water and sanitation programs.

Key Success of the Sub- component

CDSP-IV through its Water and Sanitation sub-component has been able to ensure basic minimum level of service for the entire beneficiaries of the project areas as follows:

1. **Water Supply Service Level:** Water point of DTWs for each household within 55 m distance of household premises, ensured through the project.
2. **Sanitation Service Level:** Project ensured one household has one latrine to provide basic minimum sanitation service level; every household got separate hygienic latrine with appropriate fecal sludge management system and total family may share a hygienic latrine.
3. **Hygiene Service Level:** Ensured the basic minimum service level for hygiene is hand washing with soap and promoted menstrual hygiene management as a sustainable system.
4. **Mainstreaming Gender:** Ensured involvement of women as they are generally manage water and sanitation and are also the guardians of hygiene enforcement.

Impact of Improved WatSan

Access to high impact, especially preventive health, services significantly reduces vulnerability of the poor households to illness-induced income erosion and expenditure crisis. Thus, reduction in fertility and improved health are important for poverty alleviation as well. Healthy citizens are considered as capital resources for a nation, while people with ill-health are a burden for that country. WatSan contributes to make the people healthy through a process of socialization that produces workable manpower and reduces unwanted treatment cost for a family and the country can give more attention to the development of its members and citizens for productive activities.

Reduces women's burden and enhances their participation.

Women are to collect water for drinking and other domestic purposes and they are to wait from dawn to dusk for defecation. Collecting water from a long distance and waiting for long for defecation affect seriously the physical and mental health of women. A safe water point and household latrine within their reach and adequate knowledge along with good practice contributes in reducing their burden and ensuring healthy survival. It helps to save time for women which they can use in productive and other social activities. It helps women to earn money and learn new things in terms of capacity building in social and economic areas that contribute directly to women's empowerment



Gender focus on water and sanitation activities

In coastal areas, women are mainly concerned with collecting and managing drinking, cooking and washing water for their households. Water is procured by women and sometimes girl children from different sources such as tube wells, pond, wells, canals, rivers, rain, streams etc. Hence, the poor section of the people, particularly women and adolescents face lot of problems in relation to accessing safe drinking water that apparently affect their health. Women and adolescents generally carry the burden of water collection and it is now widely accepted by NGOs that gender issues must be integrated into project development. However, the practicalities of water collection involve balancing the roles of women and men in water and sanitation projects.



Homestead Agriculture and Value Chain Development

CDSP IV is implementing a Homestead Agriculture and Value Chain Development program to reduce malnutrition and to increase the income of households by agricultural production through technology transfer, using training, demonstration plots, motivational tour and distribution of input support.

Farmers training on fruits and vegetables: Homestead Agriculture and Value Chain Development program provided training of 13,520 beneficiaries up to December 2017. All trained farmers received inputs (seeds, saplings, fertilizer, etc.) through PNGOs.

Demonstration plots: During the reporting period 280 farmers received orientation and high value crop demonstration and in total 7,824 demonstration plots were established (1,600 mixed fruits orchards and mango orchard, 6,224 farmers received vegetable seeds/ mustard oil cake/ pheromone trap). 38,940 Saplings of different fruits were distributed up to December 2017.

Demonstration plots (IPM): During the reporting period 60 farmers received orientation on integrated pest management (organic agriculture) for crop production and established demonstration plots, in total 121; all 121 farmers received vegetable seeds/ mustard oil cake/ vermin compost/organic pesticide and fertilizer preparation technology/ pheromone trap etc.

Vermi compost: Vermi composting is an important technology for converting organic waste into nutrient rich compost by earthworms without compromising the population of beneficial bacteria which has a favourable effect on soil properties and other processes. Vermi compost is one of the highest-grade and most nutrient-rich natural fertilizers in the world. Its soil conditioning properties and plant-strengthening effect encourage the growth and yield of the plants. To encourage organic farming, reduce cost of production and improve soil health condition, 308 Vermi compost plants were established during the reporting period and 1,487 up to December 2017.

Impact of Vermicompost

- Farmers experienced faster rate of seed germination and rapid growth of seedlings and they are getting better production using Vermi compost
- Water holding capacity improves when Vermi compost is used repeatedly in crop fields.
- Use of Vermi compost significantly reduces growth of weeds (nearly 50%).
- Less attack of pests and diseases due to use of Vermi compost.
- Farmers are getting more production than before due to use of Vermi compost.
- Use of Vermicompost reduces salinity and this is very important for the soil in coastal chars.
- Enhanced fruiting period.
- Storage ability for fruits and vegetables becomes 6 to 8 days more than with inorganic fertilizer,

Motivation tours and field day

The concept of motivational tour is the one of sharing new technologies and introducing best practices of crops in respect of technology, yield and other practices. 47 motivation tours of farmers were organized up to December 2017. In the reporting period 3 (three) Field days were organized and total 270, with the aim to make farmers more knowledgeable and introduce new varieties to produce more fruits and vegetables.

Active nurseries: 125 Nurseries were developed in the project area of which 110 are actively involved with sapling production. In the reporting period 25,010 saplings were produced and 18,04,783 in total. In the reporting period 294,030 saplings were sold worth Tk.1,370,580 and so far 1,307,935 saplings sold worth Tk.10,079,221.

Collection Point Management Committees (CPMC): 11 CPMCs were formed earlier. In the reporting period 18 meetings were held with all committees and 63 up to December 2017. Each group consists of 11 members from 40 growers and 10 market actors, so in total 440 growers and 110 market actors are actively cooperating in the project area. They were trained on pre-season vegetable production and selling planning.

Rain water harvesting schemes: In the coastal area Rabi season crop production is very difficult because of major constraints such as i) scarcity of water, ii) drought, iii) soil salinity and iv) low water retention capacity of the soil. The Homestead Agriculture and Value Chain Development component has established 44 rain water harvesting schemes on a pilot basis for dry season irrigation. Each scheme covers 50 to 100 decimals (0.2-0.4 ha) of land (depending on capacity) for drip irrigation of pit crop vegetables in Rabi season and early cultivation of e.g. cucumber in Kharif 1 season.

Organic Fertilizer: For soil health development and to reduce salinity, organic agriculture is introduced for homesteads by the value chain development component in the CDSP-IV area. In the reporting period 980 farmers produced organic fertilizer and total amount of organic fertilizer was 36.659 ton.

Eye budding: For the extension of improved variety of jujube, 193 farm families received eye budding technology in the reporting period.

Outcome of the Homestead Agriculture and Value Chain Development program

After receiving training on cultivation of homestead vegetables and fruits, the project beneficiaries and farmers are now producing a huge quantity of vegetables for their family consumption and for selling in the retail and wholesale markets. A few production figures in the reporting period: Country bean seed 3,015 ton, country bean 5,312 ton, cucumber 5,535 ton, bitter gourd 3,112 ton, sweet gourd 2,912 ton, yard long bean 3,919 ton, tomato 500 ton, snake gourd 3,090 ton, ridge gourd 2,013 ton, okra 1,712 ton and chilli 1,102 ton. In total 32,222 tons of product have been sold in local, neighbouring districts and in Dhaka / Comilla/ Chittagong through value chain whole sale markets. Women farmers are earning income from plant nurseries, established by them with the use of microcredit from PNGOs. They are investing their profit in secondary income generating activities like paddy thresher, 'Nosimon' local carriers and poultry farms. They are benefiting from a higher level of income and enjoying better livelihood in their families than before joining CDSP-IV. Project area beneficiaries are using Vermi compost in their fields. Some farmers are earning money by selling the Vermi compost and worms in the project area

Poultry and Livestock

CDSP IV started the Poultry and Livestock component in the project area in October 2014. Due to lack of service from government and non-government organizations, beneficiaries were demanding support from CDSP IV.

Poultry and Livestock rearing is one of the important sources of livelihood for the settlers/ farmers in the project area. Livestock is a crucial part of household's economy as a source of food and of financial and social security, while backyard rearing of poultry (chickens, ducks and pigeons) is an important source of subsistence. The average number of birds for each household is 10 chickens and 5 ducks (baseline survey, 2014). In case of livestock and poultry, productivity was affected by high levels of mortality, especially in chicken and ducks. Typically, 50-70% of each clutch of baby chicks/ducklings was lost by disease (probably Newcastle/Ranikhet disease and duck plague) due to lack of vaccination service. CDSP IV is now implementing the poultry and livestock program to reduce the poultry and livestock mortality and to increase the income of households by rearing poultry and livestock with proper management and care. During the reporting period the program activities were as follows.

Meetings with group members: The poultry and livestock coordinators (total 6 persons, one person for two branches) are conducting meetings with NGO group members. The purpose of the meetings is to make people aware through discussion about improved rearing system, veterinary health care and other technical issues related to poultry and livestock. The meetings are held after the end of the credit group meeting. In the reporting period 378 and in total 2,401 group meetings were held up to December, 2017.



Poultry Worker Refreshers training: In the reporting period 60 Poultry workers received one day refreshers training in the PNGO branch offices.

Fodder Cultivation and Management Training: A total of 220 selected beneficiaries received training on saline tolerant fodder cultivation and management techniques to reduce shortage of quality green grass for livestock during dry and rainy season in the project area. Each trainee received grass seeds and fertilizer as input support from the project. A total of 12 demonstration fodder plots were established during reporting period.

Poultry Vaccination Program:

To improve productivity and reducing poultry mortality CDSP IV started a poultry vaccination program from May 2015, which is implemented by PNGOs. During the reporting period 509 poultry vaccination programs were conducted and in total 3,699. In the reporting period and in total 4,15,742 poultry (both chickens and ducks) were vaccinated. 51,695 Poultry were given vaccine for the first time, which indicates newly generated poultry flock in the project area. The total use of vaccine is 81%, which indicates the satisfactory use of vaccine. The following table shows the PNGO wise poultry vaccination status.

Table 4-8 Poultry vaccination status in CDSP IV areas

PNGO	Poultry vaccination Programs	Used vaccine dose / bird	Vaccinated poultry	Vaccination (%)	Total 1 st time vaccinated poultry
BRAC	207	27000	19150	70	18533
SSUS	216	43200	37253	86	17969
DUS	238	23400	22391	95	12740
SDI	21	3200	2454	75	2453
Total	682	96800	81219	81	51695

Para-vet selection and training: To decrease prevalence of common diseases, ensure vaccination and veterinary care for livestock in the project area, 12 persons (1 person per branch) were selected for a Para-Vet development training program. The technical part of this training program was conducted by resource persons from the Department of Livestock Services, Bangladesh Livestock Research Institute (BLRI), and from the District Artificial Insemination Centre. After 15 days residential training participants were awarded a certificate on primary treatment and vaccination of livestock, authorized by District Livestock Officer, Noakhali. Para-vets also received a surgical bag as input.

Livestock Vaccination and Treatment: During the reporting period 11 livestock vaccination programs were conducted in the project area and 452 up to December, 2017. In the reporting period 4,926 livestock (cattle and buffalo) were vaccinated and in total 41,540. 8,619 livestock were given primary treatment and 26,933 up to December, 2017.

Special trial program on Sonali crossbreed poultry rearing

A special pilot program was undertaken on Sonali cross breed poultry rearing in semi intensive system in CDSP IV area to 30 families in three PNGO branches in Char Nangulia. The average flock size of Sonali chicken is between 20-15 birds per family. The Sonali is a cross-breed of Rhode Island Red (RIR) cocks and Fayoumi hens and has a similar phenotypic appearance to that of local chickens. Sonali birds are well adapted to the country's environmental conditions so require less care and attention than other breeds, making them easier for women and children to rear. In project area the Sonali birds are kept in a semi intensive system house with netting and a small shelter made by wooden boards or bamboo and corrugated iron (tin). The semi intensive Sonali birds are fed homemade unbranded feed made by local

ingredients like broken maize, rice polish, soybean, broken rice, broken lentils, dried fish etc. Green vegetable waste or kitchen waste also supplied with fresh drinking water. All birds are getting vaccination and others veterinary support from PNGOs branches as well as from project.

Technical support to beneficiaries: During the reporting period, poultry and livestock coordinators have provided technical and management support to 154 cattle rearers, 119 goat rearers, 134 homestead poultry rearers and 66 beef fatteners and in total 1568, 840, 1529 and 622 respectively.

Outcome of the poultry and livestock program

Due to implementation of the poultry and livestock program in CDSP IV, project area people have become more aware about improved rearing system of poultry and livestock, and about vaccination and treatment of animal diseases. About 75% of the HHs now has access to poultry and livestock vaccination and treatment service. The increasing number of treated livestock indicates easy access. Due to the vaccination program for poultry and livestock reduced poultry mortality and prevalence of common diseases of poultry and livestock is visible in the project area.

Beneficiaries are getting necessary technical support and veterinary care for their poultry and livestock from skilled persons (Poultry Workers and Para-vets). The number of poultry and livestock is increasing day by day. People's income from the sector is increasing and they can invest additional income in production, family expenses and education for their children. In addition, there is creation of livestock based employment opportunity and improved family nutrition through increased consumption of milk, meat and eggs.

A linkage has been established between Para-vets and DLS which helps them to become more technically sound. Para vets are also involved with veterinary medicine business with small dispensaries in local bazaars which ensure quality products in char areas and it gives them Tk. 6,000 to 10,000 monthly income from primary treatment and medicine business.

Case study: Economically empowered by para vet profession (Monthly income tk.25000-30000)

Name: Emran Hossain, **Age:** 45 years, **Education:** HSC , **Village:** South Azimpur, Noler Char

About 12 years ago, I came here due to river erosion and started living with family at Noler Char. There was no other veterinary doctor or quack practitioner in this char. Treatment of sick livestock was very costly for char dwellers. Sometimes sick animals died due lack of proper treatment and people faced economical losses.

From December, 2015 I started in full strength and shared my services and vaccination facilities for livestock in different MF group meetings of SSUS with the help of the coordinator. Within one month my business was spread widely enough and I got a good response from char dwellers. I have access to use the solar refrigerator for vaccine preservation. At present I have treated and vaccinated 65 rabies infected cases and performed several vaccination campaigns for livestock in the area. I got a loan of Tk.30, 000 from SSUS for my vet medicine business expansion and I got a profit of Tk.50, 000 within 6 months. Again, I invested the profit into the business and in December, 2016 from my profit I bought one acre of land. From CDSP-IV I already received the khatian of my previously occupied land. At present I have built a nice house for my family. In 2017 I bought a motorcycle to ensure vet treatment in far places from my local areas. Now my monthly income is Tk 25,000-30,000. I am very grateful to the CDSP-IV project and always listen to technical advices from them. In future I have plan to start a large dairy farm in the place beside my house.

Fisheries

Similar to the Poultry and Livestock Component, CDSP IV started the fisheries component in the project area in October 2014. The following activities were performed in the reporting period and up to December 2017.

Staff Training: TA team has provided 5 days training to the 6 Fisheries Coordinators (FC) on basic fish culture, feed and pond management. In addition, one day refresher on fish culture management was held with 6 FC. The objective of refresher was to review the knowledge gained in the training and at the same time to share modern knowledge and technology on fish culture.

Pond Selection: After completion of the baseline survey, NSS and NGO Coordinators of fisheries selected 18,189 ponds (perennial 6,256 and seasonal 11,933), which cover 186,379 decimals (755 ha) of water bodies for fish culture in CDSP IV areas.

Training on fish culture management of perennial ponds: The objective of training was to develop the knowledge and at the same time to share modern technology on fish culture management with the annual fish farmers. A total of 4,418 beneficiaries were trained on fish farming.

Training on fish culture management of seasonal ponds: The aim of the training was to develop the knowledge and to share modern technology on fish culture management with the seasonal pond fish farmers. 1,022 Seasonal pond owner beneficiaries were trained on fish farming.

Training on fingerling production management: To develop the capacity of the fish nurserers and to acquaint them with modern farming technology and management, a 3 day long training was organized by the TA team on nursery management, quality fingerlings production and management were the main objectives of the training. The training was facilitated by the NSS (fish). In total 150 farmers were given training. The trained persons are enriched in operation in the field and producing good quality of fingerlings.

Meetings with group members and HH visit by FC: The six FC were conducting meetings with NGO group members with the support of NSS (Fishery). The purpose of the meetings is to make people aware about improved fish culture technology and other technical issues related to fisheries. The meetings were held after the end of the credit group meeting. In the reporting period 346 group meetings were held and in total 3,120. 1,804 HHs were visited by the FC and in total 10,086 up to December 2017.

Spawn collection, Fingerling production and release: Five Newly trained nurserers have collected 5.6.0Kg fish spawn (Rui, Katla, Silver carp, Bighead, Mrigle, Kalibous, Sarputi and Grass carp) from Rajlaxmi fish hatchery of Rajganj of Begumganj Upazilla, Noakhali and released these into the prepared 5 nursery ponds. So far 133 nurserers released 110.4 kg of spawn in 133 nursery ponds. 75% Cost of the spawn was given as an input support from the project and remaining 25% was borne by the nurserer. In all the nursery ponds together approximately 60 lac fingerlings will be produced. In the reporting period 3,74,470 fingerlings were sold by 133 nurserers to 6,550 annual and seasonal fish farmers in the project area; in total 35,91,672 fingerlings were sold (total price was Tk.53,31,460) up to December 2017. Now the nurserers' income increased from Tk.15,000 to Tk.80,000 per season.

Demo fish farmers training, input distribution and fish production: The training was conducted to develop the knowledge and share modern technology on fish culture management. 2 days training were held at the branch areas to establish model fish farmers and extend modern technology among the surrounding area traditional fish farmers.

Outcomes

Total 1,080 model fish farmers were trained on fish farming. The trained farmers have received 7,41,800 fingerlings from 133 nursery farmers, 28.15 MT fish feed and 18,00,000 mono sex tilapia up to December 2017 as an input support from the project. Total 245.61 MT fish was produced by 1080 demo fish farmers, the total price was Tk

28.3m and they have also produced 148.6MT tilapia and total price was Tk 14.8,m up to December 2017. Demo farmer's income range was Tk 15,000 to Tk.36, 000 each

Case study: Mrs Rezia Begum (35), Salim bazaar, Char Nangulia.

She was an inhabitant in Hatiya Upazilla of Noakhali district. Due to river erosion, they migrated to Char Nangulia in 2012 and she received 3 days training on "Fish nursery". After obtaining the training she has established a fish nursery in their 15 decimal ponds with a loan amounting to Tk.30,000. Then, she released 600 gm spawn in her ponds as an input with the project support as well as technical support.

The production cost was (spawn, lime, fertilizer and feed etc.) Tk.6,100 and she sold 37,500 fingerlings among the model fish farmers and others. She earned a total of Tk.60, 500 from her nursery pond after meeting family needs. Now she is continuing her business of production of fingerlings and selling to the fish. She has decided to extend her nursery pond area in future; now her socio-economic condition is very well and she is getting empowerment in her family as well as socially.

Legal and Human Rights

The main objective of this sub-component is to provide group members access to information about law, disseminating the law through legal literacy classes, raising awareness about legal rights, and empowering the poor, especially women, both legally and socially by encouraging them to take legal action.

Meetings with group members: The LHR coordinators are conducting meetings with NGO group members. The purpose of the meetings is to make the people aware on LHR and social issues. The meeting is held after the credit group meeting. In the reporting period 1,285 follow up meetings with NGO group members were held and 9,878 up to December 2017.

International Women Day observation: To make the project area people aware on Legal and Human Rights, International Women's Day was observed in all branches of PNGOs. A rally and a discussion meeting were held on that day. People from all walks of society attended the occasions. 6 events were observed in all branches in the reporting period and 70 events up to December 2017.

Child Rights Day observation: To make the project area people aware on rights of children, Child Rights Day were observed in all branches of PNGOs. Normally a rally and a discussion meeting were held on that day. People from all walks of society attend the occasions. Huge events Child Rights day were observed and 62 events up to reporting period December 2017.

Human Rights Day observation: To make the project area people aware on Human Rights, Human Rights Day was observed in all branches of PNGOs. Normally a rally and a discussion meeting are held on that day. People from all walks of society attend the occasions. Formal event was not held on Human Rights Day and 62 events observed up to December 2017.

Orientation meetings with local social leaders: An orientation meeting for local stakeholders such as Union Parishad members, Imams, marriage registers and other influential people in the community is annually organized to disseminate information on human rights and legal issues and to constructively engage them to minimize unlawful activities in the society and develop a sustainable society. The orientation is provided to them in the branch office. After the orientation an action plan is prepared and follow up is given by the LHR coordinators of the component. In total 1,575 persons received orientation up to December 2017.

Training of beneficiaries on legal and human rights: To raise mass awareness among the PNGO group members is one of the objectives of the LHR program. The program adopted various activities to perform the same. One of them is training of selective beneficiaries. 20% of the beneficiaries received training on legal and human rights on seven basic laws these are; 1) Muslim family marriage law, 2) Hindu Family marriage law, 3) Muslim Inheritance Law 4) Hindu Inheritance law 5) Land law 6) Criminal law 7) Bangladesh constitution law. This 20 % is the member of the group management committee, they act as law implementation committee, disseminating the message and taking action against any violation of human rights. Up to the period 5,174 selected beneficiaries received training by 207 events from PNGOs to December 2017.

Legal courses for beneficiaries: Courses on LHR are conducted by the LHR promoters in each and every group in the project. The duration of the course is 22 days. Up to the reporting period 533 courses for 13,173 beneficiaries were conducted. For completing each course, the LHR promoter receives Tk.2,000 (Tk.1,500 from the project and Tk. 500 from beneficiary contribution, course participants contribute Tk. 20 each for the course).

Law Implementation Committee (LIC) meeting: After completion of each course of LHR in the group, a law Implementation Committee is formed comprising 9 members, headed by the best performer in the LHR course. The committee makes linkage with all local level institutions including Union Parishad and assists to implement the program, disseminate and collect information regarding early marriage, dowry, divorce etc. in the Samaj. Each committee conducts a meeting once in a month and discusses about the progress and up dated information of social issues. In the reporting period 35 and in total of 4,536 meetings was held and 1,229 LIC committee meetings were followed-up to December 2017. Soon after hearing information on an event the committee members try to solve the problem with the local people. Thus, for example, they are prohibiting early marriages in the project area. LICs stopped early marriages in the reporting period and 93 were prohibited up to December 2017.

Marriage registration: The rate of marriage registration in the project area was very low compared to the mainland. People in the area are not well aware of the need to perform this. In our LHR program special emphasis is given to registration of marriages. The staffs of the program collect the information and undertake necessary measures in this regard. It is observed that the rate of marriage registration is

increasing gradually. In the reporting period 32 marriages were registered including few dues of previous period. Up to December 2017, 3,336 out of 3,296 were registered in Kazi (marriage registrar) office.

Outcome of the Legal and Human Rights Activities

After successful implementation of the activities under the LHR sub-component of the SLS component, child marriage, and multiple marriages reduced 65%, Marriage registration was ensured at 95%, dowry and illegal divorce rates have reduced significantly compared to the pre-project status. PNGOs sustain continuous follow up of LHR activities in their scheduled group work and 91% of LIC committees are active in Legal and Human Rights sub-component, so sustainability can be ensured.

Recommendations:

1. Ensure that all cases of violence against women are dealt with by formal judicial mechanisms so that victims can access effective remedies.
2. Take effective measures to ensure that the right of the victim to speak to female is respected.
3. Take effective measures to ensure the fast and efficient management of all cases.
4. Develop mechanisms to ensure a holistic, coordinated and sustained response to violence against women in order to apprehend, prosecute and convict offenders.

Disaster Management and Climate Change

To enhance the implementation process and to involve the Union Disaster Management Committees (UDMC), meetings are organized by PNGO's Disaster Coordinators with committees and other (e.g. Red Crescent) stakeholders. The discussion topics of the meetings were various disaster issues and finding ways to build cooperation with each other and on how to coordinate activities. To strengthen the activities of union disaster committees, auxiliary disaster management committees were formed in the branches. These auxiliary disaster management committees hold meeting in presence of Red Crescent members, UDMCs to make a formal relation with the Union Disaster Management Committee and other stakeholders. Action plans were prepared on issues discussed in the meeting and follow up is given by coordinators. In the reporting period 144 follow up meetings were held up to December 2017. To make the group members aware about disaster preparedness and mitigation, the staff of the subcomponent is conducting meetings with group members. Gradually meetings were held in all groups. 102 Meetings were held and 7,608 meetings up to December'2017

Training on disaster preparedness to selective group members: To raise mass awareness in the project area, selected group members are trained on disaster mitigation and preparedness. The trained members disseminate the issues to the other people in the community. In the reporting period 1,449 beneficiaries attended the refresher training and 3,397 up to December 2017.

House strengthening and plinth rising: This program is implemented on pilot basis. The objective is to strengthen and raise the platform of a few houses, so that it survives during flooding and tidal surge and that people will observe the activity and replicate it for their own house. This activity is targeting mainly on Caring Char. No houses were strengthened and no plinths rose in the reporting period, 417 of both up to December 2017.

Training on improved cooking system: To mitigate the crisis of fuel wood and to protect the house and environment from pollution, this activity is implemented in the whole project area. Project provided training to 260 (F-240, M-20) persons on improved cooking systems and is continuing campaigning and motivation to increase the number of users gradually. Up to December'2017 in total 6,015 cooking systems were established in all NGO branches so far.

International Environment day and National Disaster preparedness Day observation: In order to raise awareness among the people, on the fixed days these days are observed. People from the community, teachers, students, leader of different local level institutions and local elites are participating in the occasions. A rally and a discussion meeting are held and materials and saplings distributed to mark the days. 62 and 64 events respectively were observed up to December 2017.

Bill board preparation: To disseminate and easily understand the message on Disaster Management and Climate Change, Bill boards are prepared and put in places where many people are moving and watching. 13 such billboards were prepared up to December 2017.

Signal flag: To provide community early warning of disaster, in each branch 3 locations were selected with the management committees, where flags and other materials were supplied and stored. At 117 locations flags and other materials were supplied so far.

Hand mike distribution: At the time of disaster the concerned coordinators have to disseminate the message of disaster to take precautionary measures. 12 Hand mikes for danger signal broadcasting were distributed to announce the signals and request the people to go to cyclone shelter or safe place during the disaster period.

Outcome of the Activities of Disaster management: Thanks to the trainings, refreshers and group meeting on the issue all household in the project are aware about disaster preparedness and the signs of disaster signalling. In all areas Union Disaster Management Committees are active during the pre and post disaster periods. Already 25% of the project HHs is using improved cooking system for their daily cooking purposes.

Major Activities	Outcomes
Capacity building of disaster responder	100% of disaster responder / professional capacity building at coastal community levels
Access to information dissemination before disaster	80% of improved access to precautionary information dissemination and data on disasters
Disaster preparedness and risk reduction	80% of inculcation of a culture of disaster preparedness and risk reduction at community level
Effective disaster communication network	90% of establishment of an effective disaster communication network to provide speedy information and decision making during a disaster

During the cyclonic storm “Roanu”, in May 2016, the volunteers of Union Disaster Management Committees actively participated in signal flag hoisting, miking the community about the danger level of signals and in mobilizing people to take shelter. As a result, about 6,500 people took shelter in the nearest project cyclone shelter and most of the people went to a safe place. During the cyclone “Mora” in May 2017, 32 cyclone shelters of the project areas were used and it was reported that about 7,100 peoples took shelter in these cyclone shelters. Thus, the trend of people’s mobility to cyclone shelters is gradually increasing.

Recommendations

1. Initiate establishment of Emergency Operation Centers and disaster/emergency communication for better coordinated and focused efforts at the local level for pre-disaster planning.
2. A comprehensive plan, preparing for the effects of climate change can be addressed by creating a pre-disaster plan and knowing how to implement it quickly and efficiently; this can save lives, time and resources.
3. Project should initiate an emergency disaster response fund.

Group Formation, Micro finance and Capacity Building

As of 31 December 2017, there were **22,869** women members in **1,045** NGO groups, with an average of 22 members per group. Assuming one member per household, 79% of the total of 29,000 households in the CDSP IV chars is currently participating in NGO group activities.

PNGOs are collecting savings from the enrolled members on a weekly basis in the group meeting. Tk.**2.7** million was collected loan during the reporting period (July 2017 to December 2017) and Tk.**1.6** million refunded. The total balances in savings accounts with the PNGOs Tk.111 million. Average savings per member is Tk.**4,209**.

PNGOs are disbursing loans as per beneficiaries’ choice and skill. During the period 5,998 loans were disbursed amounting to Tk.176 million, and in total 93,828 had been disbursed up to 31 December 2017, amounting to Tk.1.767 million among 28,239 borrowers (all of them received at least one loan from the project). The average loan size in the reporting period was Tk.**18,514**. Tk.259.9 million was outstanding in loans to 16,621 borrowers. Loan recovery is reported as being good: 98% with only 2% of outstanding loans being classified as being at risk. All four PNGOs are operationally self-sufficient, with a ratio of income to operational costs of 1.74:1. Three PNGOs (SSUS, DUS and SDI) that are using funds from PKSF are providing loans on different terms targeted at specific households. Of the total amount disbursed by these three PNGO, only 36% is regular micro-credit, with 24% being seasonal loans for farm activities, 22% being on advantageous terms for the poorest households (these loans are smaller in

size and so cover over a third of all current borrowers), 16% for development of larger micro-enterprises and 2% to take land on a mortgage.

Outcomes of the Microfinance Program

So far 22,101 group members have been trained on farm and non-farm IGA, which is 79% of the members. They have invested their microcredit loans in various income generating activities (see table below). The largest share (51%) has gone on livestock and poultry investment, followed by vegetables and crops with 45%. Compared with most micro-credit lending, the share for trading is relatively low, at only 4%. This shows how micro-credit has complemented the other activities of CDSP IV in developing the farm sector.

Purposes of loans disbursed by PNGOs

Purpose of loan	Total disbursed to December 2017	
	Tk. million	% of total
Poultry rearing	124.19	9%
Cow rearing	403.0	28%
Goat rearing	48.8	3.0%
Beef fattening	154.18	11.0%
Vegetable cultivation	320.0	23%
Agriculture (all crops)	192.16	14.0%
Fish Culture	112.0	8.0%
Motor Cycle/Rickshaw/Van purchase	34.88	2.0%
Trading enterprises	299.0	21.0%
Total	1,687.5	119.0%

4.6 Institutional development

4.6.1 Field level institutions

It has been demonstrated in many parts of the world that development initiatives are more effective for poverty reduction when all stakeholders, especially citizens and marginalized communities are actively involved in the planning, implementation and monitoring of development programs. Moreover, effective development calls for the “ownership” of processes of change by those who will embody them in the future. In most cases, external interventions have negative implications at local level because they often lead to a lack of ownership on the part of local communities. For avoiding such a situation in future CDSP IV is adopting a multi-dimensional approach which requires an institutional basis at community level in order to promote a participatory process as well to make the efforts sustainable. Moreover community-owned processes would only be transformative if they are driven and self-organized by internal forces and dynamics of changes. In order to promote such a process in the project areas six implementing agencies and four PNGOs, with support from the Technical Advisory team, are working for strengthening and capacity development of field level institutions (FLIs), established to involve local people in planning and implementation of project interventions such as infrastructure development for better water management, social forestry, agriculture extension and livelihood and in operation and maintenance after the project is completed. The institutions formed are Water Management Groups (WMG); Water Management Associations (WMA); Water Management Federation, Tube well User Groups (TUG); Farmer Forums (FF); Farmers Association (FA), Farmers Federation (Federation), Social Forestry Groups (SFG); Labor Contracting Societies (LCS) and Women Credit and Savings Groups. In **Annex 9** a complete overview of FLIs is presented.

The formation of WMO, and FO was completed as per project target. The formation of TUGs is already completed, remaining 95 additional DTWs in other chars, while formation of SFGs and LCS is on-going as these are to be formed on the basis of works to be implemented in the respective areas. For the status of the formation of the Social Forestry Groups please refer to paragraph 4.2.2, for Farmers Forums please refer to paragraph 4.5.1 and for the status of women credit and savings groups and TUGs by PNGOs, please refer to paragraph 4.5.2 above. In addition, the TA Team continued support to the WMOs in the CDSP-I, II & III areas.

Formation of Water Management Federation (WMF)

After discussion with the representatives of WMG and WMA of Char Nangulia, Noler char, Caring char and Boyer char and in accordance with the participatory water management rules 2014 it was decided to form a federation committee. Accordingly a 12 members Water Management Federation committee has been elected through secret voting on February 20, 2017 by the representatives of WMA members. Henceforth WMF will act as top body of the organization. An Orientation of WMF was held on 09.05.2017 and they are continuing liaison with all WMG and WMA to solve their drainage congestion problems including sluice operation.

Formation of Water Management Association (WMA)

WMA was formed in Noler Char and Caring Char in December 2015 having 40 members (Male 27 and Female 13) with 5 representatives from each of the 8 WMGs and met 3 times during time reporting period at Saddam bazaar CDSP IV site office. Average attendance in those meetings was 91%. A WMA was formed in Char Nangulia in February 2017 which has 44 members (Male 31 and Female 13) with 4 representatives from each of the 11 WMGs and met 5 times during time reporting period at CDSP site office Kaladur bazaar. Average attendance in those meetings was 69%.

In the WMA meeting they discussed issues such as: construction of a new sluice as DS-2 has been eroded by river; demand for compensation money for those affected by the retired embankment and DS-3 sluice connected embankment at Noler char; providing furniture for the WMG centres in order to organize meetings in those centres; river erosion threat to the area, water management problems, particularly removal of water logging; audit of WMGs due to non-availability of field officials from BWDB; increase of membership in all WMGs; adopting participatory water management rules 2014; land settlement issues; infrastructure development, e.g. excavation of khals, protective works required to stop the erosion, new earthen roads, construction of new cyclone shelter in Char Laxmi area as there is no cyclone shelter, construction of additional pit latrines, reconstruction of the road from Solaiman Bazar to Haji Idris Bazar.

Formation of Water Management Groups (WMGs)

During this reporting period, the TA team continued the strengthening and capacity building related activities of WMGs, WMAs, and WMF in the 5 chars (in Char Nangulia -11 WMGs and 1 WMA, in Noler Char - 5 WMGs, in Caring Char - 3 WMGs and 1 WMA, in Urir char-3 WMGs and in Char Ziauddin – 2 WMGs). In Noler char 48, Caring Char 18, Char Ziauddin 11, Char Nangulia 64, and Urir char 16 meetings were held during the period. Average attendance in those meetings was 57% in Noler Char, 62% in Caring Char, 57% in Char Ziauddin, 61% in Char Nangulia and 69% in Urir char. It has been observed during meetings in Char Nangulia and Noler Char that river erosion, including the loss incurred by WMG centre construction and fish culture are demotivating beneficiaries to be members of WMOs.

WMG registration by BWDB

As per agreement between PCD, CDSP IV, and Chief Water Management of BWDB, 21 WMGs (11 in Char Nangulia, 5 in Noler Char, 2 in Char Ziauddin and 3 in Caring Char) were registered by the BWDB as per Participatory Water Management Rules 2014. Three reconstituted WMGs in Urir Char are under process of registration from BWDB. Registration of 10 WMGs in CDSP-III, 12 in area II and 2 in areas have been completed. The process for registration of WMGs in CDSP-III, II and I areas is progressing slowly due to the procedure laid down in the rules (it is mentioned in Participatory Water Management Rules 2014 that at least 55% of the water users within the proposed operational area need to be enrolled in WMG as members). Detailed discussion was held with BWDB to find out a workable option to find out an easy way. As there is no registration authority of BWDB available in Noakhali, so the WMO representatives have to travel to Feni to collect application forms and other documents required for registration. BWDB may develop some effective mechanism to expedite the registration process which will be less costly and less time consuming on the part of WMOs. The overall performances of WMOs are given below.

Construction of WMGs' office buildings

Construction of 11 Water Management office buildings was completed in Char Nangulia, 3 in Noler Char 2 in Char Ziauddin and 3 in Urir Char, in total 19 out of the target of 24, and 3 (Bathankhali, Shahebani and Caring khal) 80% work completed but the concerned groups have yet to get remaining RA bills, 2 WMG centres are under process. WMGs are now organizing their respective meetings in their offices on a regular basis. Due to want of budget for furniture in all the WMG, furniture could not be supplied. Maintaining of books, registers and formats by WMGs was closely monitored and guided by the concerned Project Area Coordinators (PAC) and Gender Field Coordinators (GFC) during this period too as their routine task. Monthly meetings were also facilitated by concerned PACs and GFCs.

Table 4 - 9 Status of WMOs in CDSP- IV areas (July-December 2017)

SL	Name of Char	FLIs: WMG	No. of Shamaj	No. of HHs	No. of members in WMG/ WMA			No of meetings held during the reporting period
					Male	Female	Total	
1	Char Ziauddin	2	13	2,180	39	40	79	11
2	Noler Char	5	28	7,020	104	73	177	30
3	Caring Char	3	22	3,742	43	35	78	18
4	Char Nangulia	11	83	13,837	251	199	450	64
5	Urir Char	3	21	2510	67	15	82	16
Total		24	167	29289	504	362	866	
Char Nangulia		1 WMA	83	13,837	31	13	44	5
Noler Char & Caring Char		1 WMA	50	10,762	27	13	40	3
Total		2	133	24,599	58	26	84	
		1 WMF	-		24	12	36	

The following impact was achieved by WMGs/ WMA/WMF during the reporting period July-December 2017:

1. South Katakhal khal-1 WMG resolved drainage problems by excavation/re-excavation of drainage khal in different area such as Belal bazaar Samaj and selim bazaar Shomaj (north side) in Char Nangulia area. As a result, farmers were able to cultivate a huge area of land. Location: Belal bazar somaj, Tubakathi somaj, Selim bazar somaj and 200 dag somaj.
2. South Katakhal khal-2 WMG resolved drainage problems by reexcavation/re-excavation of drainage khal in the different area such as Hemayetpur somaj under Char Nangulia. As a result, farmers of the area cultivated a huge amount of land and got more paddy production. For example, : Soyedpur somaj, Hemayetpur somaj, Bissow pur Shomaj and Alipur Shomaj.
3. In Urir Char drainage congestion is one of the main problems. During FY (2016-2017) four khals (10 km) were excavated in Urir char namely; forest khal/nursery khal, No. 03 khal, bazaar khal and Koirer khal, with the result that drainage congestion was resolved in the area and it was brought under cultivation. Farmers are happy now and their main concerned is re-excavation of more canals (at least 10 khals) to save more paddy crops in the area.
4. In Char Ziauddin drainage congestion was one of the main problems. During FY 2016-2017 seven khals (18.50 km) were re-excavated .As a result drainage congestion was solved in the areas and the local people are producing more Aman crops including HYV.

WMOs in CDSP III

10 WMGs and 1 WMA were established in the CDSP III area, i.e. in Boyer char. Ten WMGs have 411 members out of which 238 are male and 173 female. 6 male members have dropped out during this reporting period. The WMA has 40 members of which 25 are male and 15 female. The WMA organized two meetings during this reporting period and the average attendance was 70%. This initiative was taken to establish this WMF as per the procedure of Participatory Water Management Rules-2014. The ten WMGs organized 53 meetings during this reporting period. Male and female attendance in those meetings was 51% and 60% respectively, with the average attendance 55%. These WMGs have accumulated a capital of Tk 16, 56,100 as their savings and profits from economic activities undertaken by them.

The following activities were under taken by WMGs/ WMA/WMF during the reporting period:

1. WMGs continued their efforts in removing earthen cross dams and fishing traps, with the support of Local Government Institutions (LGIs). From their respective canals such as Gabtoli khal, the continued to remove water logged in the area. After removing cross dams and fishing traps, water was flowing easily and no water logging has happened.
2. WMGs repaired road and embankment from Chatla khal sluice to Hatiya khal brick field at Boyer Char and communication has been well restored.
3. WMA has been leading all operation, maintenance, social services and linkage and coordination with LGIs, other projects and implementing agencies independently in Boyer Char.

WMOs in CDSP II

In CDSP-II areas, 39 WMGs, 7 WMAs and 2 WMFs were established under CDSP-II. But due to lack of regular monitoring and supervision by the BWDB extension officials 17 were found inactive. However, with the support of TA team 6 meetings of WMG, CBD-1 was organized during the reporting period with average attendance of 50%.

Six WMGs in **Polder 59/3B**, Zillar, Momtaz, Karim, Gopal, Nobagram and Kolmi, organized 22 meetings in this period. It has been reported by the WMG committee members that they normally organize meetings whenever they feel necessary, like for the operation schedule of their sluice, repair of the embankment etc. The WMG representatives make liaison with BWDB and other implementing agencies whenever they feel necessary. The representatives suggested that if CDSP-IV can make some efforts to develop their capacities by providing formal training on group management and leadership development, book-keeping and account maintenance etc.; this would help them to continue their effective efforts in keeping their WMOs operational.

The community people in Zillar area raised the issue that the existing sluice is not in operation as one of the vents is completely damaged; they requested to repair the damaged sluice to help them in draining out the water during the rainy season. They also pointed out that a WMG centre is yet to be constructed in Zillar, Momtaz, Karim and Gopal. So they requested BWDB to take an initiative to construct a WMG office building in those areas, it will help them to organize their meetings on a regular basis and they can continue their WMO activities in a more effective way.

In Polder 59/3C-Bamni 11 WMG, 3 WMA and 1 WMF were established during CDSP-II period. During that phase only 3 WMAs were registered by Cooperative Department but no WMGs were registered at that time. Since the Participatory Water Management Rules-2014 are formulated by BWDB, the option was to register the WMGs first and then the WMA; the registration should be done by BWDB. So according to that procedure, previous registration of 3 WMAs has been cancelled by the cooperative department and 8 WMGs have already been registered by BWDB.

These 8 registered WMGs (Char Elahi, Char Lengta, Diarra Balua, Musapur Bagdara, Char Fakira, C.G.A, Sonadia and Jagdananda) have organized 42 meetings in total during this reporting period with an average attendance 70%. In those meetings they mainly discussed how to close the area which is now open due to wash out of the structure including the embankment in 2009. So, their main concern is to close the area to save their crops and livelihoods from the intrusion of saline water.

WMGs-Gangchil 3 WMGs operate smoothly the 12-vent regulator and met 17 times in the reporting period with average attendance 77%. A cross dam was constructed at the mouth of outfall channel in the post monsoon this year. They prepare a maintenance plan on a regular basis and all WMGs have already been registered by BWDB; one has been registered during the period.

In South Hatiya, 20 WMGs, 3 WMAs and 1 WMF were established during the CDSP-II period in accordance with the provision of Cooperative Rules but as Participatory Water Management Rules-2014 are approved by the Ministry of Water Resources, all these WMOs are abolished and three new WMGs have been organized following the PWMR-2014; they got registration from BWDB. 3 WMGs organized 17 meetings in this reporting period and the average attendance was 67%. The embankment, sluices and canals and cyclone shelters are in many cases are illegally occupied by local squatters, as was reported by local people and WMOs. WMOs are frequently demanding the maintenance of cyclone shelters, re-excavation of canals and maintenance of earthen and paved roads which were all constructed during CDSP-II. The WMOs continued savings collection and deposition in the bank account through meetings. The WMOs are very much in the position to involve themselves in O&M activities, which can help them in streamlining their organizational basis and also encourage the local people to be involved in WMO activities. As a follow-up they requested BWDB to allocate some O&M activities in their respective areas.

WMOs in CDSP I

Four WMGs were established in CDSP-I areas (Char Majid, Char Baggardona-II, Nobagram and Kolmi). The following activities were undertaken by these WMGs:

1. WMGs continued maintaining linkages with government agencies particularly with BWDB and LGED.
2. Yearly audits were not accomplished by WMGs, as no officials of the registration authority (in case BWDB) are currently available.
3. All WMGs reviewed O&M status and requirement in their areas and prepared a draft maintenance plan.

Issues discussed in the regular monthly meetings of WMGs are as follows:

Construction of a cross-dam between Urir Char and Noakhali is needed; land settlement of the people living in char areas needs to be formalized; construction of 4 more cyclone shelters in Urir Char, 02 cyclone shelters in Noler char and 02 cyclone shelters in Char Nangulia, and furniture of WMG centres of the concerned areas, land registration of WMGs shed, compensation for retired embankment, DS-1 (river site), compensation for WMG's shed at Caring char, improvement of law and order situation, solution of drainage congestion by excavating canals in different locations; more deep tube wells and pit latrine installation, are all considered necessary

The main issues raised by the local community during the interaction were: to take measure to stop the river bank erosion, removal of water logging from their respective areas by making the existing canals wider and more operative. The area of WMF could not be resolved through solving the boundary lines dispute between Hatiya and Ramgati.

Local people demand to include Urir Char as an operational area of forthcoming CDSP V.

- Local people are requesting to start land settlement and to take initiative to solve the court case of District boundary demarcation line.
- About 2 km. of homestead area in the south western part of the char has already been eroded by the river and the erosion is continuing. Local people requested to take measures in order to stop the erosion.
- Local people are demanding additional 40 km earthen roads in Urir Char.

Labour Contracting Societies (LCS)

A Labour Contracting Society (LCS) is a group of adult persons, male or female, having homogeneity in respect to gender, physical strength, skill and socio-economic status, who come from the households of landless laborers or share croppers and who depend on manual labour as their main source of income. The main objective of LCS is involving local people in construction work (see also the Inception Report). The number of members in an LCS depends on the nature of the works to be carried out within a given time frame. It is formally recognized that LCS can be considered as a D-class contractor and eventually work orders can be issued to LCSs without inviting any tenders. Moreover, implementing agencies will make efforts to provide training (mostly on-the-job) in order to develop participants' capacities. The main objectives of LCSs are to generate additional employment opportunities in the slack period (when employment opportunity is limited at local level, resulting in people migrating to other areas for their employment) and encourage female members to get involved in economic activities.

WMGs facilitate as affiliating institution the formation and mobilization of new LCS in all areas. The TA team set a target to form 93 LCSs in the jurisdiction of 24 WMGs and (10 WMGs at Boyer char). So that each WMG has to be able to ensure the required numbers of LCSs on the basis of works to be implemented in their areas. LCS can work in all activities related to earthen road construction / rehabilitation, canal re-excavation, all maintenance work including tree plantation, road carpeting, pipe casting, latrines production, culvert installation, market development and cyclone shelter compound development as independent male or female or as a mixed group. Char wise LCS information is stated given in the table above.

Agency wise LCSs

There are 64 LCSs for LGED work and 27 for DPHE work (latrine production). Respective implementing agencies are following their organizational guidelines as CDSP does not have its own guidelines. PMC through concerned XENs monitors directly the payment to LCS to smooth their payments. Gradually more LCSs are formed and 3 markets developed by LCS. The staff of implementing agencies still needs to be activated more for LCS purposes at field level. The TA team continued their efforts through one LCS Facilitator.

Table 4 - 10 Status of LCS July-December- 2017

SL	Name of Char	FLIs: LCS		Length of work	No. of members in LCS			Remarks
		Target	Achieved		Male	Female	Total	
1	Caring Char	11	11	3.5 km road Latrines -150 field devs -3	227	138	365	Male-5 Female-3 Mixed-3
2	Noler Char	25	25	4.26 km road; 1000 latrines; 1 market 2 field devs 2,268 m HBB road, (maintenance work 2,040m) 2400m maintenance work	478	148	626	Female-3 Male-15 Mixed-7
3	Char Nangulia	45	43	6.465 km road; 16.15km maintenance work 1,900 latrines; 1 market; 11 field developments 1000 m HBB road	611	278	889	Male-5 Female-7 Mixed-31
4	Char Ziauddin	4	4	1km road; 300 latrines.	71	9	80	Male-1 Mixed-3
5	Urir Char	2	2	1.2 km. road;	95	-	95	Male-2
6	Boyer Char	6	6	1 market 300 latrines	56	26	82	Male-3 Female-1 Mixed-2
Total		93	91	16.425 km road; 3650 latrines; 3 markets 13 field devs. 3,268m HBB road (18.55 km maintenance work.)	1538	599	2137	Male-32 Female-14 Mixed-46

Outcomes of Labour Contracting Society (LCS)

The statistics show that 2,137 LCS members (1,538 male and 599 female) received additional employment for 57,234 person-days so far in different infrastructure works initiated by CDSP IV. They received Tk. 1,88,62,241 as their wages from those works. These financial benefits encouraged them to start new additional economic activities (like cattle-rearing, garment selling, small trading etc, depending on the local conditions) in order to generate regular income round the year as the LCS works are not available round the year. This opportunity creates new avenues for male and female WMG representatives to develop linkages with the small/medium businessmen in Dhaka and Chittagong in order to ensure better prices for their commodities which are produced at local level. As these representatives become more advanced, they are now in the process of mobilizing the other members to invest their accumulated capital in feasible economic activities which will indeed provide additional employment as well as income.

It has been spelled out in the objectives of LCS that this program has two-fold objectives: to generate seasonal employment for the really deserving poor people and to create scope for womenfolk to get involved in economic activities, which will encourage them to interact with other social and economic forces at local level. It has been reported by the participants that they spent part of this amount for their survival and part of the amount they invested in other feasible income generating activities from which they will be able to receive regular income like low-cost garment selling, cattle rearing, fish culture and petty trading. It is visible in the locality that women are selling their products in the local markets. In many families, children are now going to school with a bright hope for their future.

It is now evident in the CDSP area that the involvement of poor people in economic activities is the most important means to accelerate the process of social and economic empowerment of the poor people in general and the women in particular. Empowerment is the scope and ability to influence decisions, so from that perspective it is now visible in the area, and a lot of women are playing a very important role in family decisions as well as at community level. It appears that most significant impact of LCS is to change the mind-set of the poor people realizing the fact that they can influence their livelihood.

Outcomes of the Institutional component of CDSP IV

The Field Level Institutions (FLI) established by CDSP IV are not the end result of this endeavour; rather these are considered as effective means to promote a sustainable development process in the local areas. It is demonstrated that these institutions are instrumental in providing government services in remote areas where these services were not visible in the past. These institutions are now in the process of developing linkages with other market/social forces including their respective local government institutions as they feel by now that all problems encountered by them cannot be addressed only by them. So they are developing partnerships with other social and economic forces in order to reduce their dependency, which is the basic objective of all development initiatives. Previous phases of CDSP have also established that these institutions are contributing significantly in managing O&M of infrastructure, market development and management, ensuring basic services provided by public agencies and resolving local conflicts. As many field level institutions have been formed within the project like WMOs, FFs, SFGs, TUGs and micro-credit groups organized by the partner NGOs it is now the time to develop some form of community based organization (CBOs) involving the representatives of all FLIs so that a broader outlook of these institutions can be covered which will help in activating these institutions for sustainability.

4.6.2 Local government institutions

During the reporting period the TA team continued informal discussions and interactions with the Upazila Chairmen, UP Chairmen and members concerned. Occasionally the UP Chairmen and members are participating in WMOs' meetings, whenever their involvement is required, although many WMO members have been elected as LGI representatives. A process has started to formalize the participation of LGI representatives in particular; WMA meetings and subsequently WMOs representatives have participated in UP coordination meetings to deal with local issues. Specifically, water management issues require wider participation to be resolved jointly and to promote a process for developing partnership at local level.

Challenges for sustainable WMOs

The institutional development process is implemented in all phases of CDSP without major constraint or interruption. At this point of CDSP IV, a few issues appear as challenges for the sustainability of the efforts made by the project.

- a) River erosion in the project areas
- b) Non-availability of Extension Overseer / AEO of BWDB

River erosion in the project areas

River erosion is the major challenge in some of the project areas (Char Nangulia and Caring Char) and poses a serious threat to all development initiatives including the community-based organizations such as WMOs, FOs, SFGs etc. promoted by the project. It is observed that some WMO members are not in a position to continue their involvement with the respective institutions as they have to migrate to other areas due to losing their homesteads by river erosion. On the other hand, river erosion is also affecting the trust of the local people in CDSP as they have the impression that CDSP is always with them but now they are observing that river erosion is not only washing out their property but also damaging the resources and infrastructure which have been built by CDSP. Hence the local people expect that CDSP should intervene in river erosion in order to save the huge resources and infrastructure developed by CDSP IV in the area.

Non-availability of BWDB Extension Officers

The project design of CDSP-IV requires the continuous input of BWDB Extension Officers for establishing, strengthening and capacity development of WMOs. Unfortunately, no extension officials have been available in the Noakhali Division since the beginning of 2016. Although TA team members are trying to support those WMOs, the TA team is not in a position to provide all the services required by them like arrangement of funds for conducting training courses, auditing of WMOs in accordance with the provision made in Participatory Water Management Rules-2014 and administrative system etc. Considering the CDSP IV period, these activities are very much required to develop capacities by BWDB, so that WMOs can continue as a vibrant organization after the life of CDSP IV.

One extension overseer was posted in Noakhali Division in September 2016, but he has to keep himself busy with other activities outside of CDSP IV as well and he is reportable to his superior at Feni. Subsequently he has been transferred elsewhere in September, 2017. So at present, all the approved posts of extension officials are lying vacant. As a result, the schedule of the approved WMO training program could not be undertaken. In the 58th PMC meeting held on November 18, 2017 the issue was discussed and it was decided to depute one officer from the Chief Water Management's Office to conduct the training but the officer is yet to be posted.

4.6.3 Gender Action Plan (GAP)

This part of the report aims to make an assessment of the progress of gender and social related activities in CDSP IV during the reporting period July-December, 2017 including the challenges and constraints encountered by women in the project area. Since gender inequality poses a major impediment to development, the project aims to mainstream gender issues and concerns and to create equal opportunities for women through active participation of men and women in all stages of the project through establishing various field level institutions. These attempts and the activities so far and the progress on social and gender aspects are furnished in table 4-11. For the purpose of encouraging participation of women in all Field Level Institutions; separate group meetings, and group discussions, individual contacts with women and mixed groups were organized as one of the effective strategies. The status of female membership and participation in meetings in the various FLIs is indicated below:

Table 4 - 11 Distribution of membership in WMOs their MC by gender

Name of Char	Name of FLI	No of FLI	Total members	No of females	Total in MC	No of females in MC	% of females	Remarks
Char Nangulia	WVG	11	450	199	132	56	42%	According to GPWM, the participation of women members in MC to be at least 30%
Noler Char	WVG	05	177	73	60	23	38%	
Char Ziauddin	WVG	02	79	40	24	9	38%	
Caring Char	WVG	03	78	35	36	12	33%	
Urir Char	WVG	03	82	15	36	11	31%	
Total		24	866	362	288	111	39%	

Name of Char	Name of FLI	No of FLI	Total members	No of females	Total in MC	No of females in MC	% of females	Remarks
Char Nangulia	WMA	01	44	13	12	4	33%	
Noler Char	WMA	01	40	13	12	4	33%	
Total		02	84	26	24	8	33%	

	WMF	01	36	24	12	4	33%	
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Participation of women in management committees, in leadership development and in group management increased overall and this is playing an important role in improving the position of women in society and minimizing social conflicts.

Farmers Forum

The women members of FF are becoming knowledgeable on technical know-how through receiving training, orientation, demonstration motivational tours in different districts and projects etc. Most of the women are engaged in homestead vegetable cultivation, fish culture and poultry and livestock rearing. In

absence of their husbands they are now able to perform excellently their own activities. They are involved in marketing of their own products in the local market. They are skilled in post-harvest technology, seed preservation, weeding and harvesting on a significant involvement. Their participation in this forum has helped women significantly in developing linkages with other social and economic forces, e.g. the outside traders which can ensure a fair price for the commodities they are producing at local level.

Table 4 – 12: Attendance of members in monthly meetings of WMOs by gender

Name of Char	Type of FLI	Number of FLIs	Number of meetings held	Attendance			% of female In WMG
				Male	Female	Total	
Char Nangulia	WMG	11	64	839	766	1605	44%
Noler char	WMG	05	30	350	255	605	59%
Char Ziauddin	WMG	02	11	119	130	249	51%
Caring Char	WMG	03	18	150	140	290	67%
Urir Char	WMG	03	16	269	61	330	18%
Char Nangulia	WMA	01	5	92	40	132	31%
Noler Char	WMA	01	3	100	45	145	87%
Total		26	143	1,864	1,255	3,092	42%

Table 4 - 13 Distribution of membership in FF by gender

Name of Chars	No. Of FFs	Male	Female	Total	% of female members	Comments
Char Nangulia	37	1,319	901	2,210	41%	According to the GAP, female membership in FF should be at least 33 %; present average is 42%.
Char Ziauddin	07	274	146	420	35%	
Noler Char	25	839	661	1,500	44%	
Caring Char	15	396	504	900	56%	
Urir Char	06	310	50	360	14%	
Total	90	3,138	2,262	5,400	42%	

Outcome of Involvement of women in Farmers Forum (FF)

The wives of male farmers in CDSP IV areas are considered as farmers and they are involved in many agricultural activities like homestead gardening, seed preservation, Vermi compost preparation and selling, including selling of their products in the local markets by themselves. This has created scope for the char women to get involved in production process as well as to interact with other market forces to sell and buy inputs and their own products. Virtually this situation allows the women to take decisions in order to make their investment operational and effective. In some cases, they discuss the issues with their family members, but still they have to take the decision themselves. So the whole process is contributing significantly in empowering these women socially and economically.

Social Forestry Group (SFG)

Women members' participation in SFGs and activities are given below. Women are involved in road side tree plantation, pit preparation, fencing, watcher, maintenance etc. Women are capable and getting benefits from social forestry activities. The table below provides their membership in the Management Committees (MCs) of SFGs.

Outcome of SFG from women’s perspective

Women are very involved in the social forestry activities like tree plantation, care taking of the planted trees and also maintenance of those trees. As beneficiaries of this program the women reached a contract agreement with the forest department and the concerned local government institutions, specifying that the women will receive 55% benefit of the return when the trees will be harvested. Involvement of women in any kind of economic activities allows them to interact with other social and economic forces of the community and this is creating the scope to claim their due share from the concerned economic activities and also encourages them to raise their voices against any discrimination in the society.

Table 4 -14 Distribution of membership in SFG by gender

Name of Char	No. of SFG	Male	Female	Total	% of female members	Comments
Char Nangulia	264	3648	2952	6600	45%	According to GAP, female membership in SFGs is Supposed to be at least 33%.
Noler Char	105	1429	1191	2620	45%	
Char Ziauddin	42	530	520	1050	50%	
Caring Char	57	900	525	1425	37%	
Urir char	99	1937	538	2475	22%	
Char Maksmul	14	177	173	350	49%	
Total	581	8621	5899	14520	41%	

Table 4 - 15 Distribution of membership in MC of SFGs by gender

Name of Char	No. of SFG	Male	Female	Total	%female in MC	
Char Nangulia	264	1309	1067	2376	45%	According to the guideline of SFG, female membership in the Managing Committee of SFGs should be at least 33% and is now 42%
Noler Char	105	553	392	945	41%	
Char Ziauddin	42	209	169	378	45%	
Caring Char	57	316	197	513	38%	
Urir char	92	596	295	891	33%	
Char Maksumul	14	67	59	126	47%	
Total	581	3050	2179	5229	42%	

Gender outcome: “IFAD Gender Award 2017”

CDSP IV has been awarded the “IFAD Gender Award 2017” among the IFAD portfolio of the Asia and Pacific region. On 29 November, 2017 the award has been given in a formal ceremony in IFAD headquarters in Rome. Md. Bazlul Karim, Deputy Team Leader (NGO and Livelihood) CDSP IV TA team received the award on behalf of the project. It’s an excellent recognition for the contribution to gender participation of the project, getting land allocated 50% to the wife in every household, and empowering her to possess an important family income resource..

Secure access to land for poor women and men living on newly accreted coastal islands is one of many benefits resulting from the project. About 11,800 families have gained land titles and further 2,200 are in the process of doing so.

Land titles are registered in the names of both wife and husband with equal ownership shares. The wife is named first on the title, which means that if she is widowed, divorced or abandoned the land belongs to her. The land titles are strengthening women's influence in the family and giving them a legal role in many decisions. Rates of child marriage have fallen- with 93 early marriages prevented during 2012-2016. And violence against women is also less common. Legal registration of marriage has increased.

Through project support to microcredit groups, women have access to credit and acquire machinery that reduces their manual labor, such as small irrigation pumps and rice threshers. They have taken training to improve skills in livestock and crop production and post-harvest technologies and in money making activities including tailoring. About 28,239 borrowers (2-5 times) have been provided with credit amounting Tk 1,687 million and their total balance of savings amounted to about Tk.111 million with a recovery rate of 98%. Access to water for domestic use has been vastly improved and the average distance to a safe water source has fallen from 382 to 55 meters, saving women time and energy. All households now have hygienic latrines. As farming in the project area becomes more productive and market oriented, men are less likely to migrate in search of work.

4.7 Knowledge Management

4.7.1 Monitoring and Evaluation

Comprehensive M&E and MIS systems are used in CDSP IV. These aim to:

- Generate information for impact monitoring at the project objective and goal level to measure the impact of the project against the log frame of the project.
- Generate information on project activities and outputs for project planning and management.

The M&E system consists of four elements:

- a. Activity monitoring
- b. Process monitoring
- c. Outcome monitoring and
- d. Impact monitoring.
- e.

In line with the annual work plan 2017-2018 the activities as shown in Table 4.1 were initiated/ completed in the reporting period July – December 2017:

Case Study on Impact of Vermicomposting

Organic¹ wastes returned to the soil can maintain, enhance soil quality, fertility and productivity. Vermicompost is a nutrient-rich fertilizer as well as a soil conditioner. It has been shown to increase plant growth and yield as well as suppressing key pests and diseases of horticultural plants in both the homestead and in field soils.

CDSP-IV is working in newly accreted unproductive char lands having high percentage of salinity. Homestead vegetable production by char dwellers is being promoting through the Social Livelihood Support Component (SLS) of CDSP-IV. In March 2014 Project introduced vermicomposting plants in its command area through its four partner NGOs-BRAC, Sagorika somaj Unnoyan Sangstha (SSUS), Deep Unnoyan sangstha (DUS) and Social Development Initiatives (SDI). Since then farmers have been being given practical demonstration on 'how to produce vermicompost through NGOs supported by CDSP-IV.

A total of 1487 set of vermicomposting plants have been distributed to 1487 farmers selected from 5 chars- Char Nangulia, Noler char, Char Ziauddin, caring char and Urir char. The cost of each set was about Tk. 1000. The distribution of 1487 sets by PNGOs were BRAC-717, SSUS-288, SDI-212 and DUS-270 sets. Farmers have well accepted the technology and are producing vermicompost using their available organic wastes.

¹ Anything that is alive or once was alive is "organic." All plants and animals, anything made from plants or animals, and any wastes generated by plants and animals are organic.

Table 4.16: Summary of ME Activities with Progress

Sl#	Activity/study/surveys	Sample and duration	Status on Progress	Remarks
1	Rapid survey of cyclone centre and disaster response 2017	31 Cyclone Shelter Start: 6 July 2017 End: 27 July 2017	Completed and report produced	
2	Assessment of water management groups	34 WMGs (CDSP I- IV) Start: 15 May 2017 End: 23 Jul 2017	Completed and report produced	
3	Assessment of Farmers Forums	90 FFs Start: 21 Aug 2017 End: 19 Sep 2017	Completed. Useful to add a few case studies including market actors	
4	Assessment of labour contracting society 2017	20 LCS and 160 members Start: 26 July 2017 End: 29 Aug 2017	Survey completed. Some follow up investigation / case study could be useful	
5	Assessment of outcomes and impacts of CDSP-IV on women	Start; 12 Oct 2017 End: 15 Nov 2017	Survey data collection completed. Data entry formats under preparation	MIS is preparing the format
6	Gender Impact Evaluation 2017	Gender consultant started work in December 2017	Consultant and Research Assistant completed their field work	Gender Consultant preparing draft report
7	Final and 6 th round of annual outcome survey 2017	600 HHs Start: 30 Oct 2017 End: 11 Dec 2017	Survey completed and data entry in progress	
8	Final impact evaluation survey 2017	1400 HHs Started December 2017	Data collection in progress and about 200 impact HHs covered	
9	Case study on impact of vermicomposting	Target 10 case studies Start: 14 Dec 2017 End: 31 Dec 2017	Completed. Draft report produced. Summary will be include in PR-14	
10	Other case study data	-	data for cap sewing-2, market actors-2, FF-2, traffic count-3	

Vermicomposting is an important technology of converting organic waste into nutrient rich compost by earthworms without compromising the population of beneficial bacteria through favourable effect on soil properties and other processes. Vermi compost is one of the highest-grade and most nutrient-rich natural fertilizer in the world. Its soil conditioning properties and plant-strengthening effects encourage the growth and yield of the plants.

Benefits in regards to plant nutrition and soil fertility

- Worm humus acts as an “appetizer” for plants, increasing their capacity to absorb water and nutrients
- Earthworm humus contains the essential nutrients of nitrogen (N 2-3%), phosphorus (P 1.5-2.25%) and potassium (K 1.85-2.25%) in much larger quantities than are present in the soil or in comparable compost.
- It improves soil health, can insulate plant roots temperature, control weeds, reduce soil salinity and erosion.
- It accelerates root zone
- Vermicompost protects plants against various pests and diseases,
- Low cost and sustainable technology for organic farming

Common organic wastes which are being used by farmers are cow dung, green leaves and weeds, vegetables like cabbage, carrots, beans, cucumbers, banana peelings, stems and leaves, pumpkins, Farmers did not use chicken, bones, fish scraps etc as they were demonstrated not to use such items in demonstration.

Distribution of Vermicomposting Plants by Other Organizations

In recent years couple of NGOs (DUS and Uttoran) are also distributing vermi compost plants with the assistance of other donor funds. For example, DUS has distributed to the farmers using financial assistance from the Kuwait Goodwill Fund for Promotion of Food Security in Islamic Countries (KGF). A total of 373 sets have been distributed by DUS to farmers of coastal chars and another 100 sets will be distributed in the year 2018. Uttoran has distributed 26 sets of vermi compost plants to 13 coastal char households. Farmers have also been investing in vermi compost production using their own resources and micro-credit, which is a good indicator of benefits and sustainability. Initially, farmers get only one vermi compost plant. Many farmers have purchased a 2nd or 3rd set themselves. Cow dung is the main raw material for vermi compost and farmers used to borrow micro-credit for cow rearing, thus having a better scope to go for vermi composting.

Contribution of Vermicomposting as a source of secondary HH income

The case studies done for this study reveal that vermi composting as a secondary source of farm income has a significant contribution to individual income of the households. Normally, vermi compost is sold at Tk. 10 per kg and worms Tk. 0.50 to Tk. 1.00 per piece. Major on-farm activities are a) crops, b) vegetables, c) fruits, d) plant nursery, e) cow rearing, f) goat rearing, g) poultry rearing, h) aquaculture and vermi compost. The table shows that contribution of vermi compost plays a vital role in household income. In the case of Saleha (case#3), vermicompost becomes 2nd source of income for the household and in the case of Nasima (case #2), it becomes the 3rd source of household income. This income is all from sale of vermi compost and worms, and the normal sale price is Tk. 10 per kg.

Table 17: Distribution of HH Income by Source and by Household

On-farm Activities	Case #1-Rokeya		Case #2- Nasima		Case #3-Saleha		Case #4-Halima	
	Total income (Tk.)	% share by farm income source	Total income (Tk.)	% share by farm income source	Total income (Tk.)	% share by farm income source	Total income (Tk.)	% share by farm income source
a. Crop	112500	37.3	25000	20.0	168000	64.1	150000	60.1
b. Vegetables	15000	5.0	5000	4.0	10000	3.8	5000	2.0
c. Fruits Watermelon	10000	3.3	20000	16.0	6000	2.3	10000	4.0
d. Plant Nursery	-	-	-	-	-	-	-	-
e. Cow rearing	140000	47.0	40000	32.0	20200	7.7	31000	13.0
f. Goat rearing	-	-	-	-	-	-	7500	3.0
g. Poultry rearing	12000	4.0	5000	4.0	10000	3.8	18000	6.9
h. Aquaculture	10000	3.3	10000	8.0	15000	5.7	20000	7.6
i. Vermicompost	2000	0.7	20000	16.0	33000	12.0	8000	3.1
Total Tk.	301500	100.0	125000	100.0	262200	100.0	249500	100.0

Outcome and impact of vermicompost from feedback by farmers under case study profiles

- Farmers experienced faster rate of seed germination and rapid growth of seedlings and they are getting better production use of vermi compost
- Water holding capacity improves when vermi compost is used repeatedly in crop field,
- Use of vermi compost significantly reduces growth of weeds (nearly 50%)
- Less attack of pests and diseases due to use vermi compost.
- Farmers getting 30% to 40% more production than before due to use of vermi compost.
- Use of vermi compost reduces salinity and this is very important for the soil in coastal char land where salinity is very high
- Taste of fruits and vegetables becomes better

- If vermi compost is used for fruits and vegetables then these can be stored for 6 to 8 days and in case of chemical fertilizer, produce can be stored for maximum 3-4 days.
- They get higher number of fruits per plant and in vegetable crops when using vermi compost

Conclusion and ways forward

Demonstration of vermi compost plants has been proved to be relevant and effective in the context of newly accreted unfertile coastal char land. Case studies reveal that vermicomposting plants have a significant contribution to household income of char dwellers. In a couple of cases it is found that income from vermi compost has become 2nd and 3rd source of household income.

The case study also reveals that cow dung is the main input for vermicomposting. Microfinance loans from NGOs support cow rearing as an important IGA. NGOs can encourage their borrowers for installation of vermi composting plants as profitable IGA. Cow rearing is now more feasible and safer than ever before as local para-vets, trained by CDSP-IV, are providing their services at cheaper rates.

Brief on Gender Impact study findings

Income and Well-being

As expected, all the 10 groups which participated in the Focus Group Discussions (FGDs) in 5 chars of CDSP IV reported increases in income. In all FGD and interviews, women mentioned that now no household in the group goes without food. They have income of their own from agricultural production, LCS work, tree caretaking, role as traditional birth attendant, poultry worker and nonfarm IGA such as hawker, tailor, improved cook stove maker, cap embroiderer, etc. besides income of their husband. They eat vegetables, eggs and small fish every day. They also reported that apart from three main meals they eat homemade and purchased snacks and are also enjoy different 'pitha (cake)' during winter. Nazma (Noler Char) and Shaheena (Nangulia) were busy making pitha when the study team visited them for interview.

Due to increase in income and improved road communication, women mentioned greater expenditure for food, clothes, children's education and health, including their own. They have access to doctors at local level - NGO static and mobile clinic, Upazilla level, and even at District level. A few women had been to Noakhali and Chittagong for treatment of their family members. This shows that they had an increased ability to respond to health problems. Improvements of well-being are reflected in house improvements; households who have received land title have mainly replaced thatch with corrugated sheet roofs and extended their houses.

CDSP IV installed one tube-well for 15 households. The availability of tube-wells has reduced women's workload and the reduction of the household workload has enabled women to spend more time in income-earning activities. Most of the households get firewood from their own trees and firewood purchase for household use is rare. All households now have hygienic latrines and have training on how to use them. This definitely would have beneficial effects on women's and child health which is also admitted by women's groups participating in FGDs, completely reversing the situation found during project formulation mission in 2010. Mission members met men at Champar Ghat in Noler char where Abdul Halim joined by several others stated that "Sanitation was a big problem – lack of water and non-availability of latrines, women could not take a bath for 4-5 days during the dry season and had numerous reproductive health problems."

In the detailed design document of CDSP IV (Working Paper 1) it is stated that, apart from one government primary school on Urir Char, there were no government schools on any of the five CDSP IV chars, and virtually no schools of any type on Caring char. There were also no NGO schools providing non-formal primary education. Now in 2017, on all chars cyclone shelters are used for schools and a few schools are established on public and private land also. In all the chars girls are going to primary school/madrassa. But due to lack of high schools, secondary education for boys and girls is at risk. During FGD, women asked for establishment of a high school in each char.

New Economic Activities

Through the project women have become involved in nursery development, homestead resource utilization, vegetable production, fish farming and fingerling production. Noor Jahan in Noler char is an example of successful nursery owners, of whom there are many in the project. Over the last two years the

project has introduced different vegetables and other crops which are new to the area. Poultry and duck rearing is another popular income generating activity for women. In almost all chars a good number of women are involved in this business at least on a small scale, backyard rearing that makes a small profit. In the second phase hybrid poultry rearing was initiated by the project. In all chars *Sonali* breed birds have been distributed to interested poultry farmers.

Marketing, Mobility and Household Decisions

Markets with daily necessary items are available in all chars. The study team visited three markets: Chanondi Bazaar, Bhumihin Bazaar and Thanar Haat. In Chanondi Bazaar there is a big fixed shop owned by a woman and in the other two markets, on a haat day, many women were there as buyers and as sellers.

Being leaders of the field level institutions (or even as ordinary members) takes women to places that they usually would not visit. Women took part in residential and non-residential training in Noakhali. Some members went to Feni and Comilla for training. WMG and other FLI members regularly go to their own office/ cyclone shelter/CDSP site offices for meetings. Cashiers of the WMG go to banks to deposit and withdraw money. A discussion also showed that women still do not have much of a role in major household decisions unless their husband is ill or it is a women-headed household. As compared to earlier (before CDSP), they are being consulted in major decisions, but in major matters the decision-maker is still understood to be the man, the head of the household.

4.7.2 Knowledge Management

CDSP IV is maintaining strong compliance with the Knowledge Management Strategy of IFAD. As part of this strategy CDSP IV has developed a good practice database using the good practice template. During the July – December 2017 reporting period several good practice cases have been identified and reported by CDSP IV staff members. These were:

- DTW Painting by Care Takers for Sustainable Use
- Feeding Children Nutritional Food
- DTW's platform maintenance by Caretaker Family

The International Fund for Agriculture Development (IFAD) has awarded the **IFAD Gender Award 2017** to Char Development and Settlement Project (CDSP), Phase-IV of Bangladesh which is being implemented in the south-eastern coastal belt. For picture of celebration and video refer to link: <https://cdsp.org.bd/ifad-gender-award-2017>.

Video on land titling: a video produced by IFAD on CDSP-IV land titling was presented on 26 November 2017 to visiting members of the IFAD Executive Board of Directors at the Pan Pacific Sonargaon hotel in Dhaka. The link for the video is: <https://cdsp.org.bd/bangladesh-land-of-our-own>

Updating CDSP Web Site: the CDSP-IV web site has been updated during July-Dec 2017 and includes an e-library for CDSP-I through IV project resources and a blog page.

Journalists visit CDSP-IV: A team of journalists from news and TV media visited CDSP-IV's working areas of Char Nangulia and Noler char in October 2017. The journalists were invited and the visit organized by IFAD's office in Dhaka. Following their visit, the journalists published the following articles in national dailies and on TV, reporting highlighting the project's outcomes and achievements:

Dhaka Tribune, 2 November 2017: Article title "From barren wasteland to green landscape"

<http://www.dhakatribune.com/bangladesh/development/2017/11/02/barren-wasteland-green-landscape/>

New Age, 15 January 2018: Article title "Women in coastal chars fight natural disasters on the ground"

<http://www.newagebd.net/article/27102/articlelist/323/ Cartoon>

Bonikbarta: Article title (in Bengali) "Nuton chare nuton jiban" (in English "In newly accreted char, new life")

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<http://bonikbarta.net/bangla/news/2017-12-15/141613/%E0%A6%A8%E0%A6%A4%E0%A7%81%E0%A6%A8-%E0%A6%9A%E0%A6%B0%E0%A7%87-%E0%A6%A8%E0%A6%A4%E0%A7%81%E0%A6%A8-%E0%A6%9C%E0%A7%80%E0%A6%AC%E0%A6%A8/>

Inter Press Service: Article title “Stopping Child marriage Forever”.
<http://www.ipsnews.net/2017/10/stopping-child-marriage-forever/>

Inter Press Service: Article title “Land Settlement Empowers: Bangladesh Sets an Example”
<http://www.ipsnews.net/2017/10/land-settlement-empowers-bangladesh-sets-example/>

Jago News 24 com: Article title (in Bengali) “Ek somoyer dhu-dhu baluchare dulchhe sabujer dheu”, (in English “Waves of green in the then coastal sandy char land”)
<https://www.jagonews24.com/special-reports/news/203851>

Jago News 24 com

Article title (in Bengali) “Chare obokathamo unnoyne bishal karmajaggo”, (in English “Huge infrastructural development in coastal char lands” <https://www.jagonews24.com/special-reports/news/203128>

Jago News 24 com: Article title (in Bengali) “Bangadesher ayoton”, (in English) “Areas of Bangladesh increasing day-by-day” <https://www.jagonews24.com/special-reports/news/202360>

Jamuna TV: TV reporting video (in Bengali) title “Upakule Charer Jiban” (in English “Life of char dwellers in newly accreted coastal chars”)
<https://www.facebook.com/cdsp.noa/videos/518831568450050/>

Jamuna TV: TV reporting video (in Bengali) title “Narira jekhane sampoder malik-berechhe narir morjada and onekangshe comechhe nirjaton” (in English “Where, women are owners of wealth, increased status of women and reduction of violence”)
<https://www.facebook.com/cdsp.noa/videos/520453684954505/>

Training

During the reporting period three new training courses on: i) fruit and vegetable cultivation, ii) DTW training to caretaker family and iii) demonstration on food processing and cooking system. Besides these, a couple of refresher training have been conducted. The details of the training activities including duration of training are presented in Annex 8.

Linkages of CDSP IV to other development efforts

The following events concerning linkages of CDSP IV to other development efforts are still active as and when necessary. The researchers of Bangladesh Jute Research Institute (BJRI) are continuing their research activities and demonstrations in Boyer Char and Caring Char on research for improved and salt resistant jute.

4.8 Project coordination

Five Project Management Committee (PMC) meetings, the 56th to 60th, were held during the reporting period, two in Noakhali and three in Dhaka. The meetings reviewed among others preparation of the IFAD Supervision Mission, agency wise progress, problems and bottlenecks, fund flow and management, reimbursement, social and livelihood progress by PNGOs, feasibility studies, trainings, DPP revisions, and maintenance in CDSP-I, II and III areas, as well as preparation for a possible CDSP V. Composition of the PMC is given in **Annex 5** of this report. The 5th and 6th meetings of the Inter-Ministerial Steering Committee took place on 12th July and 11th December 2017 respectively, in Dhaka. Project progress and future plans for CDSP were discussed extensively.

During the reporting period various discussions/ coordination meetings were held with EKN and IFAD. The IFAD Project Implementation Support Mission took place during 12th – 19th November. The Project presented its results and took part in meetings and seminars during the visit to Bangladesh of the IFAD Board during November.

Further Draft Concept Notes on a possible CDSP V and a possible Bridging Project were prepared by the Team Leader, team members and PCD and colleagues, discussed with IFAD and the EKN and circulated to all parties.

4.9 The governmental implementing agencies

CDSP IV is implemented by six implementing agencies: Bangladesh Water Development Board (BWDB), Local Government Engineering Department (LGED), Department of Public Health Engineering (DPHE), Ministry of Land (MoL), Department of Agricultural Extension (DAE) and the Forest Department (FD). For a description of their staffing for CDSP IV reference is made to the Inception Report paragraph 5.2.

4.10 The Technical Assistance team

In **Annex 6** the CDSP IV staffing at 31st December 2018 is presented, including the date of joining the project.

4.11 Reporting

During the reporting period the following CDSP IV reports were produced:

- CDSP IV Progress Report No 13, January – July, September 2017.
- CDSP IV Technical Report No 13, Household Impact Assessment Using the Five Capitals of Livelihood Approach, July 2017.

5. Project Finances

5.1 Introduction

For an overview of overall project achievements and financial progress and planning, expenditure – and component wise, please refer to **Annex 4**, which presents the IFAD format. Implementing agency wise achievements and financial progress and planning are presented in Annex 4 as well.

In line with the approved budget of AWPB 2016 – 2017, Withdrawal Applications No. 10A (for IFAD Loan) and 10B (for GoN Grant for Civil Works) were submitted to IFAD to account for expenditures incurred by the project during July 2016 to May 2017. The expenditures submitted for justification by IFAD were US\$ 3,671,595.92 against IFAD Loan and USD 449,380.21 against GoN Grant. These were duly accepted by IFAD. An advance of USD 5,282,167 against IFAD Loan and USD 622,669 for GoN Grant for civil works was also asked from IFAD against the same Withdrawal Applications and the payments received by the project in July and August, 2017 respectively against AWPB of 2016-2017 (balance 50% advance).

5.2 Project cost

Overall project cost are estimated at Tk. 5,833.98 Million (US\$ 83.34 Million) as per DPP which as per First Revision of DPPs (RDPP1) is Tk.6,120.15 Million (US\$ 81.70 Million) at an enhanced exchange rate of BDT 77 to US\$1 for first projection of project operation up to December 2016. Then there has been a second revision of DPPs (RDPP2) for the extended period of project operation upto December 2018. Total project cost as per RDPP2 (RDPP1 for only DAE component as it ended in December 2016) is US\$ Tk. 6,875.90 Million (US\$ 89.30 Million) at an exchange rate of BDT 77 to US\$ 1. The IFAD Loan remains the same at US\$ 47.35 Million as no additional funds were made available. GoN Grant increased with Euro 551,845 to cover the cost of the extended TA contract till 31 December 2018. Applying the exchange rate of BDT 77 the total GoN Grant amounts to US\$ 19.83 Million. There has been an increase in GoB cost from US\$ 13.71 Million to US\$ 15.66 Million mainly due to additional requirements for BWDB infrastructures and salary increase of government employees from July 2015. The contribution of the beneficiaries included in total project cost now is US\$ 7.17 Million which previously was US\$ 0.811 Million, because of more savings than originally expected by the beneficiaries, and some increase in the number of deep tube wells. It excludes the micro-credit provided by the NGOs.

The Project is financed by IFAD (53.02% of the total cost), the Government of the Netherlands (22.21%) and the Government of Bangladesh (17.55%) and by the contribution of the population in the project areas (7.22%). The detailed cost of the Project in Bangladeshi Taka and US Dollar for the original project period of six years up to December 2016 under the original DPPs is furnished in Annex 10 of the Inception Report. A Component wise summary of the total cost of the Project for the eight year period up to December 2018 under the second revised DPPs is presented in **Table 6 - 1** below.

Table 6 - 1 Cost component wise summary of project cost

No	Cost Components	Tk. Million	USD Million
01	Protection from Climate Change	2,382.01	30.95
02	Internal Infrastructure	2,715.72	35.27
03	Land Settlement and titling	76.91	0.99
04	Support to livelihood	381.25	4.95
05	TA and Management Support	823.12	10.69
06	Beneficiary Contribution	496.89	6.45
	Total	6,875.90	89.30

A summary of the total cost of the project and percentages of financing for the eight year period is presented in **Table 6 - 2** below.

Table 6 - 2 Project cost and percentages of financing

No	Financer	Tk Million	USD Million	Percentage
01	IFAD	3,646.27	47.35	53.02
02	GoN	1,527.14	19.83	22.21
03	GoB	1,205.60	15.67	17.55
04	Beneficiary Contribution	496.89	6.45	7.22
Total		6,875.90	89.30	100.00

The detailed Component wise Cost of the Project and the Financing Plan of the Project are shown in Annex 11 and 12 of the Inception Report respectively.

5.3 Annual Budget 2017 - 2018

The budget for the financial year of July 2017-June 2018 and the cumulative budget upto the same period are presented in **Table 6 - 3** below, the financing plan in **Table 6 - 4** below. The detailed, agency wise budget is presented in Annex A of Volume 2 Financial Tables of the Annual Work Plan and Budget 2017 - 2018.

Table 6 - 3 Budget 2017 – 2018 (Figures in Million)

Slab	Cost Components	Budget 2017 – 2018		Cumulative Budget up to 2017 – 2018	
		BDT.	US\$	BDT	US\$
01	Protection from Climate Change	514.86	6.68	2,489.92	39.01
02	Climate Resilient Infrastructure	358.60	4.66	2,754.07	35.77
03	Land Settlement and Titling	9.90	0.13	67.65	0.88
04	Support to livelihood	41.88	0.54	388.38	5.04
05	TA and Management Support	90.78	1.18	729.88	9.48
06	Beneficiary contribution	9.03	0.12	114.52	1.49
Total budget		1,025.06	13.31	6,544.42	84.99

Table 6 - 4 Budget Financing Plan 2017 – 2018 (Figures in Million)

Slab	Cost Components	Budget 2017 – 2018		Cumulative Budget up to 2017 – 2018	
		BDT.	US\$	BDT	US\$
01	IFAD	590.62	7.67	3,713.74	48.23
02	GoN	186.09	2.42	1,458.90	18.95
03	GoB	239.31	3.11	1,251.09	16.25
04	Beneficiary contribution	9.04	0.11	120.69	1.56
Total budget		1,025.06	13.31	6,544.42	84.99

Contribution of IFAD

Of the contribution from IFAD for the eight year project period of TK. 3,646.27 Million (US\$ 47.35 Million) a sum of TK 590.62 Million (US\$ 7.67 Million) was projected to be expended during the financial year 2017 – 2018 against which a sum of TK 177.27 Million (US\$ 2.30 Million) has been spent during the half year from July to December 2017.

Contribution of GoN

The contribution from the Government of the Netherlands for the eight year project period is TK.1,527.14 Million (US\$ 19.83.Million). A sum of TK 186.09 Million (US \$ 2.42 Million) was projected to be expended during the financial year 2017 – 2018 against which TK 81.70 Million (US\$ 1.06 Million) was spent during the half year July to December 2017.

Contribution of GoB

The contribution from the Government of Bangladesh for the eight year project period is TK. 1,205.60 Million (US\$ 15.67 Million). A sum of TK 239.31 Million (US\$ 3.11 Million) was projected to be expended during the financial year 2017 – 2018 against which TK 106.16 Million (US\$ 1.38 Million) was spent during the half year from July to December 2017.

Procurement Plan 2017 - 2018

Procurement of goods and services follow the Public Procurement Regulations (PPR) of 2008, provided they are consistent with IFAD Procurement Guidelines. During the financial year 2017 – 2018 procurement of works and goods will be made to the tune of TK. 291.85 Million (US \$3.79 Million). The component wise summary Procurement Plan is presented in Table 6 - 5 below.

Table 6 - 5 Summary Procurement Plan 2017 – 2018

Slab	Cost Components	Tk million	US\$ million
01	Protection from Climate Change	146.03	1.90
02	Internal Infrastructure	145.82	1.89
	Total Procurement Plan	291.85	3.79

The detailed Procurement Plan is presented in Annex B of Volume 2 Financial Tables of the Annual Work Plan and Budget 2017 - 2018.

5.4 Funds received from IFAD

US\$ 5.28 Million and US\$ 0.62 Million were received respectively against IFAD Loan and GoN Grant to the Safe Account during the period. These funds were requisitioned in withdrawal applications nos. 10A and 10B for balance 50% against Annual Work Plan and Budget 2016-17. The project received the IFAD Loan amount in July 2017 and the GoN Grant amount in August 2017.

Funds have been distributed among IAs during the reporting period as indicated in **Table 6 - 6** below.

Table 6 - 6 Status of IFAD Funds per Implementing Agency

Slab	Components	IA	Total AWPB for 2017 – 2018		Requisitioned for the year		Received against AWPB of 2016-2017		Authorized amount by MOF	Advanced BDT (Million)	Balance BDT (Million)
			BDT	US\$	BDT	US\$	BDT (Million)	US \$			
1	Protection from Climate Change										
A	Water Resources Management	BWDB	306.16	3.97	-	-	212.80	2.76	213.70	106.85	106.85
B	Social Forestry	FD	33.48	0.43	-	-	36.99	0.48	27.40	13.70	13.70
	Sub-Total		339.64	4.40	-	-	249.79	3.24	241.10	120.55	120.55
2	Internal Infrastructure										
A	Protection from climate change	LGED	219.68	2.85	-	-	131.97	1.72	244.80	122.40	122.40
B	Water and Sanitation	DPHE	29.10	0.38	-	-	20.85	0.27	44.50	20.00	24.50
	Sub-Total		248.78	3.23	-	-	152.82	1.99	289.30	142.40	146.90
3	Land Settlement and Titling	MoL	2.20	0.03	-	-	1.04	0.01	0.00	0.00	0.00
4	Support to Livelihood										
	Agriculture Development	DAE	0.00	0.00	-	-	3.08	0.04	0.00	0.00	0.00
	Total		590.62	10.57	-	-	406.73	5.28	530.40	262.95	267.45

5.5 Expenditures from IFAD Funds

The expenditures from IFAD funds in the period 1st July 2017 to 31st December 2017 against the approved ADP budget allocation for the financial year 2017-2018 are as detailed in **Table 6 - 7** below.

Table 6 - 7 Expenditures from IFAD Funds (Figures in Tk Million)

Slab	Component	IA	AWPB		Funds Received		Expenditure incurred Cumulative
			For 2017 - 2018	Cumulative	For the period	Cumulative	
1	Protection from Climate Changes						
a	Water Resources Management	BWDB	306.16	2,463.78	106.85	1,340.70	961.96
b	Social Forestry	FD	33.48	568.35	13.70	329.10	251.38
	Sub-Total		339.64	3,032.13	120.55	1,669.80	1,213.34
2	Internal Infrastructure						
a	Protection from climate change	LGED	219.68	2,847.15	122.40	1,784.43	1,432.44
b	Water and Sanitation	DPHE	29.10	247.00	20.00	117.95	138.48
	Sub-Total		248.78	3,094.15	142.40	1,902.38	1,570.92
3	Land Settlement and titling	MoL	2.20	43.89	0.00	24.08	29.43
4	Support to Livelihood						
	Agriculture Development	DAE	0.00	82.74	0.00	47.55	64.36
	Total		590.62	6,252.91	262.95	3,643.81	2,878.05

5.6 Expenditures from GOB Funds

The expenditures reported from GoB funds in the period 1st July 2017 to 31st December 2017 against the approved ADP budget/ allocation for the financial year 2017 - 2018 are as detailed in **Table 6 - 8** below.

Table 5- 8 Expenditures from GOB Funds (Figures in Tk Million)

Slab	Component	IAs	ADP		Funds Received Cumulative by 31 December 2017	Expenditures Incurred Cumulative by 31 December 2017
			For 2017-2018	Cumulative		
1	Protection from Climate Changes					
A	Water Resources Management	BWDB	147.10	682.50	314.77	314.77
B	Social Forestry	FD	4.70	20.10	15.39	15.39

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	Sub-Total		151.80	702.60	330.16	330.16
2	Internal Infrastructure					
A	Protection from climate change	LGED	76.50	585.10	477.98	477.98
B	Water and Sanitation	DPHE	10.20	73.40	35.68	35.68
	Sub-Total		86.70	658.50	513.66	513.66
3	Land Settlement and titling	MoL	7.70	36.50	29.57	29.57
4	Support to Livelihood					
	Agriculture Development	DAE	0.00	9.40	5.01	5.01
	Total		246.20	1,407.00	878.40	878.40

5.7 Expenditures from GoN Funds

5.7.1 Expenditures from GoN funds for infrastructure development

So far BDT Million 125.70 has been spent from GoN funds for infrastructure for BWDB, BDT Million 17.63 for DPHE, BDT Million 193.22 for LGED and BDT Million 0.24 for FD. The total amount spent for infrastructure development from GoN funds so far is BDT Million 336.79.

5.7.2 Expenditures from GoN funds for TA

Expenditures for Technical Assistance in the period 1 July – 31 December 2017 amounted to Euro 642,254 while total expenditures up to 31 December 2017 are Euro 9,535,712. The status of the Technical Assistance budget per 31 December 2017 is presented in **Annex 7**.

5.7.3 Financial Progress against budget

The gross financial progress from inception of the project till December, 2017 is about 91% with BDT 6,232.60 Million (US\$ 80.94 Million) spent out of a provision of BDT 6,875.90 Million (US\$ 89.30 Million) under 2nd Revised DPP. Agency wise and overall detailed financial - and physical progress is presented in the Financial Tables in **Annex 4**.

5.7.4 Development in Financial Operations

A study tour was conducted in August 2017 (27-31 August) for training on Tally Accounting and Financial Management Software at NICT, Bangalore, India specialized on computer education. Seven (7) participants from BWDB, LGED, and TA Team participated in the program. It was a part of an IFAD recommendation for strengthening of automated financial management and capacity building of the financial persons in the project.

6. Assumptions and risks

In reference to the elaborate risk assessment in Chapter 7 of the Inception Report, the following assumptions/ risks are mentioned in the AWPB 2016 – 2017 in particular. Their status is as follows:

- *Sufficient quality staffing of the implementing agencies*

It is assumed that agencies will provide staffing for CDSP IV according to their respective DPPs. BWDB has to formalize the position of the present Assistant Extension Officer and make it full time, and arrange required extension overseers (XO), to ensure that farmer participation is more than just a TA activity.

- *Timeliness of availability of funds*

It is assumed that sufficient funds are made available to implement the planned project activities. *Care has to be taken that ADP and in particular RADP cover AWPB 2016 – 2017.*

- *Law and order situation in the project areas*

It is assumed that the project areas are sufficiently safe for access of project staff and for contractors, hired to execute the works. *At Urir Char the law and order situation has improved over the last few years.*

- *Weather conditions and natural calamities*

It is assumed that weather conditions are sufficiently normal to allow smooth implementation of construction activities during the construction season; works should start as early as possible after the dry season sets in. *River bank erosion has drastically reduced part of the project area and destroyed important infrastructure. Plans have been adjusted to take this into account.*

- *Political support and stability*

Continued support from local politicians and bureaucracy is essential for implementation of the project.

- *Availability of construction materials*

Construction materials tend to be scarce on the market, in particular in the coastal areas; early tendering may help. *Availability and transport of materials was an issue at Urir Char, but the situation has improved.*

- *Successful selection of NGOs and quality staffing*

Selection of good quality local NGOs and their staffing is a condition for successful implementation of the livelihood support program. *NGOs formal role in the project was completed at the end of the reporting period but they are maintaining some activities and keeping a close link with the project. In the case of WatSan, a TA staff member has now been assigned to continue the communication role with communities and DPHE previously played by NGOs.*

- *Cooperation of all institutions and functioning coordination mechanisms*

It is assumed that cooperation between implementing agencies and coordination by PMC and IMSC continue to be adequate. *This certainly was the case; regular PMC meetings were held during the reporting period and functionality and attendance are high. Cooperation on planning for future activities of CDSP has been excellent.*

Annex 1. CDSP IV Logical Framework CDSP IV Logical Framework

Narrative summary	Indicators	Means of Verification	Assumptions	Progress as of 31 December 2017
Goal Reduced poverty and hunger for poor people living on newly accreted coastal chars	<ul style="list-style-type: none"> - Reduction of 25% in number of children stunted and number under-weight - 50% increase in household Assets - No. hh with 5 months or more of food shortage reduced from 46% to 23%. 	Impact surveys at baseline, mid-term and completion (RIMS)	Real price of rice does not rise relative to wages	<p>Stunted – No changes</p> <p>Under weight- 14% reduced</p> <p>Malnutrition- 4% reduced</p> <ul style="list-style-type: none"> - 260% HH has increased assets - 24% HH with >5 months food shortage
Purpose Improved and more secure rural livelihoods for 28,000 households in coastal chars	<ul style="list-style-type: none"> - 20,000 hhs reporting increased agricultural production - 40,000 people* in income earning occupations; - 21,000 hh with access to improved water supply and sanitation 	Impact and outcome surveys undertaken by the M&E unit.	No major natural disasters Economic growth and stability Law and order in char Areas	<ul style="list-style-type: none"> - 13,600 (68%) - No data - 27,654 HH
Outcome				
1. Water resources managed effectively to protect land from tidal and storm surges, improve drainage, and enhance accretion	<ul style="list-style-type: none"> - 80% WMG rated effective/sustainable - 70% empoldered land has reduced soil salinity, flooding and improved drainage 	<ul style="list-style-type: none"> - Project progress report - Field surveys of soil salinity and drainage. - Outcome survey 	_ Possible to carry out successful foreshore plantation	<ul style="list-style-type: none"> - 82% WMO - 65%-68% - 5 Annual outcome surveys - 1MTR RIMS
2. Improved road communication, available infrastructure for multipurpose use and ensured safe water and hygienic sanitation	<ul style="list-style-type: none"> - Better communication in different places - No. of people having access to shelter - No. of children at school in shelter - No. of hh having access to safe water and hygienic sanitation - 	<ul style="list-style-type: none"> - Project progress report - PME report - Outcome survey 	_ No unexpected changes in groundwater quality due to sea water intrusion.	<ul style="list-style-type: none"> - 242 km road constructed - 14,000 have access to shelter - School started in 80% of 30 shelters - 27,654 HH access to safe drinking water and 19020 HH have access to hygiene latrine
3. Secure possession of land	<ul style="list-style-type: none"> - Nos. of households maintaining possession of land 	<ul style="list-style-type: none"> - Project progress report - PME and outcome survey 	Vested interests & elites do not disrupt land settlement.	<ul style="list-style-type: none"> - 16,351 HH - 9,709 HH received khatians

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4. Improved livelihoods and household resilience	<ul style="list-style-type: none"> - 20,000 farmers report adoption of improved agriculture - Nos. of women involved with their own IGA - % hh using H&FP services - % of women are aware about legal rights 	<ul style="list-style-type: none"> - Project progress report - Outcome survey - PME report 	<ul style="list-style-type: none"> _ Appropriate technologies for salt affected land available. _ NGOs not subject to undue regulatory interference. 	<ul style="list-style-type: none"> - 18,200 farmers (91% adoption) - 22,101 female farmers (farm & non-farm) - 27654 HH using H&FP services - 13,173 women are aware about LHR
Outputs				
1. Area empoldered by embankment and foreshore protected through plantation	<ul style="list-style-type: none"> _ 10,000 ha of land empoldered. _ 50 km of embankment and 200 ha of foreshore protected by plantation _ 31 water management and 630 social forestry groups 	<ul style="list-style-type: none"> _ Project reports from BWDB and FD _ Participatory monitoring of community orgs. 	<ul style="list-style-type: none"> _ Sufficient allocations for O&M by the Government. _ Possible to carry out successful foreshore plantation 	<ul style="list-style-type: none"> - 11,680 ha - 59 km - 21 WMG, 3 LADC, 2 WMA - 568 SFG
2. Climate resilient infrastructure for communications, markets, cyclone protection, potable water and hygienic sanitation.	<ul style="list-style-type: none"> _ 160 km road constructed _ 25 bridges & 72 culverts built _ 9 markets constructed _ Reduction in transport costs _ 60 cyclone shelters & 24 Livestock refuges constructed. _ 1454 water supply points Operational & no. of hh supplied. _ 26,735 hygienic latrines operational _ 17,600 women earning from LCS 	<ul style="list-style-type: none"> _ Project reports from LGED _ Participatory monitoring feedback and surveys _ Project reports from DPHE 	<ul style="list-style-type: none"> _ Sufficient allocations for O&M by Government. _ No unexpected changes in groundwater quality due to sea water intrusion. 	<ul style="list-style-type: none"> - 242 km - 4 bridges, 169 culverts - 6 market - No data - 30 shelters - None - 1,297 DTWs - 27,654 HH - 19,018 Operational - 1,782 LCS members (male-1,311 female-471)
3. Secure land title granted to 20,000 households.	<ul style="list-style-type: none"> _ 20,000 target group hh getting secure title to land 	<ul style="list-style-type: none"> _ Project reports from MoL 	<ul style="list-style-type: none"> Vested interests & elites do not disrupt land settlement. 	<ul style="list-style-type: none"> - 16,351 HH - 10,801 HH received khatians

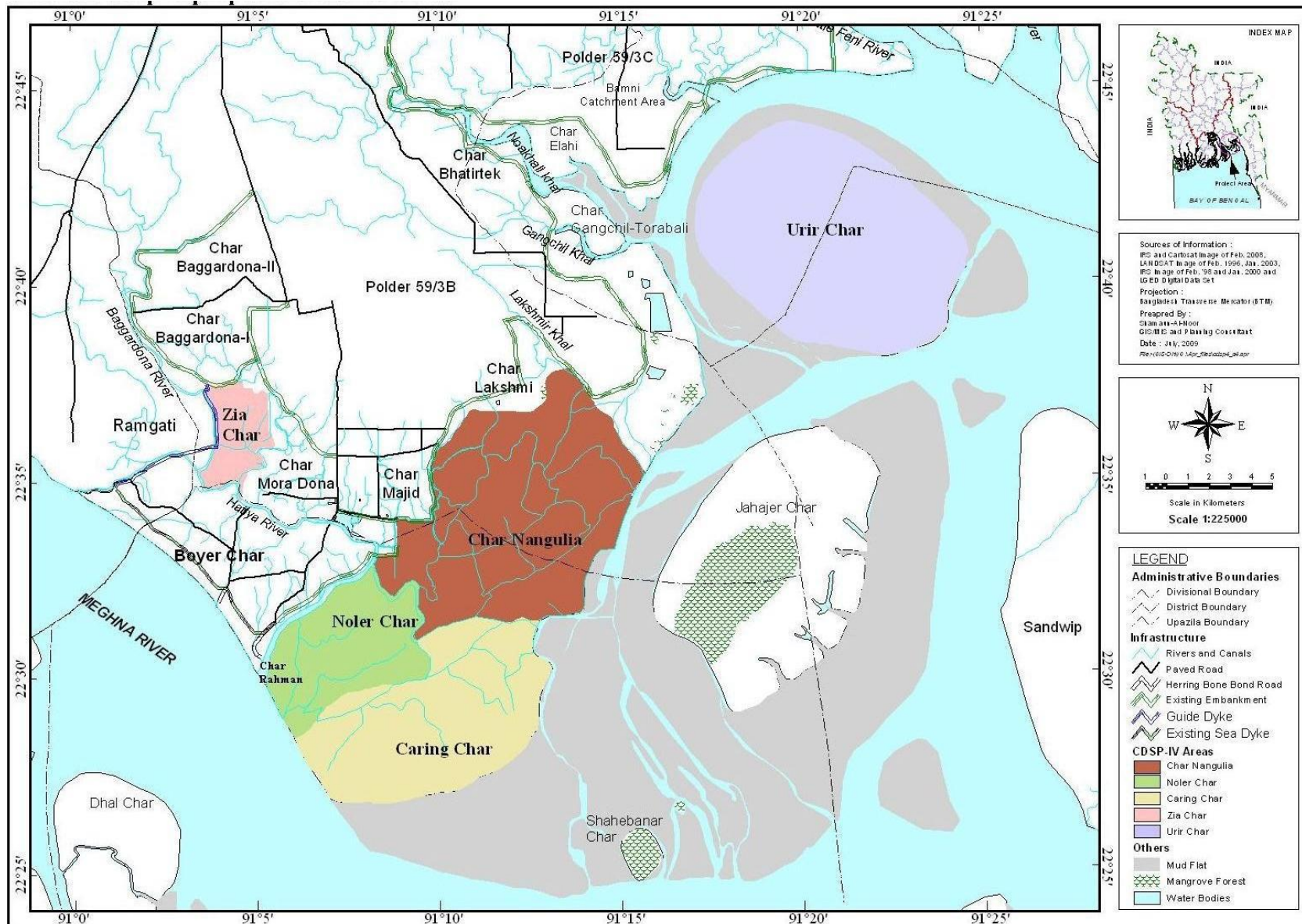
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<p>4. Improved livelihood support for the households</p>	<p>_ 5,400 farmers* attending agric. extension events _ 28,000 women in 1120 NGO group _ 234 health workers & 13 clinics _ 28,000 women trained in IGA _ 28,000 women attend rights based training and events</p> <p>240 Fish Nurserers and 1680 model fish farmers</p> <p>60 poultry workers & 12 paravets</p>	<p>_ Participatory monitoring feedback and surveys</p> <p>_ KAP surveys</p> <p>_ Project reports from DAE and NGOs</p> <p>_Project reports</p>	<p>_ DAE able to post staff to implement agricultural development programme. _ Appropriate technologies for salt affected land available. _ NGOs not subject to undue regulatory interference.</p>	<ul style="list-style-type: none"> - 5,400 farmers (100%) - 26,373 women - 185 HW and 11 clinics - 22,101 women trained (farm-& Non-farm) - 13,173 women trained on LHR - 108 Fish Nurserers - 720 model fish farmers - 60 poultry workers & 12 paravets
<p>5. Knowledge management and lessons for Integrated Coastal Zone Mgt (ICZM).</p>	<p>_ Project reports, studies workshops and other events</p> <p>-</p>	<p>_ Project reports</p>	<p>Government continues to support coastal development</p>	<ul style="list-style-type: none"> - Progress Report-13 - Technical report-13 - Mission Report-9 - KAP report-8 - PME report- 8 - Feasibility Study- 3 - RIMS- 1, baseline 1, Mid-term 1

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Activities	
<p>1. Protection from climate change: (a) sea dykes; (b) internal embankments; (c) drains and canals, (d) water control sluices, (e) Water Management Organisations; (f) water infrastructure maintenance; (g) formation of social forestry groups; (h) tree planting on embankments, roadsides, foreshores & mudflats roadsides etc; (i) plantation caretaking</p>	
<p>2. Climate resilient infrastructure: (a) village and union roads and bridges; (b) cyclone shelters & killas; (c) rural markets; (g) deep tube wells; (e) drinking water ponds and rainwater collection; (f) hygienic latrines; (g) Labour Construction Societies for construction. (h) O&M user groups; (l) market management committees; (j) infrastructure maintenance</p>	
<p>3. Land settlement and titling: (a) Surveys to assess availability of land and current ownership status; (b) selection of target group households; (c) process of land titling; (d) computerised land record management system.</p>	
<p>4. Livelihood support: (a) formation of groups; (b) identification of appropriate technologies; (c) capacity building of service providers; (d) crop training and demonstrations; (e) other skill training; (f) access to livelihood opportunities and markets; (g) promotion of better health and hygiene; (h) social support and rights; (i) disaster preparedness and climate change resilience.</p>	
<p>5. Technical assistance and management support: (a) support from TA team for implementing agencies; (b) quality control; (c) specialised training; (d) M&E system; (e) studies of development of new chars; (f) dissemination and sharing of experiences.</p>	

Annex 2. Map of CDSP IV areas



Annex 3. Status of Infrastructure Development

Table 1 BWDB

Table 2 LGED

Table 3 DPHE

Annex 4. Annual Plan and Achievements (IFAD Format)

Summary by Expenditure Account

Summary by Component

A1 BWDB

A2 Forest Department

A3 LGED

A4 DPHE

A5 DAE

A6 MoL

Summary Physical Plan and Achievement by Component

Annex 5. Composition of Project Management Committee of CDSP IV

1. Mr. Md. Shamsuddoha
Project Coordinating Director, CDSP-IV
BWDB, Dhaka.
2. Mr. Mahbub Alam Talukdar
Project Director, CDSP-IV
Deputy Commissioner, Noakhali.
3. Mr. M. A. Halim Khan
Project Director, CDSP-IV
DPHE, Dhaka.
4. Mr. Mohammad Rezaul Karim
Project Director, CDSP-IV
LGED, Dhaka.
5. Mr. Pranab Bhattacharjee
Project Director, CDSP-IV
DAE, Noakhali.
6. Mr. Md. Amir Hosain Chowdhury
Project Director, CDSP-IV and DFO
FD, Noakhali.
7. Mr. Andrew Jenkins
Team Leader, CDSP-IV
Member Secretary PMC.

Five PMC meetings (56th – 60th) were held during the reporting period, two in Noakhali and three in Dhaka

Annex 6. CDSP IV Staffing on 31st December 2017

Sl.	Name	Designation	Date of Joining
1.	Mr. Andrew Jenkins	Team Leader	15/5/2017
2.	Mr. Mihir Kumar Chakroborty	Deputy Team Leader (Infrastructure)	1/3/2011
3.	Mr. Md. Bazlul Karim	Deputy Team Leader (NGO & Livelihoods) and Agricultural Adviser	7/7/2011
4.	Mr. Md. Rezaul Karim	Land Settlement Adviser	15/9/2013
5.	Mr. Md. Mahfuzur Rahman	Quality Control / Design Engineer	2/5/2011
6.	Mr. Sajjad Ahmed Khan	Financial Adviser	1/1/2014
7.	Mr. Kiran Sankar Sarkar	Monitoring Evaluation & Knowledge Management Adviser	1/1/2015
8.	Mr. Md. Robiul Islam	Social Forestry Adviser	2/5/2011
9.	Mr. Yahiya Shawon	Accounts Officer	12/4/2012
10.	Md. Nurul Islam	Assistant Land Settlement Adviser	3/4/2011
11.	Md. Mijanur Rahman	Project Area Coordinator (Char Nangulia)	18/1/2016
12.	Md. Liaquat Ali Khan	Project Area Coordinator (Urir Char)	2/5/2011
13.	Md. Alauddin	Project Area Coordinator (Char Ziauddin)	2/5/2011
14.	Md. Basedul Alam Siddiqui	Project Area Coordinator (NC)	26/5/2011
15.	Md. Zahirul Islam Chowdhury	Social Forestry Coordinator	2/5/2011
16.	Md. Zulfiker Ali	NGO Sector Specialist Micro Finance	4/5/2011
17.	Motaher Hossain	NGO Sector Specialist WATSAN	2/5/2011
18.	Mozammel Hoque Chowdhury	NGO Sector Specialist (Fisheries)	1/3/2015
19.	Ms. Jannatul Naim	NGO Sector Specialist (Livestock)	23/11/2014
20.	Zulfiquer Azeez	Project Engineer (NC)	7/4/2011
21.	Sankar Chandra Saha	Project Engineer (Nangulia)	1/3/2011
22.	Md. Abul Hossain	Project Engineer (Urir Char)	18/9/2011
23.	Shajjadur Rahman	Project Engineer (Char Ziauddin)	14/11/2011
24.	Radheshyam Sutradhar	Project Agriculturist	2/5/2011
25.	Ms. Raka Monaem	Office Manager & Accounts Officer (Dhaka)	1/3/2011
26.	Md. Liakhat Ali	Agriculture cum Forestry Coordinator	21/7/2013
27.	Mesbahuddin Ahmed (Bahar)	Logistic Officer	2/5/2011
28.	Md. Mizanur Rahman	MIS & Computer Specialist	20/1/2014
29.	M.A. Kader	Monitoring & Evaluation Officer	2/10/2011
30.	Ms. Khaleda Akter	Monitoring & Evaluation Officer	2/10/2011
31.	Md. Sanaulah	Account Assistant (NPO)	15/5/2013
32.	Ms. Shilpi Regina Gonsalves	Administrative Assistant (Noakhali)	1/3/2011
33.	Zahidur Rahman	Administrative Assistant (Dhaka)	15/6/2011
34.	Md. Rafiqul Islam	Data Collector (PCD Office)	15/6/2011

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Sl.	Name	Designation	Date of Joining
35.	Ms. Fatema Begum	Gender Field Coordinator	2/5/2011
36.	Ms. Nahid Farhana Akter	Gender Field Coordinator	2/5/2011
37.	Sazedul Kabir	Computer Operator	3/4/2011
38.	Abul Kashem	Computer Operator	30/6/2011
39.	Mohamed Ali	Surveyor (Engineering)	2/5/2011
40.	Nazrul Islam	Surveyor (Engineering)	1/4/2013
41.	Ziaur Rahman (Resigned on 30/11/2017)	Surveyor (Engineering)	1/12/2014
42.	Md. Sajib Hossain	Surveyor (Engineering)	7/1/2018
43.	MD Abdul Khaleque	Surveyor (Engineering)	1/11/2014
44.	Habibur Rahman	Surveyor (Land)	2/5/2011
45.	Md. Kamal Uddin	Surveyor (Land)	1/6/2011
46.	Md. Delwar Hossein	Consolidator (Land)	2/5/2011
47.	Md. Shodiul Islam	LCS Facilitator	1/1/2012
48.	Flavian Gonsalves	Driver	1/3/2011
49.	Md. Gaiz Alam	Driver	1/3/2011
50.	Abdul Latif	Driver	2/5/2011
51.	Md. Abdul Jalil Miah	Driver	2/5/2011
52.	Md. Akter Hossain	Driver	15/9/2011
53.	Md. Abdul Hai (Bahar)	Driver, DPO	1/3/2011
54.	Chandra Bushion Majumder	Driver	1/7/2014
55.	Md. Jahiruddin Shobuj (Died on 13/12/2017)	Peon	1/3/2011
56.	Md. Shohan	Peon	4/1/2018
57.	Gopal Chandra Roy	Peon	3/4/2011
58.	Md. Abul Hossain	Peon	12/7/2011
59.	Protap Daring	Peon, DPO	1/4/2011
60.	Md. Jewel	Guard, Boyer Char	1/11/2012
61.	Bino Fernandez	Guard, Noakhali	3/4/2011
62.	Mosharref Hossain (Manik)	Cook/ Manager, TL- & Guest- house	1/3/2011
63.	Md. Abdul Kader	Cook, Char Nangulia	1/3/2011
64.	Md. Shamsul Haque	Cook, Urir Char	2/5/2011
65.	Md. Waziullah	Cook, Char Majid (CM)	15/9/2011
66.	Mohammad Kabir	Speedboat Helper (Boyer Char)	2/5/2011
67.	Md. Jahir Uddin	Peon cum cook	1/2/2012
68.	Bashir Ahmed	Office Assistant (PCD Office)	15/4/2013
69.	Md. Shah Alam	Cleaner/Peon	18/05/2014
70.	Khalequzzaman	Day guard (DPO)	9/10/2012

Annex 7. Status of Technical Assistance Budget on 31st December 2017

Euro

Sl. No.	Budget Item	Total Budget	Previous Claims	Claim July-December 2017	Total claimed	Balance
1	Professional Staff	4,416,245	3,420,989	264,420	3,685,409	730,837
2	Technical/administrative Staff	1,086,299	833,303	103,752	937,055	149,244
3	Support and field Staff	924,129	684,291	78,014	762,305	161,824
4	Equipment/ Vehicles	191,546	125,976	(785)	125,191	66,355
5	Studies and surveys	414,872	337,849	6,371	344,220	70,652
6	Training and Workshops	116,750	62,600	14,662	77,262	39,488
7	Contracted services	65,000	30,785	4,723	35,508	29,492
8	Recurrent Cost	755,523	628,228	62,620	690,848	64,676
9	Office Construction	50,000	50,000	0	50,000	0
<i>Sub-total TA</i>		<i>8,020,364</i>	<i>6,174,020</i>	<i>533,777</i>	<i>6,707,797</i>	<i>1,312,567</i>
10	Contingencies	210,881	28,042	0	28,042	182,839
<i>Sub-total TA incl. contingencies</i>		<i>8,231,245</i>	<i>6,202,062</i>	<i>533,777</i>	<i>6,735,839</i>	<i>1,495,406</i>
11	Social and Livelihood support	3,076,749	2,691,396	108,477	2,799,873	276,876
<i>Sub-total Social & Livelihood</i>		<i>3,076,749</i>	<i>2,691,396</i>	<i>108,477</i>	<i>2,799,873</i>	<i>276,876</i>
Total TA contract		11,307,994	8,893,458	642,254	9,535,712	1,772,282

Annex 8. Training provided by TA Team, IAs and PNGOs July-December 2017

SI No.	Title of Training/Workshop	Facilitated by	Duration	Batch	Participants		
					Male	Female	Total
1.	Refresher Training on TBA	PNGOs	1 day	18	-	270	270
2.	Field Day Observation on Fruit & Vegetable cultivation	PNGOs	1 day	3	-	63	63
3.	Refresher training to Poultry workers	PNGOs	1 day	06	-	60	60
4.	DTW training to Caretaker family	PNGOs	3 days	23	-	465	465
5.	Demonstration on Food Processing & Cooking System	PNGOs	1 days	79	-	790	790
6.	Follow-up training on Social Forestry to Mitigate Climate change	FD	1 day	82	1210	840	2050
7.	Gender Evaluation and Monitoring Training	TA Team	1 day	10	-	240	240
8.	Experience sharing training with FLIs	TA Team	1 day	2	20	22	42
9.	Experience sharing training with IFAD Local Journalist team and FLIs	TA Team	1 day	2	12	21	33
Total				225	1242	2771	4013

Annex 9. Overview of FLIs 31st December 2017

SL	Name of Area/ Polder/ WMG/ LADC	No of FF	No of SFG	No of NGO group	No of TUG	No of LCS
1	Dorbesh Khal- WMG	4	21	37	75	4
2	North Nangulia Khal- WMG	3	3	44	77	5
3	South Nangulia Khal-WMG	5	18	71	98	6
4	Bhuiyar Khal-WMG	3	30	41	71	5
5	Nonar Khal-WMG	3	21	19	45	2
6	North Katakhal Khal-01 WMG	3	24	41	54	3
7	South Katakhal Khal-01	3	26	31	51	3
8	North Katakhal Khal-02 WMG	4	20	46	59	3
9	South Khatkhal -02 WMG	3	29	29	47	4
10	Boro Khal- WMG	3	51	31	55	5
11	Lakshmi Khal- WMG	3	21	33	51	3
	Total	37	264	423	683	43

Noler Char

1	Howar Khal-01- WMG	3	25	45	79	5
2	Rahamat pur Khal- WMG	7	19	51	79	8
3	Chanandi Khal- WMG	5	9	37	60	5
4	Milon Khal- WMG	5	13	40	59	2
5	Alamin Khal- WMG	5	39	44	76	5
	Total	25	105	217	355	25

Caring Char

1	Bathankhal-WMG	3	19	54	85	3
2	Shahabani Bazar- WMG	5	11	36	55	5
3	Mujib Bazar- LADC (drop out)	3	18	34	14	0
4	Caring Khal –WMG	4	9	56	48	3
	Total	15	57	180	202	11

Char Zia Uddin

1	Char Bagga Khal –WMG	4	13	45	47	2
2	Motobi Khal- WMG	3	24	35	83	2
3	Gabtolli Khal-1	0	5	0	0	0
	Total	7	42	80	130	4

Urir Char

1	Urir Char WMG-1	2	0	28	9	0
2	Urir Char WMG-2	2	0	35	33	1
3	Urir Char WMG-3	2	47	21	25	1
	Total	6	47	84	67	2
1	Boyer Char/Teliur, Char Muksumul, Bangchur, Kolatoli	0	66	0	95	6
26	Total (5-Chars)	90	581	984	1532	91