

Char Development and Settlement Project Phase IV Bangladesh

Progress Report No 15

January – June 2018

August 2018

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 until 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 (specifically in Boyer Char). It also looks to the future by conducting feasibility studies in areas where future char development programs might be undertaken.

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

The 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 is presented in the IFAD format.

After this introductory chapter, the present Progress Report No 15 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 their 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 is being 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 particularly to the 29,000 households in the CDSP IV project areas. The purpose is being 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 WMG 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 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.

3.1 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 1970's. 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).

3.2 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 33,000 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 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 at Char Elahi Union of Companiganj Upazila under Noakhali District (*mouzas*: Char Umed, Char Rahman, Char Balua and Char Gazi Mijan).

3.3 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 North, Char Baggardona (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 30th June 2018. 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 (16.76 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) Mission of March 2015. Construction work completed on 3.45 km of retired dyke at Noler Char and 10.50 km at Char Nangulia out of a new target of 15.54 km; overall 94% progress has now been achieved.

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 in order to make a separate hydrological polder; it 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 30th June 2018 overall physical progress in BWDB activities was 98%, against 100% planned. 13% physical progress was achieved during this reporting period.

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 has been engulfed. Two third of Caring Char is already eroded. Erosion at sluice Gabtali in Boyer Char has reduced significantly.

Average erosion at **Boyer Char** during the last seven months up to December 2017 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 up to December 2017 was found to be about 107m; Erosion at Musapur Mosque, close to proposed sluice DS-3 was 107m. Present setback distance measured in late June 2018 of DS-3 from west bank is 480m and from D/S diversion khal outfall is 462m which was more than 1000m when they were shifted in early 2015. The major sea dyke is eroded at Noler Char and a retired dyke has been constructed for 3.45 km, including a new closure over Hoar khal-1. Replacement for sluice DS-3 was proposed at a safe location as it was under threat of river erosion. The Forest Department (FD) has already completed foreshore plantation close to sluice DS-3.

At **Caring Char**: Since measurement started in September 2014, up to December 2017 total erosion at sluice DS-1 has been 1,042 m. Present set back distance of sluice DS-1, measured in late June 2018 is 218m. At the southern part near Bathankhali ghat, erosion is 1,320 m in total and 126 m during the last seven months up to December 2017, and at the eastern side near Gour Nitai Mondir road, it is 2,388m in total. The Forest Department completed foreshore protection 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 still get refuge during cyclones for some time.

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 of foreshore plantation and embankment has 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 up to December 2017 was 49 m.

Construction of peripheral embankment

Construction work was completed for the full RDPP-1 mentioned length of 16.76 km (12.22 km at Char Nangulia and 4.54 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: 8.50 km). During the reporting period construction was started for a new target of 15.54 km of retired sea

dyke at Char Nangulia and Noler Char and overall progress for sea dyke construction is 94%. During the reporting period 23% physical progress was achieved.

Construction work has been completed for 21.09 km of interior dyke (13.82 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 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 30th June 2018 is 100% as per field requirement.

Construction of dwarf embankment

Construction work of 13.88 km of dwarf embankment was stated in RDPPs along Caring khal and Mamur khal in Noler Char and has been completed for the full length.

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 the monsoon in 2015. Through this sluice, drainage congestion and salinity intrusion were fully controlled at Katakhal khal -1 catchment area. But due to severe erosion of the 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 of sluice DS-3 was completed and the structure 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 was completed, and the sluice has been functioning since March 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.

Construction of closures

Construction work was completed for Mamur khal-1 closure at Char Nangulia in FY 2012 - 2013. Construction of a 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 2017 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 was completed. Up to 30th June 2018, initial excavation of drainage khals was completed for 69.50 km including major Caring khal, Nangulia khal and

Bhuiyar khal at Char Nangulia, 42.50 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 as per target.

Overall physical progress is 100%, during the reporting period 15% progress is done.

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, 3 at Caring Char, 2 at Char Ziaudin and 2 at Urir Char by WMGs as Labour Contracting Societies (LCSs).

Overall physical progress is 100%. During the reporting period 16% physical work was achieved.

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 Districts and a cheque handed over to the DC's 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; they have already been scrutinised and sent to the Land Ministry for approval. But due to budget constraint, this could not be finalized. A proposal has been submitted to IFAD, PDR Mission to carry over these activities to the 3 Years Bridging Project period of CDSP-IV.

Rehabilitation of affected households

Selection and listing of affected households during construction of embankment and sluices were done and 108 families have already received compensation. During the ongoing construction of retired dyke and dwarf embankment at Noler Char and Char Nangulia an estimate for 59 families is ready and they are expected to be compensated shortly. There is limited possibility of further need for 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 reached and there is only a limited possibility of increasing this number. 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 with 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. Under Maintenance Budget during construction in the CDSP-IV area, the following major works were done: river bank protection by permeable spurs on left bank of Jarirdona shortcut channel and Baggardona river meeting point has been done, BWDB building maintenance at Sonapur BWDB office premises, re-sectioning of dwarf embankment at Noler Char, both sides slope protection of drainage sluice DS-1 at outlet, repair and maintenance of embankment (interior dyke) at Char Ziauddin, repair and maintenance of embankment for at Caring Char for Char Nangulia and re-excavation of Darbesh khal were done. So far, 98% physical progress has been achieved.

Over all physical progress in maintenance work is 99%

Maintenance of Gabtali sluice

Protective work of Gabtali sluice up-stream and down-stream diversion canals was completed from CDSP-IV maintenance fund at a 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 in 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 is the Social Forestry Group (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 78 meetings have been organised in Char Nangulia, Nolerchar, Caring Char, Musapur 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 39 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 30 June 2018 is 620.

Land lease and benefit sharing workshop

Basis on 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, 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 right on government land and usufruct rights on trees and produces 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 74 SFGs (1850 members) have received tri-partite signed agreements and the cumulative number of agreements received by SFGs is 568 out of 620 (cumulative number of last year).

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 had been established at various locations. Soil collection and preparation were done for raising seedlings for non-mangrove species in polythene bags. Seedbeds have been prepared for non-mangrove species in polythene 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 the second RADP of FD, there was a plan for 15 km embankment, 13 ha non-mangrove block and 54 km canal plantations in 2017 - 2018. In the reporting period, all plantation works have been done.

Plantation Maintenance

Mangrove forestation, predominantly with Keora, Gewa and Baen species, was established on 650 ha in Char Nurislam, Char Nangulia (Char Amin) and Tengar Char in 2016–2017. The maintenance work of these mangroves has been done. The maintenance of strip, canal, block and institute plantations established in 2016 - 2017 and 2015 - 2016 were also done in the reporting period.

Watcher Recruitment

To make the plantations a success in the year 2017-18, a total of 64 watchers have been deployed for a period of 12 months for different non-mangrove plantations.

Capacity building

To familiarise people with the CDSP IV program and particularly with the social forestry methodology and to enhance the capabilities of the SFGs for the year 2017-2018, the FD has trained 52 batches for two days duration training courses and 52 batches for one day duration benefit sharing agreement workshops in this reporting period. A total of 13 Batches of one day duration workshops with LGI, NGO and the Public has been conducted in 2017-2018. FD also provided two day duration training courses for the three batches of watchers; each batch contains 25 members and it also visits for 10 batches.

Outcome of forestry plantations

- 8,100 Beneficiaries received ownership of 10,39,680 non-mangrove trees from embankment, road, canal, foreshore and block plantations. Trees are also protecting the embankment and inhabitants inside the embankment from tidal floods and cyclone surges.
- 4,975 SFG members collected a total of 38,29,080 kg of fuel wood (tree branches) in the year 2017-18 from the plantations of 2012-2013, 2013-2014 and 2014-15 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 an area 82 km long, settlers collect seeds as pulse, which is rich in protein. The leaf of the pigeon pea is used as fodder crop for the livestock and the branches for fuel wood. It has also an ecological impact through nitrogen fixation into the soil.
- Mangrove forests are rich in biodiversity providing a habitat for a wide variety of animal and plant species. It helps in sediment deposits through burial as well.
- Embankment, roadside, canal and mangrove forests provide protection and shelter against extreme weather events, such as storm winds and surges.
- Storage of carbon in plants takes place through accumulation in living biomass.

4.3 Climate-resilient infrastructure and water supply and sanitation

This component concerns the 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 30th June 2018, overall physical progress achieved by LGED is 98% of a planned 100%. During the reporting period, the physical progress achieved was 10%.

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 171,000 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 36 cyclone shelters the char dwellers of the five project chars have scope to take shelter during any disaster, and 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).

Overall progress as per field requirement is 100%

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 has been completed by 31st December 2016 as per RDPP-2.*

HBB Roads (paved width- 3.70m)

Out of 32.86 km HBB roads, as proposed in RDPP-2, work is complete for full length.

During the reporting period 21% physical progress was achieved.

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 for full length. (44.61 km in Char Nangulia, 22.48 km in Noler Char, 4.00 km in Caring Char, 10.58 km in Char Ziauddin and 12.65 km in Urir Char).

Up to 30th June 2018 physical progress achieved is 98% while 100% was planned. 9% progress was achieved during the reporting period.

Earthen roads (5.50m/ 4.3m crest width)

Out of 148 km earthen roads as proposed in RDPP-2, work is completed, ongoing for full length (60.0 km in Char Nangulia, 29.0 km in Noler Char, 16.7 km in Caring Char, 13.3 km in Char Ziauddin and 23.6 km in Urir Char).

Up to 30th June 2018 physical progress achieved was 96%, while 100% was planned. 5% 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 2 in Char Ziauddin.

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 four 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 has also been designed and constructed as a four vent box culvert for the same reasons as mentioned above.

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. It may be mentioned that the original number of RCC girder bridges was 25 which was reduced to 4 for saving budget and making construction easy. Out of these 93 RCC box culverts work is completed/ ongoing for 87 (41 in Char Nangulia, 24 in Noler Char, 6 in Caring Char, 6 in Char Ziauddin and 10 in Urir Char). 6 are dropped for budget constraint.

Up to 30th June 2018 over all physical progress was 98% against planned 100%. 12% Physical Progress was achieved during the reporting period.

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 for 134 (68 in Char Nangulia, 21 in Noler Char, 2 in Caring Char, 18 in Char Ziauddin and 25 in Urir Char), 6 are dropped for budget constraint.

Up to 30th June 2018 over all physical progress was 97% against planned 100%. 5% progress was achieved during the reporting period.

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 for 39 (15 in Char Nangulia, 9 in Noler Char, 2 in Char Ziauddin, 4 in Urir Char and 1 in Char Maximul Hakim; one at Char Mozammel, one at Dhal Char). 3 cyclone shelters, one at Char Kolatoli, which was designed as a 3 storied building considering office/ lodging facilities for the possible CDSP-V period, one at Char Nangulia and other at Char Maksumul Hakim were dropped due to time constraint.

Up to 30th June 2018 over all physical progress was 98% against planned 100%. Physical Progress achieved during the reporting period is 4%. Still today 36 cyclone shelters are fully completed for taking refuge during natural disaster or to be used as schools. 3 (Three) cyclone shelters are under construction, two at Urir Char & the other at Dhal Char, where average physical progress is above 86%

Cyclone shelter field raising;

Cyclone shelter field raising completed/ on going for 33, with 95% overall physical progress.

Construction of Public Markets

Out of 7 village markets as per RDPP-2, work is completed/ongoing for all 7, with 3 by LCS (1 at Janata bazaar in Char Nangulia - completed, 1 at Thanarhat Bazar in Noler Char – completed and the other at Boyer Char - construction done); and for the other four through contractors, work is completed at Zia Bazar in Char Ziauddin, Kaladur Bazar in Char Nangulia, and at Bathankhali Bazar in Caring Char (lost due to Meghna river erosion); and for that at Urir Char 60% progress is achieved.

Up to 30th June 2018 overall physical progress achieved was 95% against planned 100%, where 4% progress was gained during the reporting period.

Construction of Union Parishad Complexes (UPCs)

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

Construction of Cluster Villages (CVs)

As per RDPP-2, one Cluster Village construction is planned at Char Nangulia and one at Noler Char. A new concept is suggested 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 being constructed at Char Nangulia on available free Khas land. A new location safe from erosion is achieved and construction for both the cluster villages are 90% completed.

Progress was delayed by the search for a new location following the severe erosion of Sandwip Channel at Sluice DS-2 location. 90% physical progress is achieved during the reporting period.

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 and 3 Chittagong District) which are completed by this time. Work is in progress for two *killas* one at Dhal Char and other at Char Mozammel.

Up to 30th June 2018 over all physical progress achieved was 89%, against planned 100%.

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 coastal char area which is very dynamic, and also to save money.

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.

Widening of bus road

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

Roads and culverts in Other Chars

Up to 30th June 2018 over all physical progress achieved was 100% against planned 100%. As per RDPP-2 revised budget is Tk 338.4 lakh, replacing 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. *This was completed by June 2017.*

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

From the road pavement maintenance, periodic maintenance of road items, road off-pavement (earth) maintenance and the repair and maintenance of buildings and structures, the following works were completed under CDSP IV.

- 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 from 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 from *ch 00-3845m.*
- x) Periodic maintenance of Jubair Miar Raster Matha-Banskhali sluice –Manumiar Bazar-Bhumihin Bazar road from *ch 1000-3900m.*
- xi) Periodic maintenance of Chiyakhali Bazar-Bhuyiarhat Bazar-Kanchan Bazar-Pariskar Bazar-Atkopalia Bazar GC road from *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
From the road off-pavement (earth) maintenance, work is completed for:
- xv) RHD –Bhuyiarhat- Banskhali sluice-Kazir shop road ch 00-3022 at Char Majid in CDSP-I area.

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 for 5 at Char Vatirtek polder and one at Char Majid CDSP-I,II,III old area at Subarnachar. Contract amount Tk. 42.00 lakh.

Overall progress achieved for maintenance work is 99% up to 30th June 2018. Total expenditure was made for Tk. 998.5 lakh against Tk 1004.73 lakh as RDPP-2 maintenance budget.

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 99% against planned 100%, 9% 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 1,531 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 23,650 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 per year 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 1,531 (Char Nangulia 710, Noler Char 343, Caring Char 186, Char Ziauddin 130, Urir Char 66 and 96 at other Chars). Platform construction is completed for 1,331.

Up to 30th June 2018 overall physical progress of deep tube wells was 99% against planned 100%, 8% 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 June 2018 construction was completed for 25,717 single pit latrines (SPLs), 25,505 were distributed and 23,642 installed.

Up to 30th June 2018 overall physical progress achieved was 97% over planned 100%.

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. No PSF were required to install as ground water was found good.

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. No RWHS construction was required as ground water was found good.

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 were spent.

Up to 30th June 2018 overall physical progress achieved was 88% over planned 100%.

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:

- Completion of the residual settlement activities of CDSP III;
- Settlement of the landless households in government khas lands of CDSP-IV areas of Hatiya and Subarnachar Upazilas of Noakhali District;
- 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 ACs (Land) 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 new UNO and AC (Land) of Hatiya Upazila have joined after the transfers of their predecessors. Currently the post of AC (Land), Subarnachar has fallen vacant after the transfer of the officer.

In the month of May 2018, a formal Khatian (Title deed of land) distribution program was held during the visit of the IFAD Project Completion Validation mission. On 9th May 2018, the festive and colourful land title (Khatian) distribution ceremony was held at Saddam Bazar, Noler Char area. IFAD mission members were present and distributed as many as 517 land titles (Khatians) among the landless families. Mission members were Mr. Yuexiong Situ, Team Leader and Rural Development Specialist, Mr Harold Liversage, Land Tenure Specialist, Ms Wanaporn Yangyuentham, IFAD Programme Analyst, and Ms. Sherina Tabassum, IFAD Country Programme Officer. 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 in 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	947	16,506
Jamabondi preparation	14,000	1,375	1267	16,333
Jamabondi approval by:				
Upazila Committee	14,000	1,375	1267	16,333
District Committee		1,375	1267	16,333
Kabuliyat:				
Execution	14,000	2,369	499	13,761
Registration		2,369	476	13,385
Khatian Preparation	14,000	2,735	774	12,822
Khatian distribution	14,000	2,735	607	12,461

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 18/01/2018 and 03/04/2018 in the Ministry of Land. five 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. Until 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.

Training and Workshop

The following training programs/ workshops have been conducted on land settlement and management during the reporting period.

- The district administration conducted a day long (25/06/2018) training program on Land Settlement Process under CDSP-IV for the officers and support staff, who are associated with the implementation of CDSP IV in Hatiya and Subarnachar Upazilas. The training included all the subjects relating to the conduct and management of the land settlement activities and emphasised the sustainability of the CDSP procedure in the concerned Upazilas. Land Settlement Advisor and the senior officials of the district administration acted as the resource persons of the program.
- A workshop on expansion of the government line agencies' activities into CDSP IV areas was arranged on 24nd June 2018 by the district administration. Representatives of all the six implementing agencies of CDSP IV, relevant departments and journalists were present at the seminar. Deputy Commissioner, Noakhali and PD, CDSP IV MoL (Part) presided over the workshop while Land Settlement Advisor presented the latest progress and overall CDSP-IV activities by a power point presentation.

Participation in the International Conference

On behalf of CDSP-IV, Land Settlement Advisor Mr. Md. Rezaul Karim joined the LANDac Annual International conference-2018 on 28-29 June 2018 at Muntgebouw, Utrecht, the Netherlands. According to the programme of the conference on the 1st day during parallel sessions-1 under panel: 'Scaling up Women's Land Rights, key lessons from grassroots initiatives', a Power Point Presentation on '**Land Tenure Security in the Chars: lessons from an IFAD funded project**' was presented. After discussion two take-aways were selected from the CDSP-IV presentation for the plenary session. These were:

1. Importance of equal access to land
2. Title plus: You must do more than just simply give titles to women

Outcome of Khatian (Land title) distribution

Since inception of CDSP IV 12,461 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 the woman'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;
- survey and monitoring.

For an overview of achievements and financial progress and planning of DAE, see **Annex 4**, Table A5, which presents in the IFAD format. For homesteads 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 activities by the DAE during January-June, 2018.

Continuation of DAE in project area

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.

Guidelines for Farmers Organizations

The "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. After wards draft FO Rules 2014 have promulgated from MoA.

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 was formed according to the Guidelines for Participatory Farmers Organization (GPFO). All management committees at all tiers of farmer's organisation 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 FO formation, stakeholder's participation, GPFO, AWPB 2017 - 2018, involvement of NGOs and project interventions by DAE. A total of 93 batches of Farmers Forum, 36 Farmers Association and 6 Farmers Federation's 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, BIRRI, 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.

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 313, 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 inputs were also distributed such as seeds and 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 plot at CDSP areas.
- Private agro-farms, Noakhali/ Feni.
- Nimshar Bazar of Comilla for value chain market linkage.
- Shitakundu, Mirersorai of Chittagong country bean production and value chain area.
- Private Mushroom Centre, Feni /Comilla.

Adaptive trial

Eight adaptive trials of some newly released variety were conducted to see the specific variety of rice/ other crops about the suitability in the project area. Only the varieties were found suitable for the area that has been introduced for cultivation by the farmers.

Demonstration plots

During the period 10 demonstration plots on HYV Aus (BRRIdhan 48, BRRIdhan 55) have been established. A total of 1,090 demonstrations have been established at farmers' 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 730 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.

Introduction of Boro crop

Boro crop has been introduced and is practised by the farmers in the last 4-5 years in Char Nangulia, and in other chars, 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, BRRI, 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, TA team 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 distributed 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, TA team 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 and Monitoring & Evaluation report

In total, 2 Annual reports of 2014-15 and 2015-16 prepared by the project and a monitoring and evaluation report prepared by DAE HQ have been published during the project period, containing information on all aspects of project objectives, activities, progress, impact, 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 the 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 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, 8 LLP 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 monitoring

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 (ECe, 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/meter). 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, several activities have been undertaken, like Daincha cultivation for green manuring, quick compost and Vermi compost preparation.

Table 4 - 5 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	0.85	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	-
8	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 of the Rabi and Kharif-I seasons to combat salinity. This resulted in above mentioned cultivation of Watermelon, Cucumber, Sweet gourd etc. contributing to increasing cropping intensity of the area. This is a new innovation, and an adaptable technology for the area, so it needs further extension to combat salinity and ensure irrigation in homesteads and around in dry season.

Established vermi compost technology

The field staffs of DAE and PNGOs are being 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 1,487 of vermi compost plants have been established in the project area. Now this has been replicated in project area and encourages 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 a 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 in the ditches between. The total area covered by sorjan crops (Cucumber, Bitter gourd, Snake gourd, Yard-long bean etc.) is approximately 2,911 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 the 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 days training, motivational tour, demonstrations and field days. Farmers cultivated modern rice variety BRRIdhan 27, 48, 55, 65 Binadhan 14 in Kharif-I season and BRRIdhan 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 Organizations, and provided with modern technical training/advice, supplied with HYV/hybrid seed and fertilizer, innovation technologies, agri-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. Demonstrations have been carried out, with quality seed and fertilizer distributed among the farmers. As a result, farmers increased their crop yield 2-4 times compare to pre-project.

Yield projection in pre-project (2011)

Crop name	Total area coverage ha	HYV coverage ha	HYV yield in t	Local Variety coverage ha	Local variety yield (t)	Total yield (t)
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
Boro	0	0	----	-----	----	0
Grand total Yield of Rice						45,208
Rabi	22000X22% =4400	All farmers used local traditional variety of Rabi crops (Chili, Methi, soybean, country bean, sweet potato etc) and their yield was very low				

After completion of 7 years of the project intervention the estimated yield produced from rice and Rabi crops cultivation from the project area.

Crop name	Total area coverage ha	HYV coverage ha	HYV yield (t)	L. Variety coverage ha	L.V. yield (t)	Total yield (t)
Aman	22000X96%= 21120	21120X94%= 19853	<u>19853@5.3/ha</u> =105221	21120X6%=1267	1267@1.94 t/ha=2458	107679
Aus	22000X13%= 2860	2860 X60%=1716	<u>1716@3.2t/ha=</u> 5491	2860X38%= 1087	1087@1.7 t/ha=1848	7339
Boro (Hybrid)	22000X38%= 8360	8360	<u>8360@ 8.2</u> t/ha=68552	----	-----	68552
Grand total Yield of Rice after 7 years of project						183,570
Grand total Yield of Rice before project intervention						45,208
Yield increased						138,362
% of yield increased						306%
Rabi	22,000X8 1% =17820	All farmers used HYV, Hybrid and local traditional variety of Rabi crops (Chilli, Methi, Soybeans, Country Bean, Groundnut, Watermelon, Potato, Sweet potato, Field cucumber, Okra, Radish, Tomato, Cabbage, Cauliflower, Egg plant, Garlic, Sweet gourd, red amaranth, spinach etc), many new crops are introduced and their yield is 2-3 times higher than that of previous times.				
Rabi area Increased		After 7 years 17820 ha - Before project 4,400 ha=13,420 ha or 3.05 % increase				

Yield of other crops such as water melon, rice (hybrid) 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 Unfavourable 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 Social and livelihood support

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 has been supplied to 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 29,008 households live in these five chars. So far 27,654 households have been identified as enlisted as NGO members in the 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 in extended period from March 2017 are given in the table below:

Table 4 - 6 PNGOs' assigned areas

Sl #	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 for each program 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 and Value Chain Development, 6 for Fisheries, 6 for Poultry and 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 prepared 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 Poultry and Livestock. Moreover, PNGOs recruited 6 coordinators for Fisheries and 6 for the Poultry and 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 have received training on various courses during the remaining project period. A total of 22,101 (farm 21,902; non-farm 199) beneficiaries received training on income generating activities up to the December 2017.

Table 4 - 7 Status of staff of PNGOs

PNG O	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	Asst. A/C cum office assistant	Credit Officer	LHR/Disaster Coordinator	WatSan	Agri. Coordinator	Paramedics	HEPF	Support Staff	Fisheries Coordinator	P/Livestock Coordinator ⁴	Sub-Total	Female	Male	Total	
BRAC	1	1	1	1	1	5	2	2	2	1	0	1	2	2	6	1	2	2	33	7	31	38	18
SSUS	1	1	1	1	1	5	2	2	2	0	0	1	2	2	6	1	2	2	42	15	32	47	32
DUS	1	1	1	0	1	4	1	0	1	0	0	1	1	3	1	1	1	1	16	3	17	20	15
SDI	1	1	1	0	1	4	1	0	1	0	0	1	1	3	1	1	1	1	15	3	16	19	16
Total	04	04	04	02	04	18	06	04	06	4	0	2	06	06	8	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:

- Health and Family Planning;
- Water and Sanitation;
- Homestead Agriculture and Value Chain Development;
- Fisheries (started since October 2014)
- Poultry & Livestock (started since October 2014)

Follow up continued for extended period

- Legal and Human Rights;
- Disaster Management and Climate Change.
- 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 Health and Family Planning Facilitator (HFPF) creates awareness

among the community on family planning, nutrition, hygiene, immunization, on pregnancy related care and on common diseases. A total of 46,420 health forums were conducted up to December 2017. Medical Assistants (MA) of the health and family planning program have been paying visits to the health forums to monitor and develop the quality of the forum. They visited 3,971 health forums. 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. HFPP visited in total 152,110 households.

In the static and mobile clinics, 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. Boys were circumcised 903. 90 Traditional Birth Attendants (TBAs) attended the refresher trainings 4 times and HFPPs and MAs have visited all TBAs 4 times in the reporting period. A total of 12,424 pregnant women received treatment and checkup. 101 pregnant women, 90 lactating mother were served iron tablets 7,002 and 5,541 respectively. TBAs handled deliveries 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. In total 5,483 group counselling sessions were performed. A total of 390,137 cycles of pills were distributed and 17,192 injections were given. Family planning method user rate in the project stands at 66% (Eligible couple by health baseline survey 23,879)

To reduce diarrhea the Health and Family Planning Facilitators are working for raising awareness on safe drinking water and cleanliness. In total ORS 896,268 packets have been distributed among the households 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 daylong 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 conducted the orientation as per CDSP IV guidelines. A total of 2,342 local leader received orientation. 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 the sustainability of the future health program 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 facilitated the session. Both theory and practical sessions were included in the training module. Trainers from BRAC conducted the training. During the period refreshers training was conducted 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. A total of 179 sessions were held in different Samaj up and 3580 participants were attended.

Height and 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 after phasing out of the project, TA team and partner NGOs were conducted 48 mass meetings with all stakeholders having 100-200 beneficiaries attended in each meeting in the area. In the mass meetings and a workshop were conducted in CDSP IV, TA team conference room with all stakeholders such as Civil Surgeon and Upazilla Health officers, Deputy Director Family Planning and other related departments, NGOs, which participated. 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. PNGOs sold medicines worth BDT 6,009,151 during the period.

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. The growth rate of babies is normal, and stunting is becoming less as we are observing and collecting information. Rate of immunization of babies up to one year old 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 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 2,500 meetings with credit groups so far (two or more times a group). Separately monthly follow-up meetings were held with 11,980 TUG members. 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 who were involved in the location selection of tube wells and who 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 collected funds to DPHE through TA team. Only after the contribution money has been deposited for a DTW, DPHE starts 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 total of 1,541 TUG has been formed; one for each DTW. 1,541 selected sites were submitted to DPHE. PNGOs collect beneficiaries' contribution money at the rate of Tk.4, 500 per tube-well.

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 takes necessary measures to solve the problems. Thus, a relation mechanism is developed with PNGOs and community on water and sanitation issues. So far, 1,541 DTWs were installed and 1,500 platforms were constructed and Tube well management groups have maintained 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 1,500 caretaker families. In total 3,131 CTF members received training with focus on water and sanitation issues, repair and maintenance of DTW.

Single pit latrines

Through coordination with DPHE, PNGOs ensured distribution of 25,505 sets of latrines and installed. A total of 20643 superstructures were completed.

The drive to ensure 100% sanitation and outcome

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 WatSan sub-component are:

Major intervention	Outcome/ Indicators
Availability of safe drinking water	98 % of HHs has access to safe water available within average 35 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 Diarrhea, Hepatitis, Scabies etc. and 80% health improvement. Saved time for women's water collection.

NGO support for DTWs site selection in other Chars

In CDSP-IV, NGOs have taken responsibility for site selection in other Chars. Discussions was 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 Kolatali, Dhal Char , Char Mozammel, Char Maksumul Hakim and Teliar char, assisted DPHE to install DTWs in 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 vulnerable to normal flooding or any other influence that can cause damage to the platform.

NGO assistance has ensured that DTW contributions have 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. 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 all the beneficiaries in the project areas as follows:

1. **Water supply service level:** Water point of DTWs for each household within 35 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 faecal 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 managed 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 to 13,520 beneficiaries. All trained farmers received inputs (seeds, saplings, fertilizer, etc.) through PNGOs.

Demonstration plots: A total of 7,824 farmers received orientation and high value crop 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.

Demonstration plots (IPM): A total of 121 farmers received orientation on integrated pest management (organic agriculture) for crop production and established demonstration plots, 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, 1,487 Vermi compost plants were established.

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.
- 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. A total of 270 field days were organized, 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. A total of 1,804,783 saplings were produced 1,307,935 saplings sold worth Tk.10,079,221.

Collection Point Management Committees (CPMC): 11 CPMCs were formed earlier. 63 meetings were held with all committees. 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. A total of 980 farmers produced organic fertilizer and total amount of organic fertilizer was 36.7 t.

Eye budding: A new technology has been introduced for the extension of improved variety of jujube a total of 193 farm families have been provided budding technology for the improvement of their local variety.

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: 7,105 t, country bean 1,102 t, cucumber 5,103 t, bitter gourd 2,912 t, sweet gourd 3,012 t, yard long bean 2,712 t, tomato 709 t, snake gourd 3,030 t, ridge gourd 3,112 t, okra 1,899 t and chili 1,019 t. A total of 31,715 tons of products have been sold in local, neighbouring districts 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 since 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 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 has introduced 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.

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. A total of 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.



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. A total of 3,699 poultry vaccination programs were conducted and 4, 15,742 numbers 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 program	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	81248	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: Total 452 livestock vaccination programs were conducted in the project period and 41540 livestock (cattle and buffalo) were vaccinated and 26,933 were given primary treatment.

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 15-20 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: Poultry and livestock coordinators have provided technical and management support to cattle rearers, goat rearers, homestead poultry rearers and beef fatteners in total 1,568, 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 incomes 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 to 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 have 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 advice from them. In future I have planned 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 during the project period.

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 1,863.79 acres (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. Nursery management, quality fingerling 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. 10,086 HHs were visited by the FC.

Spawn collection, fingerling production and release: Five Newly trained nurserers have collected 5.6 kg 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 project 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). 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 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 148.6 t tilapia and total price was Tk 14.8 m so far. 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 17 years ago. After CDSP introduction in 2012 she received 3 days training on "Fish Nursery". After obtaining training she has established a fish nursery in their 0.15 acre pond with a loan amounting to Tk.30,000. Then, she released 600 g 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 good 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. Follow up meetings with NGO group members were held 9,878.

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. 70 events were observed in all branches and in total 10,500 peoples of all walks of life participated in the rally and meeting.

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 in total 62 events and in total 8,060 school children's, local people, teachers etc attended the occasions.

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 were observed.

Orientation meetings with local social leaders: An orientation meeting for local stakeholders such as Union Parishad members, Imams, marriage registrars 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 follows up is given by the LHR coordinators of the component. In total 1,575 persons received orientation.

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 selected 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% are members of the group management committee, they act as law implementation committee, disseminating the message and taking action against any violation of human rights. 5,174 selected beneficiaries received training in 207 events.

Legal courses for beneficiaries: Courses on LHR are conducted by the LHR promoters in each group in the project. The duration of the course is 22 days and a total 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 consisting of 9 members, headed by the best performer in the LHR course. The committee makes linkages with all local level institutions including Union Parishad and assists in implementing the program, disseminates and collects information regarding early marriage, dowry, divorce etc. in the Samaj. Each committee conducts a meeting once a month and discusses about the progress and up dated information of social issues. A total of 4,536 meetings were held and 1,229 LIC committee meetings were followed-up in the project period. 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 93 early marriages.

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. During project time, out of 3,336 marriages 3,296 were registered in marriage registrar offices.

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 a 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. A total of 144 follow up meetings were held. To make the group members aware about disaster preparedness and mitigation, the staff of the subcomponent is conducting meetings with group members. 7,608 meetings were held in all groups.

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. A total of 3,397 beneficiaries attended the refresher training

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 and a total of 417 HH strengthened and plinths raised.

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. In total 6,015 cooking systems were established in all NGO branches.

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.

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 Bill-boards were prepared and displayed in the project area.

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: Outcomes of the trainings, refreshers and group meeting on the issue all household in the project are ensured 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.

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 people took shelter in these cyclone shelters. Thus, the trend of people’s mobility to cyclone shelters is gradually increasing.

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

Recommendations

1. Initiate establishment of Emergency Operation Centres 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 29,008 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 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 according to 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 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	7
Cow rearing	403.0	24
Goat rearing	48.8	3
Beef fattening	154.18	9
Vegetable cultivation	320.0	19
Agriculture (all crops)	192.16	11
Fish Culture	112.0	7
Motor Cycle/Rickshaw/Van purchase	34.88	2
Trading enterprises	299.0	18
Total	1,687.5	100.0%

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); Labour 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 85%. 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 61%.

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 30, Caring Char 18, Char Ziauddin 12, Char Nangulia 60, and Urir char 17 meetings were held during the period. Average attendance in those meetings was 56% in Noler Char, 61% in Caring Char, 58% in Char Ziauddin, 55% in Char Nangulia and 72% 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, 23 WMGs (11 in Char Nangulia, 5 in Noler Char, 2 in Char Ziauddin and 3 in Caring Char and 2 in Urir char) are registered by the BWDB as per Participatory Water Management Rules 2014. One reconstituted WMG in Urir Char is under process of registration from BWDB. Registration of 10 WMGs in CDSP-III, 12 in area II and 2 in I 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.

Table 4 - 9 Status of WMOs in CDSP- IV areas (January- June, 2018)

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	41	41	82	12
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	60
5	Urir Char	3	21	2510	67	15	82	17
Total		24	167	29289	506	363	869	137
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	8
		1 WMF	-		24	12	36	0

The following impact was achieved by WMGs/ WMA/WMF during the reporting period January-June 2018:

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 excavation/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, Bissowpur 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 Koierer 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 concern 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 408 members out of which 235 are male and 173 are female. 3 male members have dropped out during this reporting period. The WMA has 40 members of which 25 are male and 15 are female. The WMA organized four meetings during this reporting period and the average attendance was 63%. This initiative was taken to establish this WMF as per the procedure of Participatory Water Management Rules-2014. The ten WMGs organized 55 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 17,36,100 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 well 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 were organized during the reporting period with average attendance of 50%.

Six WMGs in **Polder 59/3B**, Zillar, Momtaz, Karim, Gopal, Nobagram and Kolmi, organized 23 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 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 45 meetings in total during this reporting period with an average attendance 76%. 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 81%. 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 16 meetings in this reporting period and the average attendance was 63%. 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 under taken 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 measures 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.

Construction of WMGs' office buildings

Construction of 24 WMG office building have been completed out of that 11 in Char Nangulia, 5 in Noler Char 2 in Char Ziauddin, 3 in Caring char and 3 in Urir Char. WMGs are now organizing their respective meetings in their offices on a regular basis. 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.

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 95 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 below.

Agency wise LCSs

There are 68 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 need to be activated more for LCS purposes at field level. The TA team continued their efforts through one LCS Facilitator.

Outcomes of Labour Contracting Society (LCS)

The statistics show that 2,181 LCS members (1,582 male and 599 female) received additional employment for 87,240 person-days so far in different infrastructure works initiated by CDSP IV. They received Tk. 2,61,72,000 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 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.

Table 4 - 10 Status of LCS January-June 2018

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	226	139	365	Male-5 Female- 3 Mixed-3
2	Noler Char	26	26	4.26 km road; 1000 latrines; 1 market 2 field devs 2,268 m HBB road, (maintenance work 2,040m) 2400m maintenance work	492	155	647	Female- 3 Male-15 Mixed-8
3	Char Nangulia	46	46	6.465 km road; 16.15km maintenance work 1,900 latrines; 1 market; 11 field developments 1000 m HBB road	647	272	919	Male-5 Female-7 Mixed-34
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		95	95	16.425 km road; 3650 latrines; 3 markets 13 field devs. 3,268m HBB road (18.55 km maintenance work.)	1582	599	2181	Male-31 Female-14 Mixed-50

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 especially women. 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 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 (CBO) 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 Upazilla 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 January-June 2018 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	WMG	11	450	199	132	56	42%	According to GPWM, the participation of women members in MC to be at least 30%
Noler Char	WMG	05	177	73	60	23	38%	
Char Ziauddin	WMG	02	82	41	24	13	54%	
Caring Char	WMG	03	78	35	36	12	33%	
Urir Char	WMG	03	82	15	36	11	31%	
Total		24	869	363	288	115	40%	

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.

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	60	731	628	1359	44%
Noler char	WMG	05	30	348	250	598	41%
Char Ziauddin	WMG	02	12	136	148	284	50%
Caring Char	WMG	03	18	150	136	186	45%
Urir Char	WMG	03	17	269	61	330	18%
Char Nangulia	WMA	01	5	94	41	135	30%
Noler Char	WMA	01	3	72	30	102	33%
Total		26	145	1800	1,294	3,094	41%

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 - 13 Distribution of membership in FF by gender

Name of Chars	No. of FFs	Male	Female	Total	% of female members	Comments
Char Nangulia	37	1319	901	2210	41%	According to the GAP, female membership in FF should be at least 33 %; present average is
Char Ziauddin	07	274	146	420	35%	
Noler Char	25	839	661	1500	44%	
Caring Char	15	396	504	900	56%	
Urir Char	06	310	50	360	14%	
Total	90	3138	2262	5390	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)

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	282	3919	3131	7050	44%	According to GAP, female membership in SFGs is supposed to be at least 33%.
Noler Char	109	1489	1231	2720	45%	
Char Ziauddin	44	558	542	1100	49%	
Caring Char	57	900	525	1425	37%	
Urir char	114	2176	674	2850	24%	
Char Maksmul	14	177	173	350	49%	
Total	620	9219	6276	15495	41%	Present average is 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	282	1407	1131	2538	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	109	576	405	981	41%	
Char Ziauddin	44	220	176	396	44%	
Caring Char	57	316	197	513	38%	
Urir char	114	672	349	1026	34%	
Char Maksumul	14	67	59	126	47%	
Total	620	3263	2317	5580	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.

4.7 Knowledge Management

4.7.1 Monitoring & 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.

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

Production of technical reports

During January-June 2018 progress period several studies, assessment of field level institute and case studies have been conducted and reports produced. Some of them have been published as technical reports, some are ready for publication and some drafts are as in the form of final for publication. These are:

Reports published as Technical Reports

- Rapid survey of cyclone shelters and disaster response at the household level (TR-14), March 2018
- Evaluation of Water Management Groups (TR-15), April 2018
- Assessment of Farmers Forums in CDSP IV (TR-16), April 2018
- Impact of employment in project works on members of Labour Contracting Societies (TR-17), April 2018
- Gender Impact Assessment (TR-18), April 2018
- Annual Outcome Survey 2017 (TR-19), April 2018
- Project Completion Report 2018 (TR-20), April 2018

Reports produced final draft/ready for publication

- Agricultural Impact Assessment
- Sorjon – an innovation for maximizing farm income on poorly drained and saline coastal land (3rd draft)
- Final Impact Study 2018 (1st draft)

Reports under preparation

- Traffic Count survey (surveyed data already processed)
- Market study (surveyed data being entered)

Stakeholder PCR Workshops 2018

In compliance with IFAD PCR requirements two stakeholder workshops (the 1st workshop with participants from field staff of CDSP-IV implementing agencies and PNGOs including representatives of char dwellers and the 2nd workshop with participants from CDSP-IV implementing agencies, partner NGOs and local government institutions (LGIs) have been organised. Implementation process of the two stakeholder workshops were as detailed below:

A: Stakeholder workshop with CDSP-IV field level staff members

Venue: CDSP-IV Site Office, Kaladur Bazar, Char Nangulia

Held on: 19 March 2018

Workshops participants (56) were divided into the following groups:

- Men living in the chars
- Women living in the char
- Members of LGIs and WMG
- Field level staff of PNGOs
- Field staff members of implementing agencies

Each group was asked to list and comment on

- Results (intervention areas, achievements, challenges and lessons for the future) of CDSP-IV components and sub-components)
- Impacts (impacted areas, change in last 6 years, contributions of CDSP-IV and what was not improved)

Each group was also invited to address the workshops regarding their overall findings and major issues.

A: Stakeholder workshop with CDSP-IV Implementing agencies and LGIs

Venue: LGED Conference Room, Maijdi, Noakhali

Held on: 21 March 2018

Workshops participants (45) were grouped by agencies:

Each group was asked to list and comment on

- Relevance (additional intervention needed/not needed, comparison before and CDSP-IV status)
- Problems (in implementation, and un-foreseen problems)
- Results (important, not so important, areas for discussion and feedback)
- Sustainability
- Management (what could have been done better by TA team)
- Lessons (success factor, challenges and to be done differently in future)

Each group was also invited to address the workshops regarding their overall findings and major issues.

Findings and outcomes from both the workshops have been well documented and summarized. The summary of findings has been captured into MS Excel sheets which have been included into Project Completion Report 2018 (TR-20) as Appendix-12, pages 115-128,

Table-4.1: Summary of ME Activities with Progress

Sl#	Activity/study/surveys	Plan/budget/approval, sample HH##, and duration	Status on Progress	Remarks
1	Final impact evaluation survey 2017	Tk. 474000, 1400 HHs Started-19 Dec 2017 End-in progress	Data collection in progress and approx. 200 impact HHs covered	
2	Traffic count survey 2018	Seven market and associated committee members	Data collected from 7 markets with supplementary qualitative information	
3	Market survey 2018	Seven markets developed by CDSP-IV and 3 developed by others	Data collection being collected	
4	Assessment of social forestry groups (SFGs)	Survey questionnaire designed	Data will be collected on selected sample SFGs	
5	Other case study data	-	Data for cap sewing-2 and other important interventions	

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. Many good practice cases have been identified and reported by CDSP IV staff members till June 2018.

Ceremony on Distribution of Land Titles

Mr. Donal Brown, Associate Vice President of IFAD and Mr. Nigel Brett, Director, Asia and Pacific Division, IFAD have visited CDSP-IV project sites on 4 August 2018. They were present in the ceremony on distribution of land titles (khatians) for the landless and poor char dwelling families. Mr. Nigel Brett told that he was involved in the design process of CDSP-IV and visited chars before eight years. At that time he did not observed any smiling faces of char dwellers, but he can see hundreds of smiling faces at the venue.

Both the distinguished guests expressed their high satisfaction and gratitude to be present in the land title ceremony where more than 400 land titles have been distributed to the landless families. Moreover, they are proud and delighted to handover land titles directly to some char family members. They have thanked all the implementing agencies and Technical Assistance Team of CDSP-IV for their hard work in preparation of 'khatians' (land titles). Both of them praised the act of handing over land titles to the names of both husband and wife keeping wife's name in the first place. This significant event of Government of Bangladesh is a unique example that is securing woman's right towards empowerment. Mr. Donal requested owners of land to develop their land more productively that will provide livelihoods for them.



Mr. Donal Brown (left) and Mr. Nigel Brett (right) Handing Over Land Titles (Khatians)

For more interesting and relevant information, videos and pictures you may visit following links:

- www.cdsp.org.bd
- www.cdsp.org.bd/video.php
- www.vimeo.com/cdspiv
- www.photo.cdsp.org.bd

Training

During the reporting period 126 events on training and workshops were held during this reporting period. The new workshops: (i) PCR Stakeholder Workshop with Field staff members, (ii) PCR Stakeholder Workshop with IAs and LGIs Officers and (iii) Workshops on benefit sharing agreement. The new trainings are i) leadership and accounts management for WMG members of CDSP-I, II and III areas, (ii) book keeping and accounts, (iii) advance course of leadership development orientation on PWMR-14 for WMGs of CDSP-IV areas and (iv) leadership and accounts management for WMG members of CDSP-IV. Besides the above trainings, a couple of experience sharing meetings were held with the IFAD PDR mission, Edward Mallorie and Natasha Haider including a one day observation ceremony on International Woman Day-2018. The details of the training activities including duration of training and venues 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 resistance jute.

5. Project organization

5.1 Project coordination

Five Project Management Committee (PMC) meetings, the 60th to 64th, were held during the reporting period, two in Noakhali and three in Dhaka. The meetings reviewed among others results of the IFAD Project Completion Review (PCR) Mission and preparations for a Bridging Project 2019-21, agency wise progress, problems and bottlenecks, fund flow and management, re-imburement, trainings 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.

During the reporting period various discussions/ coordination meetings were held with EKN and IFAD.

The IFAD Project Design Review Mission took place during 8th – 12th July. Documents and data were prepared and analysed and supplied to this mission, as requested by IFAD.

5.2 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.

5.3 The Technical Assistance team

In **Annex 6** the CDSP IV staffing per 30 June 2017 is presented, including the date of joining the project. For the period January to June 2018, the following minor budget neutral time reallocations are planned:

	Changes in Working days
Professional Staff	
Team Leader (international)	0.0
Team Leader (international)-ST input	28.0
Short term (international)	-28.0
Deputy Team Leader (infrastructure)	22.0
Land Settlement Adviser	45.0
Senior Quality Control Engineer	0.0
Institutional Advisor	0.0
Quality Control/Design Engineer	15.5
M&E and Knowledge Management Adviser	45.0
Gender and Social Adviser	0.0
Deputy Team Leader Agricultural Advisor (NGO and livelihoods till Mar16)	-48.0
Financial Adviser	19.0
Agricultural Advisor till Mar16	0.0
Social Forestry Advisor	50.0
Short term national	-170.1
Subtotal	-22

	Calendar Months
Technical/administrative staff	
Accounts Officer	0.0
Assistant Land Settlement Adviser	-3.0
Logistic Officer	3.0
Project Area Co-ordinators	0.0
Social Forestry Co-ordinator	6.0
NGO sector specialists	0.0
Project Agriculturist	3.0
Project Engineers	0.0
Office Manager	0.0
MIS and Computer Supervisor	0.0
Field Engineers (intermittent input)	0.0
Short term national technical staff	0.0
Subtotal	9

5.4 Reporting

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

- CDSP IV Progress Report No 14, July – December 2017, March 2018.
- CDSP IV Technical Report No. 14: Rapid survey of cyclone shelters and disaster response at the household level, March 2018.
- CDSP IV Technical Report No. 15: Evaluation of Water Management Groups, March 2018.
- CDSP IV Technical Report No. 16 Assessment of Farmers Forums in CDSP IV, April 2018.
- CDSP IV Technical Report No. 17: Impact of employment in project works on members of Labour Contracting Societies, April 2018.
- CDSP IV Technical Report No. 18: Gender Impact Assessment, April 2018.
- CDSP IV Technical Report No. 19: Annual Outcome Survey 2017, May 2018.

6. Project Finances

6.1 Introduction

For an overview of overall project achievements and financial progress and planning, expenditure, component wise, please refer to **Annex 4**, which presents in 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 2017 – 2018, Withdrawal Applications No. 11A (for IFAD Loan) and 11B (for GoN Grant for Civil Works) were submitted during the reporting period to IFAD to account for expenditures incurred by the project during July 2017 to March 2018. The expenditures submitted for justification by IFAD were US\$ 3,339,062.59 against IFAD Loan and USD 371,796.17 against GoN Grant. These were duly accepted by IFAD. An advance of USD 1,153,330.00 against IFAD Loan and USD 148,990 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, 2018 against AWPB of 2018-2019.

6.2 Project cost

Overall project costs 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 up to 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 by 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\$ 6.45 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.

6.3 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 618.16 Million (US\$ 8.03 Million) was projected to be expensed during the financial year 2017 – 2018 against which a sum of TK 484.98 Million (US\$ 6.30) has been spent during the year with TK 307.71 Million (US\$ 4.00 Million) spent during the half year from January to June 2018.

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 188.25 Million (US \$ 2.44 Million) was projected to be expensed during the financial year 2017 – 2018 against which TK 177.90 Million (US\$2.31 Million) was spent during the year with TK96.20 Million (US\$ 1.25 Million) spent during the half year from January to June 2018.

Contribution of GoB

The contribution from the Government of Bangladesh for the eight year project period is TK. 1,205.59 Million (US\$ 15.66 Million). A sum of TK 239.31 Million (US\$ 3.11 Million) was projected to be expensed during the financial year 2017 – 2018 against which TK 278.35 Million (US\$3.62) was spent during the year with TK 172.19 Million (US\$ 2.24 Million) spent during the half year from January to June 2018 .

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.

6.4 Funds received from IFAD

USD 1,153,330.00 against IFAD Loan and USD 148,990 for GoN Grant for civil works were asked for from IFAD during the period. These funds were requisitioned in withdrawal applications nos. 11A and 11B respectively against Annual Work Plan and Budget of Financial Year 2018-19 (July to December 2018). The project received the funds in July 2018. In the meantime, project expenditure by all implementing agencies of the project during the reporting period were met from unspent advance funds lying in the SAFE Account.

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		Authori- zed amount by MOF	Advan ced BDT (Millio n)	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	213.70	0.00
B	Social Forestry	FD	33.48	0.43	-	-	36.99	0.48	40.90	33.40	7.50
	Sub-Total		339.64	4.40	-	-	249.79	3.24	254.60	247.10	7.50
2	Internal Infrastructure										
A	Protection from climate change	LGED	219.68	2.85	-	-	131.97	1.72	193.00	172.40	20.60
B	Water and Sanitation	DPHE	29.10	0.38	-	-	20.85	0.27	44.50	44.50	0.00
	Sub-Total		248.78	3.23	-	-	152.82	1.99	237.50	216.90	20.60
3	Land Settlement and Titling	MoL	2.20	0.03	-	-	1.04	0.01	2.20	2.20	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	494.30	466.20	28.10

6.5 Expenditures from IFAD Funds

The cumulative expenditures from IFAD funds in the period upto 30th June 2018 against the approved AWPB budget allocations upto 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 by IAs (Disbursed from PCD Office)		Expenditure incurred Cumulative
			For 2017 - 2018	Cumulative	For 2017-2018	Cumulative	
1	Protection from Climate Changes						
a	Water Resources Management	BWDB	306.16	2,463.78	213.70	1,268.32	1,144.66
b	Social Forestry	FD	33.48	568.35	33.40	289.68	285.68
	Sub-Total		339.64	3,032.13	247.10	1,558.00	1,430.34
2	Internal Infrastructure						
a	Protection from climate change	LGED	219.68	2,847.15	172.40	1,816.28	1,577.96
b	Water and Sanitation	DPHE	29.10	247.00	44.50	203.67	174.26
	Sub-Total		248.78	3,094.15	216.90	2,019.95	1,752.22
3	Land Settlement and titling	MoL	2.20	43.89	2.20	31.62	31.62
4	Support to Livelihood						
	Agriculture Development	DAE	0.00	82.74	0.00	69.76	64.36
	Total		590.62	6,252.91	466.20	3,679.33	3,278.54

6.6 Expenditures from GOB Funds

The expenditures reported from GoB funds upto the 30th June 2018 against the approved ADP/RADP budget allocation upto the financial year 2017 - 2018 are as detailed in **Table 6 - 8** below.

Table 6- 8 Expenditures from GOB Funds (Figures in Tk Million)

Slab	Component	IAs	ADP		Funds Received Cumulative by 30 June 2018	Expenditures Incurred Cumulative by 30 June 2018
			For 2017-2018	Cumulative		
1	Protection from Climate Changes					
A	Water Resources Management	BWDB	229.42	764.82	431.97	431.97
B	Social Forestry	FD	2.80	18.20	16.99	16.99
	Sub-Total		232.22	783.02	448.96	448.96

2	Internal Infrastructure					
A	Protection from climate change	LGED	68.00	576.60	519.58	519.58
B	Water and Sanitation	DPHE	13.50	76.70	42.23	42.23
	Sub-Total		81.50	653.30	561.81	561.81
3	Land Settlement and titling	MoL	7.70	36.50	34.45	34.45
4	Support to Livelihood					
	Agriculture Development	DAE	0.00	9.40	5.01	5.01
	Total		321.42	1,482.22	1,050.23	1,050.23

6.7 Expenditures from GoN Funds

6.7.1 Expenditures from GoN funds for infrastructure development

So far BDT Million 145.22 has been spent from GoN funds for infrastructure for BWDB, BDT Million 20.45 for DPHE, BDT Million 205.87 for LGED and BDT Million 0.24 for FD. The total amount spent for infrastructure development from GoN funds so far is BDT Million 371.78.

6.7.2 Expenditures from GoN funds for TA

Expenditures for Technical Assistance in the period 1 January – 30 June 2018 amounted to Euro 605,676 while total expenditures up to 30 June 2018 are Euro 10,141,388. The status of the Technical Assistance budget per 30 June 2018 is presented in **Annex 7**.

6.7.3 Financial Progress against budget

The gross financial progress from inception of the project till June, 2018 is about 91% with BDT 5,831.03 Million (US\$ 75.73 Million) spent out of a provision of BDT 6,385.90 Million (US\$ 82.93 Million) under 2nd Revised DPP excluding the beneficiary contribution on account of micro-credit. There being a higher than expected progress on that account, the overall progress including that one reaches 101% over target. Agency wise and overall detailed financial - and physical progress is presented in the Financial Tables in **Annex 4**.

6.7.4 Developments in Financial Operations

An Annual Workplan and Budget (AWPB) was prepared for the Project Closure Period of July to December 2018, submitted to and approval duly received from IFAD and EKN. Total expenditure during the period has been planned at TK 244.98 Million (US\$3.18 Million) with IFAD Contribution at TK88.81 Million (US\$1.15 Million), GoN at TK67.09 Million (US\$0.87 Million) and GoB at TK89.07 Million (US\$1.16 Millions).

A CDSP Bridging Project has been designed with duration from January 2019 to December 2021 with an estimated total Project Cost of US\$54.075 Million with IFAD Contribution at US\$20.63 Million, GoN at Euro 4.95 Million and GoB at US\$ 24.699 Million and a beneficiary contribution of US\$ 3.757 Million. The Project Design Mission for the project was conducted by IFAD in Bangladesh in July 2018.

7. 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 CSDP 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 2017 – 2018.*

■ *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.

■ *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.*

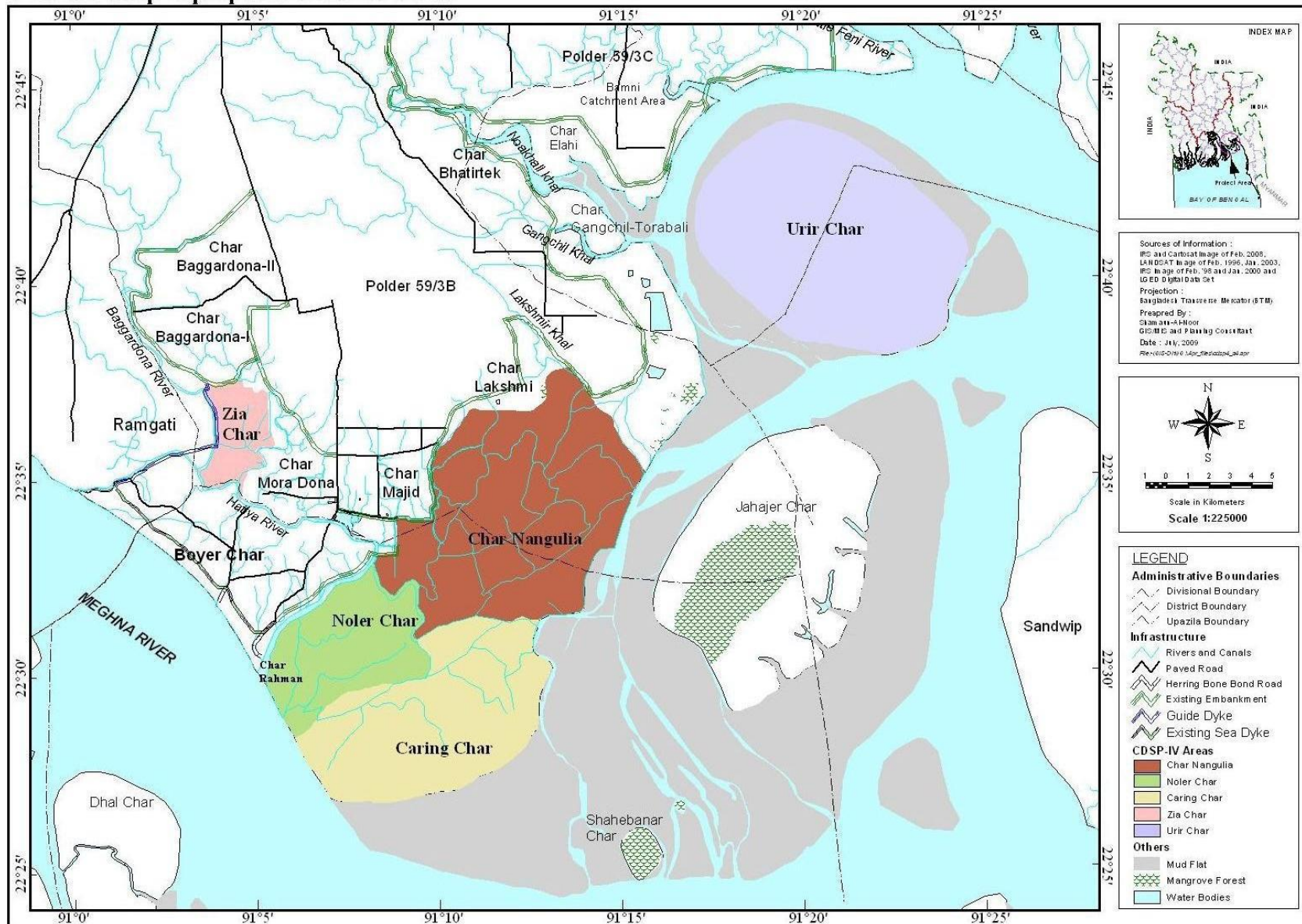
Annex 1. CDSP IV Logical Framework

Narrative summary	Indicators	Means of Verification	Assumptions	Progress as of 30 June 2018
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	Stunted – No changes Under weight – 14% reduced Malnutrition – 4% reduced - 503% HH has increased assets - 35% HH with <=3 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 - 28,970 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% - 6 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"> - 310 km road constructed - 17,000 have access to shelter - School started in 92% of 38 shelters - 28,970 HH access to safe drinking water and 25,717 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 /outcome survey 	Vested interests & elites do not disrupt land settlement.	<ul style="list-style-type: none"> - 16,506 HH - 12,461 HH received khatians
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 	_ 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 - 13,173 women aware of 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 - 75.5 km - 200 ha foreshore - 24 WMG, 2 WMA, 1 WMF - 620 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"> - 310 km - 4 bridges, 219 culverts - 7 market - No data - 38 shelters - None - 1,531 DTWs - 28,970 HH - 25,717 Operational - 2,137 LCS members (male-1,538 women-599, 28% women)
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 - 14,599 HH received khatians (12,461 CDSP IV and 2138 CDSP III)
4. Improved livelihood support for the households	<ul style="list-style-type: none"> _ 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 _ 240 Fish Nurserers and 1680 model fish farmers - 60 poultry workers & 12 paravets 	<ul style="list-style-type: none"> _ Participatory monitoring feedback and surveys _ KAP surveys _ Project reports from DAE and NGOs _ Project reports 	<ul style="list-style-type: none"> _ DAE able to post staff to implement agricultural development programme. _ Appropriate technologies for salt affected land available. _ NGOs not subject to undue regulatory interference. 	<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>_ Project reports</p>	<p>Government continues to support coastal development</p>	<ul style="list-style-type: none"> - Progress Report-15 - Technical report-20 - Mission Report-9 - KAP report-8 - PME report- 8 - Feasibility Study- 3 - RIMS- 1, baseline 1, Mid-term 1
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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. Dr. Md. Abul Hossain
Project Director, CDSP-IV
DAE, Noakhali.
6. Mr. Md. Tahidul Islam
Project Director, CDSP-IV and DFO
FD, Noakhali.
7. Mr. Andrew Jenkins
Team Leader, CDSP-IV
Member Secretary PMC.
8. Mr. Mihir Chakraborty
Deputy Team Leader (I) CDSP IV
TA team
9. Mr. Md. Bazlul Karim
Deputy Team Leader (N&L) CDSP IV
TA team

Five PMC meetings (60th – 64th) were held during the reporting period, two in Noakhali and three in Dhaka.

Annex 6. CDSP IV Staffing on 30 June 2018

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	20/1/2015
8.	Mr. Md. Robiul Islam	Social Forestry Adviser	2/5/2011
9.	Mr. Mesbahuddin Ahmed (Bahar)	Logistic Officer	2/5/2011
10.	Mr. Yahiya Shawon	Accounts Officer	12/4/2012
11.	Md. Nurul Islam	Assistant Land Settlement Adviser	3/4/2011
12.	Md. Mijanur Rahman	Project Area Coordinator (Char Nangulia)	18/1/2016
13.	Md. Liaquat Ali Khan	Project Area Coordinator (Urir Char)	2/5/2011
14.	Md. Alauddin	Project Area Coordinator (Char Ziauddin)	2/5/2011
15.	Md. Basedul Alam Siddiqui	Project Area Coordinator (Noler Char, Caring Char)	26/5/2011
16.	Md. Zahirul Islam Chowdhury	Social Forestry Coordinator	2/5/2011
17.	Motaher Hossain	NGO Sector Specialist WATSAN	2/5/2011
18.	Zulfiqur Azeez	Project Engineer (West)	7/4/2011
19.	Sankar Chandra Saha	Project Engineer (East)	1/3/2011
20.	Md. Abul Hossain	Project Engineer (Urir Char)	18/9/2011
21.	Shajjadur Rahman	Project Engineer (Char Ziauddin)	14/11/2011
22.	Radheshyam Sutradhar	Project Agriculturist	2/5/2011
23.	Ms. Raka Monaem	Office Manager & Accounts Officer (Dhaka)	1/3/2011
24.	Md. Liakhat Ali	Agriculture cum Forestry Coordinator	21/7/2013
25.	Md. Mizanur Rahman	MIS & Computer Specialist	20/1/2014
26.	Ms. Shilpi Regina Gonsalves	Administrative Assistant (Noakhali)	1/3/2011
27.	Md. Sanaullah	Account Assistant (NPO)	15/5/2013
28.	Zahidur Rahman	Administrative Assistant (Dhaka)	15/6/2011
29.	Md. Rafiqul Islam	Data Collector (PCD Office)	15/6/2011
30.	Bashir Ahamed	Office Assistant (PCD Office)	15/4/2013
31.	M.A. Kader	Monitoring & Evaluation Officer	2/10/2011
32.	Ms. Khaleda Akter	Monitoring & Evaluation Officer	2/10/2011
33.	Ms. Fatema Begum	Gender Field Coordinator	2/5/2011
34.	Ms. Nahid Farhana Akter	Gender Field Coordinator	2/5/2011

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

Annex 7. Status of Technical Assistance Budget on 30th June 2018

Euro						
Sl. No.	Budget Item	Total Budget	Previous Claims	Claim April-June 2018	Total claimed	Balance
1	Professional Staff	4,400,037	3,885,342	162,661.68	4,048,004	352,033
2	Technical/administrative Staff	1,108,367	981,077	44,021.62	1,025,098	83,269
3	Support and field Staff	918,333	801,259	39,006.99	840,266	78,067
4	Equipment/ Vehicles	126,218	125,235	(723.36)	124,511	1,707
5	Studies and surveys	414,672	353,467	9,466.94	362,933	51,738
6	Training and Workshops	117,050	78,265	4,823.13	83,088	33,962
7	Contracted services	65,000	35,585	0.00	35,585	29,415
8	Recurrent Cost	820,523	711,630	17,341.48	128,971	91,552
9	Office Construction	50,000	50,000	0	50,000	0
<i>Sub-total TA</i>		<i>8,020,200</i>	<i>7,021,859</i>	<i>276,598.48</i>	<i>7,298,457</i>	<i>721,743</i>
10	Contingencies	211,045	28,042	0	28,042	183,003
<i>Sub-total TA incl. contingencies</i>		<i>8,231,245</i>	<i>7,049,901</i>	<i>276,598.48</i>	<i>7,326,499</i>	<i>904,746</i>
11	Social and Livelihood support	3,076,750	2,799,873	15,015.88	2,814,889	261,861
<i>Sub-total Social & Livelihood</i>		<i>3,076,750</i>	<i>2,799,873</i>	<i>15,015.88</i>	<i>2,814,889</i>	<i>261,861</i>
Total TA contract		11,307,994	9,849,774	291,614.36	10,141,388	1,166,606

Annex 8. Training provided January-June 2018.

SI No.	Title of Training/Workshop	Facilitated by	Duration	Batch	Participants		
					Male	Female	Total
1.	International Women Day -2018 at Char Nangulia & Nolerchar	TA Team	1 day	2	180	278	458
2.	Experience sharing meeting with Natasha Haider at Char Nangulia & Nolerchar	TA Team	1 day	4	29	27	56
3.	Experience sharing meeting with Edward Malory (FLIs & LGIs) at 59/3C polder, Char Nangulia & Nolerchar.	TA Team	3 days	5	23	36	59
4.	Experience sharing of IFAD PDR Mission with FLIs and beneficiaries in CDSP-I, II, III and IV areas.	TA Team	1 day	2	22	08	30
5.	Experience sharing of IFAD PDR Mission with FLIs and beneficiaries in CDSP-I, II, III and IV areas.	TA Team	1 day	1	14	01	15
6.	Experience sharing of IFAD PDR Mission with FLIs and beneficiaries in CDSP-I, II, III and IV areas.	TA Team	1 day	1	10	03	13
7.	Experience sharing of IFAD PDR Mission with FLIs and beneficiaries in CDSP-I, II, III and IV areas.	TA Team	1 day	1	11	19	30
8.	Experience sharing of IFAD PDR Mission with FLIs and beneficiaries in CDSP-I, II, III and IV areas.	TA Team	1 day	1	09	06	15
9.	Training on Leadership & Accounts Management to WMGs in CDSP-I, II and III areas at BRDB Training Centre.	BWDB & TA Team	2 days	4	96	24	120
10.	Training on Book keeping & Accounts to WMGs in CDSP-I, II and III areas at BRDB Training Centre..	BWDB & TA Team	2 days	3	80	10	90
11.	Training on Advance Leadership Dev. & Orientation on PWMR-2014 to WMGs in CDSP-IV, area at CDSP Site Offices.	BWDB & TA Team	2 days	3	73	17	90
12.	Training on Leadership Dev. * Gr. Mngt. to WMGs in CDSP-IV at CDSP site offices	BWDB & TA Team	1day	19	351	142	493
13.	Training on social Forestry for mitigation of climate change	TA Team & FD	2	39	598	377	975
14.	PCR Stakeholder Workshop with Field staff members held at CDSP Site office, Kaladur	TA Team & IAs	1	1	45	12	57
15.	PCR Stakeholder Workshop with IAs and LGIs Officers held at LGED Conference Room, Maizdee, Noakhali.	TA Team & IAs & LGIs	1	1	44	1	45
16.	Workshops on benefit sharing agreement	TA Team & FD	1	39	598	377	975
Total				126	2183	1338	3521

Annex 9. Overview of FLIs 30 June 2017

SL	Name of Area/ Polder/WMG /LADC	No of FF	No of SFG	No of NGO group	No of TUG	No of LCS	Remarks
Nangulia							
1	Char Azmal Dorbesh- WMG	4	21	37	75	4	
2	North Nangulia- WMG	3	7	44	77	5	
3	South Nangulia-WMG	5	22	71	98	6	
4	Char Jamil Bhuiyan-WMG	3	34	41	71	5	
5	Char Bashar-WMG	3	21	19	45	2	
6	North Katakhal-01, WMG	3	24	41	54	3	
7	South Khatkhali-01, WMG	3	26	31	51	3	
8	North Katakhal-02, WMG	4	24	46	59	3	
9	South Khatkhali-02, WMG	3	29	29	47	4	
10	Char Noman, WMG	3	51	31	55	5	
11	Char Lakshmi- WMG	3	23	33	51	3	
	Total	37	282	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	11	37	60	5	
4	Milon Khal- WMG	5	15	40	59	2	
5	Alamin Khal- WMG	5	39	44	78	5	
	Total	25	109	217	355	25	
Caring Char							
1	Bathankhali WMG	3	19	54	85	3	
2	Shahabani Bazar- WMG	5	11	36	55	5	
3	Mujib Bazar- LADC	3	18	34	14	0	Eroded
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	Gabtoli khal- 1	0	7	0	0	0	
	Total	7	44	80	130	4	
Urir Char							
1	WMG-01	2	0	28	9	0	
2	WMG-02	2	0	35	33	1	
3	WMG-03	2	47	21	25	1	
	Total	6	47	84	67	2	
1	Boyer Char/ Telier Char, Muksumul, Bangchur, Kolatoli	0	81	0	95	6	
	Grand Total	90	620	984	1532	91	

Annex 10. Additional Data for EKN

Results for the period January-June 2018

It is understood that, during the year under review CDSP IV has mainly been closing down and that no new results in several areas may have been obtained.

*Note that the results required are **not cumulative**.*

*There are a lot of overlapping outcome categories and so ‘**double counting**’.*

*Age and gender disaggregated data are not always available and so **only data has been provided which is available to us at present**.*

Indicators by Sector/Results/Impact/Outputs	Values
Sector: WATER	
Result : Improved basin and polder management: number of people benefitting from improved water security and water safety in the project area (project target and non-cumulative result)	1,71,147 people
Outputs (Project targets and results obtained):	
1: Number of people supported in flood protection activities	1,25,464 people
2: Number of people supported on improving drainage and water availability /irrigation	1,71,147 people
3: Number of people supported for improved water shed/polder protection	1,71,147 people
4. Number of WMA and of WMO supported	26 nos.
5. Number of professionals trained in water management	866 nos.
6. Number of people benefitting from operational plans for IWRM	1,71,147 people
7. Number of ha with operational plans for IWRM	25,533 ha
Sector: AGRICULTURE	
A. Productivity and Income	
Result/Impact: Number of family farms that doubled their productivity and/or income	24,300 family farms
Outcomes:	
1. Number of family farms that increased productivity or income (by male/female headed and age %<35)	15,795 family farms by male, 8505 family farms by females and (11,057 by males & 5954 by females when age <35)
2. Number of family farms with improved access to input and/or output markets (by male/female headed and age %<35)	9,425 family farms by males, 9425 by females and (6,598 by males & 6598 by females when age <35)
3. Number of family farms whose farming enterprise became more resilient to shocks (by male/female headed and age %<35)	7,250 family farms by males, 7,250 by females and (5,075 by males & 5075 by females when age <35)
Outputs:	
Number of family farms directly reached by the project (by male/female headed and age %<35)	10,640 family farms where 3,136 family farms by males, 7,504 by females and (2,195 by males & 5,253 by females when age <35)
Number of family farms indirectly reached by the project (by male/female headed and age %<35)	9,180 family farms by males, 9,180 by females

B. Sustainable farming and land use	
Result/Impact:	
Number of hectares converted to sustainable farming and land use (including pastures & fishing grounds)	21,993 hectares
Outcomes:	
1. Number of hectares of farmland used in a more eco-friendly way (including pastures & fishing grounds)	7,331 hectares
2. Number of hectares of farmland that became part of improved watershed/polder management (including pastures & fishing grounds)	8,990 hectares
3. Number of hectares of farmland that agro-ecologically become more resilient to shocks (including pastures & fishing grounds)	51,32 hectares
Outputs:	
Numbers of hectares of farmland directly reached (including pastures & fishing grounds)	5,600 hectares
Number of hectares of farmland indirectly reached (including pastures & fishing grounds)	12,925 hectares
C. Knowledge technology and innovation	
Outcomes:	
1. Number of farmers that adopted research results/knowledge/new technologies (by male/female headed and age %<35 as well as Dutch origin or not)	14,500 males, 14,500 females, (10,150 male farmers, 10,150 female farmers for age <35)
D. Food and agribusiness	
Outcomes:	
1. Number of jobs supported in agricultural value chains (by male/female headed and age %<35)	198 jobs (100% males), 188 job (100% males)
2. Number of value chains performing better	13 value chains promoted
3. Number of businesses co-investing in food & nutrition agribusiness activities (by Dutch/non-Dutch)	20 businesses co-invested)
E. Gender	
Outcomes:	
Number of women empowered on food security/agriculture/nutrition	29,000 women
Outputs	
Number of women that benefited from FNS interventions	29,000 (??) women and children
WATER SUPPLY & SANITATION	
Outcomes:	
Number of People using safely managed drinking water services (disaggregated as to male/female)	488 mix of males and females
Number of people using safely managed sanitation services (disaggregated)	4,372 peoples using hygienic latrines
Outputs:	
a) Number of WASH organisations strengthened	244 nos.
b) Number of people trained in WASH institutions	3,660 people
c) Number of people with access to micro-finance for WASH	4,372 people
d) Number of climate resilient drinking water point constructed	244 DTWs
e) Number of climate resilient sanitary facilities constructed	4,372 hygienic latrines
f) Number of students with improved drinking water & sanitary facilities in schools	2100 students
g) Number of health centres with improved drinking water and sanitary facilities	4 clinics by PNGOs
LAND RIGHTS	
1. Number of people that enjoyed (more) secure right to land	10,624 people