

CHAR DEVELOPMENT AND SETTLEMENT PROJECT- III

চর উন্নয়ন ও বসতি স্থাপন প্রকল্প- ৩

BANGLADESH

Project Completion Report

1st October 2005 to 28th February 2011

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)
Department of Forest (FD)

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Table of Contents

LIST OF ABBREVIATIONS.....	i
CHAPTER 1: INTRODUCTION.....	1
1.1 Background.....	1
1.2 Approaches and strategies.....	1
1.3 Linkages of CDSP III to other development efforts.....	3
1.4 Basic Project Documents.....	4
CHAPTER 2: OBJECTIVES AND SCOPE OF THE PROJECT.....	5
2.1 Development objective and project purpose.....	5
2.2 Components and activities.....	5
2.3 Target groups.....	5
2.4 Target areas.....	6
CHAPTER 3: ACTIVITIES PER COMPONENT.....	7
3.1 Introduction.....	7
3.2 Institutional development.....	7
3.2.1 Contribution to ICZM.....	7
3.2.2 Strengthening of implementing agencies, including internalisation of CDSP concepts	8
3.2.3 Participatory water management: monitoring of and support to WMOs in CDSP I and	
II areas, and in Boyer Char; support for the BWDB Water Management Directorate.....	11
3.2.4 Strengthening links between communities, local government institutions and	
implementing agencies in CDSP I and CDS DP II areas and Boyer Char.....	14
3.2.5. Greater involvement of District level in the project.....	15
3.2.6 Upgrading and improving functioning of the Project Management Committee.....	16
3.2.7 Preparation of funding arrangements for char development interventions after 2009.....	17
3.3 Studies, knowledge management and dissemination.....	17
3.3.1 Drainage study upstream Baggar Dona.....	17
3.3.2 Feasibility studies for char development projects in future.....	18
3.3.3 Knowledge management: linking project data base with Integrated Coastal Resources	
Data Base of ICZM; dissemination of CDSP achievements on a wider scale; improving	
flow of information to and from communities in Boyer Char.....	19
3.3.4 Increasing knowledge about impact of past interventions in CDSP I and II areas:	
monitoring land retention in CDSP I and II areas; monitoring soil salinity; monitoring HYV	
adoption.....	21
3.4 Interventions at field level particularly in Boyer Char.....	22
3.4.1 Ministry of Land.....	22
3.4.2 Bangladesh Water Development Board (BWDB).....	29
3.4.3 Local Government Engineering Department (LGED).....	30
3.4.4 Department of Public Health Engineering (DPHE).....	30
3.4.5 Department of Agriculture Extension.....	31
3.4.6 Department of Forest.....	34
3.4.7 BRAC/CDSP.....	38
3.4.8 Training.....	38
CHAPTER 4: PROJECT ORGANISATION.....	39
4.1 Introduction.....	39
4.2 The parties involved and their responsibilities.....	39
4.2.1 The Ministry of Water Resources.....	39
4.2.2 Embassy of the Kingdom of the Netherlands.....	39
4.2.3 Bangladesh Water Development Board.....	40

4.2.4 Local Government Engineering Division	40
4.2.5 Department of Public Health Engineering	40
4.2.6 Department of Agricultural Extension.....	40
4.2.7 Department of Forestry	40
4.2.8 Ministry of Land.....	41
4.2.9 Government at local levels	41
4.2.10 Community-based field level institutions	41
4.2.11 NGOs	42
4.2.12 Technical Assistance team	42
4.3 Formal coordination mechanisms	42
4.4 Monitoring, reporting and review	43
CHAPTER 5: BUDGET AND TIMEFRAME.....	44
5.1 Contribution of the Government of Bangladesh	44
5.2 Contribution of the Government of the Netherlands	44
5.2.1 Financial Assistance	44
5.2.2 Technical Assistance.....	45
5.3 Money flows and financial reporting	45
5.4 Time-frame	45
CHAPTER 6: RISKS AND ASSUMPTIONS	46
ANNEX- I EXECUTIVE SUMMARY TECHNICAL REPORT NO. 7	48
ANNEX- II EXECUTIVE SUMMARY TECHNICAL REPORT NO. 4	51
ANNEX- III MAP OF CDSP-I, II, III & IV AREAS	56
ANNEX- IV MAP OF BOYER CHAR.....	57
ANNEX- V MAP OF CDSP-IV AREAS	58
ANNEX –VI OVERVIEW OF TRAINING ACTIVITIES	58
ANNEX- VII OVERVIEW OF INFRASTRUCTURE WORKS	62
ANNEX-VIII LIST OF CDSP III REPORTS AND PUBLICATIONS	69
ANNEX-IX TECHNICAL ASSISTANCE BUDGET AND EXPENDITURE	75

LIST OF ABBREVIATIONS

AC (L)	: Assistant Commissioner (Land)
AEO	: Assistant Extension Officer
AGM	: Annual General Meeting
BARD	: Bangladesh Academy for Rural Development
BARI	: Bangladesh Agriculture Research Institute
BRAC	: Bangladesh Rural Advancement Committee
BRRI	: Bangladesh Rice Research Institute
BWDB	: Bangladesh Water Development Board
CBD	: Char Baggar Dona
CDS	: Coastal Development Strategy
CDSP	: Char Development and Settlement Project
CEGIS	: Centre for Environmental and Geographic Information Services
CM	: Char Majid
DAE	: Department of Agricultural Extension
DC	: Deputy Commissioner
DDCC	: District Development Coordination Committee
DOC	: Department of Cooperatives
DOF	: Department of Forest
DPHE	: Department of Public Health Engineering
DPP	: Development Project Proforma
DTW	: Deep Tube Well
ECNEC	: Executive Committee of National Economic Council
EDP	: Estuary Development Programme
EIRR	: Economic Internal Rate of Return
EKN	: Embassy of the Kingdom of the Netherlands
FF	: Farmers Forum
FIRR	: Financial Internal Rate of Return
HH	: Household
HYV	: High Yielding Variety
ICRD	: Integrated Coastal Resource Database
ICZM	: Integrated Coastal Zone Management
IPSWAM	: Integrated Planning for Sustainable Water Management
IWM	: Institute of Water Modelling
LCS	: Labour Contracting Society
LGED	: Local Government Engineering Department
LGI	: Local Government Institution
LRMS	: Land Records Management System
MC	: Management Committee
MIDPCR	: Market Infrastructure Development Project in Char Land Regions
MoL	: Ministry of Land
NGO	: Non Governmental Organization
NSC	: National Steering Committee
O&M	: Operation and Maintenance
PDZ	: Productivity Zone
PMC	: Project Management Committee
PMU-ESPP	: Project Management Unit-Estuary Studies and Pilot Project
PP	: Project Proforma

RDPP	:	Revised Development Project Proforma
SRDI	:	Soil Research Development Institute
SFG	:	Social Forestry Group
UCO	:	Upazila Cooperative Officer
UNO	:	Upazila Nirbahi Officer
UP	:	Union Parishad
XEN	:	Executive Engineer
WARPO	:	Water Resource Planning Organization
WMA	:	Water Management Association
WMF	:	Water Management Federation
WMG	:	Water Management Group
WMO	:	Water Management Organization

CHAPTER 1: INTRODUCTION

1.1 Background

The Bangladesh Government, with assistance from the Government of the Netherlands, initiated development activities in the late 1970s aimed at increasing the security of households in the coastal chars of south-eastern Bangladesh by providing them with individual assets (land being the most important one) and collective goods, as embankments, roads and cyclone shelters. These activities evolved from a single agency project in Noakhali District under the Land Reclamation Project, to a regional multi-sectoral and multi-agency programme under the successive phases of the Char Development Project (CDSP). CDSP I ran from 1994 to 2000, CDSP II from 2000 to 2005 and CDSP III from October 2005 to December 2010. The initial project duration of CDSP III was till July 2009, but the progress of works made it necessary to extend the project with 18 months to the end of 2010. To avoid a gap with CDSP IV, the project was extended with a two months bridging period till 1st March 2011. As its Inception Report states, CDSP III was meant to consolidate and monitor the achievements of earlier phases, while at the same time embarking on an intervention programme, specifically in Boyer Char. Also, the project had to establish a bridge to a future char development programme by undertaking feasibility studies.

The current report is the Project Completion Report of CDSP III. Its main reference document is the Inception Report (of March 2006), while the text is predominantly based on the series of six monthly Progress Reports. The nature of this report is essentially a factual account of the activities. For more technical information and for aspects of impact of project interventions, at times reference is made to Technical Reports and Mission Reports. This report has the same structure (chapters, sections and sub-sections) as the Inception Report, Annual Work Plans and Progress Reports.

1.2 Approaches and strategies

In the Inception Report, the following elements are identified, characterizing the approaches and strategies in CDSP III:

- *Poverty alleviation:* The provision of a land title to landless families formed the core of the efforts to reduce poverty levels in coastal char communities. This was followed by improvements in water management and agricultural practices, leading to higher farm incomes. In addition, general economic uplift of the project areas created employment opportunities. Technical Report no. 7 (December 2010) provides insight into the impact of CDSP I, II and III. In all CDSP areas, a substantial reduction in poverty has taken place, with the proportion of very poor households and households with chronic food shortages declining from 90% to between 39% and 56%. Despite the overall reduction, there remains a significant proportion (10% to 16%) of households facing a chronic food shortage. Although poverty levels in the CDSP III area have become lower, a high level of poverty remains because the project is not yet completed and the full benefits of development have yet to be realized. In CDSP I and II areas, many of the very poor are those that migrated to these areas since the CDSP I and II projects were completed. They did not benefit from the

land settlement programme. The executive summary of Technical Report no.7 can be found in Annex 1.

- *Integration:* The integration approach is based on the premise that the social and economic situation in the chars, marked by a set of vulnerabilities, can not be meaningfully improved by one single intervention, nor by one government agency. CDSP is a multi-discipline and multi-agency development effort, undertaking a set of different interventions within the same geographical area in the timeframe of a project. The administrative basis is an umbrella Development Project Proforma (DPP), with separate DPPs for the participating agencies. This common planning and coordinated implementation, but with each agency doing what it is best at and each agency with its own money flow, is now recognised by many of being a “best practice” method of implementing multi-sectoral programmes. But the integration in CDSP went further than only the government agencies. In the coordination mechanisms (National Steering Committee, Project Management Committee, see section 4.3.) also NGOs were represented, because an NGO programme was implemented as well, in the same area and in the same period (see sub-section 3.4.7.). CDSP is very much in line with the strategies of the Coastal Development Strategy (see sub-section 3.2.1.), which is based on the principles of Integrated Coastal Zone Management (ICZM).
- *Participation:* Involvement of the settlers in the chars with planning and implementation of project activities has been given shape through the formation of community based, field level institutions as the Water Management Organizations (see sub-section 3.2.3.), Social Forestry Groups (see sub-section 3.4.6.), Farmer Forums (see sub-section 3.4.5.), Labour Contracting Societies and NGO-groups (see sub-section 3.4.7.). From early on in the process (during the feasibility study phase) local government institutions were involved in the project as well. In the planning at field level, households were closely involved in the location and alignment of public investments as roads, cyclone shelters, tube-wells, public toilets etc.
- *Gender equality:* It has been a conscious strategy in the project to pursue that the consequences of interventions would as much as possible equally benefit men and women, and that both men and women would be involved in the participation in project planning and implementation. This is manifested in the project policy to set as a target a 50-50 male and female membership in Water Management Groups, and a 30% target of women in Farmer Forums. An important step forward for women was the fact that they not only are the legal owner of 50% of the land allotted to the household, but that their signature comes first on the title document (*khatian*). Technical Report no. 4 (November 2009), provides ample information on the gender related project interventions and on the impact they had on the position of women. One of the conclusions is that overall, CDSP III has been successful in reducing gender gaps and achieving a more gender balanced society in the project area. The executive summary of the report is included as Annex 2.
- *Linkages with other projects:* CDSP III followed an approach of pursuing open relations with other projects, especially those operating in the same area. This has proven to be very beneficial for the char settlers, making more public goods and services accessible to them in a coordinated manner. More detailed information is given below in section 1.3.
- *Internalisation:* As mentioned in section 1.1, consolidation of achievements of earlier phases, was one of the aims of CDSP III. Internalisation was understood as incorporating

concepts and experiences of CDSP I and II into the approaches and working methods of the participating government agencies. The aim was to make these agencies better prepared for future char development programmes. This has proven to be a difficult task, with limited but, at the same time, significant achievements (see sub-section 3.2.2.).

- *Bridging function*: The project continued its support in CDSP I and II areas, in particular with regard to Water Management Organisations (see subsection 3.2.3.) and land settlement (see subsection 3.4.1.). The bridge to the future consisted of undertaking feasibility studies (see subsection 3.3.2.), that indeed formed the basis for the formulation of the next phase, CDSP IV. Likewise, the internalisation efforts, incorporating past experiences for making organisations ready for future programmes, are fulfilling a bridging function.

1.3 Linkages of CDSP III to other development efforts

The aim of consultation and coordination with other development efforts in the char areas of Noakhali was to avoid duplication of interventions and to mutually support each others activities, amplifying the results. In a sense a pattern existed both for the CDSP III project area (Boyer Char) and the new chars that will be included in CDSP IV: the reports of the feasibility studies created a planning framework that was followed by other projects as well. CDSP was considered to be the trail blazer for new areas, pulling other activities in its slipstream. The projects concerned were:

- *Regional Fisheries and Livestock Development Component (RFLDC)*: The main part of the cooperation was in the use of water bodies, created in CDSP areas, for aquaculture. Field level institutions instigated under CDSP were instrumental in establishing community based organisations that were involved in aquaculture activities, following the Farmer Field School approach. Other subjects of cooperation were the contribution of RFLDC to feasibility studies that formed the basis for CDSP IV. RFLDC is a component of the Agricultural Sector Support Programme, Phase II, supported by Danida, and is the successor of the Greater Noakhali Aquaculture Extension Project (GNAEP).
- *Rural Roads and Market Access Infrastructure Development Project (RRMAIDP-LGED)*: Even before CDSP III could start concrete interventions in Boyer Char, this project (at the time called LGED Rural Development Project no. 23) constructed a road in that char. The project kept taking care of the maintenance of that road. The same happened in the new chars to be included in CDSP IV. Based on the feasibility study for Char Nangulia, Noler Char and Caring Char, the Danida supported project relieved the precarious situation the settlers were in by constructing a few much needed rural roads.
- *Danida Water and Sanitation Project*: As with the rural roads project, this DPHE-Danida project assisted in Boyer Char before CDSP could start its activities, by establishing test tube wells, facilitating the beginning of CDSP's drinking water interventions. In CDSP IV areas the project provided similar support, even in a more extensive way.
- *Market Infrastructure Development Project in Charland Regions (MIDPCR)*: This project, with assistance from the International Fund for Agricultural Development (IFAD) and the Government of the Netherlands, developed a market in Boyer Char (at Hatiya Bazar) and provided pavement on a rural road, linking markets. CDSP field level organisations assisted in forming a market committee.

- *Estuary Development Programme (EDP)*: Close consultation with EDP (a project with the Bangladesh Water Development Board with Dutch support), took place on a model study, paid for by CDSP III, on the establishment of a connection between Noakhali mainland, Urir Char and Sandwip. This study ultimately resulted in a plan, including a design, to construct a cross dam between Char Clark on the mainland and Urir Char. The intention is that the construction will be financed by the Climate Change Fund of the Government of Bangladesh. It is expected to start and be completed in the 2011-2012 dry season.

To a lesser extent, cooperation existed with the Integrated Project for Sustainable Water Management (IPSWAM) on working methods for formation of and support to Water Management Organisations. In its last project year, CDSP III the Agricultural Research for Climatic Change Adaptation in Bangladesh (SARCCAB-IRRI) project started cooperation with regard to a pilot project in Boyer Char.

1.4 Basic Project Documents

As the Inception Report explains, the legal foundation of CDSP III is formed by the Contribution Agreement between the Governments of Bangladesh and The Netherlands, signed on 27th September 2005. Subsequently, a Project Concept Paper (PCP) has been approved by the Executive Committee of the National Economic Council (ECNEC) on 23rd October. The PCP provides a summary of the work of each of the six implementing agencies (Bangladesh Water Development Board, Local Government Engineering Department, Department of Public Health Engineering, Ministry of Land, Department of Agricultural Extension and Forest Department). The programme for each of the agencies is further detailed in individual Development Project Proformas (DPPs). The Inception Report is essentially an obligation of the Technical Assistance consultants towards the Netherlands government. It spells out all the activities to be performed by the Technical Assistance team (TA team) and also includes all activities to be implemented by the six agencies. For the most part, it repeats what is stated in the DPPs, but never contradicts it.

The DPPs were twice revised. Four reasons led to these revisions. The main reason was an increase in the schedule of rates for construction activities. The original amounts were based on the schedule of rates of the year 2000. A second reason was an increase in volume of works, while a third reason was new, additional activities. The fourth reason was that works included in the DPP were cancelled or turned out to be less costly than anticipated. The total amount increased from Taka 7,874,730 to Taka 9,220,000 in both the first and second revision, as the table below shows.

DPP revisions in '000 Taka

Agency	Original	1 st revision	2 nd revision
BWDB	3,102.23	4,412.07	4,412.07
LGED	2,910.00	2,910.00	2,910.00
DPHE	800.00	800.00	800.00
MoL	496.00	496.00	496.00
Forest Department	500.00	535.430	535.430
DAE	66.500	66.500	66.500
Total	7,874.73	9,220.00	9,220.00

CHAPTER 2: OBJECTIVES AND SCOPE OF THE PROJECT

2.1 Development objective and project purpose

As described in the Inception Report, the long term development objective of the project was the improvement of the economic situation and the living conditions of the population in the coastal areas of south-eastern Bangladesh, with special reference to the poorest segments of the population.

The project was working towards the development objective by aiming at the following three specific project purposes:

- promotion of an institutional environment that sustains CDSP type of interventions
- accumulation and dissemination of knowledge on coastal development
- direct improvement of the economic and social situation of people in coastal chars.

2.2 Components and activities

Based on the three project purposes, the following three categories of activities can be distinguished:

- institutional development
- studies, knowledge management and dissemination
- concrete interventions at field level, directly contributing to the improvement of livelihoods of households in the chars.

The same distinction can be found in the next chapter (on activities per component): section 3.2. is on institutional aspects, 3.3. on knowledge management and related subjects and 3.4. on interventions in the field.

2.3 Target groups

All CDSP III activities were meant to serve, either directly or indirectly through a chain of events, the interests of the landless households that settled in the chars. In case of CDSP III, this refers in particular to the families in Boyer Char. In that area the full range of concrete field interventions have been undertaken. To a lesser extent, households in CDSP I and II areas benefited from CDSP III, through its support for the Water Management Organisations and the land settlement programme. A part of the water management interventions were undertaken to alleviate the drainage problems that families in the upstream area of the Baggar Dona river had to face.

Given the mix of different kinds of activities included in CDSP III, the project's target groups can also be found at other layers of society and the administrative system, from grass roots to the national level. The internalisation was aimed at staff of the six implementing agencies (see sub-section 3.2.2.), dissemination and knowledge oriented activities (3.3.) were directed at these agencies and at other groups, varying from policy makers, local government, the public in general and secondary school students and teachers.

2.4 Target areas

The main target area of the project is Boyer Char, followed by other more upstream parts of the Baggar Dona river catchment area, and by CDSP I and II areas (see previous section). In addition, three feasibility studies were made for five chars: 1. Char Nangulia, Noler Char, Caring Char; 2. Ziar Char and 3. Urir Char. The feasibility studies led to inclusion of these chars in the CDSP IV programme.

A map of the CDSP I, II, III and IV project areas, a map of Boyer Char and a map of the CDSP IV areas can be found in Annex 3, Annex 4 and Annex 5 respectively.

CHAPTER 3: ACTIVITIES PER COMPONENT

3.1 Introduction

This chapter forms the core of this Project Completion Report, since it reports on the activities that were actually carried out in the 65 months of CDSP III. It follows the three project components that were identified in section 2.2.: institutional development (section 3.2.), studies, knowledge management and dissemination (section 3.3.) and concrete interventions in the field (section 3.4.).

3.2 Institutional development

3.2.1 Contribution to ICZM

- *Implementation of the Coastal Development Strategy:*

The Coastal Development Strategy (adopted by an Inter-Ministerial committee in 2006) evolves around nine strategic priorities:

- Ensuring fresh and safe water availability (in the context of regional water resources management)
- Safety from man-made and natural hazards
- Optimising the use of coastal land
- Promoting economic growth emphasizing non-farm rural employment
- Sustainable management of natural resources
- Improving livelihood conditions of the people, especially of women
- Environmental conservation
- Empowerment through generating and disseminating information and knowledge
- Creating an enabling institutional environment.

CDSP III arguably has strong credentials as far as seven of these strategic priorities is concerned, with relatively less emphasis on non-farm employment and on environmental conservation. The Coastal Development Strategy is very much formulated along the lines of the principles of Integrated Coastal Zone Development, and CDSP is at heart an ICZM-project, contributing in a significant way to applying ICZM in Bangladesh. In the eyes of the staff of the ICZM-project that ceased to exist in 2006, CDSP was an ideal environment for piloting certain ideas, such as establishing a District Information Centre as a dissemination vehicle for coastal information and creating a connection between data bases of coastal projects with the central coastal data base at WARPO. These activities were indeed included in CDSP III (see sections 3.2.5. and 3.3.3.)

- *Strengthening the institutional framework:*

Early 1999 the attention on Integrated Coastal Zone Management (ICZM) in Bangladesh was given impetus by an international study tour of five Secretaries of the Government of Bangladesh, joined by the Director General BWDB and the Chief Conservator of Forest. In 2000, the Integrated Coastal Zone Management Plan-project, with financial contributions from the Governments of Bangladesh, the Netherlands and the United Kingdom started. The project had three major outputs: the Coastal Zone Policy (approved by the cabinet on 17th January 2005), the Coastal Development Strategy (adopted by the Inter-Ministerial Steering Committee on 13th February 2006, five months after the start of CDSP III) and the Priority Investment Program (drafted in 2005 and accepted in 2006). However, after that project elapsed in 2006, core bodies as the Inter-Ministerial Steering Committee on ICZM and the Inter-Ministerial Technical Committee ceased to convene. To revitalize the process, the

Bangladesh and Dutch Governments fielded a mission in January 2009, led by the Chief Technical Adviser of CDSP III, which resulted in a series of pragmatic recommendations. It was argued that the two main coordination mechanisms (the Inter Ministerial Technical Committee and the Steering Committee) should convene again, while the urgency of coastal development should have a translation in the organisation of pivotal stakeholders in coastal development. The Government accepted the recommendations, but only one was actually implemented: the creation of a Coastal Unit in WARPO. The abovementioned two committees, the backbones of the institutional framework, did to date not reconvene. Hence, there was little opportunity for CDSP to strengthen the ICZM institutional framework.

3.2.2 Strengthening of implementing agencies, including internalisation of CDSP concepts

- *Internalisation*

One of the aims of CDSP III has been the internalisation of matured CDSP experiences, approach, strategies, and methodologies into the six implementing agencies, in order to prepare them for future integrated char development programmes. As such, internalisation can be considered as a capacity building activity. The importance of it was recognised by the Mid Term Evaluation mission of CDSP II (July 2002) and reaffirmed by the Joint Bangladesh Netherlands Formulation Mission for CDSP III, fielded in June 2004. While designing the process of internalisation in CSP III, internalisation was defined as incorporation of relevant experiences of CDSP phases I and II into the policies and working methods of participating government agencies to strengthen their capacity for future project implementation. The Technical Assistance team developed the following building blocks for the internalisation process:

- A. Agency wise national workshops on internalisation,
- B. Incorporation of matured CDSP experiences in standard training courses of each agency / Ministry,
- C. Publication of articles in the agency newsletters,
- D. Adaptation of working methods and procedures.

This structure was discussed in six bilateral meetings between the senior management of the partner agencies (at the level of the head of the organisation). During these meetings discussions of substance were conducted, resulting in full-fledged support to the proposed methodology, while useful suggestions were made for the actual implementation. In practice, the following series of activities evolved:

1. Selection of internalisation issues: The whole range of experiences and issues of all six implementing agencies was listed, analysed, discussed and finalized after thorough discussion with the respective implementing agencies, including the top level management. The selected issues were treated as subjects that would be included in further activities. The final outcome was a mixture of issues related to working methods, procedures; knowledge and information; and organizational culture of implementing agencies (details can be found in Mission Reports 10 and 15). The number of internalisation issues per agency is shown below.

Serial	Name of implementing agency	No. of issue
1	Bangladesh Water Development Board	11
2	Local Government Engineering Department	07
3	Department of Public Health Engineering	05
4	Department of Agriculture Extension	07
5	Forest Department	05
6	Ministry of Land	15

Integrated Coastal Zone Management (ICZM) has been included as the common issue to all agencies considering its importance and relevance in coastal zone development. The crux of the CDSP institutional set-up which is based on cooperation and coordination between agencies is also the essence of the ICZM approach.

2. Organizing workshops: The following workshops were organised at different stages of implementation of internalisation activities.

-Regional workshops: Six regional workshops were organized in the initial stage involving the agency personnel, NGOs, other project personnel and government departments of Noakhali and Lakshmipur District. The aim was sharing the concept and objectives of internalisation with the participants and seeking their opinion. The process and the recommendations were documented and published.

-National workshop: Following the regional ones, each of the six implementing agencies organized its own national workshop on internalisation. The background, concept, strategies, importance of internalisation and the specific internalisation subjects for that agency, were shared and recommendations were worked out to guide future activities on internalisation. Ministers, Secretaries, top- and senior level officials of agencies, among others' attended the workshop. The process and recommendations were documented separately for each workshop. A half-day national workshop on "Internalisation of CDSP Experience for Capacity Building of Implementing Agencies" was organised in January 2011 involving concerned officials specifically, the members of the 'Internalisation Committee' of all six implementing agencies of CDSP-III.

3. Formation of Internalisation Committees – One of the recommendations of the national workshops was to form a separate committee in each agency to guide, assist and monitor the internalisation. In each agency, a 5-7 member 'Internalisation Committee' was established, headed by a top level official not directly involved with CDSP (except in case of BWDB where the Project Director is the chairperson). In all Internalisation Committees the Technical Assistance team is represented by the Team Leader. The committees conducted their tasks under a Term of Reference approved by the Project Management Committee and adopted by each committee, with minor modifications where needed. The initial aim was to have quarterly meetings, but in practice this diluted to approximately six monthly meetings, largely due to the workload of the members. The table below provides the dates of internalisation committee meetings held by implementing agencies during the November 2008 to November 2010 period.

Serial	Agency	No. of Meetings	Meeting Dates				
1	BWDB	04	13. 11.'08	09.04.'09	24.11.'09	03.06.'10	-
2	DAE	04	12. 10.'08	04.04.'09	24.06.'09	26.05.'10	-
3	DPHE	04	06. 11.'08	30.11.'08	30.05.'09	13.05.'10	-
4	LGED	04	11. 01.'09	08.06.'09	24.09.'09	13.05.'10	-
5	FD	05	11. 01.'09	08.06.'09	24.09.'09	20.06.'10	14.11.'10
6	MOL	03	11. 06.'09	07.12.09	12.09.'10	-	-

In most meetings issues related to project implementation were discussed, in addition to internalisation *per se*. These committees functioned as a dissemination vehicle for information on CDSP activities to parts of the agency that were not directly related to the project.

4. Internalisation through training – One of the strategies of internalisation has been to incorporate identified internalisation issues into the contents of standard training courses of agencies. The idea was to incorporate such issues in core training courses of agencies, so that the process of information dissemination would be sustained. Through a short assignment, for this purpose suitable standard training courses of each agency were identified (see Mission Report no. 10). Once the courses and matching contents were identified, a document was drafted (Mission Report no.15) elaborating the earlier identified internalisation issues for each of the six agencies. This was done with the aim of assisting the training units of the agencies in further selection for subjects to be incorporated in training events.

After receiving Mission Report no.15, agencies felt the need for transforming the information in modular format to make presentation easier. Consequently, six ‘internalisation training modules’, one for each agency, were developed. These modules contain, among others, objectives, methodologies, time frame and visual materials. These modules can be included into the contents of the already existing variety of training courses. In addition, each module contains one presentation on Integrated Coastal Zone Management (ICZM). Each agency was supplied with sufficient copies of the module. The content of the modules was scrutinized by the concerned training persons and departments of the agencies. The modules were finally approved by the Internalisation Committee of the respective agencies.

All agencies committed to organize training courses incorporating the internalisation issues in their regular courses to disseminate CDSP experience to all officials. Most of the agencies namely DPHE, Forest Department, LGED and BWDB have indeed done so and have presented CDSP experience in the earmarked training courses and beyond.

5. Publications – Another strategy for internalising CDSP experience was publication of articles in agency newsletters to disseminate information. BWDB, DAE and LGED have already published several short articles/news items in their respective newsletters. Articles were printed and distributed among officials by agencies that do not publish newsletters. In addition, the following CDSP documents on internalisation were distributed through the members of the Internalisation Committees:

1. Outline of Internalisation Activities under CDSP III, August, 2006
2. Internalisation of CDSP Experience through Training, Mission Report No. 10, October 2007, CDSP-III
3. Internalisation of CDSP Experiences through Training Courses, Mission Report No. 15, October 2008, CDSP-III
4. Internalising Successful Experience of CDSP in FCD/FCDI Projects of BWDB, Training Module, March 2009, CDSP-III
5. Internalising CDSP Experience by the Local Government Engineering Department (LGED). Training Module, March 2009, CDSP-III
6. Internalising CDSP Experience by the Department of Public Health Engineering (DPHE), Training Module, May 2009, CDSP-III
7. Internalising CDSP Experience by the Department of Agriculture Extension (DAE), Training Module, May 2009, CDSP-III
8. Internalising CDSP Experience by the Forest Department (FD), Training Module, May 2009, CDSP-III
9. Internalising CDSP Experience by the Ministry of Land (MoL), Training Module, May 2010, CDSP-III.

6. Adaptation of working methods and procedures: In general, internalisation of most of the selected issues was possible through training except some of the issues of the Ministry of Land (MoL). Internalisation of these issues need special arrangements including changing the existing

legal framework related to land settlement procedures. This necessitates the involvement of many more departments into the scenario. Some of the selected issues of MoL that would require change in policy and legal framework are:

1. Changes in settlement procedure
2. Mechanism to solve boundary problems must be developed
3. Monitoring of land retention
4. Land Record Management System
5. Computer training
6. ICZM / Coordination with other agencies

The ministry recognised the importance of adapting the changes. The computer training has already been organised. The ministry took the initiative to pilot the Land Record Management System, as developed by CDSP, in new places outside the CDSP project area. However, adopting the Agricultural Khas Land Settlement procedure in the light of CDSP experience would require modifications of existing laws and procedures. This might take quite some time to finalize.

- *Strengthening of BWDB Project Management Unit (PMU) / Directorate of Estuary Studies and Pilot Projects: (PMU-ESPP)*

In order to identify the requirements for improving the functioning of the Directorate of Estuary Studies and Pilot Projects, two short term assignments were undertaken, the second one based on the results of the first one, which was an inventory of the situation at the time (see Mission Report no. 3 of February 2007 and Mission Report no. 8 of August 2007). The conclusion was that the PMU-ESPP has a shortage of manpower. The staff strength was only 10 versus a sanctioned strength of 23. All positions for research officers were vacant. The actual staff position was not adequate to cope with the workload. The second report analysed the problems in greater depth and recommended measures to be taken on the short term (within the sanctioned mandate and strength of staff), and on the long term (transformation into a coastal, ICZM oriented Directorate). However, hardly any of the recommendations have been implemented. Later, training activities were identified for the available staff, but also those events never materialised, mainly due to pre-occupation of the staff with other activities.

3.2.3 Participatory water management: monitoring of and support to WMOs in CDSP I and II areas, and in Boyer Char; support for the BWDB Water Management Directorate

- *Water Management Organisations (WMO) in general*

Formation of Water Management Organisation (WMO): Three levels of WMOs can be distinguished: Water Management Groups (WMG), Water Management Associations (WMA, formed by WMGs) and Water Management Federations (WMF, formed by WMAs). The process of formation of a WMG will start with meetings in each water management area, delineated through a rapid water management appraisal. These areas will often be catchment areas of a drainage *khal*. Through mass meetings WMG members are selected, with an equal number of males and females from one area. From the WMG members and by them, a Management Committee will be elected. This Committee will draft by-laws and will look after registration with the Department of Cooperatives. Usually WMGs have regular monthly meetings. Once WMGs are established the second tier of WMA can be formed, consisting of office holders of the WMG (bringing four representatives from each WMG). Subsequently, the same applies for the formation of a federation of WMAs .

Registration by Department of Cooperatives: After long debating the issue, the National Steering Committee of CDSP III took the decision to have all WMOs voluntary registered as cooperative societies by the Department of Cooperatives. At the close of the project 19 WMGs (out of 53)

were registered and seven WMAs (out of eight) were indeed registered as such. A standard bye-law was prepared, where aspects of Guidelines for Participatory Water Management (Ministry of Water Resources, 2001) and cooperative Rules of 2004 of DoC were both accommodated.

Overall number of WMGs, WMAs and WMF: In total, 43 WMGs were formed in CDSP I and II areas, and 10 in Boyer Char (CDSP III). Eight WMAs were established: seven in CDSP I and II, and one in CDSP III; two WMFs exist, both in CDSP II areas (South Hatiya and Bamni). The average membership of a WMG is 37; overall, 53% of the members are male, 47% female. On average, each WMG represents 950 households (235 households per WMG member) and an area of 640 hectares. It has been a conscious strategy to keep the number of members in a WMG limited at the beginning and to stimulate gradual growth over time, in order to strengthen the functioning of the groups. As a consequence of this strategy, extra attention was given during training to the contacts between the WMG men and women and the households in their respective areas. This strategy was fully supported by the preparatory missions for CDSP IV.

- WMOs in CDSP I and II areas

As indicated earlier, CDSP III continued to provide support to WMOs in CDSP I and II areas. The areas covered by these WMOs are Polder 59/3C-Bamni, Polder 59/3B, Char Majid, Char Bhatir Tek, Char Baggar Dona I and II (all on the mainland of Noakhali); and South Hatiya. The total of WMGs involved is 43 (total membership 1183: 674 male and 509 female), while there are seven WMAs (total membership 206: 136 male and 70 female), and two WMFs (total membership 54: 44 male and 10 female).

The support to the WMOs was provided by members of the TA-team, till 1st January 2010, and by Extension Overseers of the BWDB. All WMGs held regular monthly meetings (and annual AGMs), with an average attendance rate ranging from 60 to 80%.

Usual issues discussed in those meetings were: operation of all sluices and regulators; erosion in front of regulators and of embankments; re-excavation of *khals* and clearing of debris; demarcation of sluice areas; maintenance plan, maintenance works of water management structures; execution of maintenance work directly by the WMO; fund raising, fund management for future O & M; training, orientation and refresher to the WMOs; registration with DoC; AGM, audit, proper record keeping; maintaining linkages with government agencies as BWDB, LGED, DPHE, Ministry of Land, and with other projects.

- WMOs in Boyer Char

Ten WMGs and one WMA were established in Boyer Char during the project period. An overview of WMOs in Boyer is given in the following table.

Name of WMO	Date of formation	Members		
		Male	Female	Total
WMG Gabtoli Khal-1	08.05.2005	21	20	41
WMG Gabtoli Khal-2	10.05.2005	17	15	32
WMG Gabtoli Khal-3	15.05.2005	19	15	34
WMG Gabtoli Khal-4	17.05.2005	16	20	36
WMG Tankir Khal-1	24.05.2005	19	19	38
WMG Tankir Khal-2	06.06.2005	20	18	38
WMG Chatla Khal	13.06.2005	23	13	38
WMG Chairman Khal	14.06.2005	16	22	38
WMG Hatiya Khal	15.06.2005	22	18	40
WMG Basumajir Khal	01.06.2005	19	16	35
Total		192	176	368
WMA Boyer Char	23.05.2007	30	10	40

The average attendance rate in the monthly meeting was about 65 to 70%, with a higher attendance rate for women than for men.

Major subjects discussed in those meetings were among others: infrastructure planning and site selection, land settlement, water supply and sanitation, formation of LCS for (re)excavation of canal and community pond, WMG by-laws, registration, holding AGM, reconstitution of management committees, drainage congestion, shifting households from outside to inside polder, use and management of Local Information Centers, Joint Management Committee (JMC) for Gabtoli sluice. Other issues reviewed in those meetings were loan distribution among group members, savings management, accounts and record keeping, training/orientation, linkage with RFLDC and other projects. Since the overall infrastructure was only completed towards the end of the project period, actual water management issues were as yet not often discussed.

The same can of course be said of the activities undertaken by the WMOs. Many were organisational or administrative in nature, such as organising meetings and administrating shares, savings and loans of WMG members. Eight WMG established an office in their area of jurisdiction, while two use rooms in CDSP site-offices. Discussion on and establishment of by-laws, record keeping, preparation of audits by DoC were other recurring activities. The WMOs played a significant role in the actual implementation of project activities. Important elements in this respect were: comments on the plans for infrastructure development (especially on alignment and location of structures, such as roads, culverts, bridges and cyclone shelters); assistance with the re-location of settlers outside the embankments to areas inside; assistance with the mobilisation of LCSs for earthwork; assistance with the distribution of single pit latrines. As local initiative, WMG members along with other local people, re-excavated link drainage canals and installed pipes in different drainage pockets. WMG members participated in many training events.

- Training

Training and refresher workshops organised in the project period in connection with WMOs are given in detail in Annex 6.

- Staffing from BWDB side and TA support

Four BWDB Extension Overseers worked for CDSP-I and II areas on the mainland during the project period. However, at the end of the project this was reduced to two, because one Extension Overseer was transferred and one retired. No one was posted in the South Hatiya area. In Boyer Char, CDSP III area, two Extension Overseers were posted.

The TA Team continued supporting activities to strengthen the WMOs in CDSP I and II areas till 30th June 2009, after which this support was phased out. The TA Team also continued some coordination with the staff and WMOs in old areas, especially for maintenance work. During the period, TA Team provided formal and on hands training, orientation to the Extension Overseer and AEO in preparing them for the fact that Overseers have to be trainers themselves and have to run all WMO related activities on their own. TA support included the supply of motorcycles to AEO and Overseers, supply of books/reports and some minor stationery. A great number of weekly progress review meetings were held during the project period in BWDB (and CDSP) office in Noakhali with the participation of the Extension Overseers, AEO-BWDB and Project Area Coordinator for Boyer Char. The Deputy/Acting Team Leader, CDSP-III, facilitated these meetings. The meetings reviewed the WMO related activities, O & M planning and implementation, training/refreshers, holding regular meetings, poster/leaflet distribution on water

management, WMO registration, linkage and coordination, shifting responsibilities from TA Team to BWDB and concerned etc.

- BWDB Water Management Directorate

The relation between CDSP III and the Water Management Directorate of BWDB was focused on three subjects: legal aspects of Water Management Organisations; posting of additional Extension Overseers in the project areas of CDSP; supervision of the extension staff by higher levels in the BWDB organisation.

The discussion on the legal aspects received renewed attention in 2006, after publication of the report “Institutional studies for legal framework of water management organisations”. After several options were weighed, the National Steering Committee took the decision to have the WMOs registered by the Department of Cooperatives (see above). Discussions with the Water Management Directorate then shifted to the formulation of by-laws for the WMOs and their relation with the Department of Cooperatives.

The shortage of staff for the project from BWDB side was and will be highlighted at more places in this report. The continued pressure on Chief Planning of BWDB and the Directorate ultimately resulted in the posting of three additional Extension Overseers and one Assistant Extension Officer (AEO) in the first half of 2007. Two years later one more Extension Overseer was posted, bringing the total to seven (plus the AEO).

Actual supervision of Extension Overseers was first done by members of the Technical Assistance team, which was gradually shifted to the AEO. But higher levels in the Directorate of Water Management did not supervise nor monitor the work of the BWDB extension team in CDSP. The Project Director submitted to BWDB a proposal to shift the supervision to the Executive Engineer, Noakhali O&M Division. However, a decision on that proposal was never taken.

3.2.4 Strengthening links between communities, local government institutions and implementing agencies in CDSP I and CDSP II areas and Boyer Char

The Inception Report recognises the importance for development of the relations between the parties in the triangle formed by the communities in the chars, the local government institutions and the governmental agencies. In CDSP areas, field level institutions were formed, representing the communities in this triangle. The most significant ones in this respect were the Water Management Organisations, the Social Forestry Groups, the Farmer Forums and the NGO groups. As far as the agencies are concerned, the most relevant ones were obviously the six partner agencies in CDSP III: BWDB, LGED, DPHE, Ministry of Land, DAE and the Forest Department. The Union Parishad is the pivotal local government institution for development, while during CDSP III, elected Upazila Parishads came into being as well. The problem in Boyer Char throughout the project period has been the uncertainty of the administrative borders, the question whether the area belongs to Hatiya Upazila or to Subarnachar Upazila being at the heart of the problem (see subsection 3.4.1.). Consequently there never was an elected Union Parishad. In 2009 the government appointed an Administrator and six persons as administrative members.

- CDSP I and II areas:

The main element in the link between communities, local government and agencies was in CDSP I and II areas formed by the Maintenance Plans. At the end of CDSP-I, in 2000, a Maintenance Plan was produced for each of the three polders (Char Majid, Char Baggar Dona-I and Char Bhatir Tek). These plans were jointly prepared by BWDB, LGED, Union Parishads and WMOs. The WMOs prepared the first draft based on discussions in the monthly and special meetings. Then they placed it before the agencies and the UPs. Ultimately it was finalised in a meeting

where all parties were present, chaired by a representative of the BWDB. The plan was signed by all four parties. The role and responsibilities of each party were identified in the plans, along with the source of financing. But the execution deviated slightly from the plan. Factors that played a role were: non availability of funds from UP side; shortage of funds from the implementing agencies; lack of coordination and linkages among the parties involved in execution of the plan. This system was changed in later years, largely because of two reasons. The shortage of available funds resulted in disappointment among the farmers in the WMOs. At the same time, the decision was taken by BWDB to implement maintenance works that were not too complicated through the WMOs themselves, and not through contractors. Instead of the four party Maintenance Plans, a series of 16 area-wise bilateral agreements emerged between BWDB and the respective WMOs. These agreements covered all CDSP I and II areas: three agreements in Bamni with Water Management Associations (an association of Water Management Groups); two in South Hatiya with the WMA; one in the Gangchill area with the WMA. Nine agreements were signed between the BWDB and WMGs of Char Majid, Char Bagar Dona I, Char Bagar Dona II, Nabagram, Kolmi, Zillar, Montaj, Karim and Gopal.

- *Boyer Char:*

In Boyer Char, practically all public infrastructure was constructed during the CDSP III period. Maintenance was as yet not felt as a dominant issue. However, the draft Maintenance Plans with regard to works of BWDB, LGED, DPHE and the Ministry of Land were all prepared by the Water Management Organisations of Boyer Char. These Maintenance Plans form the kingpin of the relations in future between the communities and the implementing agencies. Although there are no elected Union Parishad officials in the area (see 4.2.9), three out of the six appointed UP members are also WMG-member, which means there is a link to local government. In the bridging period (January and February 2011), the draft plan was discussed with the agencies. Priorities will be reflected in annual plans.

An important linkage between the settlers, local government and government was formed by the Benefit Sharing Agreements with regard to social forestry (see section 3.4.6.). These agreements stipulate the allocation of benefits derived from the selling of produce of the forestry plantations. These agreements are signed by members of the Social Forestry Groups, Union Parishad, Forestry Department and the department to which the land is allotted (BWDB or LGED).

The Maintenance Plans and the Benefit Sharing Agreements on forestry structured the relations within the triangle of community, local government and implementing agencies. There are of course numerous instances where there are interactions between the three parties.

3.2.5. Greater involvement of District level in the project

The Joint Formulation Mission recommended increasing CDSPs presence at the level of the District Administration. Following the Inception Report, this has happened in three ways mentioned below.

- *District Development Coordination Committee (DDCC)*

Staff of the six implementing agencies as well as staff of the TA-team regularly participated in the monthly DDCC meetings, chaired by the Deputy Commissioner.

In the beginning, TA staff went to the DDCC meetings in both Noakhali and Lakshmipur Districts, but after the boundary issue was solved (see section 3.4.1.), this was discontinued. The DDCC meetings were usually overloaded, with much attention to law and order issues, ongoing matters and progress of development efforts. Not much time was spent on CDSP III as such.

- *Meetings with Deputy Commissioners:*

Given the observation on the time spent on CDSP III in the DDCC meetings, the meetings with the Deputy Commissioners (later only the one in Noakhali), gained importance. There were many meetings between members of the Technical Assistance staff and the Deputy Commissioner on the progress of the project in general, but much more so on the land settlement component. The Deputy Commissioner is the representative of the Ministry of Land at District level and is intimately involved in the process of land allocation. On a few occasions, meetings were held on CDSP matters with representatives of all implementing agencies, BRAC and the Deputy Commissioner of Noakhali. In addition, coordination meetings were held, chaired by the Deputy Commissioner, with other development projects in Noakhali.

- *District Information Centre:*

Empowerment through generating and disseminating information and knowledge is one of the nine strategic priorities of the Coastal Development Strategy (see section 3.2.1.). It was based on this element of ICZM that CDSP III started the effort to establish a District Information Centre. Originally, the idea was entertained to begin in Lakshmipur District and, in case this proved to be a success, to establish a second centre in Noakhali District. The Deputy Commissioner of Lakshmipur at the time was very enthusiastic about the plan and immediately made one room available at the District headquarters. He also formed a 12-member Advisory Committee, with representatives of the District Administration and civil society (among them teachers and representatives from NGOs and the private sector). From Technical Assistance funds a person, basically a computer operator, was posted to start-up and run the centre, until it would be taken over by the District. A database was built, largely structured on the information requirements as identified by the Deputy Commissioner. However, the use of the centre fell much behind expectations. A short term consultant made an analysis and came to the conclusion that a number of factors played a role (among them, inadequate promotion of the centre and shortcomings in the capability of the posted staff). In addition, support from more senior staff members of the Technical Assistance team declined over time, because of an overload of other work and because of the fact that the main project area, Boyer Char, was declared to be totally under Noakhali District (see section 3.4.1.). That change led to much less visits to Lakshmipur District. Early 2008, a practical plan was formulated to improve the functioning of the centre, which was to a certain extent successful (a workshop made the centre better known, monitoring of the centre was activated). During 2008, the NGO Community Development Centre (CODEC) was approached about the possibility to take over the support for the centre from CDSP III. The discussions ultimately led to a transfer to CODEC on 1st July 2009. The Advisory Committee was re-organised and CODEC posted a staff member for the day-to-day operations.

3.2.6 Upgrading and improving functioning of the Project Management Committee

The Project Management Committee (PMC) formed the heart of the decision making process in CDSP III. The PMC consisted of the Project Director of BWDB (chairman), the Project Director LGED, Project Coordinator DPHE, Project Coordinator Ministry of Land, Project Director DAE, Project Director Forest Department, Project Director BRAC, Chief Technical Adviser (CTA) and Team Leader of the Technical Assistance team (the last two specifically as advisers to the chairman). The office of the Project Director BWDB is the secretariat of the PMC. During the meetings, the Team Leader is the secretary. All elements of a strengthening process as reflected in the Inception Report were addressed:

- in December 2006, the PMC was officially established through a letter issued by the Ministry of Water Resources

- the letter contained Terms of Reference, based on the ToR given in the report of the Joint Formulation Mission
- the PMC held regular meetings, 41 in a period of 63 months; the Inception Report stipulated a frequency of at least one meeting in three months
- the system of communication between the PMC members was improved, particularly through e-mail and telephone
- the intended limited training programme was implemented through a workshop on the Coastal Zone Policy and Coastal Development Strategy (as required by the Inception Report) and by a well received 12-days study tour to The Netherlands in September 2008.

Although the attendance rate of the actual members has not been as high as expected (see section 4.3.), the PMC discharged its duties in a satisfactory manner, an opinion expressed by the Project Directors and Project Coordinators themselves.

3.2.7 Preparation of funding arrangements for char development interventions after 2009

As stated in the Inception Report, both the Bangladesh and Dutch governments are convinced that development of newly accreted coastal lands has significant social and economic benefits. They consequently indicated their intention to contribute to new char programmes. The possible scale of future programmes warranted an investigation into widening the funding basis. At the same time, from the Dutch side efforts were initiated to give a more multilateral character to their bilateral assistance. It was the intention for some time to make the successor of CDSP III part of a large and comprehensive ICZM umbrella programme. Since such a programme did, as yet, not emerge (see section 3.2.1.), the focus shifted to individual multilateral development partners. Early 2009, the International Fund for Agricultural Development (IFAD) started to show interest in participating in a future char development programme. IFAD had already gained experience in working with CDSP III with their market development activities in Boyer Char under MIDPCR. IFAD made use of the feasibility studies, in particular the one on Char Nangulia, Noler Char and Caring Char, to assess the options of becoming a partner in a future phase of CDSP. This resulted in a series of missions (identification, formulation and appraisal) and ultimately in an agreement with the Bangladesh government to make a substantial contribution to CDSP IV, through a soft loan. Given this arrangement, the Netherlands government decided to continue its support, by funding the Technical Assistance costs, including an NGO component, and by support for investments via a contribution to the IFAD loan.

3.3 Studies, knowledge management and dissemination

3.3.1 Drainage study upstream Baggar Dona

- *Drainage study*

The Appraisal Mission that reviewed the report on the Feasibility Study on the development of the catchment area of the Baggar Dona river recommended to undertake an Additional Drainage study. The main aim of this study was to investigate in greater detail the drainage problems, especially in secondary and tertiary channels. After a protracted process of formulating the Terms of Reference, these were finally agreed upon by BWDB and the Technical Assistance team in the first half of 2007. The study was funded by Financial Assistance funds and was consequently tendered by BWDB. A consortium including the Institute for Water Modelling (IWM) won the tender early 2008. The Final Report was completed in August 2009.

- *Monitoring programme*

The abovementioned Appraisal Mission also advised to take up a monitoring programme as soon as the outfall through the Jarir Dona khal was operational. Monitoring of discharge, sedimentation, and salinity intrusion, was to form a valuable input in the decision making process whether or not to construct a regulator at the mouth of Jarir Dona khal, close to the Meghna. The Additional Drainage Study confirmed the need for such monitoring programme. BWDB signed a contract with IWM (also under Financial Assistance). The survey team was mobilised in February 2010 and the Final Report submitted in December of that year.

3.3.2 Feasibility studies for char development projects in future

The future oriented part of the bridging function of CDSP III was mainly formed by the feasibility studies in areas where char development activities can be undertaken. The Inception Report indicated that two or three feasibility studies would be carried out.

- *Overall study:*

The first step in the selection process was an estuary wide screening of potential areas for CDSP-type of interventions. Very early in this process the chars east of Boyer Char, across the Hatiya river became serious candidates. The areas were close to CDSP III and older CDSP polders and settlers in the new chars were familiar with the activities and results of CDSP. They were requesting local politicians and the local government institutions to start a CDSP-programme in the new chars. All the new land was assumed to be *khas* land, while the chars had reached land levels at many points that were higher than in Boyer Char. The PMC took early on the decision to start a feasibility study for Char Nangulia, Noler Char and Caring Char.

The screening process continued. A mission was fielded in May 2006 to assist the PMC and the Technical Assistance team in this work and to draft the Terms of Reference for the Char Nangulia / Noler Char / Caring Char feasibility study (see Mission Report no. 2). Reconnaissance surveys were carried out for the five areas identified by the mission team. Important criteria were the size and physical stability of the area, and the prospects for a land settlement programme. The law and order situation played a role as well. Based on the results, Urir Char was selected for the second feasibility study. Ziar Char, not included in the five areas identified by the mission, became the area for the third study. This is an older char, surrounded by CDSP areas, but was not taken up by CDSP III, because it was at the time still controlled by the Forest Department.

- *Feasibility studies:*

As mentioned, the draft Terms of Reference for the first study (Char Nangulia / Noler Char / Caring Char) were provided in Mission Report no. 2 and later approved by the PMC. These ToR also served as a model for the ToR for the subsequent two studies for Urir Char and Ziar Char. Because the studies were to be funded from the Technical Assistance budget, the tender process had to be organised by Technical Assistance team. Selection committees were formed with representatives from the TA-team and BWDB, while the final selection was discussed in the PMC. However, before tendering, the Terms of Reference were divided in parts that had to be sub-contracted and parts that best could be done by the TA-team itself or by staff from other projects working in Noakhali. This led to the following rough division of tasks: topography, water management, internal infrastructure, forestry, population, environmental impact, social impact and cost/benefit analysis were tendered; land settlement and institutions were done by the TA team; and fisheries, aquaculture and animal husbandry were carried out by the Regional Fisheries Livestock and Development Component. This applied to the first and second study. For Ziar Char, with a view on the limited size of the area, the decision was taken to have that study

completely done by the TA-team, with some help through short term assignments. The TA-team also had the considerable task to pull all the parts of the studies together and produce the Main Report for all three studies.

The Char Nangulia / Noler Char / Caring Char study and the Ziar Char study were both completed in November 2008, while the study on Urir Char was completed in November 2009.

As already mentioned in 1.3., CDSP III made a key contribution to the study that led to concrete plans to construct a cross dam between Urir Char and Noakhali mainland. The project funded the model study that indicated that building this dam would have no adverse impacts, like erosion, elsewhere in the estuary. The feasibility study on Urir Char showed that a connection with the mainland would have a considerable positive impact on economic development of the island, and would increase the security of the population by providing overland communication to the mainland. The modelling study was awarded to IWM after an international tender procedure. The Final Report was submitted to BWDB in December 2009.

3.3.3 Knowledge management: linking project data base with Integrated Coastal Resources Data Base of ICZM; dissemination of CDSP achievements on a wider scale; improving flow of information to and from communities in Boyer Char

- Linking up of databases:

The linking of the project data base of CDSP and the Integrated Coastal Resources Database (ICRD) of WARPO (and maintained by CEGIS) was the first of its kind and consequently unfamiliar waters had to be navigated, both in a procedural and in a technical sense. A Memorandum of Understanding was required between BWDB and WARPO on sharing of information, in this case limited to the CDSP data base. The preparation of the text took a while and the MoU was signed by the two Directors General in August 2007. This was followed by an agreement between CEGIS and the main consultant of CDSP III (Euroconsult Mott MacDonald) on the implementation of the link. Finally, a protocol was established between the Project Director (BWDB) of CDSP III and the computer section of WARPO on the actual connection. This was signed in May 2008.

In the meantime the technical work had progressed. It started with the remodelling of the CDSP data base to make it compatible with the ICRD. Computer equipment with CDSP had to be expanded. All preparatory technical work was completed in February 2008. The linking occurred after signing the protocol and after introducing security measures, in line with the protocol.

- Dissemination

During the project period, the dissemination efforts consisted of the following ten elements:

Visits of senior policy makers: In February 2006, the Dutch Minister for Development Cooperation visited the project, accompanied by the Minister of Water Resources of Bangladesh. A week later, this was followed by a visit of a delegation of the Dutch parliament. Both occasions offered the opportunity to make the concept and activities of the project known to a wide range of senior politicians and bureaucrats, as well as to the writing press and TV journalists. On numerous occasions, high level officials of the Bangladesh administration as well as the Ambassador of the Netherlands, paid a visit to the project.

Workshops: A series of workshops was held for the management level of Ministries and implementing agencies (see also section 3.2.2. on internalisation). Also, CDSP staff presented the project during workshops organised by other projects and institutes.

Visits of journalists: Several times, journalists working for Bangladeshi newspapers came to CDSP and published articles afterwards. On three occasions the foreign press showed interest. A German journalist working for “Die Zeit” visited Boyer Char and surrounding areas for an extensive article on climate change. An American journalist and a Danish video maker paid a visit and later published an article in the Washington Times and posted a video on TIME.org, the online channel of TIME magazine. A Dutch journalist of the magazine “Internationale Samenwerking” (meaning International Cooperation) visited CDSP I, II and III areas and also the new chars that will form a part of CDSP IV. Her contribution was published in February 2011.

TV broadcasts: CDSP featured at least in four programmes on national TV and in two on local TV; but these numbers are probably higher, as the project is not always informed beforehand.

Articles in newsletters of agencies: As part of the internalisation programme, a number of articles was placed in the newsletters of the implementing agencies, informing its readers on objectives and interventions of CDSP (see 3.2.2).

CDSP brochure: A brochure on CDSP III was produced, also highlighting the main features of CDSP I and II. The brochure was published in Bangla and English and was twice updated.

CDSP website: The text of the brochure formed the basis of a website, CDSP.org.bd.

Video: On request of the PMC, a third party was engaged for the production of a video with the aim to visualize the “before” and “after” CDSP situation in the chars. Shooting started in the first half of 2007, while the final product, the DVD “Rebuilding Livelihoods”, was presented in 2010.

Educational materials on climate change: Based on experiences with visits of school teachers to the project area, the idea was developed to make educational materials on coastal issues, focusing on climate change. IUCN was engaged to produce the materials. After extensive visits to the area and consultations with teachers of 18 schools in the Noakhali region, two sets of books were developed: one for students (5,000 copies) in the class 6 to 10 bracket and one for their teachers (3,000 copies). Short training events were organised to make the teachers familiar with the book and assist them in developing a teaching method.

Book: On a voluntary basis, a group of 18 persons (14 Bangladeshis and four foreigners) wrote a book (titled “Moving coastlines – emergence and use of land in the Ganges-Brahmaputra-Meghna estuary”). The book was published in January 2011 by University Press Ltd. The writers came from a range of organisations and projects, as the Forest Department, BWDB, CEGIS, IWM, IUCN, CDSP, EDP and RFLDC. The project procured 100 copies.

- *Information flow to and from communities in Boyer Char:*

A variety of avenues was pursued to improve the information flow to and from the project to the households in Boyer Char:

Workshops: The project started with a launching workshop in Boyer Char, attended by thousands of people. During the workshop, the main activities of the project were explained. During other workshops (for instance with local NGOs and field level groups) the information on the project was repeated and special features, such as the procedures for land settlement, were highlighted.

Training courses: Especially after the recommendations were received of a short term assignment on communication aspects in the project (see Mission Report no. 11), attention was given to training of WMO members with regard to their key-role in the whole information flow in Boyer Char. To that effect a special training module was developed and used in a series of courses. In training events with other groups (NGO groups, Social Forestry Groups and Farmer Forums) information on the ongoing and planned activities was provided.

Meetings of field level institutions: During the regular meetings of the field level groups, but especially the WMO meetings, project staff gave information on the progress of activities. Many of the questions were on the land settlement process, indicating that the official title on land was a high priority for the settlers.

Local Information Centres (LIC): Another recommendation of the short term assignment was to establish simple information centres at community level. In meetings with the WMOs, the decision was taken to have these centres housed in the sheds of the Water Management Groups. In all, 13 LICs were made operational in December 2008 and January 2009. Facilitators were trained to manage them, two for each centre. Books, reports, posters and other materials were supplied to each centre on a wide range of subjects: overall CDSP interventions, health, gender, cooperatives, agriculture, fisheries, social forestry, land settlement, climate change etc. Although over time the use of the LICs improved slightly, the number of visitors is still limited.

Court yard meetings (Uthan Bhaitak): Female members of the Technical Assistance team organised court yard meetings throughout Boyer Char. The formula applied was to hold a meeting at the court yard of a female WMO member, where women from the neighbourhood are invited. These meetings proved highly useful in the flow of information, especially on those issues that were of interest to women. These often went beyond subjects that belong to the brief of the project (as for instance dowries, domestic violence, education for their children). As far as the project activities were concerned, land settlement, water and sanitation and women participation in agriculture were probably the issues most frequently discussed. During team meetings of the TA-team and in subsequent discussions with staff of the agencies and NGOs, feed back was given.

3.3.4 Increasing knowledge about impact of past interventions in CDSP I and II areas; monitoring land retention in CDSP I and II areas; monitoring soil salinity; monitoring HYV adoption

On the surveys described below two Technical Reports have been published: no. 3 of January 2009 and no. 5 of December 2010.

- Land settlement:

In the project period, two land monitoring surveys were conducted, although the original plan was to conduct a survey every year. The workload of the Technical Assistance team, and the problem in finding suitable surveyors for the planned time the survey teams would be fielded, were the main causes. At the same time it was felt that less frequent surveys would still yield valuable results and would provide insights in the processes that were going on in CDSP areas. The two surveys were held in the period January to March 2007 and July to September 2009. CDSP started in the year 2000 to follow a cohort of 453 *khatian* holders from CDSP I polders (Char Majid, Char Bhatir Tek and Char Baggar Dona II), out of a total of 4,494. In 2006, a sample of 78 households from Char Mora Dona (a CDSP II area) was added, out of a total of 1,067 *khatian* holders in that char. The same cohorts were followed during the two surveys under CDSP III. Through the surveys, a number of variables were monitored, among them the actual land holding. But also questions on the price of land, land use, tenancy patterns and cropping intensity were included.

The survey of 2009 in the CDSP I and II areas shows that since receiving their land 15 to 20 years ago, 80% of the settlers are still living in the same locality. One fifth of the original settlers have left the area. An increase of out-migration could be seen over the last few years (the out-migration in the first survey of 2007 stood at a little over 6%), most probably because families moved to the new chars where CDSP activities were expected to begin in future (Char Nangulia,

Noler Char and Caring Char). The conclusion is however justified that the vast majority retain their land, while those that sell land, which is illegal, receive a considerable capital gain. Average land values have increased from about Tk. 30,000 per acre in 1998 to approximately Tk. 70,000 in 2006.

- *Soil salinity:*

Two times a year, in April and in December/January, the Soil Resources Development Institute (SRDI), with assistance from the Technical Assistance team, took 48 samples, from 24 spots. The two samples at each spot are one from the top-soil and one from the sub-soil. The locations where samples are taken are in eight different project areas of CDSP I and II. The survey continued in the period December 2006 to April 2008. Results show that the level of soil salinity is dynamic and has an annual cycle. The maximum salinity occurs when the soil becomes dry in the months of March and April. Salinity decreases with the monsoon rains. In addition to the annual cycle, a long term downward trend in soil salinity is expected after protection of the chars as the salt is thought to be washed out gradually from the land. The surveys indicate that the desalinisation process goes slowly, with annual variations in the long term downwards trend. For all protected areas in CDSP where soil salinity is measured, there is a rather steep reduction in the first years, a re-emergence of higher levels in the years after, and subsequently a decrease again. This decline, however, shows some volatility. The general trend matches with the perceptions of the aged farmers of the locality who say that soil salinity reduced to a safe level for crop production after about 8 to 10 years after the complete protection of the area from saline flooding.

- *Adoption of modern agricultural technologies:*

The agricultural transect surveys were carried out in a two year period, between November 2006 and December 2008. They took place three times a year: in April (for *rabi* crops), in September (for *aus* crops) and in December (for *aman* crops). Surveys were held in seven polders, three in CDSP I and four in CDSP II, and were carried out by DAE, with support from the Technical Assistance team.

The surveys show a rather erratic pattern over the years. In 2009, adoption of HYV *aus* rice in CDSP I and II areas stood, on average, at about 20%. For *aman* rice, the increase in HYV adoption was as high as around 30%. It must be mentioned that discussions with the farmers and DAE officials gave much higher figures: 40% for *aus* and 50% for *aman*. Average yield of *aman* rice in Boyer Char is 3-4.5 ton per hectare, and for local varieties 1.5-2.0 ton per hectare. Cropping intensity increased from 190 in 2005 to 231 in 2009.

3.4 Interventions at field level particularly in Boyer Char

3.4.1 Ministry of Land

- *Introduction*

The Government conducts settlement of *khas* land in accordance with the *Agricultural Khas Land Management and Settlement Policy of 1997*. The policy states that *khas* land will be distributed to (a) households, which have no homestead and cultivable land, but depend on agriculture; or (b) agriculture dependant households having a homestead up to 10 decimals of land. Such landless households are entitled to a maximum of 1.5 acres of *khas* land in the coastal char areas, subject to the availability of such land. Agricultural *khas* land so settled is not transferable in any way other than by inheritance. In case of transfer of any settled land, the

settler will lose his/her land title and the land in question will again be vested back in the Government as *khas* land.

CDSP brings about a qualitative change in the lives of the people in char areas. All the stages of settlement activities from the selection of eligible families to delivery of the records of right are performed at the doorsteps of the households. The official titles of land give them a sense of land ownership, which is instrumental for their empowerment. CDSP develops confidence in the minds of local people that the char lands are being settled to the landless poor people for their socio-economic development in a very transparent, open and official way.

This land settlement process generally follows the government's *Agricultural Khas Land Management and Settlement Policy of 1997*. However, in CDSP certain adjustments have been made in order to make the process more efficient and transparent. It has reduced the cumbersome and lengthy processes to the following stages:

- a. Information about the upcoming *khas* land settlement is disclosed in the locality through public notice and local meetings.
- b. With the approval of the DC, a "plot-to-plot" survey to the new chars is carried out. This survey includes:
 - i. Assessing availability of *khas* lands for settlement;
 - ii. Preparing a list of unofficial occupants/households on *khas* lands and existing configurations of the possessed lands;
 - iii. Preparing *mouza sheet* maps duly approved by the DC;
 - iv. Objections to the "plot-to-plot" survey, if any, are received through public notice.
- c. The Upazila Committee holds public hearings at the local areas for disposal of the objections, if received any, on the selection of landless households and decides on the requirement and availability of *khas* lands, in a transparent way. It prepares and approves the list of the selected families.
- d. The AC (Land) officially initiates the settlement cases (*jamabandi*) on an individual basis, and, as member-secretary, gets approval from the Upazila Committee and forwards these to the District Committee.
- e. The District Committee approves the list and the Deputy Commissioner approves the *jamabandi* cases and sends these cases back to the AC (Land).
- f. After the approval by the District Committee, the AC (Land) issues *khabuliyats* (deed of agreement) with the settlers and gets the *khabuliyats* registered by the registering authority, organising a "registry camp" in the field.
- g. *Khatians* (records of right) are opened and handed over to the settlers, along with registered *khabuliyats*; actual physical possession of the lands by the new owners has to be ensured.

This streamlined process simplifies the government's usual procedures for *khas* land settlement. The plot-to-plot-survey, open hearings for selection of the landless and registration of the deed in the locality proved to be very effective innovations.

- *Completion of the residual settlement activities of CDSP-II, carried out as part of CDSP-III*

Incomplete and residual settlement works of CDSP-II had been included as part of the land settlement activities of CDSP-III. Efforts had been made for completion of these works since inception of CDSP-III. CDSP-III started with 4985 pending settlement cases of CDSP-II and

subsequently, 1430 more cases were added. Thereby, the number of total cases to be disposed of stood at 6415. Out of these, 5798 cases have been disposed of. At the end of December 2009, the pending balance stood at 517 (which are about 8% of all cases in CDSP-II).

The stage-wise overview of the pending cases at the end of 2009 is shown below:

Nature of work	Pending per Upazila				
	Subornochar	Companigonj	Hatiya	Mirersarai	Total
Jamabondi preparation	-	-	-	-	-
Jamabondi approval:					
a) Upazila Committee	4	-	-	-	4
b) District Committee	15	-	-	95	110
Realization for Salami	-	-	-	-	-
Kabuliat execution	30	9	167	60	266
Kabuliat registration	6	-	109	-	105
Khatian preparation	22	-	-	-	22
Khatian distribution	-	-	-	-	-
Total	77	9	276	155	517

Of these 517 cases, 149 cases will be settled shortly. Although there were intensive activities to dispose of all the 6,415 pending cases by 31st December 2009, but due to the following problems and legal obligations some cases could not be settled -

- Declaration of some areas as 'Chingri Mohals' (Shrimp land) by Govt.;
- Disputes over ancestral claims;
- Civil litigations such as Civil Suits filed in Civil Courts and stay orders from the higher offices / Courts.
- Orders of injunction from the courts;
- Illegal and forcible possession by unauthorized occupants;
- Stay order passed by Ministry of Land and Divisional Commissioner, Chittagong Division in respect of cases of Muhuri Accreted areas of Mirsharai Upazila of Chittagong District partly;
- Boundary disputes between Sonagazi upazila of Feni district and Mirersarai upazila of Chittagong district;
- Frequent changes in the posts of Deputy Commissioner and Land related officials, especially the Asstt. Commissioners (Land) and Upazila Nirbahi Officers (UNO);
- Sometimes lack of interest and attitude towards CDSP land settlement affairs among the members of the bureaucracy and beneficiaries.

The TA Team maintained continuously close contacts with the DC, ADC (Rev), AC (Land) and UNO's to expedite completion of the pending cases and the matter has been discussed in various district level meetings. In November the matter was again discussed in the District Monitoring Committee, presided over by the Deputy Commissioner, Noakhali. In that meeting it was decided that the 517 pending cases of CDSP I and II will be dealt with and disposed of by the District Administration following the general provisions of the Settlement Policy of the Government. This meant in practice that CDSP as a project does not need to take any further action in the matter. Support would still be given however, if so requested by the District Administration.

- Settlement activities of CDSP-III in Boyer Char

On the basis of the result of the Plot-to-plot Survey (PTPS) conducted in Boyer Char (already carried out during CDSP II), the settlement process was taken up in CDSP III. The PTPS indicated that an area of 13,804 acres of *khas* land was available, under Hatiya and Subornachar Upazilas, while 9,702 households had illegally settled in the area. As target for CDSP III, 9,500 households was taken, in conformity with the DPP.

Progress of land settlement process in Boyer Char polder areas during and at the end of the project period was as follows:

Stages of settlement activities	Progress as on 28/2/2011
Target as per Plot to Plot Survey	9500
Approval of sheet Maps of PTPS	32
Consolidation of FTPS survey records	9500
Hearing of Landless Families	8950
Landless families selected for settlement	8945
Settlement Case initiated	8142
Jamabondi cases prepared	8142
Jamabondi cases approved by Upazila Committee	8142
Cases sent to District Committee for approval	7755
Approval of the list of the landless by District Committee	7755
Case-to-case approval by the DC & cases sent back to AC (L) office	7715
AC (Land)'s order for Salami realisation and execution of Kabuliyats at Tahsil.	7706
Salami realised and Kabuliyats executed by AC (Land)	7397
Registration of Kabuliyats	7305
Khatian Preparation in LRMS format	7179
Realisation of khatian fees & opening of holding for landless	6185
Khatian distribution	6185

From the above statement it will appear that during the CDSP III project period as many as 11,983 settlement cases (5,798 cases of CDSP II and 6,185 cases of CDSP III) have been disposed of and completed by handing over the *khatians* to the landless households/ settlement holders. This achievement is particularly noteworthy because of the delays the settlement process has to face due to legal complications. Two separate cases were filed against the government after it had decided that Boyer Char would be under Hatiya Upazila of Noakhali District. As early as April 2005, even before the start of CDSP III, a case was instituted before the High Court Division of the Supreme Court. People of Subarnachar- and Hatiya Upazila

started the case with the aim of overturning the decision. They wanted to have Boyer Char as a part of Subarnachar Upazila of Noakhali District. Based on a “stay order” passed by the Court, the Deputy Commissioner discontinued all settlement activities in the area. With assistance from the TA-team, an “affidavit-in-opposition” was submitted and a legal opinion was obtained from the Ministry of Law that stated that there was no bar for the continuation of land settlement activities as a normal function of the office of the Deputy Commissioner, despite the pending writ case. Those activities were indeed resumed in May 2007, which meant a delay of 28 months. A second case (Writ Case no. 2454 of 2008) was initiated by people from Lakshmipur District, who opposed the government decision on the administrative status of Boyer Char because they wanted a part of the area as a part of Ramgati Upazila of that district. The court ordered maintenance of the “status quo” in April of 2008 and consequently the Deputy Commissioner of Noakhali stopped all interventions. Subsequently, the court issued a “stay order”. Objections were submitted on behalf of the government. After hearing both sides, the Court gave a final judgment in February 2009 in favour of the government. Land settlement activities started again in March 2009. The court cases did not stop the process totally. Cases that were already approved could be processed further, but new cases were not taken into consideration.

- *Assessment of actual quantum of land used for interventions of different government departments under CDSP*

It is a legal requirement that all implementing agencies apply to the Government through the concerned District Administration for allotment of the lands involved in structures and other interventions. So far, the Executive Engineer, BWDB of Lakshmipur Division has applied to the District Administration for settlement of *khas* land. Others have not yet submitted any proposal. All the PCs / PDs of the concerned implementing agencies have been pressed to apply to the Deputy Commissioner for allocation of lands in favour of their respective Departments, so that the ownership of the land is transferred to the concerned Department before finalisation of the records and closure of CDSP-III. Those who have not yet applied for or have not yet received the allocations should comply with these legal requirements immediately.

Assessment and identification of actual land required for different interventions and infrastructural activities continued till the end of 2010. The TA Team continued the works of reflecting the alignments in the *mouza* sheet maps with the assistance of the implementing agencies. The situation is as under:

Agencies	Interventions	Quantity of works	Alignments done	Percentage of works done
WDB	Embankment-Sea side	10.87 Km	10.87 Km	100 %
"	" - Marginal dyke	8.00 Km	8.00 Km	100%
"	" - Jarirdona	7.35 Km	7.35 Km	100%
"	" - Guide dyke	6.50 Km	6.50 Km.	100%
"	Canals	27.15 Km	27.15Km	100%
"	Sluice structures	3 nos.	3 Nos.	100%
"	Closure	1 no.	1 no.	100%
LGED	Cyclone Shelter	22 nos.	22 nos.	100%
"	Rural roads (UP)	60 Km.	51 Km.	90%
"	Ponds	49 nos.	49 nos.	100%
LGED	RDP-23	13 Km	13 Km.	100%

Agencies	Interventions	Quantity of works	Alignments done	Percentage of works done
MoL	Pond (RPA)	22 nos.	22 nos.	100%
“	HH’s rehabilitation	616(29X28) HHs	616	100%
"	Ponds (GoB)	8 nos	8 nos.	100%
"	Twin Houses	128 (8X16) THs	256 nos.	100%
Forest Dept.	Foreshore plantation	200 Ha.	150 Ha.	75 %
MoL	Fixation diluvion lines of Boar Char along the river Meghna.	16 Km.	16 Km.	100%
“	Fixation of the homesteads around the excavated ponds.	Ponds 22 nos	Ponds 21 nos.	95%

The process of identification of the areas had been hampered as some of the implementing agencies decided to shift alignments of some interventions during the implementation period. This shifting has been causing problems in the land settlement activities as some interventions have encroached over the land of the settled households. All the Departments have been requested to report all changes in the alignments to the concerned AC (land) so that the land records and *mouza* maps are amended accordingly before settlement records are finally prepared in favour of the landless.

- *Components for rehabilitation of the landless*

As per the terms of the DPP, the following components were supposed to be implemented by the Ministry of Land through its ‘Project Coordinator’, who was a Deputy Secretary of the Ministry. But as the Project Coordinator had been located at the Secretariat at Dhaka, the Ministry authorized the Deputy Commissioner, Noakhali to take all steps for implementation of these interventions on behalf of the Ministry. Accordingly, the Deputy Commissioner entrusted the ‘Project Implementation Committee (PIC)’ headed by the UNO, Hatiya to accomplish the implementation of the components under the supervision of the Deputy Commissioner, Noakhali. The Project Director of the Ministry of Land acted as the Drawing & Disbursement authority for the project funds. The progress of the components as on 28th February 2011 stands as under:

-Excavation of ponds (GoB):

Originally nine ponds had been planned for excavation. But during the implementation period, eight ponds were taken up for excavation. Of these, six ponds have been completed. Work orders for excavation of the remaining two ponds have been issued by the PIC, but till the end of the project period the contractors did not take up the excavation works. Consequently, two GoB ponds were not available for construction of the planned twin houses (128 houses over eight ponds). To meet the situation, twin houses have been constructed on the banks of the two ponds excavated under the RPA Fund as per discussions in the PMC.

-Construction of Twin houses under GoB:

The PIC, Hatiya issued work order for construction of 128 Twin Houses in January 2010. But the contractors postponed the start of the construction works. The PIC pressed hard for completion of the works of the houses, while maintaining good quality and good workmanship. The contractors have completed the construction of the house, albeit late. The Upazila administration

has issued allotment letters to the affected households showing the homestead for each of the families. The Upazila administration has also taken steps for allotment of the land of the concerned homesteads to the respective households and for transferring the title of the land and ponds proportionately as per modalities of the project.

-Re-allocation of the landless families from outside the embankments under RPA:

Originally, 1800 families were planned for shifting from outside the embankments to areas inside the embankments. But based on the physical survey of the families held during the period of implementation, the number was significantly reduced and activities for shifting of only 774 families were taken up. The PIC took up excavation of 29 ponds under RPA (following the DPP-Second Revision) to accommodate the 774 families on the homesteads on the banks of the ponds. Following the modalities of the shifting, the families would shift their houses themselves to the homestead allotted to them. A reasonable amount of shifting allowances was provided to them from project funds (see below). Of the planned 29 ponds, 25 ponds have been excavated till 2009-10. However, rectification works had to be carried out as some of the ponds had been badly affected by the 'Aiyala' cyclone. The PIC issued work orders for excavation of the remaining 4 ponds in June 2010. But the contractors did not take up the works till December 2010. As a result, actual shifting of the households, earmarked for these ponds, could not be effected.

As per shifting modalities of the project, twenty-eight families have been accommodated in each of the RPA ponds. For each rehabilitated family nine decimals of land at the banks of the ponds are allotted as their homestead land for setting up their houses, around Taka 10,000/- (ten thousand) has been paid to each family as shifting allowances (fixed by the Assessment Committee headed by the Assistant Commissioner (Land), Hatiya). A water-sealed latrine has been allotted to each family through DPHE, free of cost. Two deep tube wells have been sunk at the two corners of each of the ponds, which will be maintained by the dwellers around the ponds. However; each family has to pay Tk. 325/- as contribution for the tube well as per DPHE rules. Each family would get equal share and enjoy equal rights for aquaculture and other cooperative activities in the respective ponds. Special consideration for allotment of some additional (agricultural) land to these families from outside the embankments has been endorsed by the PMC. The Upazila Agricultural Khas Land Management & Settlement Committee is carrying out the process of identifying the land to disburse among these households.

Up to December 2010, 616 out of 774 households have been shifted and Tk. 53,84,700 has been paid to the households as shifting allowances.

-Shifting of houses from different alignments and interventions:

From different alignments within the embanked areas, 253 households have already been shifted with a view to facilitating the progress of different infrastructures and interventions. These were involved in internal alignments (as roads, cyclone shelters etc.) and hence were not included in the aforementioned 774 households from outside the embankments. An amount of TK. 22.39 Lakh has been paid to these households towards shifting costs. These families have been accommodated in the twin houses which have been constructed at different sites out of GoB fund.

- *Modernisation of Land Records Management System (LRMS)*

In Bangladesh, the land records are maintained and managed manually by the land offices at the Union, Upazila and District levels. Various attempts have been undertaken by the Ministry of Land to modernise the land records management system, but a sustainable system has not yet been achieved. In CDSP, software has been developed to computerise the land record system. This system has been applied in CDSP-III. The system is compatible to include provisions for maintaining records of all government, non-government and private lands, records of mutation,

issue and revision of *khatians* (records of right) and maintenance of registers used in the offices of AC (Land) and Union Land offices. Presently, under CDSP-III, the system has been successfully used in Hatiya and Subarnachar Upazilas of Noakhali District in respect of the lands, which have been settled under CDSP.

The Ministry of Land has agreed to accept the system on principle for general use and asked for holding a 'pilot activity' with a view to assess the suitability and its adaptability. The pilot activity is funded by the Ministry of Land and has been conducted in two Upazilas namely Companiganj Upazila of Noakhali District and Ramgati of Lakshmipur District. The reports have been submitted by the concerned Upazila administration and are now under the scrutiny of the Ministry of Land. The decision of the government is expected soon. Meanwhile, the system has been included for implementation in the DPP of CDSP-IV.

- *Training of Ministry of Land staff*

Comprehensive training sessions have been conducted for officials of the MoL and the District Administration on different subjects related to the settlement of land. Training events were held both in Dhaka and in Noakhali. A separate set of trainings was given on the Land Records Management System.

A manual on different laws and statutory orders / instructions related to the settlement of *khas* lands, along with the related legislations, promulgations and enactments has been prepared, printed and distributed among all the concerned officials of the District Administration.

3.4.2 Bangladesh Water Development Board (BWDB)

Below, attention is given first to the new structures built under CDSP III. Then the maintenance works are dealt with, carried out under CDSP III on structures from the CDSP I and II periods. The same structure is maintained in 3.4.3 and 3.4.4 (LGED and DPHE respectively). For maintenance works the combined DPPs had a provision of Taka 740 lakh for all three agencies. Actual agency wise expenditures on maintenance is shown below.

- *New infrastructure*

As per the revised PP (2nd revision), BWDB had to accomplish the following main components: sea dyke and interior dyke (18.87 km); sluices (3 nos.); closures (2 nos.); individual guide dyke (3 km); excavation/re-excavation of drainage canals (38 km); excavation/re-excavation of shortcut channel (6.655 km); re-excavation of river (10 km). BWDB achieved 99.8% progress as per 31st December 2010 and 100% by 1st March 2011. In general, the quality of the work is satisfactory. The details of all works under BWDB are given in Table 1 in Annex 7.

In future, BWDB has to monitor the erosion problem of Gabtoli sluice and also the proper operation of drainage through the gate. Necessary protective measures on the R/S of Gabtoli sluice shall have to be taken immediately. Details have been given in Mission Report no. 20 of December, 2010. BWDB has to monitor also the erosion problem of Jarirdona shortcut channel and take necessary protective measures. Details have been given in the same Mission Report.

- Maintenance work for BWDB

In lakh Taka

Si-No	Item	CDSP- I		CDSP-II		Total
		Length in km	Cost	Length in km	Cost	Cost
01	Re-excavation of khal under Noakhali O&M Division	33.670	63.570	34.036	249.480	313.05
02	Embankment maintenance at Muhuri Accreted are			3.728	31.640	31.640
03	Manufacturing & fixing of 8 no vertical lift gates with lifting device & other gate repairing for sluice DS-3, DS-4, DS-5 & SS-16			LS	4.700	4.700
	Total		63.57		285.820	349.39

3.4.3 Local Government Engineering Department (LGED)

- *New infrastructure*

According to the second revised DPP, the construction programme for LGED was as follows: multipurpose cyclone shelters (20 nos.), bridges/culverts (70 nos.), rural roads-paved/earthen (73 km), bus stand (1 no.) and community ponds (49 nos.). LGED fully implemented all activities and thus accomplished 100 % progress. The details are given in Table no.2 in Annex 7. The quality of the structures is in general very satisfactory.

- *Maintenance work for LGED*

In lakh Taka

SI-NO	Item	CDSP- 1		CDSP-II		Total
		Length in Km/No	Cost	Length in km/No	Cost	Cost
01	Bridge Approach			LS	2.965	2.965
02	Paved road	3.500	29.264	8.500	160.847	190.111
03	Boundar Pillar const.			LS	1.681	1.681
04	Cyclone shelter	4	3.724	2&LS	12.764	16.488
05	Pipe culvert	3	1.489	-	-	1.489
06	Pipe const. 0.6 to 0.9 M dia	LS	5.088	LS	7.673	12.761
07	Earthen road	16.400	26.102	8.3	26.505	52.607
	Total		65.667		209.470	275.137

3.4.4 Department of Public Health Engineering (DPHE)

- *Department of Public Health Engineering (DPHE)*

As per second revised DPP DPHE had to accomplish the following components: deep tube wells (600 nos.), test tube wells (18 nos.), sanitary latrines (8,500 nos.), public toilets (20 nos.), sand filters for ponds (47 nos.), rain water harvesting schemes (60 nos.). DPHE achieved almost 97 % progress. The details can be found in Table 3 in Annex 7.

- *Maintenance work for DPHE*

In lakh Taka

SI- NO	Item	CDSP- 1		CDSP-II		Total
		No	Cost	No	Cost	Cost
01	Re-sinking of deep tube wells at Char Vatirtek 59/3b. Char Maiid. Char Moradona & Baggardona. Niihuldwin & Hatia Island	17	8.905	14	7.345	16.250
02	Maintenance of deep tube wells for fitting & fixing spare parts. Head cover-No-6 construction of CC platform at Char Char Moradona. Char Baggardona I & II Boyerchar at Subarnachar & Hatia upazila	LS	8.100	-	-	8.100
Total			17.005		7.345	24.350

3.4.5 Department of Agriculture Extension

- *Benchmark survey:*

To better understand the situation in agriculture in Boyer Char, a benchmark survey was planned. The field work for the benchmark survey was carried out in November-December in 2006. The survey used a structured questionnaire with four sections: (a) demographic information, (b) agricultural information including land use / cropping pattern, (c) use of agricultural inputs and marketing and (d) household assets. A sample of 1,200 households (around 13% of the total households in Boyer Char) was randomly selected. The survey report was published in March 2007 as Technical Report no. 2. In a nutshell, the findings of the survey are: family size varied from only husband and wife to as many as 23 (joint family sharing same homestead), with an average of seven; about 68% of the respondents were farmer, while 17% were agricultural labourer; 80% of the occupied land is used for crop production. Seven dominant cropping patterns have been identified. Percentage of the area that is covered by single, double and triple crops are 58.8%, 26.6% and 14.5% respectively. The cropping intensity at the time was 155.7%.

- *Identification of productivity zones:*

In March 2006, the process of identification of productivity zones (in order to design more suitable and targeted extension packages) started with the collection of 1,200 soil samples (salinity, texture, and nutrient content). In the area, 65.1% can be considered extremely saline and 23.6 % strongly saline. Land types were identified according to farmer's perceptions of high, medium and low land. It is predominantly (66.4 %) medium land, followed by high (22.6 %), medium low (10.9 %) and low (0.1 %). The soils are mostly clay loam (47.3 %), loam (24.8 %) and silt loam (13.5 %). In Technical Report no. 1 four productivity zones (PDZ) have been distinguished, with different combinations of flooding depth and soil characteristics. Based on this zonation, for each zone the most suitable cropping patterns have been identified. The result of the application of the PDZ concept has been encouraging. Extension staff members of DAE find it easy to identify and locate areas with the same characteristics. A Technical Resource book, supporting the work with the PDZ concept, provides the technologies that are most suitable for any given set of parameters.

- *Group approach, Formation of Farmer Groups and Farmer Forums:*

Following DAE's extension policy, the group approach was adopted in CDSP III. To that effect, also based on the experiences in CDSP II, Farmer Forums have been formed, each consisting of 30 farmers. The groups have been formed through a series of informal discussions with the

community (especially WMO members), DAE-staff, Technical Assistance staff and NGOs. During the project period 35 Farmer Forums have been established, evenly distributed over the area. Of the in total 1,005 members (over 10% of the total households in the area), 23 % are women. Certain criteria to become a member of a Farmer Forum were applied. Candidate members have to:

- own or lease cultivable land (minimum 0.50 acres for Noakhali area)
- be a permanent resident of the area
- have agriculture as the main occupation.

The first Forums were established in April 2006, the last ones in December 2008. The earlier idea of forming Farmer Groups was left. Instead, the Water Management Groups were used to assist in the formation of the Forums. The WMGs functioned as *de facto* Farmer Forum until all 35 were established. This number was not fixed beforehand, but is based on circumstances that were faced in the field.

- *Extension interventions*

A number of interventions have been adopted by DAE to develop, extend and disseminate agricultural technology packages, suitable for Boyer Char: (a) demonstration of technologies; (b) organising field days; (c) seasonal surveys / evaluation of crop performance; (d) agricultural machineries and inputs support; (e) capacity building; and (f) publications on agriculture.

(a) Demonstration of Technologies: DAE demonstration plots were established in farmers' fields, having easy access, being visible, and located near a main public junction. The demonstration plots are established entirely with close participation of the farmers. Activities were supported by DAE and TA staff to make the demonstration more effective. A total of 576 demonstration plots were established in Boyer Char within the project period, divided over all Productivity Zones. Details of agriculture technology that were demonstrated are given in the following table:

Crop production technology demonstrations in Boyer Char during CDSP-III

Crop	Name of variety	Yield (t/ha)
Rice	HYVs- Brridhan-32,40,41	3.5 - 4.2
	Brridhan-39	2.5 - 3.5
	BR-11, 14, 22 and 23, Brridhan-27,28,42,43	2.8 - 3.5
	Local: Rajashail, Kazalshail, Gigaz, Betichikan	1.5 - 2.5
Water Melon	Glory	32.0- 5.0
Felon	BARI-1	0.5 - 0.6
Sweet Potato	Kamala Sunduri, Tripti	23, 24
Chili	Local	1.5 - 1.7
Sweet gourd	Local	10 - 16
Onion	Thaherpuri	5.0 - 8.0
Garlic	Local	2.0 - 7.0
Okra	BARI-1	3.5 - 4.0
Mustard	BADC-1	0.4 - 0.5
Carrot	Hybrid	10.0
Ground nut	Dhaka-1	1.85
Soybean	Shohag	1.0 - 1.4
Mung Bean	BARI-5	0.7
	BARI-6	0.8

(b) Organising field days: The organisation of field days is a very effective method for dissemination of information on technology. Field days have been an integral part of technology demonstration. A total of 140 field days was organised at the demonstration plot sites or nearby places during the project period. The participating farmers observed the performance of the demonstrated technology and discussed the *pros* and *cons* of the technology.

(c) Seasonal survey and crop performance evaluation: Ten seasonal evaluation and performance surveys were conducted to assess the performance of field activities of DAE in different crop seasons.

(d) Agricultural machinery and input supply: The agricultural inputs and machineries are two essential factors for agricultural development. DAE provided inputs like quality seeds, fertilizers, drums for seed preservation, sprayers and paddle threshers to the farmers. It has been observed that timely availability of inputs, especially quality seed and fertilizer, influenced crop production in Boyer Char positively. Availability of seed drums, paddle threshers and sprayers was very effective in seed- and crop management. Supply of seed drums to farmers has improved the seed preservation and thus availability of quality seeds to the local farmers of the project area. The popularity of paddle thresher use reveals that it could be a potential commercial venture for employment and income generation of the farmers.

(e) Capacity building activities:

Farmer-training plays a vital role in the process of motivating farmers to adopt a certain technology. It is an essential event in all extension activities. DAE organised two types of formal training; i) farmer training and ii) staff training.

Training topics have been identified based on farmers' demand and appropriate training modules were prepared. The trained officials have been conducting attractive and participatory training sessions, including theoretical and practical aspects of crop production. In the training activities of DAE, 9,095 persons were involved: 9,040 farmers (6,780 male and 2,260 female) and 55 DAE-staff members.

Three TOT courses were organized during the project period for skill development of DAE officers. Participating officials have been presenting coastal agricultural technological aspects. Performance of participating officers improved significantly as was shown by their presentation in training events. Apart from an orientation course, subjects of the courses were: *Kharif* I, II and *rabi* crops production; use of HYV production techniques; soil management; seed production and preservation; Integrated Pest Management (IPM); gender aspects in agriculture.

Char people are heavily dependent on agriculture for their livelihood. They do not have the means or the time to visit other areas, in order to see which agricultural technologies are successful elsewhere. In this situation, the project started to organise motivational tours. This strategy appears to have been effective in raising awareness of farmers about modern agricultural technologies. A total of 960 farmers took part in 32 motivational tours organised to different places in Bangladesh. The groups visited among others the headquarter of BRRI at Gazipur and the regional station located at Comilla. The Rural Development Academy at Bogra and the Horticultural Resource Centre (HRC) at Ramgor, Chittagong, were also visited. The farmers were surprised to see the performance of various crop varieties. Following the tours, more farmers expressed their desire to adopt the technologies they had seen. They have placed demands for seeds of those crops/varieties to DAE.

(f) Publications on agriculture: One thousand posters were published, describing HYV seed characteristics and seed preservation techniques, with a view to raise awareness of farmers to

promote adoption of HYV rice in coastal chars. In addition, an updated edition of the Technology Resource Book (TRB) was published and distributed to the concerned individuals/organisations working in the coastal areas. The recipients included DAE officials at the field level and all Upazilla Agriculture Offices of the coastal zone. DAE Noakhali has been disseminating the information through training and other means. It is expected that the information will be disseminated further in the coastal areas.

In the form of a table, the DAE achievements can be summarized as follows:

	Components/Activities	Target	Achievement	Remarks
a.	Formation of Farmers' Forum	35	35	100%
b.	Demonstration of technologies	576	576	100%
c.	Organising field days	140	140	100%
d.	Crop cut demonstration	1152	576	50%
e.	Seasonal survey / evaluation of crop performance	10	10	100%
f.	Agricultural machinery and input support			
	i) Distribution of plastic seed drums	200	200	100%
	ii) Distribution of hand sprayer	100	100	100%
	iii) Distribution of paddle threshers	100	100	100%
g.	Training activities			
	i) Farmer training	288	288	100%
	ii) Training of trainers	11	11	100%
h.	Organising motivational tour	32	32	100%
I	Organising workshops / seminars	6	6	100%

3.4.6 Department of Forest

- *Formation of groups for social forestry:*

The first step in the implementation of the approach was the formation of Social Forestry Groups (SFG). Prior to group formation activities, several discussion- and awareness raising meetings were held with community members and local leaders. This was done to inform them about the legal aspects of SFG formation, their possible role in the process and the benefits that it would ultimately bring. In total, 85 motivational and awareness meetings in different places at Boyer Char were organised.

To select appropriate beneficiaries for road plantation, embankment, foreshore and village forestation activities, a quick survey using structured questionnaires was carried out. The final selection of the project beneficiaries was done through a series of consulting meetings with Water Management Groups (WMG), local elite, NGOs and field staff of the Forest Department and TA team. Group members are mainly the char dwellers who were directly affected through construction of roads or embankments. They all live close to the plantation for which they are responsible. Priority is given to vulnerable groups. One SFG is formed for every 1 km roadside plantation, 0.75 km embankment plantation, 12-15 hectare foreshore and 20 ha mangrove plantation. Group membership ranges from 20-25 members, with an average of 24. The SFG members for mangrove plantations, located outside Boyer Char, were formed from settlers living outside the embankment and from fishermen.

These SFGs are responsible for roadside-, embankment-, foreshore- and mangrove plantation activities, and are expected to properly maintain those. A series of meetings, workshops, field visits and training activities were organised for wider dissemination of plantation related

information, motivational aspects and group strengthening activities. At the end of the project period, 128 Social Forestry Groups existed (see table below), each with 25-30 participants (of the total 3,172 members, 39% are women, and 1,889, 61% men). Each SFG has its own name which helps in providing an identity to the members and facilitates the identification of the groups in documentation.

Social Forestry Group formation:

Type of activities performed	No of SFG	No of Male	No of Female	Total
Roadside plantation	75	1214	761	1975
Foreshore plantation	11	155	100	255
Embankment plantation	28	363	239	602
Mangrove plantation	14	210	130	340
Total	128	1942	1230	3172

For the village afforestation programme, no SFGs were formed. In each of the selected villages, an average of 182 households were involved, with in total 3,655 participants. One fifth were destitute women or women of women headed households.

Since becoming associated with this component, local communities in Boyer Char have come to realise the many benefits that social forestry can bring to their lives. Project beneficiaries are now well aware of the possibilities of income generation from the plantations, the protective role of forests and the fact that they have gained access to an important natural resource. Their SFG membership has helped female members in gaining social recognition. This, in turn, may lead to further economic opportunities and a stronger voice in society. In Boyer Char, the social forestry programme represents an important breakthrough in relations between the Forest Department and local char dwellers (now most of them are direct beneficiaries). The tense relation dating from the period of encroachments, changed into an atmosphere of mutual acceptance and cooperation. Social forestry involves formal partnerships between char dwellers and government (Forest Department) through the formation of SFGs for protection, management and usufruct rights. Another significant aspect was that social forestry approach changed the attitude of the foresters towards the settlers, and vice versa. Forest Department field staff members have regular contact with SFGs and attend their monthly meetings.

- *Land lease and benefit sharing agreements:*

The land lease agreement and benefit sharing agreement with the respective land owning agencies, SFG members (who are the primary beneficiaries of the project) and Forest Department have been completed before or immediately after the establishment of plantations. Considering the successful implementation of the social forestry plantation programme and the long-term sustainability, appropriate sharing of benefits among the stakeholders was extremely important. These agreements have created a sense of ownership and ensured settlers their right on government land and usufruct rights on trees and produces. These agreements were signed by Forest Department (the Divisional Forest Officer on behalf of the Government), land owning agencies like LGED or BWDB, Union Parishad and SFGs. They have a duration of 10 years. The original land lease and benefit sharing agreements were prepared in a non-judicial stamp valued Taka 150/= (one hundred fifty). The original agreements are maintained at CDSP-III office and photocopies are provided to the beneficiaries, land owning agencies and Forest Department.

The agreements describe the rights, responsibilities, and short- and long term benefits of the SFG members. All short term benefits (intercropping, pruning; see below) go to the SFGs. The long

term benefits are the revenues at the end of the period of the agreement, by selling the wood of the trees, when they are mature. The sharing arrangement for road- and embankment plantation for the long term benefits is:

- Forest Department 10%
- LGED, BWDB 20%
- SFG members 55%
- Tree farming fund 10%
- Union Parishad 5%

For mangrove- and foreshore plantation these figures are:

- Forest Department 25%
- Land owner 20%
- SFG members 45%
- Tree farming fund 10%.

At the end of the project period, the situation was as follows for the different categories:

Roadside plantation: For all SFGs agreements have been completed; out of the total of 1975, photocopies for 826 groups have been distributed. The other 1149 members had already received agreements.

Foreshore plantation: Agreements have been signed by SFGs, Union Parishad, Forest Department for 165 SFG members. They have been submitted to the UNO of Hatiya Upazilla for signing. The 90 remaining ones will be done in 2011.

Embankment plantation: For 417 SFG members agreements have been signed by SFGs, Union Parishad and Forest Department and have been sent to Executive Engineers of BWDB in Lakshmipur and Noakhali for signing. For 185 members the agreements were already distributed.

Mangrove plantation: All agreements were distributed.

- *Roadside- and embankment plantations*

The roadside plantation programme was formally started on 23rd May 2006 at Ali Bazar cyclone shelter, Boyer Char. As per original DPP, a total of 60 km road (120 km seedling- or plantation km) and 14 km embankment (28 km seedling- or plantation km) was planted. For the embankment plantation 93,250 seedlings were used and for the road side plantation 60,000 seedlings. Each km. of road length contains 1,000 seedlings, 500 at each side. To ensure better survival of planted seedlings in embankment, caretakers were appointed accordingly to project provision. The caretakers/watchers were selected among Boyer Char dwellers. This programme has directly generated 61,110 person days of employment.

- *Village afforestation*

Boyer Char has about 42 villages or *samaj*. With a view to increase the productivity of the homesteads in the villages, vacant and under-utilized land was used for the village afforestation programme. This component was initiated by the Forest Department under CDSP III in 2006. A total of 20 villages were brought under the village afforestation programme with different fruit, timber and fodder species. Initially it was planned to cover a total of 1,000 households. In practice, with the same resource allocation, 3,655 households were supported. An average of 182 households was involved in each village. They were selected by staff of the Forest Department. Applied criteria were the availability of empty space on the homestead and the socio-economic status, with priority for the most poverty-stricken families. Under this programme, vacant and unused suitable homestead lands were planted with trees for fuel wood, timber and medicinal purposes. This created additional income for the participants. The project supported the cost of

seedlings, fertilizer and bamboo sticks. It engaged a watcher, whose tasks included tree maintenance and associated works. Other inputs like training support, and technical support were ensured by the Forest Department and the TA team.

Most of the trees planted in homesteads have multiple uses. The eight major uses of the homestead trees are: fruit/food, timber, fuel wood, fodder, spices, medicine, fencing and miscellaneous. The miscellaneous uses include handicrafts, brooms, shade, ornamental, ceremonial, environmental and aesthetic purposes. Overall, 350,000 seedlings have been planted in homesteads. This means that a household received, on average, 95 seedlings.

- *Foreshore plantation*

The social forestry activities in the foreshore were designed to protect the embankment, and at the same time improve livelihoods of the families that would be shifted from areas outside the embankment to land inside the embankment. The original DPP target of 800 ha (block plantation) was changed to 200 ha, because the Forest Department, supported by the Project Management Committee of CDSP III and a short term mission, changed the design to large mound plantation. The revision of the design was deemed necessary to protect the non-mangrove species in the low lying foreshore areas against tidal inundation and to increase the effectiveness of the foreshore plantation as embankment protection. This change, however, required a large amount of relatively costly earthwork. Hence the reduction of the area in order to stay within the available fund allocation. A contract was signed between the Forest Department and contractors for the construction of the mounds on 200 ha, with 104 mounds per hectare. However, at the end of the project period, only 85 ha were constructed and 35 ha of the total of 85 ha were planted.

- *Mangrove plantation*

During 2006-2008, in total, 500 ha mangrove plantations have been established at two locations in the vicinity of Boyer Char i.e. Jaliar Char (300 ha) and Teliar Char (200 ha). On average, at least 3-4 times vacancy filling has been done in these mangrove plantations. During January to December 2007, 200 ha mangrove plantations which had been established in Teliar Char were washed out by tidal movement and wave action. A total of 2,151,500 seedlings of *keora*, *gewa* and *baen* has been planted. Fourteen SFGs for mangrove plantation have been formed. They are formed by people settled in Boyer Char. The SFGs are currently involved in maintaining the mangroves at Jaliar Char.

- *Capacity building*

Training was a key component of the social forestry activities. The training programme aimed to link all activities. The programme covered a wide range of intertwined social issues and practical skills. The participants were SFG members, members of Water Management Groups and Farmer Forums, local elite, Forest Department staff, staff from other agencies and NGOs. The emphasis in the training of officials of Noakhali Division of the Forest Department was on social aspects of social forestry. Social forestry has more to do with social development than with growing trees. In a social forestry activity, forestry is only a vehicle to achieve socio-economic development objectives (self-reliance, additional income stream). Training activities aimed at human capacity building at two levels: at the level of participants in forestry activities and at the level of the Forest Department, to facilitate the shift from conservation forestry to people-friendly forestry.

With the aim of capacity building among Forest Department staff, two workshops and four training courses were organized, with as subjects the CDSP approach, working methodologies, social forestry approach, pest and disease management and plantation establishment and management aspects.

In total, 29 training courses for SFG members were organised by the Forest Department and the TA team, with in total 1,139 participants (739 male and 400 female). The training was on social forestry approach and methodologies, technical aspects of plantation management, which contributed to ensure better management and maintenance of planted trees. In addition, three courses have been organised by the TA team for NGO staff and Forest Department staff. The duration of each course was two days.

3.4.7 BRAC/CDSP

BRAC was in charge of the NGO programme implemented in Boyer Char under a contract with the Embassy of the Kingdom of the Netherlands. This programme contained activities that were complementary to the interventions under the governmental CDSP III project. Field activities were carried out by five local NGOs (see 4.2.11), contracted by BRAC. BRAC was responsible for the coordination and for the reporting to EKN. The Coordination between CDSP III and the BRAC/NGO programme took place at several levels. BRAC was represented in the National Steering Committee and in the Project Management Committee of CDSP III. In Noakhali, CDSP III staff was invited and always participated in the bi-monthly coordination meetings between the five local NGOs, chaired by BRAC's Senior Regional Manager. At field level, monthly NGO coordination meetings were held at different venues in Boyer Char, led by the Noakhali based liaison officer of BRAC. The Project Area Coordinator from CDSP III side participated in those meetings. Topics that were discussed regarding the coordination and cooperation between CDSP III and the NGO programme were wide ranging but often focussed on issues of drinking water supply (NGOs collected funds, while DPHE was responsible for installation of tube wells) and information exchange.

BRAC published a separate Completion Report on the activities of BRAC and the five local NGOs working in Boyer Char.

3.4.8 Training

A Training Plan was formulated and accepted by the PMC. Subsequent training activities indeed followed that plan. All training activities in CDSP III are summarized in Annex 6.

CHAPTER 4: PROJECT ORGANISATION

4.1 Introduction

CDSP III was implemented by six agencies in two Districts with components that had a bearing on several levels (from field- to national level). As a result the project had a rather elaborate institutional set-up. This chapter gives an overview of that organisation. It starts with the most significant parties involved, including their responsibilities in the project (4.2.), and of all important coordination mechanisms (4.3.). It closes with a paragraph on monitoring and reporting (4.4.). The approach in CDSP III was not to create a project structure parallel to the normal set-up of the Ministries and agencies involved. For all practical purposes the usual procedures were followed. Only the coordinating mechanisms were institutional arrangements specifically created for this project (and at national level for other coastal projects as far as the ICZM Inter-Ministerial Technical Committee was concerned). Project activities were normally done by the existing staff of the line agencies.

The lead agency, the BWDB, provided the Project Director. The activities of each of the other five implementing agencies were headed by a Project Director or Project Coordinator from the agency concerned. Not all institutions described in paragraph 4.2. are parties in CDSP III in the sense that they are party to or mentioned in the agreements between the two governments on CDSP III. All, however, had an important role to play and are partners in the implementation of the project. The PMC has adopted a document delineating the role and responsibilities of the main parties.

4.2 The parties involved and their responsibilities

4.2.1 The Ministry of Water Resources

The Ministry of Water Resources (MoWR) was the sponsoring Ministry of CDSP III. The Secretary MoWR convened and chaired the Inter Ministerial Technical Committee for ICZM and later the National Steering Committee (NSC) of CDSP III (see below under 4.3).

4.2.2 Embassy of the Kingdom of the Netherlands

The government of The Netherlands was represented in the project by the Embassy of the Kingdom of the Netherlands (EKN). An EKN representative was member/ observer in the NSC. The Chief Technical Adviser and the Team Leader of the TA team reported to EKN (as well as to the Project Director). EKN representatives, including the Ambassador, paid several visits a year to the project area. CTA and Team Leader had regular discussions at the embassy about the progress of the project and the most pressing issues of the day. All expatriate short term consultants debriefed at the embassy at the end of their mission.

4.2.3 Bangladesh Water Development Board

The Bangladesh Water Development Board (BWDB) was the lead agency in CDSP III. It provided the Project Director, who chaired the Project Management Committee (PMC, see 4.3.). BWDB was directly responsible for the implementation of the water management related infrastructure as described in 3.4.2., and for the studies mentioned in 3.3.1.

An issue that played a role throughout the project period was the shortage in staff. The office of the Project Director (PMU-ESPP) had much less staff members than the DPP prescribed. Also the number of available field staff was inadequate. Section 3.2.3 provided information on the situation with regard to support from BWDB side for water management organisations. The technical staff for supervision on construction work was, especially in the first years of the project, pre-occupied with works elsewhere in Noakhali. The planned staff consisted of an Executive Engineer, one Sub-Divisional Engineer and two Sub-Assistant Engineers, both in the Noakhali- and in the Lakshmipur O&M Division.

4.2.4 Local Government Engineering Division

The Local Government Engineering Division (LGED) was responsible for implementation of the internal infrastructure in Boyer Char as outlined in 3.4.3. It provided a Project Director, located at the headquarters of LGED in Dhaka. There were hardly any staffing problems. Field staff related to CDSP III consisted of one Executive Engineer, one Assistant Engineer and one Sub-Assistant Engineer, both for the LGED office in Noakhali and Lakshmipur.

4.2.5 Department of Public Health Engineering

The works related to sanitation and drinking water supply (given in paragraph 3.4.4.) were carried out by the Department of Public Health Engineering (DPHE). Just as LGED, DPHE has the Ministry of Local Government and Rural Development as parent Ministry. DPHE had a Project coordinator, situated at the head office in Dhaka. Posting of sufficient number of field staff posed a problem at times. Staff working for CDSP III consisted of one Executive Engineer, one Sub-Divisional Engineer and one Sub-Assistant Engineer.

4.2.6 Department of Agricultural Extension

The Department of Agricultural Extension (DAE) is an agency of the Ministry of Agriculture. In paragraph 3.4.5. a description is given of the activities in Boyer Char for which DAE was responsible in CDSP III. The Project Director for CDSP III was the Deputy Director of DAE in Noakhali. DAE posted three Sub-Assistant Agriculture Officers in the project area, of which two had also responsibilities elsewhere.

4.2.7 Department of Forestry

The Department of Forestry functions under the Ministry of Forestry and Environment. Its Coastal Forest Division, Noakhali, was responsible for the implementation of all forestry activities in the project, such as group formation, social forestry in Boyer Char polder, foreshore- and mangrove plantations (see paragraph 3.4.6.). The head of that Division functioned as Project Director, CDSP III. Field staff was formed by two Range Officers, one Asst. Range Officer, six Beat Officers and approx. eight Forest Guards and 18 Watchers.

4.2.8 Ministry of Land

The Ministry of Land (MoL) was responsible for the land settlement programme in CDSP III. As far as the implementation aspects were concerned, in particular the Deputy Commissioners and their Assistant Commissioners (Land) were involved. The settlement programme and the other components (relocation of households in Boyer Char, the construction of houses and ponds, and the computerised Land Records Management System) are described in paragraph 3.4.1. The Ministry provided a Project Coordinator at the office of the Ministry in Dhaka.

4.2.9 Government at local levels

District: Activities of CDSP III were focused on two Districts: Noakhali (Boyer Char and Baggar Dona river) and Lakshmipur (re-excavation of the upstream part of the Baggar Dona river). Key functions for the District administration are land settlement (Deputy Commissioner and Additional Commissioner, Lands) and coordination (Deputy Commissioner and the District Development Coordination Committee)

Upazilla: At sub-District level, the Upazilla Parishad played an important role in both land settlement and coordination. The Parishad is headed by the Upazilla Nirbahi Officer and has the Chairmen of the Unions in the Upazilla as members. The following Upazillas were involved as far as Boyer Char is concerned: Hatiya and Suborna Char (in Noakhali District).

Union: The Union Parishads and in particular their Chairmen, were involved in a number of ways in the project activities, for instance through the WMOs and as partner in the maintenance plans for infrastructure in the respective project areas. The UP members have an important function in the overall communication process between settlers and government agencies. There has been continued uncertainty about the status of Boyer Char, whether it belonged to Hatiya or Subarnachar and, consequently, which Unions had jurisdiction over the area. To fill this vacuum, the District Administration appointed administrative staff to run the affairs in Boyer Char.

4.2.10 Community-based field level institutions

As no or hardly any field level institutions existed before CDSP started to be operational in Boyer Char, the project dealt mainly with the following institutions, all established within the CDSP framework:

- *Water Management Organisations:* The project was working with 53 WMGs (of which ten are in Boyer Char), seven WMAs and two WMFs. The WMAs and WMFs are in CDSP II areas. These WMOs are responsible for the day to day water management in their areas and are party to the maintenance plans. The legal status of the WMOs has been subject of a continuous debate. The registration by BWDB under the BWDB Act turned out to be legally invalid. BWDB has now taken the decision that WMGs have to be registered under the rules of the Department of Cooperatives (DOC). The Cooperative Act, however, does not allow registration of WMAs and WMFs. The possibility of a Memorandum of Understanding between BWDB and DOC to address this issue has to be investigated. See also section 3.2.3.

- *Farmer Groups and Forums:* In Boyer Char ten Farmer Groups were formed. They formed the main avenue for the agricultural extension activities (see also 3.4.5).

- *Social Forestry Groups:* Approximately 110 SFGs were established in Boyer Char. They were the main actors in implementing the social forestry approach and were

involved in all forestry activities, such as mangrove-, foreshore -, roads- , embankment – and village plantations (see 3.4.6).

- *NGO groups*: Under the BRAC/CDSP programme around 720 all-female groups were formed by the five local NGOs. The groups had an average of 25 members. These groups were involved in the activities taken up in the BRAC/CDSP programme (see 3.4.7. and 4.2.11), but also played a role in agriculture extension activities and in the formation of SFGs under CDSP III.

4.2.11 NGOs

As was explained in paragraph 3.4.7., BRAC and the five local NGOs working in Boyer Char were no direct party to the CDSP III agreements. Still they played a vital role in the overall development of Boyer Char. The activities of the local NGOs (DUS, HASI, SSUS, UPOMA and N-RAS) are given in a separate Completion report, produced by BRAC.

4.2.12 Technical Assistance team

The Technical Assistance team was primarily employed in an advisory capacity to the six implementing agencies. The majority of the activities described in chapter 3 were carried out under the responsibility of those agencies, with the consultants of the TA team as advisers and in a monitoring capacity as far as the activities, funded by Financial Assistance funds, are concerned. In a number of activities, especially those related to study and monitoring, the TA team was the main implementer, but all under the responsibility of the Project Director and the Project Management Committee.

The TA team consisted of Bangladeshi experts, with the exception of the Chief Technical Adviser (CTA). The CTA was present in the project during 21 of the 65 months of the project period, heading the TA team. In his absence the Team Leader (TL) took over the management of the team. The TL used 53.7 months. During the course of the project, a Deputy Team Leader (DTL) was appointed. DTL spent 47.1 months. Other long term consultants were:

- Land Settlement Adviser (56.9 months)
- Quality Control Engineer (61.8 months)
- Institution and Gender Adviser (42.5 months)
- Water Management Organisation Adviser (11.4 months, later DTL)
- Information and Dissemination Adviser (28.3 months)
- Social Forestry Adviser (22.7 months)
- Agricultural Extension Adviser (21.4 months).

In addition, short term expatriate advisers were present for 6 months (mainly civil engineering/quality control, but also environment and field institutions). A total of 49.5 months were used by Bangladeshi short term experts in a great variety of fields, covering all sectors.

Expatriate staff was posted through Arcadis Euroconsult, later Euroconsult Mott MacDonald. Local consultants and support staff were hired through BETS, except the quality control engineer and the social forestry adviser, who were hired through Socioconsult.

4.3 Formal coordination mechanisms

There were two formalized forms of coordination, a steering committee at national level (Inter Ministerial Committee ICZM and later the National Steering Committee) and one at project level

(Project Management Committee). Other forms of coordination were provided by a series of different arrangements at District- and lower levels.

- *National Steering Committee*: This Committee was chaired by the Secretary, Ministry of Water Resources. It had as members representatives of the parent Ministries of the six participating agencies. A representative of EKN was a member/observer of the NSC. CTA and TL of the consultants team were invited as observers as well. The Project Director BWDB was the secretary. Although the NSC was supposed to meet every six months, the Committee met only four times in the whole project period. These meetings proved, however, of vital importance for the progress of the project and for the preparation of CDSP IV.

- *Project Management Committee*: The PMC is headed by the Project Director CDSP III (from the lead agency, BWDB). It further consisted of the Project Coordinators of the other five implementing agencies (MoL, DOF, DAE, LGED and DPHE) and the Programme Manager of the BRAC/CDSP programme. The Team Leader of the TA Team and the Chief Technical Adviser, if present in the country, had a seat on the PMC as advisers to the PD. The TL acted as the committee secretary. The PMC met regularly. Over the whole period, the PMC convened 41 times. Meetings took place both in Dhaka and Noakhali. Despite the fact that the attendance rate for the actual PMC members was on the low side (approx. 65%), the PMC discharged its responsibilities quite effectively. Recurrent subjects discussed during the meetings were the progress of project activities, inter-agency issues, results of studies, reimbursement matters and revision of DPPs (see section 1.4).

4.4 Monitoring, reporting and review

From the side of the implementing agencies, the Project Director of the lead agency (BWDB) and the respective Project Directors/Coordinators of the partner agencies were responsible for monitoring the project activities. Instruments used were field visits, reading of progress reports, meetings within the agencies and meetings of the Project Management Committee. The Chief Technical Adviser and the Team Leader of the TA team took care of monitoring the support provided by the members of the TA team. CTA and TL reported to the PMC, to EKN and to the headquarters of the main consultant. At national level the National Steering Committee met only four times in the entire project period. From the side of the donor, EKN staff monitored the progress of CDSP III mainly by reading the six monthly progress reports, through discussions with the CTA and TL of the TA team and through field visits. An EKN staff member was also a member-observer in the NSC. From the side of the consultants consortium, a Project Coordination Board was established, that convened six times during the project period.

An external Joint Mid-Term Review mission took place in 2008.

The project produced a series of Progress Reports, Mission Reports and Technical Reports. In addition three feasibility studies and other study reports were published. An overview of all project reports can be found in Annex 8.

CHAPTER 5: BUDGET AND TIMEFRAME

5.1 Contribution of the Government of Bangladesh

The main expenditures from the side of the Government of Bangladesh were formed by costs of manpower, vehicle maintenance and other running costs. They also included O&M costs in CDSP I and II areas. The following table reflects the agency wise expenditure from the side of the Government of Bangladesh as on 28-02-2011

Tk. in Lakh.

Name of Agency	Amount as per RDPP-2 (GoB)	Expenditure up to 28 th February 2011	Expenditure in %
BWDB	821.99	756.81	92
LGED	507.54	505.56	99
DPHE	74.35	69.35	93
MoL	516.00	443.90	86
DAE	13.67	9.20	67
DoF	24.05	23.71	99
Total:	1957.60	1808.53	92

5.2 Contribution of the Government of the Netherlands

5.2.1 Financial Assistance

Up to 30th September 2011, requests for re-imbursment were received for a total of Taka 8401.69 lakh of which an amount of Taka 8401.56 was indeed recommended for re-imbursment by the TA Team.

Reimbursement position (Financial Assistance- Final) as on 30th September 2011

Tk. in Lakh

SL No.	Agency	Revised PP amount (RPA)	Claimed amount	Recommended amount	Amount not yet disposed.
01	BWDB	4412.07	4217.78	4217.78	0.00
02	DAE	66.50	61.04	61.04	0.00
03	FD	535.43	380.00	380.00	0.00
04	LGED	2910.00	2785.72	2785.59	0.13
05	DPHE	800.00	697.42	697.42	0.00
06	MoL	496.00	259.73	259.73	0.00
	Total:	9,220.00	8401.69	8401.56	0.13

5.2.2 Technical Assistance

The original Technical Assistance budget (tender bid and Inception Report) of Euro 2,390,342 was increased with Euro 295,000 to Euro 2,685,342. The increase was due to the extension of 18 months (1st July 2009 to 31st December 2010). The second extension of two months (January and February 2011) was done in a budget-neutral fashion. At the end of the project period the whole budget-amount was spent. There was an actual over-expenditure of around Euro 10,000, which was borne by the main consultant as rebate. For details see Annex 9.

5.3 Money flows and financial reporting

GoB funds for CDSP III were transferred from the treasury to each of the implementing agencies via their respective parent Ministries. The flow was based on the actual annual requirements, reflected in the Annual Development Programme budget.

For those activities for which RPA funds were available under Dutch Financial Assistance, the funds actually were reimbursed by The Netherlands to the treasury. Recommendations for reimbursements were submitted by the CTA of the TA-team to EKN. These recommendations were based on requests for reimbursements from the implementing agencies, sent to the TA-team. The whole process of quality control and subsequent reimbursements followed the Guidelines for quality control and reimbursements, documents that were agreed upon between each of the six implementing agencies and the TA-team.

The Technical Assistance budget formed a part of the contract between the Government of the Netherlands (represented by EKN) and the main consultant, Euroconsult Mott MacDonald. Funds for expenditures under this budget were disbursed by the Technical Assistance team. Claims were submitted to EKN by Euroconsult Mott MacDonald through quarterly invoices. The headquarters of Euroconsult Mott MacDonald transferred money to a bank account in Dhaka, managed by the TA team. From that account, also the two sub-contracting firms, BETS and Socioconsult, were paid for their services. All receipts etc. are available in the offices of the TA team in Noakhali and Dhaka. On a monthly basis overviews of all expenditures were sent to Euroconsult Mott MacDonald head office in the Netherlands.

5.4 Time-frame

As reflected at the outset of this Project Completion Report, the initial project period of 45 months (1st October 2005 to 1st July 2009), was extended twice: First with 18 months to 1st January 2011, and then with another two months to bridge the gap to CDSP IV. The total project period therefore became 65 months. Chapter 3 reflects all the achievements in that period. It can be concluded that all activities that were planned were indeed implemented, with the exception of the land settlement programme (with a balance of approximately 3,400 cases at the end of the project; this balance will be dealt with in CDSP IV) and the foreshore plantation.

CHAPTER 6: RISKS AND ASSUMPTIONS

The Inception Report of CDSP III identified five factors that were critical for the successful implementation of the project: timeliness of availability of funds, timeliness of availability and quality of inputs, cooperation of all involved institutions, political support and favourable weather conditions. It was concluded that only if these factors were positive, the project could be completed in time. As can be concluded now, the project had to be extended with 18 months because works were not completed within the original project period. A main reason for this delay was the fact that the formal approval process of DPPs was not yet completed when the project started in October 2005. Also, the revision of DPPs took more time than expected.

- *Timeliness of availability of funds:* The flow of funds to the project is vital for its progress. Funds from both governments have to be available when they are required. A considerable set-back in this respect was that the original DPPs (in particular the one of BWDB) were based on schedule of rates of 2002. Revisions were needed to make the budgets more realistic. In the initial period, no works could be started that exceeded the original budget amount. Other delays occurred because funds were not available in time, for instance for land acquisition and for payment of contractors. Throughout the project period there were such examples of a less than adequate money flow from the government to the agencies and from the agencies to their field offices. In one case, amounts proposed for the ADP were insufficient, because they were calculated on the presumption of a bigger progress in the previous year than actually was achieved.
- *Timeliness of availability and of quality of inputs:* The inputs, whether they are materials or expertise, have to be available whenever they are needed and of sufficient quality. There were incidental problems with materials supplied by the contractors, but on the whole this did not impede progress of interventions in a significant way. The same can be said of availability of certain materials (there were problems with, for instance, sheet piles) on the market. A bigger issue was the availability of land, especially with regard to BWDB works in Lakshmipur O&M division. The construction of the sea facing embankment and the (re)excavation of the Jarir Dona short cut to the Meghna were delayed. As observed earlier in this report, shortages of staff of implementing agencies were a negative factor during project implementation. The office of the Project Director never acquired the staff that was stipulated in the DPP, while field staff of in particular BWDB and DPHE were not provided in adequate numbers during large parts of the project period.
- *Cooperation of all involved institutions, properly functioning of coordination mechanisms:* The multi-sectoral approach of CDSP and the fact that it functions at different levels of the administration and is implemented in different Districts, has as a consequence that many parties are involved. The cooperation of all these institutions and the coordination of interventions is central to a successful implementation of the project. In general, one can conclude that the cooperation between all involved institutions has been adequate and contributed to the progress of project activities and did not impede them. As argued before, the Project Management Committee performed satisfactorily and indeed served as a platform for coordination between the directly involved, implementing agencies. Due to the fact that the Project Director of the lead agency was based in Dhaka, much of the relations and coordination with other institutions in the project areas was done by members of the Technical Assistance team. It could be observed that many of the institutions, administrative and knowledge-based organisations alike, showed a genuine

interest in CDSP III. The rather smooth and timely preparation of CDSP IV demonstrates the positive view on CDSP III in a series of institutions. Having said this, the National Steering Committee should have functioned better. It should have convened much more frequently than it has done in practice. The legal complications with regard to land settlement (see section 3.4.1), can be interpreted as a lack of proper cooperation between all parties involved, since the actions of the opponents to a government decision proved to be extremely harmful to the progress of land settlement activities.

- *Political support and political stability:* The period of political instability in the country, with many hartals and blockades, had a negative influence on the progress of the project. So did the frequent changes of project personnel, certainly in the land settlement sector. However, in general the political establishment in Bangladesh showed support for the activities of CDSP III. This was regularly shown in contacts with Members of Parliament with constituencies in the project areas. Also the policy environment (with policies pertaining to the coastal zone and to the consequences of climate change) was favourable for the project. In a project like CDSP, it is not surprising the influence of local political relations is always felt. In a number of cases, public reaction to project interventions, with most likely political connotations, delayed activities or at least required special attention from project authorities. The construction of Gabtali sluice and the foreshore plantation are examples. The visit of the Dutch minister for Development Cooperation early in the project, as well as from a delegation of the Dutch parliament, underlined the political support from the side of the donor. In the Dutch policy on development cooperation with Bangladesh, the water sector remained a dominant field of cooperation. On several occasions the specific support for CDSP type of interventions was expressed by embassy officials, both verbal and in writing.

- *Favourable weather conditions:* Weather conditions certainly had a negative impact on the rate of implementation of works. Both early rainfalls and late monsoon rain shortened the construction season in several years. In the project period, the consequences of three cyclones (Sidr, Nargis and Ayla) impeded the progress. Unusual high water levels severely hampered the completion of the Jarir Dona short cut channel. A breach of a cross bundh caused re-siltation of an already excavated channel, while stretches of the guide dyke and of berms slid into the channel because of heavy rains. Other earthwork activities faced problems as well. Roads needed repairs, while already completed ponds were partly lost. Heavy rains also caused delays in casting work of sluices. A secondary consequence of the cyclones was that prices of building materials increased steeply, causing delays in the purchase of those materials due to the required budgetary adaptations.

ANNEX- I EXECUTIVE SUMMARY TECHNICAL REPORT NO. 7

This report aims to provide a concise assessment of the impact of the three phases of CDSP. It is primarily based on information from two impact evaluation surveys (one quantitative and the other qualitative) commissioned by IFAD (with financial support from the Netherlands) as part of the process of planning CDSP-IV, and on a gender evaluation carried out by CDSP-III. Information from these three studies, supplemented by other reports and data, show that the programme has had substantial impacts in terms of reducing flooding and salinity and increasing agricultural production, which in turn has resulted in better livelihoods and increased employment, leading to reduced poverty, increased income and a degree of empowerment for women.

All three phases of CDSP have been successful in reducing tidal flooding and reducing the ingress of saline water. However in May 2009 cyclone Aila struck the CDSP III area before protection works had been completed, and resulted in saline water flooding the area, which damaged standing crops as well as returning salinity to the situation that existed before CDSP started work. However local people expect that, with the completion of project works, the situation will improve within 4 to 6 years to reach the situation that now exists in the CDSP I and II areas. In these areas, soil salinity is no longer considered to be a problem, although saline groundwater limits irrigation.

Although generally improved, drainage is reported to be a problem by a number of farmers in all three areas. In parts of CDSP I and II, inadequate maintenance of drains has resulted in increased water logging. In CDSP III there are significant areas of drainage congestion caused by obstruction to the original lines of drainage – partly due to project works such as embankments and roads, and partly due to settlers raising mounds for houses and banks around fishponds. At the time of the study, CDSP III was planning to construct additional culverts and drains to alleviate the problem.

This improved physical environment has helped transform agriculture. The monsoon aman paddy remains the main rice crop, and there has been a gradual switch from local to high yielding varieties. This switch is most evident in the CDSP-I area, and is only just starting in CDSP-III. Aus paddy, which is more vulnerable to saline flooding, is starting to be grown in the CDSP I and II areas, but very little is grown as yet in CDSP-III and, in all areas, is still mostly local varieties. The rabi (winter) season is now the main time for cash crop production. Some rabi crops, such as country beans, were grown prior to the start of CDSP, but are now grown by 95% of households in all three areas. Major crops include soybeans, lady's finger and brinjal. However production is limited in all areas by lack of irrigation water and by soils that are still saline in CDSP-III.

Since the implementation of CDSP there has been an overall increase in the numbers of cattle, however opportunities to own animals are now being squeezed by the continuing increases in human population in the CDSP I and II areas, and a higher proportion of households seem to own animals in CDSP I. Fishing in the Meghna estuary is an important source of livelihood in CDSP II and there has been a considerable investment in homestead fish ponds in all areas, although they do not hold water all year-round and productivity is low. The chars were originally

planted with mangroves which were all cleared away when settlement took place, but now trees are being planted around homesteads and on roadsides, embankments etc. by the Forest Department as part of CDSP. In the CDSP I and II areas the trees are now generating a supply of timber.

Access to markets is good in the CDSP I and II areas, and has recently been transformed in CDSP-III. The impact of this cannot be overstated as it is the major driver behind the spread of high value cash crops. Support services for crops, livestock and fisheries are poorly developed in all areas, apart from the support directly provided during the implementation of CDSP by DAE and NGOs.

Agriculture (own farming and agricultural wage labour) is the main source of livelihoods in all three areas, but has lost some of its dominance in CDSP-I (and to a lesser extent in CDSP-II) with the growth of the non-farm sector. Given limited local employment opportunities, many people seasonally migrate to neighbouring districts and Chittagong to seek work. The proportion of households sending such migrants has fallen in all areas over the last five years, and is lowest in the better developed CDSP-I area, suggesting that as agriculture improves, there is less need to travel to search for work. There is, however, little overseas migration, with only about 1% of households in the CDSP-I area sending workers abroad, and even fewer in the CDSP II and III areas.

Growth in the agricultural sector has led to reduced poverty. Participatory wealth ranking shows a substantial reduction in poverty in all three areas since the implementation of CDSP, with the proportion of households in the two poorest categories falling from over 90% to between 39% and 56%. However there remains a significant proportion (10% to 16%) of households in the poorest category with chronic food shortages. Although poverty levels in the CDSP-III area have been reduced, there remains a high level of poverty as the full agricultural benefits of development are yet to be realised. In the CDSP II area (and to some extent also in CDSP I) many of the very poor and chronic food shortage households are those who migrated to the area since CDSP I and II were completed. They have not benefited from the CDSP distribution of land and may have had to settle in vulnerable locations outside embankments. Poverty levels are also being pushed down by natural growth in population, sub-division of land holdings and lack of local employment opportunities.

The sample survey found that average incomes in CDSP III were substantially below those in CDSP I and II. However average monthly income in the CDSP I and II areas is little more than the upper poverty line, while in the CDSP III average income is below the lower poverty line. In all three areas over half of all households are below the lower poverty line, compared with 29% of the rural population of the country as a whole.

Food security has also improved, with the number of households reporting some period of food shortage has declined from 61% in 2004 to 52% in 2009. A slightly lower proportion of households now have shortages in the CDSP I and II areas than in CDSP III, but an improvement has taken place in all three areas. The average number of months of food shortage has also fallen.

An essential achievement of CDSP has been the provision of legal and secure land titles to people who are occupying land on the project chars. Most of them lost their land due to erosion in other parts of the estuary. These people qualify for land titles (a 99 year lease) under the government's policy for distribution of char land. Land titles are granted in the joint names of husband and wife, with the wife's name coming first on the title deed.

With security of land tenure and higher incomes, people have invested in better housing. In the CDSP I and II areas, over 60% of houses now have tin roofs, while in CDSP-III the proportion with tin roofs has doubled from 15% to 30% since the start of the project. People also have more household assets – such as furniture, bicycles and mobile phones, but ownership levels are substantially higher in CDSP I and II than in CDSP III.

Tubewells are now used as a source of potable water by almost all households. In the CDSP-III area the project has been installing tubewells and setting up user groups, which has allowed people to switch from using unhygienic pond water (used by about half of all households 2004). The distance between a household and its water source has also become shorter with the increased availability of tubewells. As a result, less time is needed to fetch water. There has also been an enormous improvement in sanitation facilities in CDSP-III. The installation of household latrines by the project has resulted in the percentage of households with ring/slab latrines increasing from under 2% to over 70%.

The proportion of children attending school has risen significantly in the CDSP III area over the last five years. This reflects the improved access to schools in CDSP III, brought about by the establishment of community schools in CDSP-III cyclone shelters, and by the construction of roads that enables children to get to school more easily. However, in all three areas, attendance is significantly below the national net primary enrolment rate for 2009 of 81% (as reported by UNICEF).

CDSP-III has made some significant contributions to the empowerment and emancipation of women. This is of crucial importance as women living in the chars are in an extremely dependent and disadvantaged position. Project NGOs have provided most women with micro-credit loans and this, together with the employment of some women as health workers, has provided a degree of economic security. NGOs have also provided health and family planning services – but these have been limited in scope and may not be sustained after the end of the project. One of the most significant improvements in the lives of women has been their share in land ownership. By putting the names of women before that of their husbands on land title deeds the project has been able to dispossess men who abandon or mistreat their wives. This has not only led to a reduction in violence and abandonment, but has visibly improved the status of women and given them confidence to make their voices heard.

ANNEX- II EXECUTIVE SUMMARY TECHNICAL REPORT NO. 4

The Char Development and Settlement Project III is a multi-sectoral and multi-agency project located in the coastal zone of South-eastern Bangladesh, which aims at improving the economic situation and living conditions of the char people in a sustainable way. The project's poverty alleviation efforts are primarily directed at the poorest segments of the population.

CDSP-III's concrete development initiatives are for the most part implemented in Boyer Char; an area of 6.600 hectares which is home to around 8.600 households (42.500 people). The empolderment of this area will be completed in the course of 2010 and internal infrastructure – such as rural roads, bridges, cyclone shelters and deep tube wells – has been constructed. Furthermore, the polder and foreshore area are afforested and suitable agricultural technology has been promoted among char settlers. Field level institutions (FLI's) – like Water Management Organizations (WMO's), Farmers Forums (FF's) and Social Forestry Groups (SFG's) - have also been established, in order to ensure people's participation in the project. Another major poverty alleviation strategy of CDSP-III is the allocation of Khas land to the often very poor and vulnerable landless households. This is intended to benefit them by significantly broadening their asset base and – consequently – securing their livelihoods.

CDSP-III is funded by the Government of Bangladesh and the Government of the Netherlands. The project is sponsored by the Ministry of Water Resources of Bangladesh and implemented by six government agencies (BWDB, MoL, LGED, DPHE, FD and DAE). The BWDB is the leading agency and coordinates the activities of all government agencies involved in the project. CDSP-III's technical assistance (TA) team provides support and assistance to the aforementioned agencies, and monitors their quality control measures.

Besides the different government agencies and CDSP-III's TA-team, NGO's are also involved in the development of Boyer Char. Five local NGO's – coordinated by BRAC- implement an extensive development program, which is complementary to and mutually supportive of the program of CDSP-III.

The aim of this report is to provide insight into the gender relevant project interventions of CDSP-III and the impact of the project on women's empowerment and position. Both women's material and immaterial position are considered. Furthermore, the report aims to make a preliminary assessment of the sustainability of the changes in women's position due to CDSP-III.

For this report, project documents and other relevant literature were examined. Furthermore, interviews were conducted with TA-team members and representatives of all involved government agencies and NGO's. Extensive field work was also conducted in the project area. Focus group discussions were organized with members of FLI's, NGO groups and a female Labor Contracting Society (LCS). In addition, a courtyard meeting for women was arranged and two land hearings were attended. In total, around 225 people in Boyer Char (45 men and 180 women) participated in focus group discussions. In addition, a small group of female project beneficiaries were subject of case studies, in order to obtain detailed insight into processes of change and female empowerment due to development interventions. Last but not least, three focus group discussions were organized in CDSP-I and II areas, with the purpose of comparing

the impact of different types of interventions and understanding CDSP's progress through time IV regarding effectively addressing gender issues. The collection and analysis of the different sorts of qualitative information altogether have resulted in the publication of this Technical Report on gender.

As a multi-agency and multi-sectoral project, CDSP-III has proven to be a very complex and comprehensive development project. It coordinates the activities of multiple government agencies, works together with several NGO's and is dedicated to a wide range of topics. Gender is a prominent cross-cutting theme and – hence – receives ample attention in the project's efforts to bring about valuable and sustainable processes of change and development in Boyer Char.

CDSP-III aims to ensure equal benefits for men and women and fights for the improvement of women's overall condition and position. This is deemed important, as women are among the poorest of the poor and often find themselves in an extremely dependent, disadvantaged and vulnerable position. They lack income-earning opportunities and usually depend on men for the survival of themselves and their families. Furthermore, women in Bangladesh are characterized by a low nutritional status and very high workloads, and are often deprived of proper health care and education. Especially women's reproductive health is dire and puts their lives in serious danger. In addition, women folk is generally excluded from ownership of property – especially land – in their marital home and denied access to their parental property. They usually lack decision-making power – in the private as well as public sphere – and have very little personal autonomy. Women are severely restricted in their mobility and often victims of violence, discrimination and oppression. As a result of the aforementioned factors, women folk is characterized by a downgraded social status in comparison to men folk and often experience severe suffering, misery and hardship in their lives.

The profound gender inequalities and women's disadvantaged position constitute an important rationale for CDSP-III's focus on gender issues. Furthermore, gender inequality poses a major impediment to achieving development that is sustainable. For these reasons, CDSP-III aims to mainstream gender issues and concerns into all project activities and at all levels, and is committed to improving women's overall condition and position. Important in this regard is the active involvement of both men and women in the project's efforts to improve the economic situation and living conditions of the population settled in the chars

As mentioned above, a core activity and poverty alleviation strategy of CDSP-III is the allocation of Khas land to landless households. It is the first and – up until now – only project in Bangladesh where women's name is being put first on the official land title. Usually the land title is provided in the name of both spouses, listing the husband first. By putting the women's name first, CDSP-III aims to increase their power of ownership. This is of crucial importance considering the fact that women are usually deprived of land in their marital as well as parental home. As a result of CDSP-III's efforts, the women of Boyer Char now enjoy prominence and recognition concerning their land rights, which is highly exceptional within the context of Bangladesh. This is intended to contribute to an improvement in women's overall condition and position.

Another activity of CDSP-III aimed at improving women's often dire situation is their inclusion in FLI's. The project strives for female participation in more equal numbers compared to men, as well as their active participation in FLI's. Important in this regard are the affirmative actions taken by project staff. Women's increased participation in FLI's is expected to increase their benefits from the project and – ultimately – improve their overall condition and position, creating a more gender balanced and equal society. Today, women constitute 47% of Water Management Groups (WMG's), 21% of FF's and 37% of SFG's. Furthermore, they make up 10 to 20% of LCS's. Although these numbers are not yet equal to men, they represent a major improvement compared to before and to other parts of the country, where these groups are usually male-dominated. In addition, women have become more vocal and exercise more influence on decisions taken by FLI's.

Furthermore, support is granted to an extensive development program implemented by five local NGO's. The NGO's work exclusively with women and direct their efforts towards achieving more gender equality through the empowerment of women. The NGO development program consists of nine components: Group formation and savings management, Health and family planning, Human rights and legal education (HRLE), Palli Samaj, Poultry and livestock, Social forestry, Homestead crop cultivation, Disaster management and Water and sanitation. Nowadays, over 8600 women are member of an NGO group, which represents almost 100% of all female settlers in the project area. This implies that nearly every woman in Boyer Char has benefitted of being a NGO group member.

Last but not least, CDSP-III aims at raising community awareness concerning women's disadvantaged position, rights and needs. Important in this regard are the gender trainings for FLI members, courtyard meetings, women's desks and events on special occasions such as International Woman's Day. These efforts are in addition to the HRLE and Palli Samaj programs of NGO's. They intend to sensitize people – especially men – towards gender issues and minimize the discrimination and maltreatment of women in Boyer Char. Important topics discussed during these events are violence against women, dowry, child marriages, polygamy, women's health care and their right to Khas land.

Overall, CDSP-III has been quite successful in reducing gender gaps and achieving a more gender balanced society in the project area. Many women have experienced valuable processes of empowerment, emancipation and – hence – development. Their overall condition and position has improved as a result of the project.

Women are provided with more income-earning opportunities and now have access to saving schemes and micro-credit loans. This has not only improved their living standard and nutritional status, but also increased their economic value to the family. Furthermore, they are now less dependent on men for their survival and the survival of their families. In addition, due to the project women and girls also have better access to health care, education and training programs. Many serious problems related to reproductive health have ceased to exist, as women are now provided with family planning methods and other relevant health care services. Through the various training programs provided by CDSP-III and NGO's, women in Boyer Char have been enabled to explore and further develop their personal skills and abilities. They are therefore better capable of earning a living and maintaining their families. Women's ownership of land

also has far-reaching consequences for their lives and well-being. They now experience greater economic security, have somewhat more influence on decisions concerning land and are less likely to become victim of violence. Furthermore, rates of divorce, abandonment and polygamy significantly decreased as a result of women's improved land rights. Women have also gained some decision-making power in the private and public sphere. They have become more vocal and for example enjoy more influence in FLI's. CDSP-III has also enabled a small group of women to develop and establish themselves as community leaders. These female leaders are increasingly invited to join local shalishes and the Union Parishad (UP) – which is highly exceptional within the context of Bangladesh – and are of great importance to women folk in general. As a result of their increased decision-making power, land ownership, improved economic status and education, the women of Boyer Char have also experienced a significant increase in their social status. Furthermore, women now enjoy somewhat more personal autonomy, which is reflected in their increased mobility and the decreased levels of violence against women. Last but not least, women are now more aware of their disadvantaged position and rights, and solidarity among women folk in the project area has increased due to their participation in FLI's, NGO groups and LCS's.

All in all it can be said that - due to the project's interventions - many women in Boyer Char now find themselves in a less dependent, disadvantaged and vulnerable position than before. It must be emphasized however, that significant differences can be observed between women in the project area. Some women have become more empowered, emancipated and – hence – developed than others. This is particularly true for female members of FLI's – especially WMO's. Furthermore, sole female heads of household – like widows, abandoned women and wives of migrants – form a special group among the women in Boyer Char. Although – due to the absence of a male head – they are usually more mobile and enjoy more decision-making power in the family, they are often also the most vulnerable segment of the population. CDSP-III and NGO's therefore pay extra attention to the empowerment of these individuals by prioritizing them in land settlement activities, including them in FLI's and appointing them for instance as community health workers, poultry workers or horticulture nurturers. This way the project seeks to improve their often dire situation – frequently with rather good results.

Despite the fact that CDSP-III has contributed significantly to the improvement of women's overall condition and position, considerable challenges remain with regard to the achievement of gender equality in Boyer Char.

With regard to workloads and income-earning power for instance, much inequality remains between male and female folk. Furthermore, violence against women – although significantly decreased as a result of women's land ownership and overall empowerment – continues to exist, indicating unequal power relations between men and women. In addition, the practice of dowry is said to be increasing and many of the problems regarding women's health care and education remain. There are no literacy trainings for adult women and reproductive health care and family planning services – while significantly improved since the start of the project – still insufficiently meet the needs of the total female population of Boyer Char. Last but not least, traditional gender attitudes – especially among male folk – have proven to be extremely deeply-rooted, rigid and resistant to change. This makes it very difficult to raise gender awareness and stands in the way of achieving satisfactory levels of equality between men and women. As a result, many of the

gains experienced by women folk are quite limited. In most cases for example, the improvements in women's personal autonomy and decision-making powers remain rather small. They usually still have very little influence on the use of their own earnings, savings and micro-credit loans. Furthermore, institutions like the Shalish, UP and often even FLI's remain male-dominated. Nevertheless, things have started to improve in Boyer Char. These often seemingly small improvements in women's condition and position are important signs of progress – especially in the context of the conservative char areas - and usually represent great and valuable steps forward for women folk. The start of processes of female empowerment, emancipation and development often provide women with great hopes for the future and inspire many to continue their struggle for more gender equality in their families and communities.

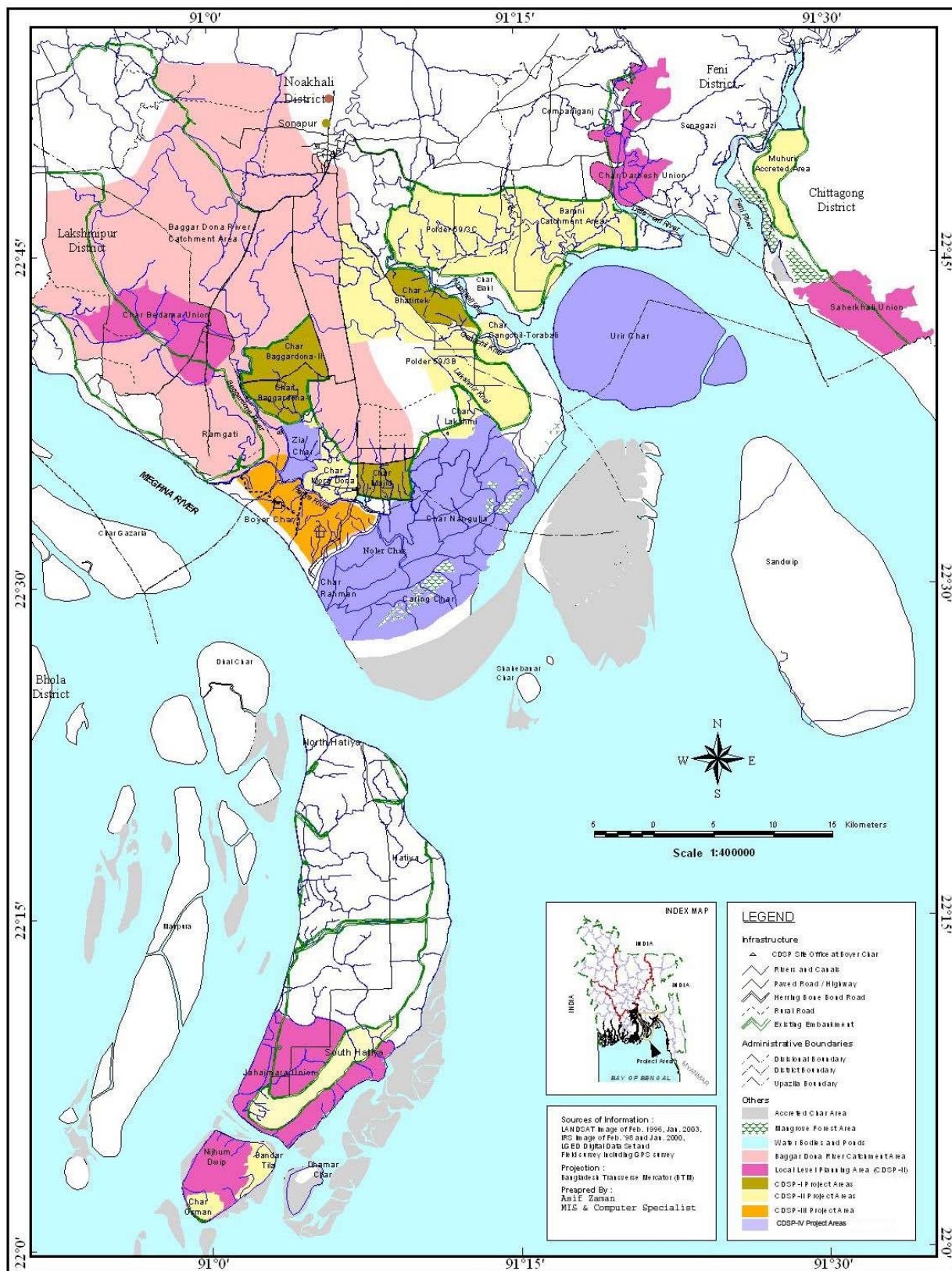
Aside from the abovementioned challenges on a field level, some difficulties are also encountered with regard to gender mainstreaming and sensitization in the government agencies and TA-team. Social attitudes towards women and cultural practices of institutions have proven to be deeply-rooted and rather resistant to change, making processes of gender mainstreaming and sensitization relatively difficult. However, as these processes – at all levels - are an important prerequisite for sustainable and equitable development, it is crucial that concerted effort is put into making it more successful in the future.

With respect to the sustainability of changes in the position of female project beneficiaries, outcomes are rather mixed. While the benefits of land are likely to be secured for one generation of women only, women's new-found leadership position in the community is not expected to change much upon project termination. The impact of the project's ending on women's mobility and the involvement of NGO's in Boyer Char is difficult to predict and therefore remains to be seen.

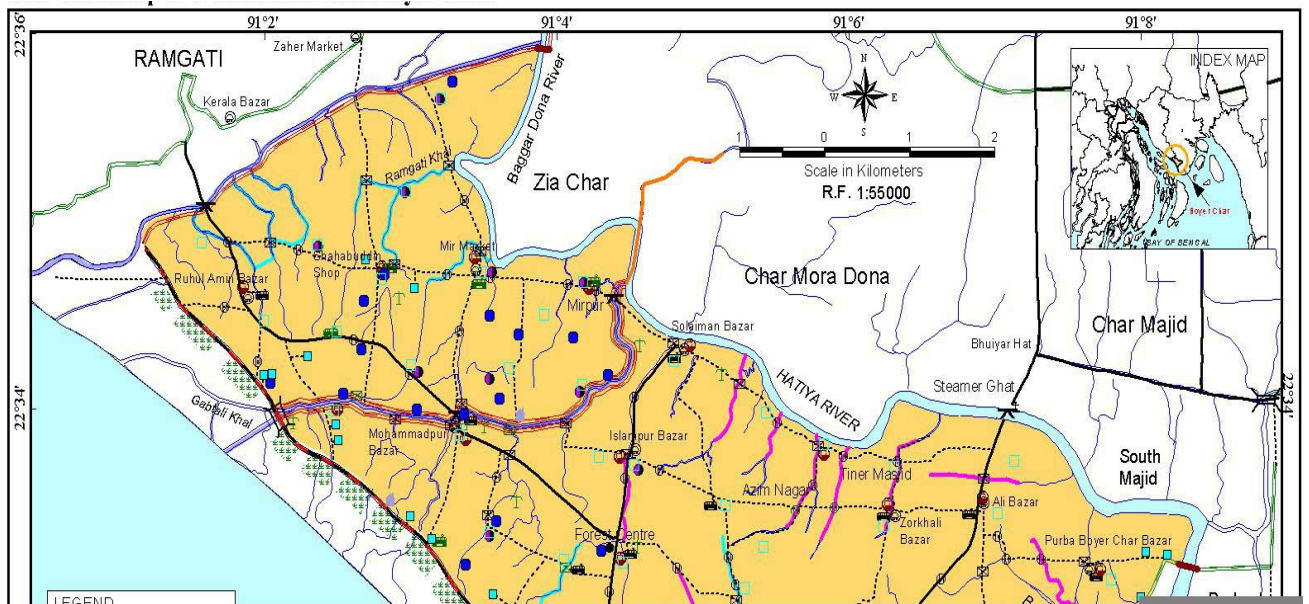
Overall however, it can be concluded that CDSP-III has made crucial contributions to the empowerment, emancipation and development of women folk in Boyer Char. The project has set in motion valuable processes of change and enabled many women to improve their overall condition and position. This is of critical importance in Bangladesh, where levels of gender inequality are extremely high and women often find themselves in very vulnerable and disadvantaged positions. The changes brought about by CDSP-III are expected to have long-lasting and far-reaching consequences, and will therefore benefit future generations of women and girls as well.

To further improve the position of women in Boyer Char and contribute to more gender equality in the future, this report has formulated a list of recommendations that should be taken into consideration by all stakeholders involved (see conclusion of this report).

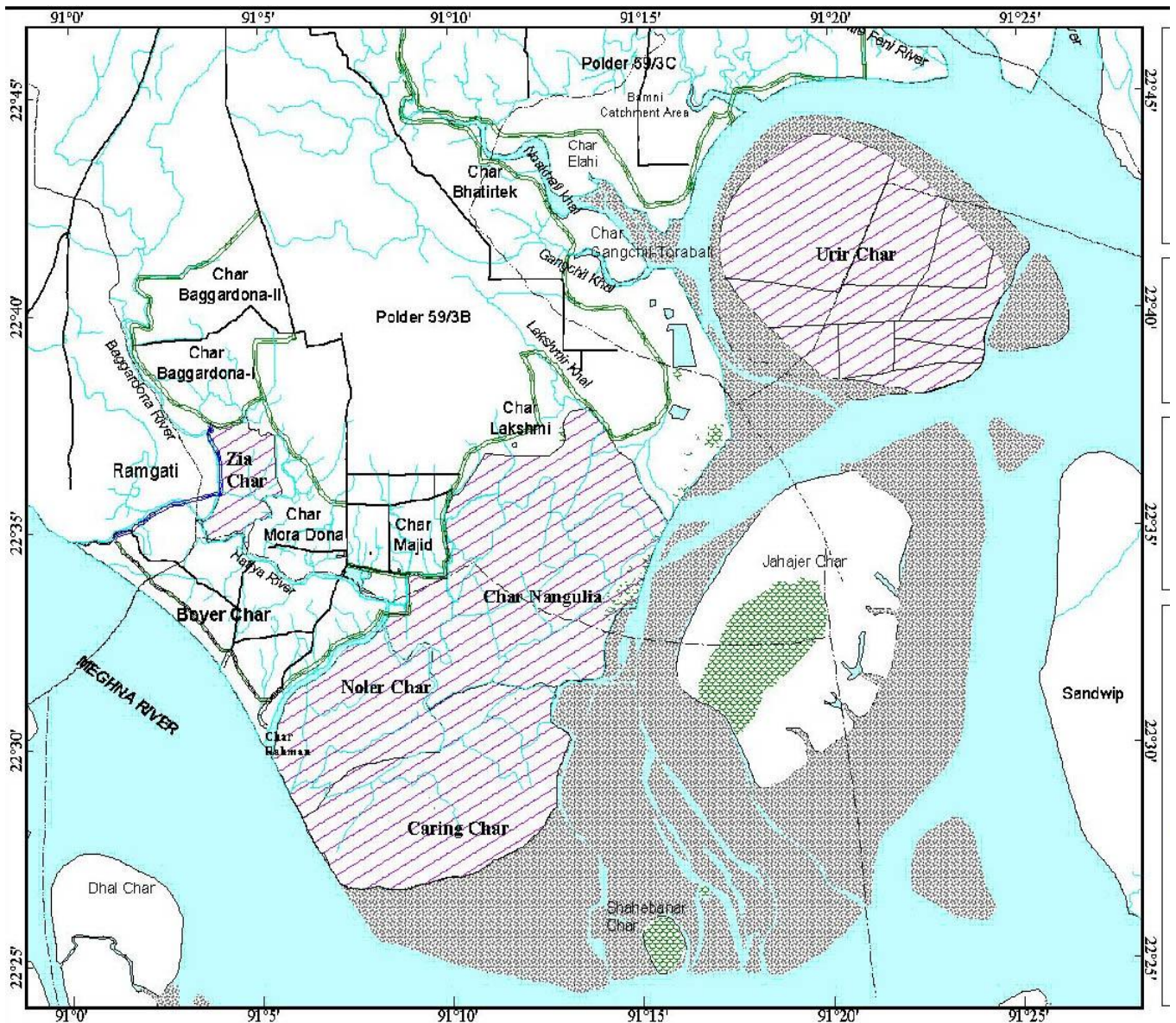
ANNEX- III MAP OF CDSP-I, II, III & IV AREAS



ANNEX- IV MAP OF BOYER CHAR



ANNEX- V MAP OF CDSP-IV AREAS



ANNEX –VI OVERVIEW OF TRAINING ACTIVITIES

SL #	Name of the course	Duration	Target group	No. of events	No. of training days	Remarks
1	Basic gender training	2 days	WMG	12	678	
2	Basic gender training	1 day	WMG	02	44	
3	Basic gender training	1 day	FF members	09	263	
4	Basic gender training	2 days	SFG members	01	40	
5	Basic gender training	1 day	SFG	09	352	
6	Basic gender training	1 day	District level high officials of IAS	01	39	
7	Training on cooperative rules	1 day	WMG/WMA/WMF	17	495	
8	Cooperative basic training	2 days	WMG	10	624	
9	Social forestry methodology & IPM	2 days	FD & NGO staffs	01	60	
10	LCS orientation	1 day	LCS groups	09	473	
11	TOT on training module development	4 days	Staff of IAS	01	140	
12	Training on LRMS	2 days	Staff of AC (L) & DC's office MOL component	01	20	
13	Training on Khas land settlement	2 days	MOL staffs	01	58	
14	Workshop on land settlement	1 day	MOL officials	01	25	
15	Workshop on Internalization	1 day	Policy level officials of MOL.	01	46	
16	Workshop on Internalization	1 day	Policy officials of DAE	01	27	
17	Workshop on Foreshore plantation	1 day	SFG (Foreshore)	07	240	
18	Workshop on Social Forestry Agreement	1 day	SFG	01	40	
19	Workshop on community pond management	1 day	LGED, MOL, RFLDC & TA Team of CDSP-III	01	32	
20	Workshop on maintenance plan of FY 2008-09	1 day	Representatives of WMOs, BWDB, LGED, DPHE, MOL & Ups	01	63	
21	Workshop on future O&M of sluices	1 day	WMO (Group Leader) & BWDB	02	60	
22	Workshop on forestry, agro-forestry & pest control	1 day	SFG	02	60	
23	Workshop on local level	2 days	LIC Facilitators	01	54	

SL #	Name of the course	Duration	Target group	No. of events	No. of training days	Remarks
	information centre management					
24	Workshop on LGED activities	1 day	Contractor of LGED Lakshmipur	01	14	
25	Workshop on Gender aspect	1 day	WMG, SFG, FF & NGOs	01	30	
26	Workshop on AGM of Boyerchar WMA	1 day	WMA	01	21	
27	Workshop on dissemination of CDSP-III	1 day	Upazila officials of GoB Line Agencies	01	40	
28	Workshop on project completion	1 day	IAs, NGOs, other project representatives, TA Team	01	84	Dhaka
29	Experience sharing visit	1 day	SFG members	03	108	
30	Contractor orientation	1 day	LGED contractor group	01	40	
31	Contractor orientation	1 day	MOL contractor group	01	30	
32	Women LCS orientation	1 day	Women LCS group	01	72	
33	Training on record keeping and accounts management	3 days	President, secretary & cashier of WMGs	01	96	
34	Training on Rabi crop production	1 day	FF Boyer Char	01	150	
35	Training on T- Amon crop production	1 day	FF & WMG Boyerchar	01	600	
36	Orientation to WMA	1 day	WMA representatives	01	31	
37	Refresher on WM and Gender training	1 day	WMG	10	333	
38	Exchange visit for SFG	1 day	SFG	01	30	
39	Experience sharing visit of BWDB & PD office staffs	3 days	BWDB, PD office staffs	01	16	Boyarch ar
40	Training no Sluice operation	1 day	Sluice operators	02	42	

SL #	Name of the course	Duration	Target group	No. of events	No. of training days	Remarks
41	Refreshers on WM capacity and cooperative aspects	1 day	WMG members	12	359	
42	Training on leadership and management	3 days	Leader of WMG of BC & CM	01	90	
43	Refresher on WM & accounts management	1 day	WMG at Boyarchar	01	27	
44	Training on climate change guide book for school teacher	3 days	Selected 18 school teachers	02	51	
45	Study tour in West Bengal Team-01	8 days	PD, PCS, XEN & ATL	01	88	
46	Study tour in West Bengal Team-02	8 day	ADC, UNO, SAC, MOL, SDE, RDC, ACF, AEO, DPC, WMO-2, LSA	01	88	

ANNEX- VII OVERVIEW OF INFRASTRUCTURE WORKS

ANNEX-VIII LIST OF CDSP III REPORTS AND PUBLICATIONS

Type	No	Title
INCEPTION REPORTS		
Inception Report	1	Feasibility study of pilot program of Land Reclamation from Bay of Bengal by Engineering and Biological Interventions under GoB Assistance, DPM/KAL/SCL/DevCon, May 2007
Inception Report	2	Awareness and education on the impacts of climate changes and variability for central coastal char communities in Bangladesh - IUCN - January 2008
Inception Report CDSP-III	3	Inception Report, March 10, 2006
Inception Report	4	Drainage and sedimentation study of Noler char and Char Nangulia using mathematical modelling for the Char Development and Settlement Project-III, by IWM, June, 2008
Inception Report	5	Environmental Impact Assessment (EIA) for Development of Char Nangulia, Noler Char and Caring Char under Char Development and Settlement Project-III, by CEGIS, June, 2008
Inception Report	6	Inception report on Additional drainage study to determine a sustainable solution for the drainage problems in the Baggardona River catchment area under CDSP-III, June 2008. By KAL, DPM, SCPL and IWM
Inception Report	7	Revised inception report on monitoring of drainage, salinity and sedimentation of Baggardona River catchment area under CDSP-III, July 2010, IWM
ANNUAL WORK PLANS		
Planning	1	Annual Work Plan 2006, March 9, 2006
Planning	2	Annual Work Plan 2007, December 4, 2006
Planning	3	Annual Work Plan 2008, October, 2007
Planning	4	Annual Work Plan 2009
Planning	5	Annual Work Plan 2008 produced by BRAC (November 2007), January - December, 2008
Planning	6	Five Years revised (activity) Plan procured by BRAC (November 2007), July'05 - June 2010
Planning	7	Annual Work Plan 2010, Published in December 2009
Planning	8	Annual Work Plan 2011 (January-February 2011), Published in December 2010
PROGRESS REPORTS		
Progress report	No. 1	Progress Report-1, 1st October 2005 to 30th June 2006 (28th August 2006)
Progress report	No. 2	Progress Report-2, 1st July 2006 to 31st December 2006 (19th February 2007)
Progress report	No. 3	Progress Report-3, 1st January 2007 to 30th June 2007 (22 August 2007)
Progress report	No. 4	Progress Report-4, 1st July 2007 to 31st December 2007 (26th February 2008)

Progress report	No. 5	Progress Report-5, 1st January 2008 to 30th June 2008 (August 2008)
Progress report	No. 6	Progress Report-6, 1st July 2008 to 31st December 2008 (March 2009)
Progress report	No. 7	Progress Report-7, 1st January 2009 to 30th June 2009 (August 2009)
Progress report	No. 8	Progress Report-8, 1st July 2009 to 31st December 2009 (February 2010)
Progress report	No.9	Progress Report-9, 1st January 2010 to 30th June 2010, August 2010
Progress report	No.10	Progress Report-10, 1st July 2010 to 31 st December, 2010
Progress report	No. 11	Progress Report-11, 1 st January 2011 to 28 th February, 2011
Progress reports (BRAC)		
Progress report	No. 1	Progress Report produced by BRAC, February 2006
Progress report	No. 2	Progress Report produced by BRAC, January - June 2006
Progress report	No. 3	Progress Report produced by BRAC, July - December 2006
Progress report	No. 4	Progress Report produced by BRAC, January - June 2007
Progress report	No. 5	Progress Report produced by BRAC, July - December 2007
Progress report	No. 6	Progress Report produced by BRAC, January - June 2008
Progress report	No. 7	Progress Report produced by BRAC, July - December 2008
Progress report	No. 8	Progress Report produced by BRAC, January - June 2009
Progress report	No. 9	Progress Report produced by BRAC, July - December 2009
Project Completion report	No. 10	BRAC Char Development and Settlement project-III, July 2005-June 2010
Impact study		BRAC Impact study on Char Dwellers, January 2011
MISSION REPORTS		
Mission Report	No.1	Drainage of Baggardona Catchment Area, Ben Lamoree, January 4, 2006
Mission Report	No.2	Terms of Reference- Feasibility study on the development of new chars in the vicinity of Boyer Char, Rob Koudstaal, Dr. M. Rafiqul Islam (ICZM), Mahfuzur Rahman (BWDB), June 19, 2006
Mission Report	No.3	Report on Inventory of the present situation of the Office of the Director, PMU-ESPP, BWDB, Md. Naojesh Ali, Md. Shafiul Alam, February 2007
Mission Report	No.4	Extension Strategies for Agriculture and Social Forestry in CDSP-III, Dr. Hero Heering, Mr. Md. Afzal Hossain Bhuiyan, March 2007
Mission Report	No.5	Quality Control Infrastructure Development, Jan W.K. van der Wal, March 2007
Mission Report	No.6	CDSP-III Training Activity (Part-I&I), Md. Shafiul Alam, May 2007
Mission Report	No.7	Gender Plan for CDSP-III, Nujulee Begum, June 2007
Mission Report	No.8	Report on Strengthening of the Office of the Director, PMU-ESPP, BWDB, Md. Ataul Huq, ABM Sayedul Kawaine, August 2007
Mission Report	No.9	Quality Control Infrastructure Development, Jan W.K. van der Wal, September 2007
Mission Report	No.10	Internalization of CDSP experience through training, Md.

		Shafiul Alam, October 2007
Mission Report	No.11	Study on the Communication Aspects in CDSP-III, Bashir Ahmed, December 2007
Mission Report	No.12	Preparation of an EIA for Development of Nangulia, Noler and Caring Chars, Noakhali District, Mr. Wandert Benthem, February 8, 2008
Mission Report	No.13	Quality Control Infrastructure Development, Jan W.K. van der Wal, March 2008
Mission Report	No.14	Study on Information Centers & Social Mobilization by WMO in CDSP-III, Mr. Bashiruddin Ahmed, July, 2008
Mission Report	No.15	Internalizing CDSP Experience through Training Courses by Md. Shafiul Alam, Training Consultant, October 2008
Mission Report	No.16	Quality Control Infrastructure Development by Jan W.K. van dar Wal, November 2008
Mission Report	No.17	Quality Control Infrastructure Development by Jan W.K. van dar Wal, April 2009
Mission Report	No.18	Quality Control Infrastructure Development by Jan W.K. van dar Wal, October 2009
Mission Report	No.19	Quality Control Infrastructure Development by Jan W.K. van dar Wal, March 2010
Mission Report	No. 20	Quality Control Infrastructure Development by Jan W.K. van dar Wal, Dec 2010
TECHNICAL REPORTS		
Tech. Report	No.1	Agricultural Productivity Zones of Boyer Char, Sheikh A. Sattar, June 2006
Tech. Report	No.2	Report on Benchmark Survey on Agriculture in Boyer Char, Sheikh A. Sattar, March 2007
Tech. Report	No.3	Monitoring of results of selected interventions in CDSP-I and II areas: Land retention, agriculture and soil salinity, M.A. Latif and others, January 2009
Tech. Report	No.4	Gender Relevant project interventions & impact on the position of Women, by Roos M. Helmich, November 2009
Tech. Report	No.5	Internalization of CDSP Experience by six Govt. Implementing Agencies by Mr. Shafiul Alam, December 2009
Tech. Report	No.6	Agriculture Development and Social Forestry Activities in Boyer char, Md. Afzal Hossain Bhuiyan and Hasan Sayed, August, 2010.
Tech. Report	No.7	Impact of the Char Development and Settlement Project-I,II & III Dewan H Alamgir and Rose Helmich, Edward Mallorie, December 2010
Tech. Report	No.8	Internalization of CDSP Experience for Capacity Building of Implementing Agencies Md Shafiul Alam, February 2011
Tech. Report	No.9	Infrastructure Related Field Level Institutions in CDSP-III Md Zainal Abedin, Md Mksudur Rahman, February 2011
INTERNAL RESOURCE REPORTS		

Internal Resource Report	No.1	Priority training plans of CDSP-III (2007-2009), Md. Zainal Abedin, DTL / Md. Shafiul Alam, October 2008
Internal Resource Report	No.2	Internal Resource Report No. 2, Md. Afzal Hossain Bhuiyan, October 2007
Internal Resource Report	No.3	Internal Resource Report No.3, Md. Mukhlesuzzaman, February 2011 2007
Internalization Report		Proceedings of the presentation ceremony on Coastal Zone Policy, Coastal Development Strategy, Database connectivity with Integrated Coastal Resources Database connectivity, April 29, 2007
Internalization Report		Proceeding of the National Workshops on Internalization of the experiences of CDSP-I&II for the Policy Level Official of Department of Local Government Engineering Department (LGED) (Held on 31 January 2008), April 2008
Internalization Report		Proceeding of the National Workshops on Internalization of the experiences of CDSP-I&II for the Policy Level Official of Department of Agriculture Extension (DAE), November 2007
Internalization Report		Proceeding of the National Workshops on Internalization of the experiences of CDSP-I&II for the Policy Level Official of Forest Department (FD) (Held on 27 February 2008), April 2008
Internalization Report		Proceeding of the National Workshops on Internalization of the experiences of CDSP-I&II for the Policy Level Official of Ministry of Land (MoL), December 2007
Internalization Report		Proceeding of the National Workshops on Internalization of the experiences of CDSP-I&II for the Policy Level Official of Bangladesh Water Development Board (BWDB) (Held on 27 February 2008), April 2008
Internalization Report		Proceeding of the National Workshops on Internalization of the experiences of CDSP-I&II for the Policy Level Official of Department of Public Health Engineering (DPHE) (Held on 23 October 2007), December 2007
Internalization Report		Proceeding of the Technical Discussion Session on Drainage problem/accretion scenario of Greater Noakhali area (Held on 15 December 2007), December 2007
Internalization Report		Mission No.10 : Internalization of CDSP experience through training, Md. Shafiul Alam, October 2007
Internalization Report		Mission No.15 : Internalizing CDSP Experience through Training Courses by Md. Shafiul Alam, Training Consultant, October 2008
TRAINING REPORTS		
Training Module		Internalizing Successful Experience of CDSP in FCD/FCDI projects of BWDB by Md. Shafiul Alam, IDA, March 2009
Training Module		Internalizing CDSP experience by the Local Government Engineering Department (LGED) by Md. Shafiul Alam, IDA, March 2009

Training Module	Internalizing CDSP experience by the Department of Agriculture Extension (DAE) by Md. Shafiul Alam, IDA, May 2009
Training Module	Internalizing CDSP experience by the Department of Public Health Engineering (DPHE) by Md. Shafiul Alam, IDA, May 2009
Training Module	Internalizing CDSP experience by the Forest Department (FD) by Md. Shafiul Alam, IDA, May 2009
Training Module	Internalizing CDSP experience by the Ministry of Land (MoL) by Md. Shafiul Alam, IDA, May 2009
Training Module	Coastal Nursery and Social Forestry Training Manual - May 2006
Training Module	কৃষকরোপন সহায়িকা - আগস্ট ২০০৭
Training Module	Role of Water Management Organization - January 2008
Training Module	Orientation Newly Formed Water Management Organization - January 2008
Training Module	Social Forestry - January 2008
Training Module	Orientation to Construction Firm on CDSP Infrastructure work - January 2008
Training Module	Internalizing successful experience of CDSP in FCD/FCDI projects of BWDB, March, 2009
Training Module	Internalizing CDSP Experience by the Local Government Engineering Department (LGED) - March 2009
Training Module	Internalizing CDSP Experience by the Ministry of Land (MoL) - May 2009
Training Module	Internalizing CDSP Experience by the Forest Department (FD) - May 2009
Training Module	Internalizing CDSP Experience by the Department of Public Health Engineering (DPHE) - May 2009
Training Module	Internalizing CDSP Experience by the Department of Agriculture Extension (DAE) - May 2009
Training Module	Management and Leadership Development of Rural Institutions
Training Module	Teachers Training Module on Climate Change(July 2010)
FEASIBILITY STUDY REPORTS	
FS report	1 Final Report - Economic Analysis of Char Nangulia, Noler Char and Caring Char, Nityananda Chakravoty, Head, Social and economic Division, CEGIS, March 2008
FS report	2 FS study on the development and settlement of new chars, Main Report-1. Char Nangulia, Noler Char and Caring char, by DDC, November 2008
FS report	3 FS study on the development and settlement of new chars, Main Report-2. Ziar Char, November 2008
FS report	4 FS study on the development and settlement of new chars, Main Report-3. Urir Char, November 2009
FS report	5 Additional Drainage Study to determine a sustainable solution for the drainage problems in the Baggardona river catchment area under CDSP-III, Final Report, June 2009

FS report	6	Survey and Modelling study of Sandwip-Urirchar-Noakhali cross-dam(s), Final Report (Volume-I & II), December 2009 (By IWM)
FS report	7	Final report on EIA for NNC by CEGIS, July 2008
FS report	8	Drainage and sedimentation study of Noler Char, Char Nangulia using mathematical modelling CDSP-III, Nov 2008, IWM
FS report	9	Agricultural productivity zones of Boyer Char, June 2006, by S.A Sattar, Consultant
SURVEY REPORTS		
Survey Report	1	Report on Reconnaissance Survey in new Chars, February 7, 2006
Survey Report	2	Report on Reconnaissance Survey on Char Zia, September, 2007
Survey Report	3	Reconnaissance Survey report of Urir Char, April, 2008
Survey Report	4	Reconnaissance Survey report of Dhal Char, April, 2008
Survey Report	5	Reconnaissance Survey report of Char Kukri Mukri, April, 2008
Survey Report	6	Reconnaissance Survey report of Teliar Char, April, 2008
Baseline Survey	7	Baseline Survey of Boyer char produced by BRAC
OTHERS		
Others	1	Guidelines for Procedures regarding Monitoring of Quality Control and Reimbursements of RPA funds, 25th April 2007
Others	2	An overview by a CDSP-III team on the sustainable and participatory water management activities in IPSWAM-BWDB at Patuakhali and Dapdapia sub-project at Jhalakati under SSSWRDSP-LGED, Md. Zainal Abedin, June 2006
Others	3	Mid Term Review Mission, CDSP-III (May 12-28, 2008), June 2008
Others	4	Agriculture Guide Book for the Coastal Char Land Region, DAE-TA Team, CDSP-III, June-2009
Others	5	Final Report-2009 on DAE-CDSP, Noakhali
Others	6	Information Guide Book on Climate Change (For Teachers) IUCN, September 2009
Others	7	Information Guide Book on Climate Change (For Students) IUCN, September 2009

ANNEX-IX TECHNICAL ASSISTANCE BUDGET AND EXPENDITURE