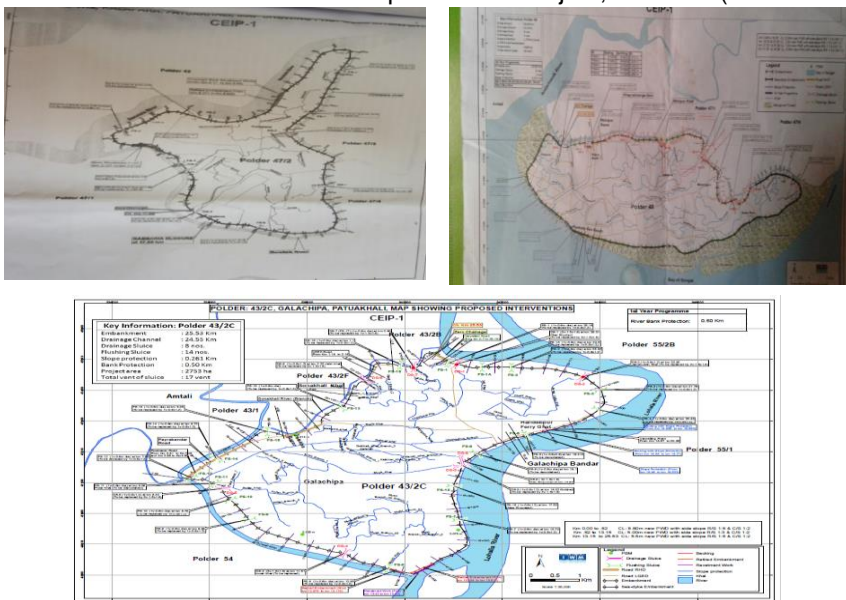


## Ministry of Water Resources



### Bangladesh Water Development Board Coastal Embankment Improvement Project, Phase-1 (CEIP-1)



Consultancy Services for Non-Governmental Organization (NGO) Services to Implement, a) Social Mobilization with Social Action Plan (incl. setting up WMOs); b) Social Afforestation and c) Integrated Pest Management (IPM) Plan for Polder 43/2c Golachipa Upazila Polder47/2 and 48 Kalapara Upazila in Patuakhali District

### DRAFT INCEPTION REPORT JUNE 2019



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Project: Coastal Embankment Improvement Project, Phase-1 (CEIP-1)

## Contents

Chapter 1: Introduction .....	31
1.1 Background .....	31
1.2: Objective of the Assignments .....	32
1.3: Signing of the Contract .....	32
1.4: Objective of the Inception Report .....	32
1.5 Contents of Inception Report .....	33
Chapter 2: Mobilization and Start-up- Activities.....	33
2.1 Setting up Office .....	33
2.2 Kick of Meeting with Project Officials.....	33
2.3 Review of Scope of Work .....	33
2.4 Consultation with Stakeholder .....	36
2.5 Field Visits .....	36
Chapter 3: Understanding of the Project.....	37
3.1: Introduction.....	37
3.2: Objective of the Consultancy Services .....	37
3.2: Project Management Challenges .....	38
Chapter 4: Detailed Scope of Work for Consultancy Services .....	38
4.1: Review Guidelines/Policy/ Document .....	38
4.2: Review of Existing Model of WMO Practices in BWDB's Project .....	39
Chapter 5: Approach and Methodology .....	43
5.1: General Approach .....	43
5.1.1: Set up Field Office .....	45
5.1.1: Mobilization of Field Staff: .....	45
5.2: Data Collection .....	46
5.2.1: Available Data Inventory .....	46
5.2.2: New Data Collection.....	47
5.3 Baseline Survey .....	47
5.4: Formation WMOs .....	48
5.4.1: Motivation campaign and conduct polling .....	48
5.4.2: Group formation modalities .....	48
5.4.3 Preparation of stakeholder lists: .....	49
5.4.4 Define WMG's tasks & disseminate group formation activity .....	49
5.4.6: Formation of WMAs.....	50
5.4.7: Prepare curriculum of training for WMO .....	50
5.4.8: Carry out the capacity building program .....	50
5.5 : Social afforestation .....	51
5.5.1: Identify land ownership .....	51
5.5.2: Select Social Forestry Beneficiaries .....	51
5.5.3: Awareness raising Campaign.....	51
5.5.4: Conduct capacity building training .....	52
5.6: Implementation of Integrated Pest Management (IPM) Plan .....	52
5.6.1 Awareness/dissemination of Information .....	53
5.6.2 Implementing integrated Plant and Soil Nutrient Management (IPSNM).....	53
5.6.3 Determining pesticide residue on crops .....	53
5.6.4 Training of Trainers .....	54
5.6.5 Capacity building of target farmers .....	54
Chapter 6: Project Organization and Execution.....	<b>Error! Bookmark not defined.</b>
6.1: Outline of the Project Organization .....	<b>Error! Bookmark not defined.</b>

6.2: Work Plan .....	54
6.3: Staffing Schedule .....	31
6.4: Reporting .....	34
Chapter 7: Conclusion.....	37
Annex 1: 32 polder map .....	38
Annex 2: 33 Polder map .....	39

## Chapter 1: Introduction

### 1.1 Background

The south coastal belt of Bangladesh, particularly Golachipa and Kalapara upazila of Patuakhali district (where Polder 43/2c, 47/2 and 48 are located) it is situated near Bay of Bengal. Bangladesh is one of the most climate vulnerable countries in the world. Around 22% of the country's population living in 19 coastal districts of the country is at the highest level of climate risks (Islam, 2015).<sup>1</sup> The frequency of climate related disasters like cyclone and storm surge are increasing with the changing climate. Thousands of people were killed, and millions others suffered due to the loss and damage of their house and property by the devastating cyclone (1991), Sidr (2007), Nargis (2008) and Aila (2009).

The coastal zone spans over 580 km of coastline and is prone to multiple hazards. Cyclones, floods, tidal surges, periodic water-logging and land erosion are common throughout this region significantly shaping the lives and livelihoods of local communities. The region constitutes 32% of total land area in Bangladesh and hosts nearly 28% of the population (i.e. nearly 42 million). The area is prone to high soil and water salinity and disaster risks like Sidr and Ailas. Approximately 3 million extremely poor people living in this area who suffer from lack of fresh water (salinity problem), limited agricultural activities, lack of income generating options (leading to urban migration), lack of access to basic services (health problems related to salinity), low levels of children attending school, lack of access to social protection.

The polder 43/2c covering Golachipa Upazilla and 47/2 and 48 covering Kalapara Upazila under Patuakhali District is located at the remote coastal zone in the south of Bangladesh near the Bay of Bengal. Being located at the frontline of climate change effects, livelihoods of local communities are disrupted either by the extreme events like cyclones, storm surges, erratic rainfall, water logging, erosion, sea turbulence or by slow onset processes like sea level rise, salinization, rising temperature, dryness, ecosystem degradation. Among other biophysical hazards, coastal flooding, water logging and higher soil and water salinity is being further aggravated under the climate change scenario and local communities are increasingly facing challenges in accessing agriculture activities, safe water, sustained food security and resilient livelihoods. It is fairly common in the area that at one point of time, prolonged drought cause water scarcity that affects agriculture while at times, intense heavy rainfall/tidal surge damages the standing crops. Besides, higher salinity often damages crops even if other hazard factors remain neutral in some occasions.

To protect the crop from tidal flood, Bangladesh government constructed polders in the 1960s, in this area which are enclosed on all sides by dykes or embankments, separating the land from the main river system and offering protection against tidal floods, salinity intrusion and sedimentation. These polders are equipped with in and outlet sluice gates to control the water inside the embanked area. Polderization was seen as having transformed the entire region into a perennial fresh water agricultural land, and benefited the local population who could cultivate two or even three crops of rice per year. However, the protective embankments and water control structures facilitated salt water shrimp farming in the area, which had a negative impact on rice cultivation. Moreover, the polders were not designed to protect the areas against storm surges and additionally, poor track record of maintenance has contributed to increased internal drainage congestion which restricted many rivers natural distributaries and the river water from entering the wetlands and, as a result, tidal sediments increased the height of these river beds instead of the wetlands. Most river beds became higher than the adjacent wetlands, creating prolonged water logging in the surrounding areas.

The water logging problem has become more severe and extensive due to saline water intrusion into the surrounding areas at high tides. Which, in turn, has resulted in salinity intrusion, reduced agricultural productivity, widespread environmental degradation, and served to undermine efforts at poverty reduction in the coastal areas.

To enhance the resilience of the embankments and to protect million coastal residents from risk to future cyclones and storm surges Government of Bangladesh took the initiative to upgrade the whole embankment system. For that, a multi-phased approach of embankment improvement and rehabilitation was adopted and Coastal Embankment Improvement Project-I (CEIP-1) is the first phase of that initiative. The project is being implemented by The Bangladesh Water Development Board (BWDB) with funding from the World Bank (WB).

In this background, the inception report is prepared for further improvement and refining the methodology and work plan which will be carried out throughout the project period by the assigned **JV of Adarsha Manobseba Sangastha (AMS), AID Organization (AO) and Peoples' Development Institute (PDI)** for ensuring the quality of the contract package to implement (1) Social Mobilization with Social Action plan (incl. setting up WMOs); (2) Social afforestation and (3) Implementation of Integrated Pest Management (IPM) in the polder 43/2c covering Golachipa Upazilla and 47/2 and 48 covering Kalapara Upazila under Patuakhali District.

### **1.2: Objective of the Assignments :**

The main objective of the "Contract Package No **CEIP-1/A2 & B1/S1-E** Consultancy service (NGO Services)" is to support the Bangladesh Water Development Board (BWDB) under CEIP-1. These activities are (a) Implementation of afforestation program especially in the fore-shore areas under social afforestation approach, (b) Social mobilization including setting up WMOs for introduction of 'Integrated Water Resources Management (IWRM) practices through preparation of Social Action plan, and (c) Implementation of the Integrated Pest Management (IPM) Plan. Engagement with local communities on the project is considered integral to the successful implementation of the project's components, and, thus, a reputable Non-Governmental Organization is sought to oversee and manage this work on behalf of the Bangladesh Water Development Board.

### **1.3: Signing of the Contract**

The contract was signed on May .19 between on behalf of client: **Md. Habibur Rahman, Chief Engineer and Project Director CEIP-1, BWDB** and THIS CONTRACT (hereinafter called the "Contract") is made the , between on the one hand ,**Bangladesh Water Development Board**(hereinafter called the "**Client**") and, on the other hand, **JV of AdarshaManobsebaSangastha (AMS), AID Organization (AO) and Peoples' Development Institute (PDI)** (hereinafter called the "**Consultant**").

### **1.4: Objective of the Inception Report:**

The broad purpose of the Inception Report is to set out the approach of JV to the CEIP-1 including articulation of the overall requirements of the project related to the proposed methodology, program of work, and staffing considering the timeframe of the project. Generally the Inception Report is the blueprint for the life of the project. As per inception report, the NGO services will integrate the relevant documents, policies and guidelines as a preparation of the assigned activities. The report also includes methods of the beneficiary's engagement, household census survey, the formation of WMOs, social afforestation process and implementation of IPM. Furthermore, the report will discuss probable challenges and

threats for the smooth implementation of the project and way forward to implement the project/assigned services.

### **1.5 Contents of Inception Report:**

The content of the inception report includes background discussion, Mobilization and Start-up- Activities, Understanding of the Project, Detailed Scope of Work For Consultancy Services, Approach and Methodology, Formation WMOs, Social afforestation, Implementation of Integrated Pest Management (IPM) Plan and Project Organization and Execution.

## **Chapter 2: Mobilization and Start-up- Activities**

### **2.1 Setting up Office :**

According to the contract of the project JV rented two project's office located in Golachipa and Kalapara Location of the both the places are given below:

#### Address of Project Office in Golachipa Upazila

558 Fider Road. Post-Golachipa ,  
Upazila:Golachipa Patuakhali

#### Address of Site Office at Kalapara Upazila

Alom Villa, Sobujbag,  
Post-Kalapara, Upazila-Kalapara, Patuakhali

Both our Key Experts and Non Key Staffs are performing day to day activities from these offices. Those offices are equipped with necessary desks, chairs, computers, internet connections, printers, scanners and other necessary equipment's for carrying out office activities on regular basis. In those offices, JV staffs can organize meeting with BWDB and other consultants of the CEIP-I project as and when required.

### **2.2 Meeting with Project Officials:**

JV team have formally meet with ? and senior officials of BWDB, Upazila Chairman, Upazila Nirbahi officer (UNO), Upazila Agriculture officer. During the meeting, participants discussed JV activities to manage the Polder no.43/2c, 47/2 and Polder no. 48 with a focus to Social Mobilization including setting up WMOs, Social Afforestation and Integrated Pest Management (IPM).

During the discussion request JV team to visit the polder area activities of 43/2c,47/2 and 48 immediately. JV Team further provided the polder maps in order to identify different Sluice gates (drainage and flushing) and related infrastructures. They also suggested to visit the places to identify the actual position and conditions of the different sluice gates of that areas. During the meeting, JV emphasized the formation of WMOs in respective polders and sluicagate areas. He assured all type of support and cooperation from the BWDB office and team member of DDSC & PMS.

### **2.3 Review of Scope of Work:**

The objectives of the consulting services are to manage and oversee tasks for social mobilization, participatory scheme cycle management(PSM) and participatory afforestation in relation to successful implementation of the CEIP-I. Specifically, consulting services will be sought for (a) Social mobilization including setting up WMOs for introduction of IWRM practices through preparation and

implementation of Social Action plan through engagement of local communities and community groups for PSM and participatory O&M of schemes, (b) Implementation of afforestation program specially in the fore-shore areas with ecologically appropriate species by adopting social afforestation approach, and (c) Implementation of the IPM practices.

Objective	Activity
<b>Initial activities</b>	0.1. Meeting client and approval of detailed work plan
	0.2. Field team recruitment and primary orientation
	0.3. Mobilization of field team
	0.4. Review and analysis of background documents and secondary information including guideline and relevant policy documents
	0.5. Collect and review scheme maps to identification beneficiary villages and hydraulic boundaries.
	0.6 Primary field visit
	0.7 Orientation of polder team (2 polder, 2 team)
	0.8 Deploy team
	0.9 Inception workshop at district level
<b>Social mobilization including setting up WMOs for introduction of IWRM practices through preparation and implementation of Social Action plan through engagement of local communities and community groups for PSM and participatory O&amp;M of schemes</b>	<b>1.1. Initial Planning and Survey</b>
	1.1.1 Collection of BWDB infrastructure's list in the project area
	1.1.2. Identify the beneficiary villages of the water management schemes and boundaries of Water Management Units (WMU) in a polder
	1.1.3. Define Water Management Units
	1.1.4. Conduct household census survey
	1.1.5 Collect quantitative information on social, environmental, technical and economic aspects
	1.1.6 Identification of beneficiaries and other stakeholders.
	1.1.7 Conduct information campaign in the locality/polder areas (to disseminate project objective, benefits etc.)
	1.1.8 PAPD for catchment and polder level pan
	1.1.9 PLUS- for compile for catchment and polder level resource map
	1.1.10 Print Polder level large maps, updates by incorporating comments from sharing/validation workshop and reprint
	1.1.11 Organize and hold polder team meetings and sharing the maps and fact sheets, validation and update, prepare a bench mark report
	<b>1.2. Formation of WMO</b>
	1.2.1 Form and orientation of core groups
	1.2.2 Motivation campaign and conduct polling
	1.2.3 Prepare group formation modalities
	1.2.4 Prepare stakeholder lists
	1.2.5 Define WMG's tasks & disseminate group formation activity
	1.2.6. Organize general meeting at WMG level and formation of Ad-hoc committee, Developing ToR
	1.2.7. Formation of WMGs
	1.2.8. Formation of WMAs
	1.2.9 Prepare WMG action plan
	1.2.10 Organize general meeting (at WMG and WMA level),
	1.2.11 WMG meetings, support to operational
	1.2.12 Frequent core group meetings
	1.2.13 WMA meetings, support to operational activities
	1.2.14 Stationeries for WMA and WMG (record book member register, box, etc.)
	1.2.15 Formation of Monitoring Committee (WMA EC),

Objective	Activity
	1.2.16 Finalizing the Polder Development Plan (PDP) with participation from the beneficiary communities of respective polder.
	1.2.17 Agreement between BWDB and WMO (WMA)
	1.2.18 O&M during operation
	<b>1.3 Knowledge Development / Capacity building</b>
	1.3.1 Training: WMG ECs- a) Organizational and water management, b) Accounts keeping and Audit system, c) Gender and leadership development
	1.3.2 Training WMA EC, WMF EC- on resource mobilization, M&E, O&M, participatory water management, organizational development
	1.3.3 Training: refreshers of WMG ECs on the basis of performance review
	1.3.4 Training- Infrastructure O&M hands on (before completion of rehabilitation work)
	1.3.5 Training- Form and train LCS groups (with EC members of WMG as they will look after)
	1.3.6 Training on participatory monitoring to WMG ECs and members of WMGs
	1.3.7 Training of Monitoring Committee (WMA EC)
	1.3.8 Training to Collective Action Leaders and Key Informants about the program
	1.3.9 Training on value chain, producer group/cooperative, market linkage, supply and demand system
	<b>1.4. Legislation Process</b>
	1.4.1 Create financial arrangement of WMGs
	1.4.2 Registration of WMOs under cooperative act
	1.5 Monitoring & Evaluation
	1.5.1 Prepare M&E Framework Reporting
	<b>1.6 Learning and Networking</b>
	1.6.1 Exchange visit of WMAs and WMF, WMG EC
	1.6.2 Review action plan and refreshment
	1.6.3 Annual update of Polder Development Plan
	1.6.4 Participatory Monitoring
<b>Implementation of afforestation program specially in the fore-shore areas with ecologically appropriate species by adopting social afforestation approach</b>	<b>2.1 Social afforestation</b>
	2.1.1 Identify land ownership
	2.1.2 Select Social Forestry Beneficiaries
	2.1.3 Awareness raising Campaign
	2.1.4 Capacity building training
	2.1.5 Support communities on Alternate livelihood activities
	2.1.6 Monitoring
<b>Implementation of the IPM practices</b>	<b>3.1 Implementation of Integrated Pest Management (IPM) Plan</b>
	3.1.1 Awareness/dissemination of Information
	3.1.2. Training of Trainers
	3.1.3 Implementing integrated Plant and Soil Nutrient Management (IPSNM)
	3.1.4 Determining pesticide residue on crops
	3.1.5 Set-up of a M&E system
<b>Reporting</b>	a. Monthly Progress Report
	b. Quarterly, Progress Report
	c. Final Report/Completion Report



## 2.4 Consultation with Stakeholder

After commencement of the CEIP-1, JV team including deputy team leader visited BWDB office at Kalkapara and Forest Range Office Mohipur, Kalapara to share and exchange views on upcoming activities of the project. From the BWDB office, JV team received operational guideline and documents including maps of the 47/2 and 48 polder areas and relevant literatures for clear understanding of the project objectives and activities

JV team also met with UNO golachipa upazilla, and officially informed activities of JV for the CEIP-1. Furthermore, field officials of JV met with concerned Union Parishad chairmen and members under polder 43/2c, 47/2 and 48 areas and discussed regarding project goal, objectives and activities.

## 2.5 Field Visits:

JV team jointly visited Golachipa and Kalapara on May 2019 with newly recruited field Organizers. During the field visit they visited the Dalbugonj, Latachiply Union area of the Polder 47/2c. and Polder 48, The objective of the visit was to familiarize the local area with the Community Organizer and also to find out a suitable office location. JV field team distributed working area among the field organizers in the Polders 43/2c 47/2 and 48. Since mobilization of the field team, all the field organizers are regularly visiting in the polder areas to collect detail information on the polder areas. By May, 2019 JV team visited each newly constructed drainage sluice gates and flushing sluice gates including older repaired ones which are still active. After locating the sluice gates, JV team applied PRA method to find out relevant villages, population, HH numbers, information on different professional groups, over all landscape information including agricultural lands, canals, social and religious institutions and local administration office and other necessary information.



### Identify villages and boundaries of the water management units:

JV team applied PRA method and conducted survey and prepared map to identify respective villages and boundaries of the water management units in the sluice gate areas. In Polder 47/2 JV team conducted PRA in 4 drainage sluice gates and 4 flushing sluice gates. On the other hand, for Polder 47/2, JV team conducted PRA in the 4 drainage sluice gates and 4 flushing sluice gates in Dalbugong Union.

### Initiating social forestation activities:

JV team already identified locations for plantation activities. In this regard, field investigation team was formed from 15-19 June, 2019 comprising JV staffs, Assistant Conservator of Forest (ACF) {with office at Mohipur Kalapara} of Coastal Afforestation Division, Patuakhali of Bangladesh Forest department (BFD), and field engineers of BWDB. Based on plantation location, JV team already identified respective villages to select beneficiaries for implementation of afforestation program under polder 47/2 with ecologically appropriate species by adopting social afforestation approach

JV team is going to form social forestry beneficiary groups having support from BWDB staffs, Forest Department and Local Government following the rules of Social Forestation.

## **Chapter 3: Understanding of the Project:**

### **3.1: Introduction**

Originally, the polders were not designed to protect the areas against storm surges. Recent cyclones and storm surges, however, have significantly damaged the embankments in many locations leading to breaches and problem of flooding. This, in turn, has resulted in reduced agricultural productivity, and widespread environmental degradation, and served to undermine efforts at poverty reduction in the coastal areas. In addition, a poor track record of maintenance has contributed to increased internal drainage congestion and heavy external siltation, which has led to salinity intrusion and reduced agricultural productivity. Finally, the weakened embankment systems will be less resilient to future cyclones and storm surges, leaving millions of coastal residents at risk.

The above reasons led the Government to re-focus its strategy on the coastal area from one that only protects against high tides to one that would provide protection against frequent storm surges as well. The long term objective of the Government is to increase the resilience of the entire coastal population to tidal flooding as well as natural disasters by upgrading the whole embankment system. With an existing network of nearly 5,700 km long embankments in 139 polders, the magnitude of such a project is daunting and requires prudent planning. Hence a multi-phased approach of embankment improvement and rehabilitation will be adopted over a period of fifteen to twenty years. The proposed Coastal Embankment Improvement Project-I (CEIP-I) is the first phase of this long term program, and will upgrade and improve a total of seventeen polders over a six year period.

BWDB had completed feasibility level studies for improvement of performance of the polders in the entire coastal belt in 2013. A total of 17 polders were selected for urgent implementation, in Phase-1 with funding from the World Bank (WB). A consortium of national and international consulting engineering firms has been recruited for preparation of detailed design of engineering components and also be responsible for supervision of construction work. Another consortium of national and international consulting engineering firms has been engaged for independent checking of quality of work and monitoring of progress in construction work. Construction of the 17 polders will be taken up in 3 packages. Contract for construction of 4 polders under package-1 has been signed and field level works are currently under implementation. Contract for 6 polders will be implemented under package -2, that has been signed and work in field will be taken up very soon. Contract for rest 7 polders under package 3 will be processed at an early date. BWDB will implement (1) Social Mobilization with Social Action plan (incl. setting up WMOs); (2) Social afforestation and (3) Implementation of Integrated Pest Management (IPM) Plan in 5 contract packages for 10 Polders of works package 1 and 2.

### **3.2: Objective of the Consultancy Services:**

The main objective of the “Contract Package No **CEIP-1/A2 & B1/S1-A** Consultancy service (NGO Services)” is to support the Bangladesh Water Development Board (BWDB) under CEIP-1. These activities are (a) Implementation of afforestation program especially in the fore-shore areas under social afforestation approach, (b) Social mobilization including setting up WMOs for introduction of ‘Integrated Water Resources Management (IWRM) practices through preparation of Social Action plan, and (c) Implementation of the Integrated Pest Management (IPM) Plan. Engagement with local communities on the project is considered integral to the successful implementation of the project’s components, and, thus, a reputable Non-Governmental Organization is sought to oversee and manage this work on behalf of the Bangladesh Water Development Board.

A brief description of the tasks is provided below:

**Task 1.** Social mobilization of community groups including setting up WMOs for introduction of IWRM practices through preparation and implementation of Social Action plan through engagement of local communities and community groups for PSM and participatory O&M of schemes.

**Task 2.** Implementation of afforestation program especially in the fore-shore areas with ecologically appropriate species by adopting social afforestation approach

**Task 3.** Implementation of Integrated Pest Management Plan.

### **3.2: Project Management Challenges:**

- As per target of the project activity, formation process of WMG will be started from 3<sup>rd</sup> month of the project year. On the other hand, for social forestation activities, social forestry group needs to be developed by June 2019 as forestation activities will be started by June 2019. It will be challenging to form WMG and Social forestry group at the same period of the project. To achieve the target JV deployed its team in the field and initiated for the PRA and field survey.
- JV team also aware that while forming the WMG, it may face obstacle from existing interest group who are traditionally using the sluice gates for their own interest rather than benefitting larger community. In this regard, JV staffs and maintaining close coordination with union BWDB officials, UP Chairman's, UNO, Forest Department and Agriculture Extension officers to avoid or mitigate any conflicting situation.
- Some of the land areas are situated in the same land but their hydrological boundary is not same. So, it is also challenging to demarcate properly the actual jurisdiction of the WMGs. In this regard, identified areas which are difficult to demarcate will be discussed with BWDB and local UP chairman office to find out a viable solutions so that jurisdiction of the WMGs will not be overlapping.
- JV team also aware that some influential people will be keen to penetrate among the WMGs for their own interest. In this regard, JV team is maintaining the participatory approach for selecting leadership and preparing list of the HHs which are actually eligible for the polder management.
- Due to Natural disaster regular activities of the project may be hampered.
- The project is only for 19 months. In this short period, it is really challenging that leadership quality and management skill for the operation of the WMGs will be developed albeit necessary trainings will be extended for the members of the WMGs.

## **Chapter 4: Detailed Scope of Work for Consultancy Services**

### **4.1: Review Guidelines/Policy/ Document**

The JV team reviewed the relevant policy documents and guidelines for participatory water resource management. JV team collected numbers of policies, guidelines and documents from different sources including BWDB offices, websites, Blue gold office and from organizations own archives. The review process is necessary in order to perform the required tasks for the consultancy service which includes (a) Implementation of afforestation program especially in the fore-shore areas under social afforestation approach, (b) Social mobilization including setting up WMOs for introduction of 'Integrated Water Resources Management (IWRM) practices through preparation of Social Action plan, and (c) Implementation of the

Integrated Pest Management (IPM) Plan. To accomplish the tasks JV team reviewed relevant policy documents and guidelines as follows:

- (i) Bangladesh's National Water Policy 1999,
- (ii) Guidelines for Participatory Water Management (GPWM), 2001,
- (iii) Guidelines for Integrated Planning for Sustainable Water Management (IPSWAM),
- (iv) Participatory Water Management Rule 2014
- (v) Framework for participatory scheme cycle management (PSM) from the Water Management Improvement Project (WMIP),
- (vi) Scheme maps of all the selected polders under CEIP-I,
- (vii) Community series of relevant upazilas covering the targeted polders,
- (viii) Cooperative Society (amendment) Act 2012,
- (ix) Sample constitutions of Water Management Groups (WMG)/Water Management Associations (WMA) from IPSWAM and WMIP projects; and
- (x) Other information/documents deemed necessary.

#### **4.2: Review of Existing Model of WMO Practices in BWDB's Project**

Bangladesh Gazette Notification, 11 February, 2014 shows the guideline for participatory water management. In section 2(1), it is mentioned that participatory water management means water resource projects, sub projects or scheme identification planning, implementing design, management, maintenance and involvement of the local interest group or stakeholders in the evaluation process. Participatory water resource management project will address following steps during implementing any water resource management projects such as:

- i) In different stages of the projects, local stakeholder's participation will be ensured and they will be organized so that a sustainable water resource management organization can be built.
- ii) Developing enable institutional environment for handing over ownership of small projects towards local community.
- iii) Developing joint management committee (JMC) ensuring participatory large scale project management, management board, organization and other stakeholders relating to water resources.
- iv) Ensuring participation of the local community and stakeholders for developing planning on cropping and necessary irrigation facilities and perform accordingly.
- v) If necessary collecting charges from beneficiaries for maintenance
- vi) For poverty alleviation, the project will involve landless poor's and destitute women in the maintenance works of the project.
- vii) Developing ownership of the local community through their participation and sustainable management.

#### **Handing over management and ownership:**

As per Gazette Notification 2014, ownership of the small scale projects will be handed over towards local authority. For proper management of the project, concern organization will perform operation, routine maintenance after certain period.

Based on project location, size and beneficiaries, there will be three types of water management organization:

- 1) Small scale water management organization
- 2) Medium scale water management organization

3) Large scale water management organization

1. Organization those are managing small scale water resources will have two tier:
  - i) In primary level water management group(WMG) will be formed
  - ii) In the higher level water management association (WMA) will formed.
2. For implementing middle range project, water management organization could have two or three tiers as per need. Including water management federation (WMF) apart from WMG and WMA.
3. For implementing large scale project, water management organization will have three tiers including water management federation (WMF) at the top apart from WMG and WMA.

It is also mentionable that separate subcommittees will be formed including fisheries, agriculture, forestation and other sectors for proper management of the organization.

- **Forming water management organization:**

- i) BWDB will be regulatory authority of the water management organization,
- ii) BWDB office will extend necessary initiative to support project management, organizing local community and forming water management organization.
- iii) A general meeting will be called ensuring participation of the local Community and all stakeholders,
- iv) In order to organize the meeting a public notice will be circulated in the project areas.
- v) In the general meeting Goal and objective of the project, benefits, responsibilities, and other issues will be discussed. In this general meeting an Adhoc committee will be formed mentioning Terms of Reference (ToR)
- vi) As per ToR, Adhoc committee will take necessary action to form the Water Management Organization.
- vii) BWDB representative will extend necessary support to form the Adhoc committee.

- **Water management Group will perform and take necessary responsibilities on following tasks:**

1. Discuss any issues relating to water management at the primary level, motivational works among the local stakeholders to initiate activities relating to mutual and common interest.
2. Membership inclusion.
3. Developing methodology to perform organizational activities.
4. Developing budgets and involve with other activities comprehensively.
5. Maintaining files and record keeping
6. Developing, introducing and maintaining annual agriculture plan and other productive system.
7. Using resources of the project management and maintenance of the necessary expenses.
8. For irrigation support, prepare agricultural lands, developing canals and necessary maintenance works.
9. Cleaning the canals regularly to avoid water stagnation.
10. Collecting fees from beneficiaries according to rules.

11. Accounts keeping for maintaining records and auditing.
12. Collaboratively work with implementing agency, Non-government organization, community level self-help group and local authority.
13. Resolving conflicts relating to water management projects.
14. Forming executive committee of the WMO through election or selection.
15. Expanding economical activities
16. Forming and maintaining Labour Contracting Society.
17. Perform other activities as per need of the organization

- **General Membership/General Committee:**

Membership is open to all villagers and inclusive by nature. All the stakeholders including families of farmers/fishermen/traders/service/landless / vulnerable women or any other member of the community can be member of the general committee. But their livelihood directly or indirectly should be influenced by the canals and polder system. The person who will be enrolled as members

- Should be permanent resident of the area or owner of land.
- At least 18 years old.
- Physically and mentally healthy/fit person.

General Committee of the WMG will be formed comprising all the general members. On the other hand, for the organizational management and directing activities, an executive body will be formed with limited number of members.

- **Involving local Government:**

For ensuring participation of the local government, concern Union Parishod member will be adviser of the WMG, Union Parishod chairman will be advisor of the WMA, while concern Upazilla Chairman will be advisor of the WMF.

- **Role and Responsibility of Executive Committee:** Activities, roles and responsibilities of EC are as follows:

- a. Financial Management
- b. Accounts keeping and submitting documents for auditing
- c. Organize general meeting
- d. Organize annual general meeting
- e. Preparing following reports in the annual general meeting
  - Annual report on WMGs activity
  - Presenting annual income and expenditure statements.
- f. Preparing documents as per need of the auditor.
- g. Regularly updating financial information
- h. Regularly updating membership register
- i. For project management or organization signing agreements and preparing documents.
- j. Regularly visiting project, polder areas, canals, sluice gate, irrigation works and find out problems relating to operational management.
- k. Submitting demands to the BWDB for necessary irrigation support and supporting management.
- l. Taking steps for collecting service charges from the land owners and keeping record.
- m. Estimating maintenance expenditure of the WMGs and collecting subscription or labour from the beneficiaries.

- n. In order to provide highest facilities for the farmers, developing proper sluice gate management rules.
- o. Initiating forestation activities in the polder area and exploring fish cultivation opportunity.
- p. Selecting Sluice gate operator from the members of the WMG if necessary.
- q. Taking initiative to reduce negative impact on small and marginal farmers.
- r. Coordination with BWDB, local government, NGOs and other service providers.
- s. Developing voter list and forming election committee.
- t. Performing other duties assigned by the general body of the WMG.

#### **Participatory scheme cycle management:**

1. Participatory Scheme Assessment	This part is mostly done by BWDB. Identification of the key problems in the polder area, assess demand for willingness to establish WMO, Identify BWDB and government land for suitable use.
2. Social Mobilization	Conducting PRA in association with BWDB's field office and Divisional Office, Information campaign, Review scheme maps and identification of the villages, Carryout beneficiary census to identify potentials members to for both water management group and Water Management association., Identify boundary of the villages and Boundaries of the water management units in a polders, enrollment of 75% HHs in the water management Groups, Drafting a constitution and that address scheme operation guideline following GPWM-2001& PWMR, 2014, Registration work, develop training curriculum on "Participatory Water Management", "Income Generating Activities (IGA)" and "Record Keeping and Accounting" using participatory methodology. Opening Bank account, financial management etc.
3. Planning and technical design	This part is almost done by BWDB. Now there is very little scope for the local community to involve with planning and technical design works. In some cases community can raise their points for undertaking necessary action where they assume support is needed from BWDB.
4. Implementation	This part is almost done by the BWDB as most of the sluice gates are completed. Where necessary, JV team will support for documenting the process and involve the WMOs in the implementation process.
5. Operation and Maintenance (O&M) of scheme	Introduce the WMO and WMA members with the water control structures, irrigation and drainage channels and the embankment of the polder and disseminate operation and maintenance details of those components. Discuss and sort out minor O&M activities that are plausible for the WMOs to implement during operation of the scheme. MoU sign between WMO and BWDB.

#### **Participation of women:**

Women will be encouraged to join WMOs and potential women leaders will be provided training on gender and leadership. Women will constitute a minimum of 30% of the members of executive committees in WMGs and WMAs. Emphasis will be given on gender role and responsibilities in project cycle with focus to operation and maintenance. LCS comprising women and men will participate in earthwork and derive benefits in terms of poverty reduction. Women will also participate in quality monitoring with men and will receive special training on supervision and monitoring. Women members will actively participate in O&M of polders during operation.

## Chapter 5: Approach and Methodology

### 5.1: General Approach

In its journey, JV adopts diverse approaches and methods, developed by itself as well as with the help of partners. The system has been evolving through a process of challenges and responses. With its flexible structure, JV is continuously gaining and sharpening its knowledge base from various sources, especially from participating communities including various development partners.

#### Target Beneficiaries

JV selects the beneficiaries according to the following criteria:

Category	Criteria for Selection
Hardcore poor	Income generating asset worth <Tk. 3,000; no/little access to productive land; income <Tk. 1500/m; not >2 meal/d for 4m a yr; daily labour: insufficient work (<150d/yr); advance sale of labour at lower wage or forced to migrate for work; scavenging for free resources (fishing at open water, collect fuel, wetland and forest resources, glean fallen paddy)
Fisherman	Catch fish for livelihoods; have <50 dec. land including homestead in floodplain sites; annual income of <Tk. 30,000 primarily from manual work; and sell labour for >100 days/ year for livelihoods.
Vulnerable group	It includes groups and communities prone to Climate Change and Disaster induced risks including women, children and disable.
Farmer	It includes all farmers i.e. large, medium, small, marginal and landless (but sharecropping/ lease in) with a differential treatment. The treatment includes suggested cropping pattern, input, skills, land and soil type (elevation/ contour/ micro-nutrient), risks (CC & DRR), ecosystem, culture, demand (and supply), public & private support system.
Gender	Gender is considered as cross-cutting development agenda in all JV programs, projects and interventions. Preference is given to destitute (abandoned), disadvantaged (poor/ women headed HH), old women, Lactating/pregnant women. It covers women empowerment interventions at both HH and community level. Engage in economic activities, skill and capacity, savings and lending, cooperative, WASH and nutrition activities.
Adolescent Girls	Adolescent girls of all socio-economic strata with a special focus to poor, women headed households. Crosscutting development agenda, Focus to reproductive health, savings, skills, nutrition and WASH activities.
Ethnic/minority community	Special focus is given to ethnic minority community within the project areas. All HH members are the target with different set of packages by gender and age groups. It follows rights-based approach along with AIGA, skills development, access to resources, education and mainstream.
Physically and mentally challenged	This is a cross-cutting development agenda of CNRS under all of its programs, projects and interventions. All physically and mentally challenged persons of men/boys/women/girls are the targets with a special focus of poor households.

However, JV customizes the criteria based on the project need and in consultation with the project team.

JV expertise in program development and implementation in different area of rural development following a holistic and integrated approach of community mobilization such as



ecosystem management including water resources, natural resource management (wetlands & forests resources), environmental education, livelihood development, capacity building, social mobilization, peoples empowerment, health, nutrition, sanitation, education, training, disaster management, emergency relief operation, rehabilitation, flood proofing, gender-disadvantaged/vulnerable group/disable-physically handicap development. However, special expertise followed by JV in all its projects in community mobilization are as follows which will be further customized on the basis of project need. Some customization is proposed in the methodology part.

- **Livelihood Analysis and Development**

JV encourages opportunities for sustaining livelihoods of poor people involved in harvesting common pool resources e.g. water for irrigation or fisheries purposes, drainage system, forests resources like fuel wood or timber. In reality, such families employ complex strategies in order to ensure their livelihoods. JV therefore has used to employ Livelihood Framework Analysis (LFA) advanced by DFID to better understand the resource utilization, economic strategies and unmet opportunities within the project areas. According to LFA approach, it has critically analyzed the assets, processes, and structures of the project setting. This information is being used to develop more comprehensive approaches to enhancing the human infrastructure and development of sustainable livelihood within the project areas.

- **Community Based Management**

JV has been working to develop and sustain livelihood of poorer communities. It requires applying locally suitable and appropriate methods reaching community consensus on interventions packages. JV adopts community-based approach where the local user communities and related stakeholders have a major part in designing and planning the management options and interventions for their specific livelihood options. Under various projects, community takes active role in implementation of each of the management interventions jointly with the respective project staff.

- **Institutional Development**

JV would accomplish a two-tier management structure of local institutions which are being constituted under Participatory Water Management Rule 2014. The First Tier consists of Water Management Group (WMG) having general member and elected Executive Committee. The WMG is being turned in to Community Based Organizations (CBOs) registered under the BWDB. Households members under a sluice gate based catchment are the member of WMG. The second tier is a Water Management Association (WMA) – a networking body to be formed with the representative of WMG at Polder level. Major activities of WMA are adaptive learning, conflict resolution and monitoring of schemes implementation process, while WMG's major responsibilities are selection of schemes, form & deploy LCS, implement schemes, savings and lending activities.

- **Community Mobilization**

As experienced, before going in to the activities related to community mobilization, JV undertakes certain activities to have better understanding of the biophysical, socioeconomic and cultural contexts of the communities and sites. This provides the team inputs for developing a clear road map for the rest of the works to be accomplished for community mobilization. JV undertakes following activities under community mobilization:

Understanding of the local context, identification of relevant community groups, identification of key villages where the resource users /target people live, definition of local

communities, reaching the communities, identification of other stakeholders, project briefing with primary and secondary stakeholders, awareness building - recognizing the problems of the majority, orientation of local leaders, understanding the resource systems and community interactions, current livelihood, water use and conflict, resource and land use pattern, understanding of the extent of community dependence on water and issues related to use, understanding of local institutional arrangements, local institutional arrangements in relation to access, use and control of resources, institutional and social mapping, consensus building among the stakeholders and participatory planning, formation of local committees, monitoring and baseline development, strengthening the capacity of local institutions.

- **Capacity Building and Training**

Empowerment of community is very much linked with the level of capacity of community. Thus JV considers capacity building activities as an important activity for the sustainability of development of community. There is no alternative of training for enhancing capacity of community. Keep this in mind JV developed a strong training team along with the required facilities through which JV has been conducting series of capacity building and skills development training.

- **Private-public Linkage Development**

JV considers this as a very important activity towards sustainability of the development process initiated by organized poor. Development is a continuous process and cannot be achieved within a particular project period. It needs a regular public support to tap resources and establish rights of poor people. Local level governance may contribute a lot to keep the pace of development in this regard. Keeping this in mind, JV would take initiative for developing linkages with the key public stakeholders such as BWDB, DAE, DOF, FD and so on.

#### **5.1.1: Set up Field Office**

According to the contract of the project JV rented two project's office located at Golachipa and Kalapara. Detail location of both the offices are given below:

##### **Address of Project Office in Golachipa:**

House NO-558, Feeder Road, Word NO-8  
Post-Golachipa,  
Upazila- Golachipa, Patuakhali

##### **Address of Site Office at Kalapara**

Alom Villa, Holding NO-59/1  
Sobujbagh, Post-Kalapara,  
Upazila- Kalapara  
Patuakhali

#### **5.1.1: Mobilization of Field Staff:**

It is to be noted that the recruitment/selection of all key-staff members has been completed during the proposal preparation period. Deployment of key staffs has been completed by May 2019. The recruitment process of all 7 non-key staffs has been completed. Details on recruitment and deployment process are given in the table below:



No	Name	Position	Achievements/ Progress
<b>Key Experts</b>			
K1	Prof. Badiuzzaman	Team Leader	Already joined and started work at Project area
K2	Ruhul Amin	Participation/Institution Specialist/Deputy Team Leader	Already joined and started work at Project area
K3	Prof. Dr. Md. Alamgir Kabir	Social Forestry Specialist	Already joined and started work at Project area
K4	Prof.Dr. Hemayet jahan	Integrated Pest Management Specialist	Already joined and started work at Project area
K5	Prof. Dr. A.S.M Iqbal Hussain	Agronomist	Already joined and started work at Project area
<b>Non-Key Experts</b>			
NK1	Md. Mansur Rahman	Community Organizer	Already and started work at Golacipa office
NK2	Rahul Chandra Saha	Community Organizer	Already and started work at Golachipa office
NK3	Sohel Sikder	Community Organizer	Already and started work at Golachipa office
NK4	Ms. Sherity Hasna	Community Organizer	Already and started work at Kalapara office
NK5	Ms. Mubassarah Munjirin Sazmi	Community Organizer	Already and started work at Kalapara office
NK6	Md. Faysal Alam	Community Organizer	Already and started work at kalapara office
NK7	Md. Mashukur Rahaman	Community Organizer	Already and started work at Kalapara office

## 5.2: Data Collection

### 5.2.1: Available Data Inventory

Secondary sources of information were collected from UP, BWDB, BBS, and other relevant public agencies, development projects, and NGOs on DRR, CCA, major economic activities, villages/ areas by risk/threats of CC & DRR, agriculture potentials, market system, changes over time (economic activities, infrastructure), major actors, meso or macro level conflicts, FFS and other bodies, existing water management efforts and learning, existing production system and collective action of production and marketing, major agricultural activities, conflicts and influence of farmers group by production system (crop, livestock, fish &

**Commented [M1]:** Factor? Micro and macro?

shrimp, etc., and number/area by type) and how these systems are competing and complementing with a particular focus to water management, collection of maps and reports.

#### 5.2.2: New Data Collection

For new (primary) data collection, JV initiated household census survey in the polder 43/2c , 47/2and 48 areas. JV is going to conduct PRA, household census, identification of beneficiaries, and identification of key problems of water management, assess demand of the community, willingness to be member of WMOs, collect quantitative information, sharing and consensus of BWDB and other major stakeholders.

A Participatory Land Use Survey (PLUS) will be conducted initially at the *Mouza* level. A *Mouza* is the lowest tier of administration in Bangladesh. For the PLUS exercise, various maps viz. *Mouza* level parcel maps, BWDB's polder map, *thana* base maps, *Mouza* geo-code maps, topography maps etc. will be used. Villagers familiar with the *Mouza* maps and land use patterns will be selected as participants during the survey. A Four -member JV team will conduct the survey at each of the mouza to be compiled to generate catchment and polder level maps. The team will use different tools like PRA, Focus Group Discussions (FGDs), and will do transect walks to collect information on the biological, topographical, physical and socio-economic characteristics of the area. FGDs will be conducted flexibly.

Participants will be heterogeneous. Separate sessions will be organized for each of the different social, economic, political, functional and occupational groups of 10 to 20 participants. To begin with, the survey objectives would be explained to the participants; it would be the villagers who will identify the people who can help in this regard. The identified individuals would be requested to select the venues for holding the sessions in such manner as they would be convenient for them to attend. A whole day would be spent in conducting a session. Often more than one session would be organized, however, to enable the team to identify all the features of a *Mouza*.

Seven map layers will be prepared, layers are as follows:

- **Mouza and Catchment Boundary:** The arc data layer shows only boundary of mouza and catchment.
- **Agricultural Land:** Different types of agriculture land (single, double or triple cropped).
- **Water bodies:** River, khal, beel, pond, shrimp gher, ditch etc.
- **Embankment and Road network:** All embankments, dykes under a polder, delineation of catchments and sub-catchments, National highway, feeder road, rural road, pucca road, katcha road, road not flooded, submergible embankment
- **Settlement:** Village, settlement, homestead, kanda (raised land).
- **Socio-economic Structure:** Different socio-economic structure such as: UP office, surface and ground water source, educational institutions, religious institutions, welfare institutions, market, bridge-culvert, sluice-gate.
- **Other Phenomena:** Different resources, such as: grazing land, fallow land, Mangrove/swamp forest, reed land, rice threshing area, seed bed, degraded land, graveyard, multiple resources.

### 5.3 Baseline Survey

#### 5.3.1: Household census survey:

JV will conduct HH Census survey following the prescribed formats prepared by BWDB. Census data will be computerized, analyzed and a report will be prepared. It will help in preparing the beneficiary list.

Secondary sources of information will be collected from UP, BWDB, BBS, and other relevant public agencies, development projects, and NGOs on DRR, CCA, major economic activities, villages/ areas by risk/threats of CC & DRR, agriculture potentials, market system, changes over time (economic activities, infrastructure), major actors, meso or macro level conflicts, FFS and other bodies, existing water management efforts and learning, existing production system and collective action of production and marketing, major agricultural activities, conflicts and influence of farmers group by production system (crop, livestock, fish & shrimp, etc., and number/area by type) and how these systems are competing and complementing with a particular focus to water management, collection of maps and reports.

JV has planned to conduct FGDs, KII on issues, present livelihood practices, migration, poverty status, nutrition status, access to information, market and financial resources, mobility, stakeholders, changes over time (livelihoods, migration, education, gender/ women empowerment), micro level conflicts, skills and capacity.

#### **5.3.2 Identification of beneficiaries and other stakeholders:**

After carrying out Household census, JV team will identify existing and/or potential members of Water Management Organizations (WMO) including Water Management Groups (WMG) for each Water Management Unit (WMU) under a polder and Water Management Association (WMA) for each polder.

### **5.4: Formation WMOs**

#### **5.4.1: Motivation campaign and conduct polling**

JV will conduct information campaign in the locality/polder areas well ahead of WMO formation. In this regard, JV staff will disseminate authentic information like project objectives, involvement of beneficiaries in the project cycles and ultimate benefits of the community peoples from the project and the responsibility of the WMOs during implementation of the project and after completion of the project. Formation of Adhoc committee of the WMG will be initiated by June 2019,

#### **5.4.2: Group formation modalities**

Core group together with the polder team initiate awareness building among potential WMG members on the rationale/objectives, roles and functions of WMG, membership of the WMG, and roles and responsibilities. The awareness building process will involve folk drama and theatre, focus group discussions, courtyard sessions, and informal discussions at homes, fields, tea stalls and markets;

Core group to undertake the following tasks:

- List potential members within the WMG boundary area;
- Conduct individual and courtyard sessions with the potential members to sensitize them on the following: key roles and responsibilities of the WMOs in attaining the goals and objectives of the project; the roles and responsibilities of the WMG members; the need to select/elect committed leaders to the Executive Committee of the WMG; the need to give equal opportunity for men and women to become members in the WMG and to participate in the selection/election process; the need to ensure that membership of the WMG adequately represents all stakeholder groups (men and women) in the WMG area; to adopt selection instead of election method in choosing the EC members.

- JV will initiate formation of ad hoc committee that has male and female representatives from each major stakeholder groups (farmers, fishermen ,landless, destitute);

#### **5.4.3 Preparation of stakeholder lists:**

JV team already started their mobilization activities. It is expected that after completion of census survey, baseline and stakeholders analysis, the team can provide a details list of the stakeholders with their motivation and roles in the project.

#### **5.4.4 Define WMG's tasks & disseminate group formation activity**

Water management Group will perform and take necessary responsibilities on following tusk:

1. Discuss any issues relating to water management at the primary level, motivational works among the local stakeholders to initiate activities relating to mutual and common interest.
2. Membership inclusion
3. Developing methodology to perform organizational activities.
4. Developing budgets and involve with other activities comprehensively.
5. Marinating files and record keeping
6. Developing, introducing and maintaining annual agriculture plan and other productive system.
7. Using resources of the project management and maintenance of the necessary expenses.
8. For irrigation support, prepare agrilands, developing canals and necessary maintenance works.
9. Cleaning the canals regularly to avoid water stagnation.
10. Collecting charges from beneficiaries according to rules.
11. Accounts keeping for maintaining records and auditing.
12. Collaboratively work with implementing agency, Non-government organization, community level self-help group and local authority.
13. Resolving conflicts relating to water management projects.
14. Forming executive committee of the WMO through election or selection.
15. Expanding economical activities
16. Forming and maintaining labour contracting society.
17. Perform other activities as per need of the organization

#### **5.4.5: Formation of WMGs**

BWDB will be regulatory authority of the water management organization, BWDB office will take necessary initiative to support project management, organizing local community and forming water management organization. Following steps will be taken prior to formation of the WMGs.

1. Concern authorized person of the BWDB, will organize a general meeting ensuring participation of the local Community and stakeholders,
2. In order to organize the meeting a public notice will be circulated in the project areas.
3. In the general meeting Goal and objective of the project, benefits, responsibilities, and other issues will be discussed by the BWDB authorized person. In this general meeting an Adhoc committee will be formed mentioning Terms of Reference (ToR)
4. As per ToR Adhoc committee will take necessary action to form the Water Management Organization.
5. BWDB representative will extend necessary support to form the Adhoc committee.

#### **5.4.6: Formation of WMAs**

It is envisaged that there will be two-tiers of institutional structures would take place such as WMG (water management group) and WMA (water management association). As the ToR suggested for undertaking Blue Gold project model, therefore, WMF (water management federation) is not considered in this proposal. WMG will be formed on the basis of water management unit (hydrological unit) under a polder which we can term as catchment while WMA is a networking body of WMG to be formed under a polder. There is a range of WMGs in a polder (estimated as 10-50). Beside general body members, there is a provision of forming Executive Committees at both WMG and WMA level. Before holding election, there is a provision of forming Ad-hoc committee of WMOs. Therefore, institutional capacity lies with all level of bodies and tiers of a WMO.

#### **5.4.7: Prepare curriculum of training for WMO**

Capacity building of an institution can be employed many processes such as training, hands on training, accompaniment support, exposure visits, and so on. JV will employ all of the possible technics for capacity building of WMOs. However, training is considered as one of the basic tools, therefore, emphasis will be given on training. It has identified number of trainings such as WMG ECs- Organizational and water management, Accounts keeping and Audit system, Gender and leadership development; WMA EC, WMF EC- on resource mobilization, M&E, O&M, participatory water management, organizational development; refreshers of WMG ECs on the basis of performance review; Infrastructure O&M hands on (before completion of rehabilitation work); Form and train LCS groups (with EC members of WMG as they will look after); participatory monitoring to WMG ECs and members of WMGs; Monitoring Committee (WMA EC); Collective Action Leaders and Key Informants about the program; value chain, producer group/cooperative, market linkage, supply and demand system, and so on. Following section gives an outline of Financial Management training (as it considers as very important for sustainability of an institution)

#### **5.4.8: Carry out the capacity building program**

For developing institutional capacity building following training will be provided for developing capacity of the WMO's.

1. Training: WMG ECs-
  - a) Organizational and water management,
  - b) Accounts keeping and Audit system,
  - c) Gender and leadership development
2. Training WMA EC, WMF EC- on resource mobilization, M&E, O&M, Participatory Water Management, organizational development
3. Training: refreshers of WMG ECs on the basis of performance review
4. Training- Infrastructure O&M hands on (before completion of rehabilitation work)
5. Training- Form and train LCS groups (with EC members of WMG as they will look after)
6. Training on participatory monitoring to WMG ECs and members of WMGs
7. Training of Monitoring Committee (WMA EC)
8. Training to Collective Action Leaders and Key Informants about the program
9. Training on value chain, producer group/cooperative, market linkage, supply and demand System.

### **5.5 : Social afforestation**

One of the major components of the CEIP-1 is embankment protection works supported by excellent afforestation means tree/vegetation coverage so that no erosion happened. Hence wide fence of mangrove plantation & protection at the fore-shore of the embankment/dyke (riverside) is very much important in order to protect the embankment/dyke from tidal surge as well as tidal wave erosion. In parallel, highland species would be planted in line with embankment by BFD as per project specification and practical situation.

#### **5.5.1: Identify land ownership**

JV field team will thoroughly survey the project areas and with due consultation process with community people & related stakeholders they will identify land ownership/tenure and land-use system beside the embankment. The consultation process with community people & related stakeholders will explore the opportunities and scope of proposed social afforestation plans inside and outside the embankments/dykes. If there is any urgency or conflict arises to know the land tenure/ownership of the specific areas the expert will communicate with respective local administration UNO, AC land, Union Parishad Chairman/Member & related stakeholders as required.

#### **5.5.2: Select Social Forestry Beneficiaries**

Social Forestry Beneficiaries will be selected as of social forestry rules 2004 ( amended upto May 2011) . As per advice of DFO, 33% member would be women. Besides, the villagers who are facing legal cases with Forest Department will not be considered as Social Forestry beneficiaries. In the beneficiary's selection process, ACF/ Forest Ranger / Forester, UP chairman/member will be involved so that the process run smoothly without any conflicts. According to the Social Forestry Rules 2004, beneficiaries should be selected among residents living within 1 (one) km radius of the site of social forestry (but not limited to in case of exception) and following citizens will get priority to be selected as beneficiary.

- ✓ Landless
- ✓ Less than 50 decimal land ownership
- ✓ Miserable women
- ✓ Disadvantaged groups
- ✓ Poor Indigenous people
- ✓ Poor forest villager
- ✓ Poor freedom fighter or son of poor freedom fighter

In discussion with Forest office Kalapara, it is to be understood that, a total 27.49 km plantation will be established at polder 47/2 and 33. Keeping this in mind, the beneficiary selection and group formation will be done as per time frame, June 2019.

JV will also take into account the formation of social forestry committee by following government rules and regulations, and according to the Social Forestry Rules. The social forestry management committee would consist of 9 members (President-1, Vice-President-1, General Secretary-1, Joint General Secretary-1, Treasurer-1, Member-4).

#### **5.5.3: Awareness raising Campaign**

The stakeholder consultations among the social forestry specialists, forest department, local government institutions including UPs, local administration and relevant government officers, community elites/leaders, community members and potential beneficiaries will be held about scientific and local traditional knowledge, current and potential land-uses, land-use and social conflicts and local environmental and socio-economic conditions. These dialogues arrangement will also support BFD in selection of tree species, afforestation sites and environmental & social needs of embankments protection.



The local communities will be mobilized towards afforestation activities through enhancement of their awareness at an extent so that they realize the need for afforestation and will be able to understand the importance of afforestation and their linkages to their livelihood. They will also understand the critical need for planting trees to protect the embankments directly and support their lives, villages and livelihoods (agriculture and fisheries) directly and indirectly.

Outreach communications tools and plans would be developed covering all relevant issues for the wider audience from communities at the grass roots. Based on existing field experience, some of the proven and effective communication means/ tools that will be applied are as follows: a) Folk drama, b) Courtyard meetings, c) School education programs, d) Awareness outreach materials- billboards, message boards, posters e) Eco-visits by the local journalists to the project area, f) Day observation.

JV will lead the stakeholder consultation process for transparent and participatory dialogue and engagement of stakeholder groups to facilitate a better understanding of the impact of the CEIP, stronger community ownership.

#### **5.5.4: Conduct capacity building training**

JV team will carry out a TNA (Training Need Assessment) to point out the capacity building needs, approaches and subject matters contents before preparing the training plan. JV team will arrange training for beneficiaries and other stakeholders so that they can effectively assess, plan, implement and monitor social forestry interventions in their respective WMOs. At least four stakeholder's groups will be targeted for capacity building viz. i) communities/ s including social forestry beneficiaries, ii) UPs, iii) relevant upazila government officials and iv) Partner NGOs for capacity building. Capacity will also be built including training in social forestry component as follows:

- Orientation on social forestry rules 2011 focusing on benefit sharing mechanisms by following the government rules and regulations.
- Technical support (necessary skill sets) to social forestry groups including selection of species with justification, collecting quality planting materials (QPM), seedling production in nurseries, site preparation, planting, manuring, staking, weeding maintenance and tending operation, protection of seedlings from cattle/pest/human, selection & deployment of watchers (particularly from grazing livestock and encroachment).
- Homestead plantation, nursery establishment and horticultural gardening to increase financial benefits as well as green coverage to reduce environmental pressures.
- Identify and undertake alternative livelihoods activities for climate vulnerable people to reduce pressure from Sundarbans and village forests.

#### **5.6: Implementation of Integrated Pest Management (IPM) Plan**

Agricultural technology development, technology transfer, extension services, increase production and market promotion of safe agro-products are multidisciplinary in nature that involves series of complex activities. It needs a strong coordination and cooperation among the agencies involved in the process. Policy interventions and initiatives are very much necessary to achieve and sustain such activities for bringing socio-economic wellbeing of the farming communities. The present policy framework of the Government of Bangladesh emphasizes technology transfer and market oriented agro-extension approach to ensure food security for its poor and vulnerable people. The crop diversification strategy of Bangladesh has given emphasis on to enhance crop production by i) minimizing the risk of damage from the flood and water logging through improving flood control and drainage system, ii) increase cropping area through brought new area under irrigation, iii) promotion

of the new high yielding varieties and modern crop management practices, iv) ensuring balanced use of chemical fertilizer and pesticides, v) increasing the cropping intensity, vi) technological advancement of crop production including adaptation to climate change, vii) improving marketing of produces in internal and export market, viii) increasing mechanization in different stage of crop production cycle.

The project is expected to bring positive environmental benefits to the project areas through the introduction and expansion of modern technologies that promotes sustainable practices and applications of the integrated pest management. The diversification and intensification of IPM activities under the project could lead to change in the application of pesticides for pest and disease controls. As per the World Bank safeguard policy Pest Management (OP 4.09), this Pest Management component will be implemented based on Integrated Pest Management (IPM) principles.

The objective of the Integrated Pest Management component is to promote the use of a combination of environmentally and socially friendly practices (hygienic, cultural, biological or natural control mechanisms and the judicious use of chemicals) and reduce reliance on synthetic chemical pesticides and ensure that health, social and environmental hazards associated with pesticides are minimized under the Project and within acceptable limit requirements of key stakeholders (i.e. primary users among farmers and their immediate dependents/families).

The project will primary focus on IPM related target groups that are formed by the DAE and other agencies and exist in the project location. The new target group will be formulated if the existing structure is not enough to accomplish the objectives of this project. However, the project will be worked with farmers, farmer field schools, farmer groups, farmer associations and IPM clubs, Water Management Organization (WMO), Water Management Association (WMA) and Social Afforestation Group are involved in farming in the project area.

The project will be worked closely with the Department of Agricultural Extension (DAE) and other relevant agencies to accomplish the IPM related project activities. The project will be formulated an Integrated pest management (IPM) plan based on the local context and the pest management practices that are currently practicing at farmers level focusing on the following areas. I) healthy crop through proper management of soil, water, fertilizers, pests, etc.; ii) conservation of biological control agents by avoiding or reducing the use of toxic pesticides; iii) augmentation of biological control agents; iv) use of pest tolerant crop varieties; v) use of cultivation practices that can minimize pest populations; vi) mechanical control of pests; vii) monitoring of field by the farmer on a regular basis; viii) build-up farmers as experts in their own fields in taking crop management decisions; ix) use of pesticides that are not harmful to the environment as a last resort.

#### **5.6.1 Awareness/dissemination of Information**

Awareness creation on the ill effects of pesticides will be conducted to the targeting communities. The programs will include along with project beneficiaries, various stakeholders residing in the project area, including the community, government officers, project staff and local politicians. Awareness materials would be but not limited posters, flyers, brochures, etc. These will be made available via the Agriculture extension offices. The following materials would be covered as i) Integrated Crop Management, ii) Integrated diseases management, iii) Integrated weed management, iv) Health issues of pesticide application, v) Safe use of agrochemicals, vi) Steps in integrated pest management.

#### **5.6.2 Implementing integrated Plant and Soil Nutrient Management (IPSNM)**

Field demonstrations are the practical way of convincing farmers on IPM practices, establishment of a Farmer Field School (FFS). FSSs can show farmers the successful crop yields that can be expected by IPM implementation and demonstrate user friendly mechanisms. This will assist in changing set mindsets and educate farmers on the programs, driving them to implement them as well.

#### **5.6.3 Determining pesticide residue on crops**

For determining pesticide residue on crops is a sophisticated test and should cover the soil, water and crop's parts for testing. As there is no separate budget head for this activity, we will test sample basis from the "Pesticide management, demonstration" budget head. About 10 to 20% of allocation of this

budget head will be expend for testing the sample. This activity will be carry forward during the project period.

#### 5.6.4 Training of Trainers

Training of Trainers will be conducted among the project/field staff and local DoA officers, stationed in the project area. A total of 20 participants expected to be covered through our training program. The training will be conducted in August 2019 before the Robi (Winter) cropping Season.

#### 5.6.5 Capacity building of target farmers

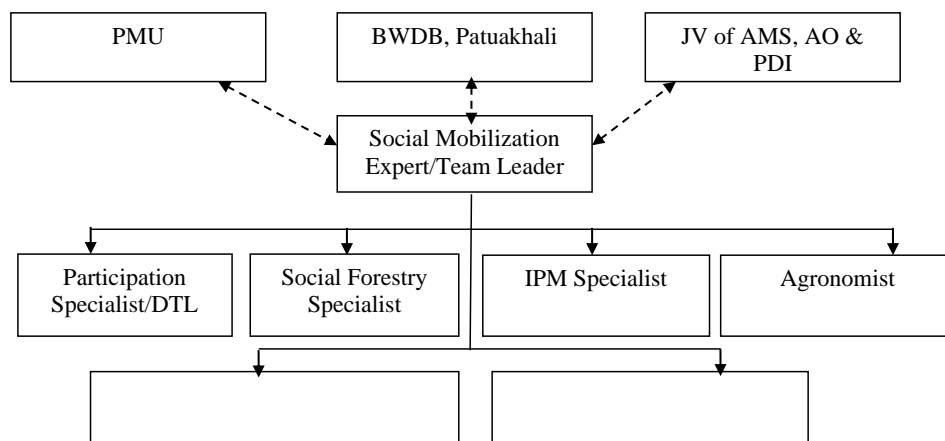
The Project will assist and train farmers to be able to develop their IPM approaches to the management of pests and diseases. This will be holistically approach from seed selection, land preparation, planting and farm maintenance to harvesting and post harvesting issues. Farmers will be trained enough and encouraged to make detailed observations in their fields regularly so that they can detect early infestations and make the appropriate management decisions using agro-ecosystem analysis. A total of 210 farmers from the target project areas will be trained where 50% will be covered during September to November 2019 to catch the *robi* cropping season and rest 50% will be covered during February to March 2020 to catch the *Kharip* cropping season.

The pesticide management measures that will be promoted in the project include: (1) Reduce pesticide application amount through project activities, (2) Forbid using unregistered pesticide in project activities, (3) Forbid using the type I pesticide of the World Health Organization in project activities, and (4) Promote IPM techniques. A total of 150 demonstration plots will be set-up during the project period.

#### ( 6.1 ) The Structure and Composition of Team:

The team consisted with five key experts and seven non-key experts, who will be eligible and capable of performing the tasks within the timeline May 2019 to October 2020 (18 months). The team decorated with Social Mobilization Expert, Participation/Institution Specialist, Social Forestry Specialist, Integrated Pest Management Specialist, and Agronomist. The team leader will keep close coordination with BWDB local Office, PMU and JV of AMS, AO and PDI. The entire professionals and support staff will under the supervision of team leader. The other key team member will keep close coordination with the expertise of different discipline of PMU. Moreover, the project team will take need-based necessary support from the office of JV. The office of JV, will take a role of the whole project management including regular communication with CEIP-1. The following *Figure-5* shows the structure of team of assignment.

*Figure-5: The Structure of Team of Assignment*





## 6.2: Work Plan

### Work plan for Coastal Embankment Improvement Project, Phase-1 (CEIP-1)

TECHNICAL PROPOSAL

#### FORM TECH-5: WORK SCHEDULE AND PLANNING FOR DELIVERABLES

JV of AMS, AO & PDI has scope to complete the assignment within Eighteen Months starting from May 2019 to October 2020. The activities thus identified in sequential order in consistence with the methodology and tasks have been shown as Work Schedule. This work schedule may be changed depending on the field requirements and suggestions of the client (in the inception phase of the assignment). The following chart illustrates work schedule decorated by activities, and time periods:

Activities	Time line (tentative)		2019										2020									
			Months																			
	Start	Finish	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
D1. Project Start-up Stage																						
1. Recruitment & mobilization of Team	01/05/2019	07/05/2019	■																			
2. Set up & equipped office	01/05/2019	10/05/2019	■																			
3. Collection & analysis of documents, report, map and infrastructure list	01/05/2019	30/10/2020	■																			
4. Reconnaissance Visit	10/05/2019	13/05/2019	■																			
D2. Initial Planning and Survey /Scheme Assessment																						
4. Define Water Management Units	15/05/2019	15/06/2019		■																		
5. Identify key problems and improvement options of scheme	01/06/2019	30/07/2019		■	■	■																
6. Conduct household census survey	01/06/2019	30/09/2019		■	■	■	■	■														
7. Conduct Inception Workshop	15/07/2019	30/07/2019			■																	

Activities	Time line (tentative)		2019										2020									
													Months									
	Start	Finish	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
D3. Formation of WMO																						
8.1 Motivation Campaign	01/06/2019	30/09/2020																				
8.2 Conduct polling	01/06/2019	30/08/2019																				
9. Prepare Group Formation Modalities	01/07/2019	30/08/2019																				
10. Prepare Stakeholder list	01/06/2019	30/07/2019																				
11. Define WMG's tasks & disseminate group formation activity	01/08/2019	30/09/2019																				
12. Formation of WMGs	01/08/2019	30/10/2019																				
13. Formation of WMAs	01/08/2019	30/10/2019																				
D4. Knowledge Development																						
14. Carry out training needs	01/12/2019	30/12/2019																				
15. Prepare curriculum of training, manual	01/09/2019	30/12/2019																				
16. Conduct training to the field staff, BWDB, EC, WMGs/WMA	01/01/2020	30/04/2020																				
17. Facilitate Regular Meeting of WMGs/WMA	01/12/2019	30/10/2020																				
18. Exchange Visit of WMGs and WMA	01/03/2020	30/09/2020																				
D5. Legislation Process																						
20. Registration of WMOs	01/02/2020	30/03/2020																				
19. Create financial arrangement of WMGs	01/02/2020	to be cont.																				
D6. Planning and Technical Design																						
21. Develop MOU and signing PDP	01/12/2019	30/04/2020																				



Activities	Time line (tentative)		2019										2020							
			Months																	
	Start	Finish	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
D7. Tasks in Implementation Stage																				
22. Formation of CST, Participatory Monitoring Plan for WMA and Procedure for CST.	01/12/2019	30/01/2020																		
23. Strengthen CS Team	01/01/2020	30/05/2020																		
D8. O & M of Scheme																				
24. Develop MoU & arrange signing of O&M plan	01/03/2020	30/05/2020																		
25. WMO involvement in O& M	01/04/2020	to be cont.																		
D9. Social Afforestation																				
26. Stakeholder Consultation	01/06/2019	30/08/2019																		
27. Awareness Campaign	01/07/2019	30/09/2020																		
28. Selection of Beneficiary	01/10/2019	30/01/2020																		
29. Training of Beneficiaries	01/02/2020	30/05/2020																		
30. Monitor technical delivery on afforestation	01/03/2020	to be cont.																		
D10. IPM Plan Implementation																				
31. Awareness/Information Dissemination	01/06/2019	30/09/2020																		
32. Establish Farmers Organization	01/10/2019	30/01/2020																		
33. Impart Training (ToT and ToF)	01/02/2020	30/05/2020																		
34. Practice IPSNM techniques	01/04/2020	to be cont.																		
35. Monitoring of IPM plan implementation	01/04/2020	to be cont.																		

### 6.3: Staffing Schedule

FORM TECH-6: TEAM COMPOSITION, ASSIGNMENT, AND KEY EXPERTS' INPUTS

No	Activities	Position	Expert's input (in person/month) per each Deliverable (listed in TECH-5)											Total Staff-month Input		
			D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10	D 11	Home	Field	Total
KEY EXPERT																
K1	Badiuzzaman	Social Mobilization Expert/Team Leader	<div></div>											4	8	12
K2	Md. Ruhul Amin	Participation Specialist/ DTL	<div></div>											3	6	9
K3	Dr. Md. Alamgir Kabir	Social Forestry Specialist	<div></div>											2	4	6
K4	Dr. S. M. Hemayet Jahan	IPM Specialist	<div></div>											2	4	6
K5	Dr. A.S.M Iqbal Hussain	Agronomist	<div></div>											2	4	6
			Sub-total (Key Experts)											13	26	39
NON-KEY EXPERTS																
NK1	Md. Mansur Rahman	Community Organizer	<div></div>											0	18	18
NK2	Rahul Chandra Saha	Community Organizer	<div></div>											0	18	18
NK3	Sohel Sikder	Community Organizer	<div></div>											0	18	18
NK4	Ms. Sherity Hasna	Community Organizer	<div></div>											0	18	18
NK5	Ms. Mubassarah Munjirin Sazmi	Community Organizer	<div></div>											0	18	18
NK6	Md. Faysal Alam	Community Organizer	<div></div>											0	18	18
NK7	Md. Mashukur Rahaman	Community Organizer	<div></div>											0	18	18
			Sub-total (Non-Key Experts)											0	126	126



#### 6.4: Reporting

**Reporting on Social Mobilization.** JV will identify and mobilize beneficiaries in Water Management Organizations and involve them in each stage of project cycle from identification through assessment, design, implementation and operation and maintenance and these activities will be reported. JV will provide appropriate training to the WMOs in order to ensure sustainable water management with effective participation of the beneficiaries. JV requires assessing periodic progress of their activities and the achievement in effecting participation of beneficiaries in project cycle and operation and maintenance of polders. JV will provide monthly report to BWDB on the progress in social mobilization, including any issue that might be hindering progress, separately for each civil works contract.

Reporting on Social Mobilization		
Sl#	Title	Content
1	<b>INTRODUCTION (common)</b>	<ul style="list-style-type: none"> <li>Purpose, objective, scope and background of the Progress Report</li> </ul>
2	<b>PROGRESS AND ACHIEVEMENTS</b>	<ul style="list-style-type: none"> <li>Summary of progress of targeted activities during the reporting period and the cumulative achievements;</li> <li>A spreadsheet will be used to determine the progress that can be attached to the report as an Annex.</li> <li>A Bar Chart with Target and achievement will be included in their report.</li> </ul>
3	<b>INPUTS</b>	<ul style="list-style-type: none"> <li>Physical and financial input during the reporting period and cumulative progress against the allocated quantities and financial budget. Comments if any at the end.</li> </ul>
4	<b>STATUS OF MOBILIZATION</b>	<ul style="list-style-type: none"> <li>Summary of achievement in social mobilization including consultation, census of beneficiaries, mobilization of beneficiaries into WMOs, training, and advance of the WMOs in terms of their activities as per objectives of participation.</li> <li>Summary of achievement in social mobilization, membership enrollment, savings and share capital accumulation, meetings, and communication, participation in supervision, monitoring and quality control of civil works.</li> </ul>
5	<b>PROBLEMS</b>	<ul style="list-style-type: none"> <li>Description of problems and difficulties encountered during reporting period and link them to policy and administrative decisions with remarks</li> <li>Actions taken to resolve problems identified in the earlier report(s), their current</li> <li>Status and any outstanding problems and recommendations for resolving those problems.</li> </ul>
6	<b>ACTIVITIES COMPLETED</b>	<ul style="list-style-type: none"> <li>Description of activities carried out during the reporting period with tables and charts for quantities (achievement and targets) followed by cumulative achievement for each activity</li> <li>The description have to be made separately for each polder under implementation (if more than one polder under implementation)</li> </ul>

Reporting on Social Mobilization		
Sl#	Title	Content
7	<b>WORK SCHEDULE</b>	<ul style="list-style-type: none"> <li>Target for next reporting period and remaining tasks with timelines for their completion</li> <li>Comments on targets and work schedule, if any</li> </ul>
8	<b>MISCELLANEOUS</b>	<ul style="list-style-type: none"> <li>Miscellaneous activities at the request of BWDB and missions attended during the reporting period with particular reference to GPWM, IPSWAM and WMIP guidelines and manuals.</li> <li>Status of special targets set by pervious missions during the reporting period</li> <li>Comments on miscellaneous activities.</li> </ul>

**Reporting on Social Forestry.** JV will identify and mobilize beneficiaries to participate in the Social Forestry program. They will provide appropriate training to the beneficiaries in order to ensure sustainable afforestation activities with effective participation of the beneficiaries. Report will be submitted assessing periodic progress of activities and the achievement in effecting participation of beneficiaries in afforestation. JV will provide monthly report to BWDB on the progress in social forestry, including any issue that might be hindering progress.

Reporting on Social Forestry		
Sl#	Title	Content
1	<b>INTRODUCTION (common)</b>	<ul style="list-style-type: none"> <li>Purpose, objective, scope and background of the Progress Report</li> </ul>
2	<b>PROGRESS AND ACHIEVEMENTS</b>	<ul style="list-style-type: none"> <li>Summary progress of targeted activities during the reporting period and the cumulative achievements;</li> <li>A spreadsheet will be used to determine the progress that can be attached to the report as an Annex.</li> <li>A Bar Chart with Target and achievement will be included in the report</li> </ul>
3	<b>INPUTS</b>	<ul style="list-style-type: none"> <li>Physical and financial input during the reporting period and cumulative progress against the allocated quantities and financial budget.</li> <li>Comments if any at the end.</li> </ul>
4	<b>STATUS OF SOCIALFORESTRY ACTIVITIES</b>	<ul style="list-style-type: none"> <li>Summary of achievement in social afforestation including <u>consultation</u></li> <li>Mobilization of beneficiaries for social forestry activities, training, and any other activities</li> </ul>
5	<b>PROBLEMS</b>	<ul style="list-style-type: none"> <li>Description of problems and difficulties encountered during the reporting period and link them to policy and administrative decisions with remarks</li> <li>Actions taken to resolve problems identified in the earlier report(s), their current status and any outstanding problems and</li> </ul>

Commented [M2]: With whom?

Reporting on Social Forestry		
Sl#	Title	Content
		recommendations for resolving those problems.
6	<b>ACTIVITIES COMPLETED</b>	<ul style="list-style-type: none"> <li>• Description of activities carried out during the reporting period with tables and charts for quantities (achievement and targets) followed by cumulative achievement for each activity</li> <li>• The description have to be made separately for each polder under implementation (if more than one polder under implementation).</li> </ul>
7	<b>WORK SCHEDULE</b>	<ul style="list-style-type: none"> <li>• Target for next reporting period and remaining tasks with timelines for their completion</li> <li>• Comments on targets and work schedule, if any</li> </ul>
8	<b>MISCELLANEOUS</b>	<ul style="list-style-type: none"> <li>• Miscellaneous activities at the request of BWDB and missions attended during the reporting period with particular reference to GPWM, IPSWAM and WMIP guidelines and manuals.</li> <li>• Status of special targets set by pervious missions during the reporting period</li> <li>• Comments on miscellaneous activities.</li> </ul>

**Reporting on Integrated pest management:** JV will provide monthly report to BWDB on the progress in implementing Integrated Pest Management Plan, including any issue that might be hindering progress.

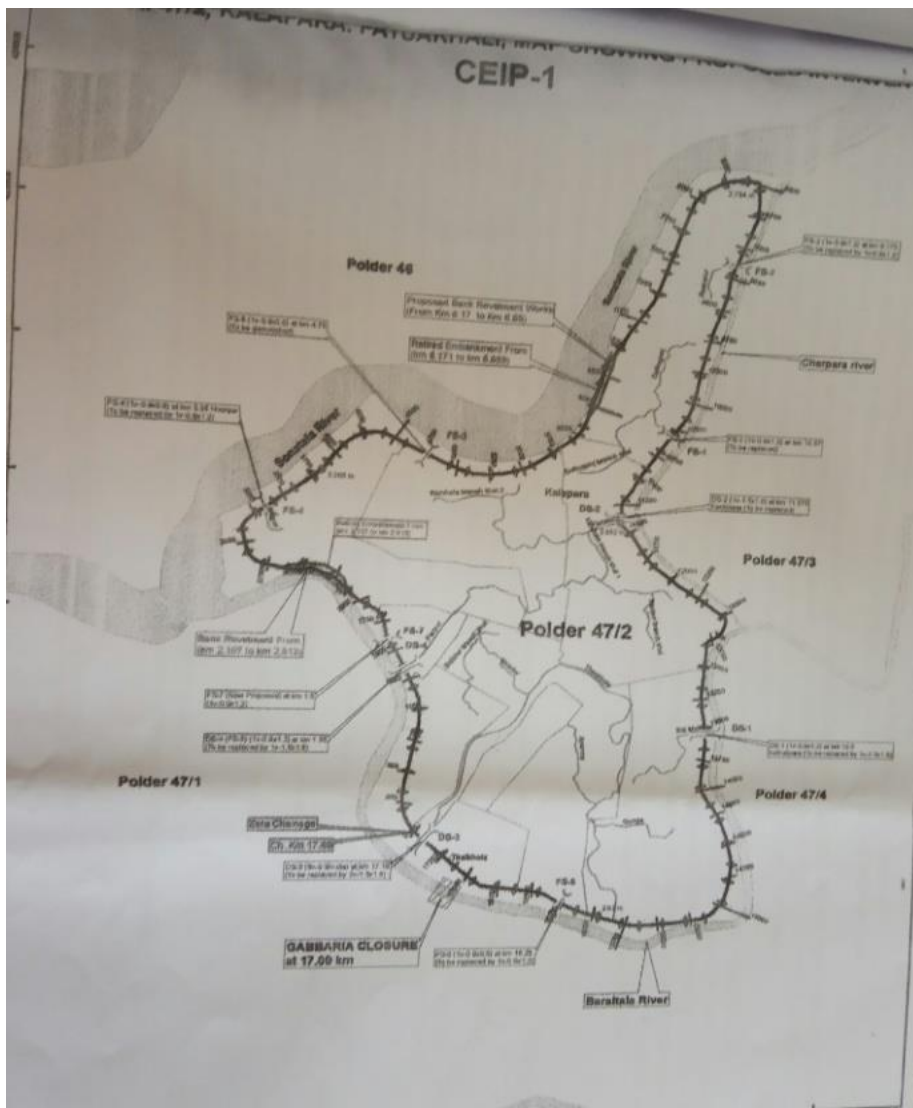
Reporting on IPM		
Sl#	Title	Content
1	<b>INTRODUCTION (Common)</b>	<ul style="list-style-type: none"> <li>• Purpose, objective, scope and background of the Progress Report</li> </ul>
2	<b>PROGRESS AND ACHIEVEMENTS</b>	<ul style="list-style-type: none"> <li>• Summary progress of targeted activities during the reporting period and the achievements</li> <li>• Provide a Bar Chart with Target and Achievement</li> </ul>
3	<b>INPUTS</b>	<ul style="list-style-type: none"> <li>• Physical and financial input during the reporting period and cumulative progress against the allocated quantities and in financial budget.</li> <li>• Comments if any at the end</li> </ul>

4	<b>STATUS OF INTEGRATED PEST MANAGEMENT</b>	<ul style="list-style-type: none"> <li>• Summary of achievement in integrated pest management (IPM) including awareness activities, training, implementing IPSNM techniques. The section should also include the following: applied quantities of pesticides, before and after the Project</li> <li>• increase if any of cropped land after the Project, increase in yield outputs of crops practiced, determining levels of</li> <li>• Pesticide residues in crops, soil and water at regular time intervals, effectiveness of bottom-up participation by the targeted groups, which types of pesticides belong to which I type of crops.</li> </ul>
5	<b>PROBLEMS</b>	<ul style="list-style-type: none"> <li>• Description of problems and difficulties encountered during</li> <li>• The reporting period and link them to policy and I administrative decisions with remarks</li> <li>• Actions taken to resolve problems identified in the earlier report(s), their current status and any outstanding problems and recommendations for resolving those problems.</li> </ul>
6	<b>WORK SCHEDULE</b>	<ul style="list-style-type: none"> <li>• 1 Target for next reporting period and remaining tasks with timelines for their completion</li> <li>• Comments on targets and work schedule, if any</li> </ul>
7	<b>MISCELLANEOUS</b>	<ul style="list-style-type: none"> <li>• Miscellaneous activities at the request of BWDB and Missions attended during the reporting period with particular reference to IPM, and IPSNM guidelines and manuals.</li> <li>• Status of special targets set by pervious missions during the reporting period</li> <li>• Comments on Miscellaneous activity</li> </ul>

#### Chapter 7: Conclusion

According to ToR of the contract, engagement with local communities in the project will be considered positive as to successful implementation of the project's components. Considering this fact, JV will manage and oversee the tasks for social mobilization, participatory scheme cycle management (PSM) and participatory afforestation in relation to the successful implementation of the CE1P-1 on behalf of BWDB. JV already deployed Key Experts with relevant skills and expecting to achieve the goal as per work schedule and deliverables. JV strongly believes that it will be able to successfully complete the journey of implementing the consultancy services for Polder 43/2c, Golachipa Upazila and Poldes 47/2 and r48 at Kalapara Upazila in Patuakhali District.

## Annex 1: 47/2 polder map



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**Annex 3: 43/2 C**

**POLDER: 43/2C, GALACHIPA, PATUAKHALI, MAP SHOWING PROPOSED INTERVENTIONS**

**Key Information: Polder 43/2C**

- Embankment : 25.53 Km
- Drainage Channel : 24.55 Km
- Drainage Sluice : 8 nos.
- Flushing Sluice : 14 nos.
- Slope protection : 0.261 Km
- Bank Protection : 0.50 Km
- Project area : 2753 ha
- Total vent of sluice : 17 vent

**1st Year Programme**

River Bank Protection: 0.50 Km

**Legend**

- PSM
- Drainage Sluice
- Flushing Sluice
- Road RHD
- Road LGED
- Embankment
- Sew-dike Embankment
- Ditching
- Revised Embankment
- Pavement Work
- Slope protection
- Flow

**Scale**

0 0.5 1 Km

**Scale**

Scale 1:50,000

**Notes**

- Km 0.00 to .52 CL: 5.50km new PWD with side slope R/S 1.5 & C/S 1:2
- Km .52 to 13.15 CL: 5.00km new PWD with side slope R/S 1.3 & C/S 1:2
- Km 13.15 to 29.53 CL: 5.50km new PWD with side slope R/S 1.5 & C/S 1:2