

Ministry of Water Resources



Bangladesh Water Development Board

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

Non-Governmental Organization(NGO) Services to Implement (1) Social mobilization with Social Action Plan (incl. setting up WMOs), (2) Social Afforestation, and (3) Implementation of Integrated Pest Management (IPM) Plan for Polder 40/2 & Polder 41/1 in Barguna District under CEIP-1” (Contact No. CEIP-1/A2 & B1/S1-D)



Project Completion Report

(12th May 2019 to 26th February 2021)

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Abbreviation & Acronyms

AGM	Annual General Meeting
BL	Baseline Survey
BWDB	Bangladesh Water Development Board
CEIP	Coastal Embankment Improvement Project
CO	Community Organizer
CST	Construction Supervision Team
DAE	Department of Agricultural Extension
DFO	District Forest Officer
DTL	Deputy Team Leader
DCEO	Deputy Chief Extension Officer
EC	Executive Committee
ECE	Ethical Community Engagement
GB	General Body
GPWM	Guidelines for Participatory Water Management
ICM	Integrated Crops Management
IPM	Integrated Pest Management
IWRM	Integrated Water Resource Management
IPSWAM	Integrated Planning for Sustainable Water Management
IPWM	Internal Polder Water Management
IR	Inception Report
IWM	Institute of Water Modeling
IWMI	International Water Management Institute
JPMC	Joint Polder Management Committee
MoU	Memorandum of Understanding
M&E	Monitoring and Evaluation
NGO	None Government Organization
O&M	Operation and Management
PWRM	Participatory Water & Resource Management
PWM	Participatory Water Management
PSM	Participatory Scheme cycle Management
PD	Project Director
SAP	Social Action Plan
TL	Team Leader
TOC	Theory of Change
TOF	Training of Facilitators
TOT	Training of Trainers
WMA	Water Management Association
WMO	Water Management Group
WMIP	Water Management Improvement Project
UP	Union Parishad
XEN	Executive Engineer (BWDB)
WB	World Bank

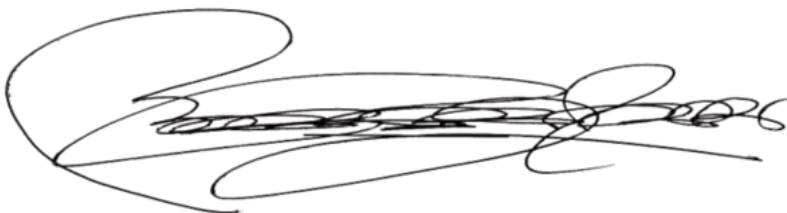
Executive Summary

This is the Project Completion Report of Shushilan prepared for the month of 12th May 2019 to 26th February 2021 on the NGO services for social mobilization, social afforestation and integrated pest management under the “Non-Governmental Organization(NGO) Services to Implement (1) Social mobilization with Social Action Plan (incl. setting up WMOs), (2) Social Afforestation, and (3) Implementation of Integrated Pest Management (IPM) Plan for Polder 40/2 & Polder 41/1 in Barguna District under CEIP-1” (Contact No. CEIP-1/A2 & B1/S1-D)”. As per the “Contract Agreement (**Contact No. CEIP-1/A2 & B1/S1-D**) signed with the Bangladesh Water Development Board (BWDB) on **02 May 2019**, Shushilan is working for BWDB in Barguna District. The activities under the NGO services are **(a)** Social mobilization including setting up water management organizations (WMOs) for introduction of ‘Integrated Water Resources Management (IWRM) practices through preparation of Social Action Plan, **(b)** Implementation of afforestation program especially in the fore-shore areas under social afforestation approach, 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 these activities, and, thus, Shushilan is sought to oversee and manage this work on behalf of BWDB.

Shushilan is one of the NGOs providing the strategic services in the command areas of polders 40/2 [21 villages, 18 flashing sluice and 12 drainage sluices under the Patharghata Sadar & Charduani union and Patharghata Pawrashava of Patharghata upazila] and 41/1 [28 villages, 19 flashing sluice and 10 drainage sluices under the Aylapatakata & Burirchar union and Barguna Pawrashava of Sadar upazilas in Barguna District.

Shushilan has implemented the project activities under social mobilization & water management organization, social forestry and integrated pest management components. We have formed 28 Water Management Groups (WMG) and 2 Water Management Associations (WMA) successfully that are the core of this project. All WMG and MWA are registered and functioning well. For sustainable embankment management, we have jointly with forest department completed social afforestation group, committee formation and plantation. To promote environment-friendly and pesticide-free agriculture, we have implemented diverse activities under IMP component also. It is mentioned that 200 demonstrations support on 7 technologies has given significant succession to farmers to reduce production cost and expected production harvest. We realized that more training, demonstration support, livelihood support and facilitation needed to continue for the overall sustainability of WMOs and their connected IPM, afforestation, and water structures management.

The purpose of this report is to provide the detail information of the project. The report also reflects the progress of targeted plan, results, lesson learned and overcoming process. This report focuses on the implementation of the all-planned activities with the co-operation of lead organization and achieving the results of the overall and specific objectives towards progress.



Mostafa Nuruzzaman
Chief Executive

Chapter-01: Introduction

1.1 Background/Context:

The negative impacts of climate change make Bangladesh is one of the most vulnerable countries in the world. In the last two decades or so, increased frequency of floods, droughts, waterlogging, salinity intrusion, river erosion and cyclones caused extensive economic damage and impacted livelihoods of the poor and marginal population who have been living in the fragile coastal areas of Bangladesh. Extreme weather events, and monsoonal variability and sea level rise (SLR) induced salinity have forced to change the traditional cropping patterns. In many part of the coastal region crop cultivation has been replaced by saline-water shrimp farming which occurred serious impact on livelihood and food security of marginalized population. In the likely scenarios of climate change and SLR, the situation might aggravate even more resulting in huge out migration from the fragile coast. Due to climate change induced accelerated natural calamities like river erosion, salinity and cyclone, the bottom of the society is encountering rapidly increasing number of climate Refugees”.

About 25% of people live in the coastal areas, but 38% live in below poverty line (BBS 2014). There are 139 coastal polders in Bangladesh. The coastal *Polders in Bangladesh* were constructed in the 1960s; some are renovated in 1970's and 1980's.

Polder 40/2 is situated in Patharghata Upazila of Barguna district & polder 41/1 is situated in Barguna Sadar Upazila of Barguna district in the South-west coastal region of Bangladesh. Both polders were constructed during the 1960s and the early 1970s by the support of the Bangladesh government and the World Bank to protect the people and agriculture of the polders and crops from tidal inundation and saline water intrusion and release a large extent of land for permanent agriculture. Supplementary irrigation and indirect road communication development was also another vision in coastal polder development project. Both polders are also renovated by the Bangladesh Water Development Board. These polders are also considered vulnerable due to impacts of climate change, environmental hazards and human interventions. In addition to breaching of the embankment due to cyclones, siltation of peripheral rivers surrounding the embankment caused the coastal polders to suffer from waterlogging, which leads to large-scale environmental, social and economic degradation. On the other hand, poor maintenance and inadequate management of the polders have also contributed to internal drainage congestion and heavy external siltation. As a result, in some areas soil fertility and good agriculture production are declining seriously because of waterlogging and salinity increase inside polders. These conditions are intensively affecting the vulnerable community. Considering these, PMU, Bangladesh water development board (the client) and **Shushilan** (the consultant organization) signed a contract on 2nd may 2019 for providing NGO services for implementation of (1) social mobilization with social action plan (including set up WMOs) (2) social afforestation and (3) implementation of Integrated Pest Management (IPM) plan for polders **40/2 & 41/1 in Barguna district** under the contract package no CEIP-1/A2 & B1/S1-D.

1.2 Project basic information:

Project name	“Non-Governmental Organization(NGO) Services to Implement (1) Social mobilization with Social Action Plan (incl. setting up WMOs), (2) Social Afforestation, and (3) Implementation of Integrated Pest Management (IPM) Plan for Polder 40/2 & Polder 41/1 in Barguna District under CEIP-1”			
Contract No.	CEIP-1/A2 & B1/S1-D.			
The contract Price	30307215 BDT			
Lead organisation	Bangladesh Water Development Board			
Project Implementing Partner	Shushilan			
Donor	The World Bank			
Geographic areas	District	Upazila	Paurashava	Unions
	Barguna	Barguna Sadar and Patharghata	Barguna Sadar and Patharghata Paurashava	Burirchar, Patharghata Sadar and Charduani
Duration	First contact (12 th May 2019 to 15 th November 2020) Second contact (16 th November 2020 to 26 th February 2021)			
Total-direct beneficiaries	14658 people (70% male and 30% of women)			
Beneficiaries’ types	landless, marginal farmers, fisherman, women management households, ethnic minority people, natural resource depended)			

1.3 Project Objective:

Is to support Bangladesh Water Development Board (BWDB) through managing and overseeing tasks for social mobilization, participatory scheme cycle management (PSM), participatory afforestation and integrated pest management practices in relation to the successful implementation of the CEIP-1.

Specific objective 1: 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

Specific objective 2: Implementation of afforestation program especially in the fore-shore areas with ecologically appropriate species by adopting social afforestation approach

Specific objective 3: Implementation of Integrated Pest Management (IPM) and Integrated Crops Management (ICM) practices

1.4 Target vs Achievement:

SL#	Item of activities as mentioned in the contract agreement	Target	Progress up to February 2021
	Project Inception		

SL#	Item of activities as mentioned in the contract agreement	Target	Progress up to February 2021
1	Agreement of the project	1	100%
2	Official set-up (Barguna + Patharghata)	2	100%
3	Project team confirmation and mobilization	1	100%
4	Inception Workshop	1	100%
	Social mobilization of community groups including set up WMOs		
5	Initial Planning and Survey (2 polders)	2	100%
6	Collection of infrastructure list (2 polders)	2	100%
7	Define Water Management Units	1	100%
8	Conduct household census survey (2 polders)	2	100%
	Formation of WMOS		
9	Motivation campaign and conduct Polling	28	100%
10	Prepare group formation modalities	1	100%
11	Prepare stakeholder lists	2	100%
12	Define WMG's tasks & disseminate group formation activity	1	100%
13	Formation of WMGs	28	100%
14	Formation of WMAs (2 polders)	2	100%
	Knowledge Development/ Development of training module/Training Curriculum		
15	Module: 1 Group management (Role & responsibilities and constitution) of WMOs	1	100%
16	Module: 2 Accounts and financial Management of WMOs	1	100%
17	Module: 3 Participatory planning of WMOs and gender mainstreaming	1	100%
18	Module: 4 Alternative livelihood/IGAs of WMOs	1	100%
19	Module: 5 IPM and ICM	1	100%
20	Module: 6 Schemes development and implementation	1	100%
21	Module: 7 TOT on establishment of WMOs, MMA	1	100%
22	Module: 8 Participatory Social monitoring	1	100%
23	Module: 9 Afforestation	1	100%
	Legislation Process		
24	Registration of WMOs under cooperative act/BWDB (28 WMGs and 2 WMA)	30	100%
25	Social monitoring and evaluation	1	100%
	Capacity building training/workshop		
26	1.Group management (Role & responsibilities and constitution of WMOs for One day (22 batches)-660 participants	660	100%
27	2. Accounts and financial Management of WMOs for One day (7 batches) 210 participants (each batch 30 person)	210	100%
28	3. Participatory planning 1 day (26 batches) 672 participants (each batch 28 person)	672	100%
29	4.Schemes development and implementation (1 day) (36 batches) 400 participants	400	100%
30	5.bAlternative livelihood of WMOs for One day (24 batches) 520 participants	520	100%
31	6. IPM training one day (12 batches) 364 participants	364	100%
32	7. Participatory social monitoring (12 batches) 364 participants	364	100%
33	8. Establishment of WMOs/WMA for BWDB and community organizers (3 days, 30 participants each=total 90 participants	90	100%
34	9. Capacity building of Afforestation for One day (6 batches) 132 participants	132	100%

SL#	Item of activities as mentioned in the contract agreement	Target	Progress up to February 2021
	Community awareness and mobilization		
35	Court yard meeting with WMGs (bi-monthly)	9	100%
36	Picture song & drama –water management, afforestation, IPM (15 shows)	15	100%
37	Exchange visit (total participants 180)	180	100%
	Reporting on social mobilization		100%
38	Monthly progress report	20	100%
39	Quarterly progress report	7	100%
40	Project Completion/final Report	1	100%
	Implementation of Social Afforestation		
41	Half yearly meeting for linkage development with relevant government departments (at Upazila level) 6 meetings	6	100%
42	Monthly meeting with social forestry groups (care takers)	21	100%
	Afforestation plan		
43	Identify land ownership		100%
44	Beneficiary selection for social afforestation		100%
45	Awareness raising (formal & informal meeting, group meeting and consultation, learning by doing)		100%
46	Participatory monitoring of afforestation		100%
47	Assist the beneficiaries for livelihood (IGAs support 520 HHs)		100%
	Reporting on social afforestation		
48	Monthly progress report	20	100%
49	Quarterly progress report	7	100%
50	Project Completion/final Report	1	100%
	Implementation of IPM		
51	Awareness and dissemination (picture song and drama, group meetings, days observation)		100%
52	Implement of IPM including plant and soil nutrient management (Group meeting and learning by doing)		100%
53	Pesticide management (demonstration/field trial)	200	100%
54	IPM report (monthly/quarterly/final report)		100%
	Reporting (overall project)		
55	Inception Report	1	100%
56	Monthly Progress Report	20	100%
57	Quarterly Progress Report	7	100%
58	Final Report/Completion Report	1	100%
59	Survey report	1	100%
60	Financial Progress report		100%
	Knowledge development/workshop		
61	Development of flip chart on IPM/ICM and WMOs (3 types)		100%
62	Picture drama materials -4 issues (water, afforestation, IPM and gender)		100%
63	Video Documentary	1	100%
64	Project brief (with printing 1500 copies in Bangla and 300 copies in English)		100%
65	Communication materials (poster Bangla 5000, Leaflet Bangla 5000, sticker-Bangla 2000)		100%
66	Lesson Learned Workshop	1	100%

Chapter-02: Social Mobilization and Water Management Organization

Social mobilization is the process of bringing together all societal and personal influences to raise awareness, assist in the delivery of resources and services, and cultivate sustainable individual and community involvement. Under this contract Shushilan mobilize the polder areas community by consisting the WMGs. Under this Social Mobilization and Water Management Organizations component, Office set up, staff mobilization, inception workshop, baseline survey, define water management units, motivation & campaign, WMG & WMA ad-hoc committee formation, membership enrollment, WMG & WMA EC committee formation, WMG & WMA formation, WMG & WMA Registration, overall consultation, training modules development, training on establishment of WMOs, training on group management, training on accounts & financial management, training on participatory planning and gender mainstreaming, training on alternative livelihood, training on scheme development & implementation, training on participatory social monitoring, courtyard meeting, exchange visit, participatory social monitoring and evaluation, picture drama show were the planned activities as per contract.

2.1 Office set up :

After contract signing, Shushilan set up two field offices in Barguna district and Patharghata Upazila for executing the assigned services in polder 40/2 and polder 41/1. Location of Barguna office was in Promi Villa, College road, Barguna and Patharghata office was in Akon Villa, Hospital road, Location of the office place is convenient to communicate with district and Upazila level stakeholders (such as local administration, BWDB office, and others) and field level communication of the polders. The field office of Barguna is equipped with necessary furniture comprises of Arm Chair, Table, Rack, File Cabinet, Almery, computer with backup support and other facilities provided to staff who were doing the job in a good environment free from noise and dust. It was neat and clean, ensures a healthy working condition, and keeps a good impression on the mind; moreover, the technological amenities like electricity, generator Wi-Fi, telephone, printing, binding, and scanning were available for personnel to use. The office had sufficient room to sit and light to work. Another field office was situated in Patharghata. This office was also equipped like the Barguna office.



2.2 Staff mobilization:

Shushilan recruited all key and non-key professionals including Team Leader-01, Institutional Specialist-01, Social Forestry Specialist-01, Agronomist-01, Integrated Pest Management Specialist-01, Admin Accounts Officer-01, Office Assistant-01, Community Organizer-08, Peon-2, Guard-01 and Cleaner-01 (Total staff-19) who were endowed to carry out Social Mobilization, Social Afforestation & Integrated Pest Management services of CEIP-1 in the project area.

2.3 Inception Workshop:

Shushilan organized a project inception workshop with the support of Bangladesh Water Development Board and funded by World Bank. An ice-breaking of participants conducted through the introduction of participants by themselves to all by the facilitation of Md. Shahin Islam, Deputy Team Leader of Shushilan. The formal project inception workshop started with the registration of all participants. The honorable Executive Engineer of BWDB Barguna was presided the inception workshop. Rabiya Asfar Saima Nejarat Deputy Collector, Barguna District Administration participated as chief guest in the workshop on behalf of ADC general, Barguna.



- Venue: Paurasava Auditorium, Barguna
- Date: 07 August, 2019
- Number of participants: 95 (Male-86 Female-8)

Welcome speech:

After introducing and inauguration of the inception workshop, Mustafa Bakuluzzaman, the Project Team Leader delivered the welcome speech. First, he had given thanks to all for effective participation. He said we are very much glad to inform all that we have started our project interventions with the support of the Bangladesh Water Development Board (BWDB) in Barguna district under coastal Bangladesh. The goal of this project is to increase the resilience of the entire population of the polder 40/2 and 41/1 and the objective is to support Bangladesh Water Development Board (BWDB) through managing and overseeing tasks for social mobilization, participatory scheme cycle management (PSM), participatory afforestation and integrated pest management practices in relation to the successful implementation of the CEIP-1. Actually, through this project we will work in three components such as (1) Community 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 (2) Afforestation program especially in the foreshore areas and (3) Integrated Pest Management (IPM) and Integrated Crops Management (ICM) practices. We are committed to implementing the project interventions with quality. We expect that all stakeholders will support us for smooth operation and stay with coastal embankment improvement activities.

Project Brief Sharing:

After the welcome speech, Mustafa Bakuluzzaman, the Project Team Leader of Shushilan shared project details through a PowerPoint presentation. He shared organization background shortly such as Shushilan a Bengali Name Means Good Practices. A Group of Enlightened Committed and Enthusiastic Youth Established Shushilan in 1991, fundamental philosophy, legal status, vision, mission, partnership, CATEGORIES OF THE STAFFS BASED ON THEIR SKILLS, cells of shushilan, future & present working area, program at a glance. Then he shared project title, goal, objective, specific objectives, working area, beneficiaries, budget, duration, organogram, stakeholders, major activities, community mobilization process, the formation process of water management organizations, integrated pest & crop management, afforestation and alternative livelihood options in detail. He also said that about 25% of people live in the coastal areas, but 38% live in below poverty line

(BBS 2014). There are 139 coastal polders in BD. The coastal Polders were constructed in the 1960s; some are renovated in the 1970s and 1980s. But, shrimp production has started in the 1980s through the illegal use of some polders. Through his presentation, all participants get a clear assumption about the CEIP-1 project. Before closing his presentation, he expects that our holistic efforts and participatory approach will strengthen and improve coastal embankment and develop polders based people's livelihood also. Then he requests participants to take part in open discussion in the event.

Open Discussion:

Samsuddin Khan, Executive Director, Onnasha, Barguna said "Most welcome to Shushilan for taking this project. After SIDR Shushilan starts its development journey in Barguna and still working with reputation. We also expect Shushilan will work in the future in Barguna. Shushilan started a new development initiative named the coastal embankment improvement project. To be successful also for the better implementation of CEIP we will provide all kinds of support. So far I know to enrich the agricultural development coastal embankment and sluice gates were constructed in our coastal area. I think that was an unplanned project. Still, the sluice gate is operating in an unplanned way. When our farmers need irrigation for cultivation they are not getting water. On the other hand, when they feel dewatering due to waterlogging to save their crops due they are suffering. Through the Team Leader presentation, we informed that CEIP-1 will engage the community for proper operation, manage and maintenance of existing newly constructed sluice gates. So, it is a new hope for coastal farmers and agriculture development. We also expect CEIP-1 will contribute to real development in our coastal area".

Moinuddin Moina, UP member, Burirchar, Barguna said, "Thanks to Shushilan for taken this project in my union. After SIDR, Shushilan is working in Barguna Upazila for our development. Through this program, we have informed that CEIP-1 will work about IPM/ICM which is very important in my union farmers. My union has a reputation and popularity for vegetable cultivation. After family consumption, most of the farmers are selling their products in Barguna Town and earning cash money. I would like to request to Shushilan to IMP/ICM on a large scale for the farmer's awareness in my union. We will provide all support as stakeholders".

Fotima Nasrin, UP member, Burirchar, Barguna said, "Due to one new sluice construction in my area people are suffering. The canal is being drained and the people are unable to use canal water. If you help us, the people in our area can live well. They are not able to use the water because the water is so wasted. Mosquitoes are flying in the vagina and the fish are dying. We have to arrange for the water to be removed very quickly. I conclude my statement by pointing to the water development board to help us with the issue".

Abu Bokker, UP member, Patharghata Union, Barguna said, "Due to SIDR 28 people lost their lives. Our area is most vulnerable due to river erosion. Recently China Company is constructing some new sluice and repairing some inactive sluice also. Through this program, I am requesting to honorable the ADC general and executive engineer to take initiative to ensure the on-going quality. To strengthen the embankment we would like to request the authority. Shushilan has reputation in our Upazila also. As a reputed organization, we request to Shushilan to maintain and continue the best quality".

Ayrin Akther, UP member, Aylapatakata, Barguna said, "I am living Jangalia village under this union. The Payra River passed near the village. Due to river erosion, hundreds of houses have broken. Thousands of people are migrated from the area. They are living like a vagabond. I am requesting the authority to take initiative to protect river erosion as soon as possible. Otherwise, due to erosion big disaster will be happened. Because the rest of the villages are at risk".

Golam Mostafa Chowdhury, correspondent, Patharghata Press Club said, "Shushilan is doing enough work at Patharghata. Some of the works are exemplary. We are very happy over Shushilan. I would tell the water development board that the sluice gates were made would not be for some people, which would have been in the public interest by some people

occupying it. For this reason, I would tell the executive engineer that action should be taken to ensure that all are given, not in the middle of one”.

Anowar Hossain Monowar, correspondent, Barguna Press Club said, “Whether the sluice gates in our Barguna are operational? Some gates are being closed for personal use. And the slums are closing the gates if they have an illegal installation of land with it. And if the gates are closed like this, it will be a big problem for the farmers. Today, I thank Shushilan for giving us the opportunity to speak through this event. Please open the closed sluice gates as possible as. I would like to request to BWDB to properly manage and maintain the sluice gates”.

Monir Hossain Kamal, President Bangladesh Television News Forum, General Secretary Barguna District Civilian Conservation Committee said, “Social Forestry is very good, I enjoy a benefit in social forestry. One of my family members was a member of the social forestry committee but not get the benefit after selling the tree. No people get the benefit. Will this forestry again be it just a forest department or will ordinary people just be named? My request to Shushilan is that the forest department officials are here, not only in the name of social forestry, but the result must be shown. Then the sustainable embankment will be obstructed”.

Matiur Rahman, Director of the Department of Agriculture, Barguna said, “Another name of water is life and also another name of water is death. A few days ago, one sluice gate has been constructed in Burirchar but where it was broken for a while. It had no repairs. I would say that what I create will have to be done well. But if we do not study the problems that exist in the bottom of the canal and in the maxim area, then the problem persists. That is why it is important to have a good plan. Where the silk has been raised, the water development board will arrange its water so that its water can flow out. By building embankment, the palm tree will hold the ground firmly on it and the barrage will be strong. I finish my request by asking everyone to plant trees, thank you everyone”.

Freedom fighter Abdul Muttaleb Mridha said, “We have liberated the country after 9 months of the war, we have dreamed of a beautiful Bangladesh, but now it is filled with drugs and corruption here. We didn't fight for that. We wanted beautiful Bangladesh. Whoever has the drug, that home is the cry of a lifetime. Let us collectively protect the country, build the golden Bangla of Bangabandhu. The country is moving towards development. The NGOs are behind this. Shushilan works much better. The way road development is being self-sufficient in food is reducing our land. Yet there is a shortage of food. Now that the canal is not filled with irrigation, it is irrigated so it has become cropland. Proceed with development by fixing water management”.

Ghiyasuddin Ahmed, Consultant, Coastal Embankment Improvement Project, Thanks to all, the people will benefit if this project is implemented. Trees will be planted by the Forest Department and Shushilan will be monitored. If not Wabdda (BWDB) today, the area would not be there at all, only water and water. So plant trees on the top of the embankment and make it strong. With the concerted efforts of all of us, this area will now be developed”

Ujjwal Kumar Sen, Executive Engineer of BWDB Barguna said, “All of you know that there are 22 polders in the water development board. Under these polders, there is a 965 Km embankment. It is the responsibility of the Union Parishad to oversee the sluice gates. In the context of our societies, if anyone occupied, I would not be able to see it sitting in Barguna. We have to create social conditions. We have to remove the illegal establishment. This is possible if the local people protest it. The point here is that there is no sustainable embankment here, but the amount of investment needed to build a sustainable embankment is nothing but ours. Other countries of the world have established permanent sheep and have planted trees there. The banana tree is a maroon tree for sheep. This property will not develop here unless I think it is a barrier. You have to take care of it. Those who set you up will know from us whether this place is vulnerable to erosion. Here you will understand the canal according to the canal design. If you see anything bad, let us know by telephone. Finally, thank you to Shushilan for organizing this event nicely”.

Participants Recommendation:

- Maintain quality implementation of the project interventions.
- Coordination and cooperation with the line stakeholders.
- Continue quality work by Shushilan in Barguna.
- Effective WMG formation in the catchment area.
- To ensure proper manage and maintenance of the sluice gates and embankment.

Closing:-At the end of the program, the president of the project inception workshop (the honorable XEN of Barguna) has declared to close the event and give thanks to all for active participation.

2.4 Baseline Survey:

Shushilan has conducted baseline a survey under the project in Patharghata (9148 HHS) and Barguna Sadar Upazila (8914 HHS) successfully. The baseline survey has been conducted to have a better understanding of the project beneficiaries' household about their present the situation according to the project objective. So the baseline report focused on household's major occupation, income status, productive asset, and existing agriculture practice, the interest of water management organization development, social afforestation & alternative livelihood opportunities.



The findings of the baseline survey under polder 40/2 in Patharghata reveal that, majority of the households have 1 working member more than 18 years in the polder. The level of education among the household heads dominated by mainly primary education and secondary education in the polder. The occupational status of the household heads reflect the rural characteristics which dominated by fishermen, farmers and forest resource users. The majority of houses of the respondents are made with wood and tin. The main drinking water sources regardless of polder are pond, rain water and tube well. More than 70% households in the polder are using sanitary toilets. The scenario of utility services reveals that more than 90% households have electricity and solar power and majority of the households consume fuel from fire wood though a good number of respondents consume from LNG gas. Majority of the households have monthly income in between BDT 1001-11000 and BDT 11001-21000. Most of the households in this polder classify them as middle class to poor and even hardcore poor. The households have got information mainly through mobile phone and also limited households have internet access and dish connection. The food security condition is not very well because more than one fourth households have food deficit in the project area. The households have different level of natural assets including land, livestock and poultry. Among the different physical assets majority of the households have cell phone and some farmers have power tiller. The existing water management facilities are not satisfactory because there is no water management organization and lack of community engagement through membership of WMO. However, majority of the respondents are interested to be the member of WMO. More than half of the respondents have mentioned that their sluice gates are inactive, not managed and irregular. The main reason for irregular sluice management are inactive sluice, inactive canal and private occupancy of sluice gate. Because of irregular sluice management respondents have mentioned that they do not get

the necessary irrigation water, the salt water cannot be controlled and waterlogging problem. The land acquisition scenario shows that land have been acquired from 37.59% households in Patharghata, 15.35% households in Charduani but the compensation scenario is not good in this polder. The current embankment situation good and fairly good though a good percentage of respondents have mentioned about bad condition which required rebuilt of the embankment. Most of the households have been mentioned about the benefit they get from the embankment. The main benefits of embankment are protection from tides, protection from salt water in the tide and control the salinity of the salt water. The disadvantages of the embankment are filling up of canal due to reduced water level, decreasing the amount of natural fish and creation of water bodies during the rainy season. Less than half of the respondents said that they are getting water for agriculture from the sluice gate. In Charduani 57.58% respondents have mentioned that they are not getting water for agriculture from the sluice gate. In polder 40/2 around 14% respondents have mentioned about the existence of IPM clubs in the project area. The main problems related to agriculture are saline water and water logging especially in Charduani union. The other problems are natural disaster, lack of adequate irrigation, and lack of modern agricultural technology. In this project area there is dominance of using surface water for irrigation than the ground water. More farmers are using organic pesticides rather than chemical pesticides in polder 40/2. The farmers who are using organic pesticides use mainly the compost fertilizer, cow done and ash as organic pesticides. There are BWDB/Khas land and most of the respondents proposed to use khas land for re-excavation of canal and private lease. On the other hand, some respondents have proposed for integrated agricultural farm. Only more than 14% in polder 40/2 respondents have knowledge on social forestry. More than 96% respondents of polder 40/2 don't know about the social forestry program and more than 99% respondents have no knowledge on benefit sharing of social forestry. However, there is no evidence of getting hurt by social forestry. Very limited respondents have been found as the member of social forestry but most of the respondents have interest to be the member of social forestry and also interested for guard service to protect social forestry. The respondents have suggested for new social forestry which include ensuring community participation, increasing number of guard, ensuring accountability and providing guard honorarium. In polder 40/2 more than 89% respondents think that they need training for skill development. A notable number of respondents are interested to join in an alternative profession. The main reason for choosing alternative profession are income in the current profession is not enough, they want to increase their income and there is no work opportunities. Also the alternative work opportunities is a vital reason for this. More than 87% respondents in polder 40/2 are interested to get training for alternative profession. More than 90% respondents have mentioned that they don't have enough capital to get alternative profession in polder 40/2 polders so the need capital to get alternative profession.

The more households of polder 40/2 have been found dependent on sundarbans. The reasons for dependency on sundarbans are lack of other job opportunities, their skill are less and they can work in own time. Only 33 respondents of Patharghata union want to change dependency on sundarbans because work guarantees are low, another 33 respondents want to change because work is at risk of life and 30 respondents want to change because family is not guaranteed. Finally, recommendations have been provided based on the findings of the baseline survey for vibrating the socio-economic condition and water management system in the project area.

On the other hand, the findings of the baseline survey under polder 41.1 in Barguna Sadar reveal that, majority of the households have 1 working member more than 18 years in the polder. The level of education among the household heads dominated by mainly primary education and secondary education in the polder. The occupational status of the household heads reflect the rural characteristics which dominated by fishermen and farmers. The majority of houses of the respondents are made with wood and tin. The main drinking water

sources regardless of polder are pond, rain water and tube well. More than 70% households in the polder are using sanitary toilets. The scenario of utility services reveals that more than 90% households have electricity and solar power and majority of the households consume fuel from fire wood though a good number of respondents consume from LNG gas. Majority of the households have monthly income in between BDT 1001-11000 and BDT 11001-21000. Most of the households in this polder classify them as middle class to poor and even hardcore poor. The households have got information mainly through mobile phone and also limited households have internet access and dish connection. The food security condition is not very well because more than one fourth households have food deficit in the project area. The households have different level of natural assets including land, livestock and poultry. Among the different physical assets majority of the households have cell phone and some farmers have power tiller. The existing water management facilities are not satisfactory because there is a few water management organization and lack of community engagement through membership of WMO. However, majority of the respondents are interested to be the member of WMO. More than half of the respondents have mentioned that their sluice gates are inactive, not managed and irregular but half of the respondents have mentioned about the regular management of sluice gate. The main reason for irregular sluice management are inactive sluice, inactive canal and private occupancy of sluice gate. Because of irregular sluice management respondents have mentioned that they do not get the necessary irrigation water, the salt water cannot be controlled and waterlogging problem. The land acquisition scenario shows that land have been acquired from 23.35% households in Burirchar, 21.16% households in Barguna, 11.14% in Aylapatakata. The current embankment situation good and fairly good though a good percentage of respondents have mentioned about bad condition which required rebuilt of the embankment. Most of the households have been mentioned about the benefit they get from the embankment. The main benefits of embankment are protection from tides, protection from salt water in the tide and control the salinity of the salt water. The disadvantages of the embankment are filling up of canal due to reduced water level, decreasing the amount of natural fish and creation of water bodies during the rainy season. Less than half of the respondents said that they are getting water for agriculture from the sluice gate. More than 78% respondents said that they are getting water for agriculture from the sluice gate in the polder 41/1. In polder 41/1 about 34.51% respondents have mentioned about the existence of IPM clubs in the project area. The main problems related to agriculture are natural disaster, lack of adequate irrigation, and lack of modern agricultural technology. In this project area there is dominance of using surface water for irrigation than the ground water. The farmers who are using organic pesticides use mainly the compost fertilizer, cow done and ash as organic pesticides. There are BWDB/Khas land and most of the respondents proposed to use khas land for re-excavation of canal and private lease. On the other hand, some respondents have proposed for integrated agricultural farm. More than 33% in polder 41/1 respondents have knowledge on social forestry. More than 99% respondents of polder 41/1 don't know about the social forestry program and more than 99% respondents have no knowledge on benefit sharing of social forestry. However, there is no evidence of getting hurt by social forestry. Very limited respondents have been found as the member of social forestry but most of the respondents have interest to be the member of social forestry and also interested for guard service to protect social forestry. The respondents have suggested for new social forestry which include ensuring community participation, increasing number of guard, ensuring accountability and providing guard honorarium. In polder 41/1 about 71.82% think that they need training for skill development. A notable number of respondents are interested to join in an alternative profession. The main reason for choosing alternative profession are income in the current profession is not enough, they want to increase their income and there is no work opportunities. Also the alternative work opportunities is a vital reason for this. More than 75% respondents in polder 41/1 are interested to get training for alternative profession. More than 90% respondents have mentioned that they don't have enough capital to get alternative profession in the polder so

the need capital to get alternative profession. Finally, recommendations have been provided based on the findings of the baseline survey for vibrating the socio-economic condition and water management system in the project area. Shushilan has submitted polder wise final baseline report to the project management unit of Bangladesh Water Development Board. Besides this, implemented the project activities to develop the vibrating the socio-economic condition and water management system in the project area based on the baseline survey recommendations.

2.5 Define Water Management Units:

Shushilan demarcated the water management units with the help of BWDB Barguna office & BWDB Barisal office. 40/2 & 41/1 polders are divided into 22 water management units in considering geographical location as per BWDB infrastructure & administrative boundary. But six water management group is increased in filed operation on the demand of local people, chairman & geographical location. Shushilan demarcated total number of 28 water management units (WMGs) under 40/2 and 41/1 polder. As per BWDB instruction, with the support of M.Monirul Alom Sarkar, Deputy Chief Extension Officer and Shushilan CEIP team visited the both polder area with map. From morning to afternoon, the whole team observed every FS & DS structures and its surrounding area and discussed with community people for better understanding. After visiting the both polder area, the team remarked WMG unit area in the map through the guideline and supervision of M.Monirul Alom Sarkar of BWDB and Mustafa Bakuluzzaman, the team leader of Shushilan.



Shushilan also conducted total number of 28 consultation meeting on water management units area demarcation with the catchment area people for justification. People from different occupations from both polder area participated in the meeting and justify their catchment area in the map for better operation and management.

2.6 Motivation and campaign:

Shushilan implemented huge motivation and campaign works for mass people awareness about water management group's formation and its importance including adaptive agriculture & afforestation. Before organized the general meeting for water management group

formation, Shushilan conducted motivation campaign and conduct polling activities such as miking, posturing, social mapping, field visit, informal discussions, communication with the community people, Union Parishad authority and social organization etc.



After motivation and campaign, Shushilan facilitated to form water management groups as per participatory water management policy 2014.

2.7 Membership enrollment:

After ad-hoc committee formation, membership enrollment was another important task for water management group. A total number of 28 ad-hoc committee members worked to enroll membership for their water management group through the facilitation of community organizer. The project Team Leader and Deputy Team Leader monitored the membership enrollment activity effectively. Before executive committee formation, total 7582 members (Male-4804, Female-2778) under polder 40/2 and 7076 members (Male-3945, Female-3131) under polder 41/1 has been enrolled within 28 water management groups.

2.8 WMG and WMA ad-hoc committee formation:

In the project period, Shushilan completed total number of 28 WMG and 2 WMA ad-hoc committee formations under polder 40/2 & 41/1. To form every ad-hoc committee, Shushilan organized ad-hoc committee formation meeting. Through the publicity and communication with the community people, Union Parishad authority, forest department, BWDB Barguna, Barishal & Dhaka, DAE, Upazila administration and social organization, Shushilan organized a meeting to form an ad-hoc committee. The meetings has been conducted by the facilitation of Team Leader, Deputy Team Leader and the team of Shushilan. In the meeting, Team Leader and Deputy Team Leader of Shushilan discussed the CEIP-1 project goal, objectives and interventions in the polder area. In this meeting, Md Masud Karim, Chief Extension Officer of BWDB, Mohammad Monirul Alam Sarker, Deputy Chief Extension Officer of BWDB. XO, consultants, Upazila & Union Parishad Chairman has participated and facilitated in general meeting to form ad-hoc committee under polder 40/2 & 41/1 in Patharghata and Barguna. In the meeting, they discussed the ad-hoc committee formation process, role and

responsibilities of ad-hoc committee, election committee and management committee in details.



Finally, the participants formed their ad-hoc committee as per rule with the combination of 5 members and named their water management group successfully.

2.9 WMG and WMA formation:

Shushilan facilitated to form the WMG and WMA executive committees through election committee under the polder 40/2 and 41/1. At first, ad-hoc committee, formed election committee to conduct election. Then election committee followed water management rule 2014 for executive committee formation process. The election committee maintained some steps for WMG and WMA executive committee formation such as nomination papers sale, submission of nomination papers, publication of preliminary draft list after selection and selection of nomination papers, submission of appeal against canceled nomination, hearing on appeal and publication of final valid list, allotment of last date and symbol of withdrawal of candidature. Finally, election committee has formed WMG and WMA executive committee with the combination of 12 members.



Through CEIP-1, Shushilan has formed 28 WMGs and 2 WMA under polder40/2 and 41/1 in Patharghata and Barguna Sadar.

2.10 WMG registration:

Shushilan, prepared WMGs registration papers through the supervision and guideline of Deputy Chief Extension Officer of Bangladesh Water Development Board, Barishal. One of his staff support the Shushilan CEIP-1 team for registration papers preparation. Shushilan team prepared the registration papers and documents with the help of water management executive committees. After complete all papers as per DCEO instruction, we had submitted a total number of 28 water management groups registration documents to BWDB, Barishal for getting registration. To review the submitted documents, Deputy Chief Extension Officer of Bangladesh Water Development Board, Barishal has given registration of 28 WMGs for the polder 40/2 & 41/1.

উপ-প্রধান সম্প্রসারণ অফিসার এর দপ্তর
উপসংশোধন পানি উন্নয়ন বোর্ড
নিম্নোক্তকর্তার কার্যালয় (৩য় তলা)
চৌমুহাটী, বরিশাল।
ফোন # ০১৩১-৭১৮৯৯ (অফিস)
স্মারকসং-সিইআইপি-১/পোল্ডার ৪০/২



Office of the Deputy Chief Extension Officer
Bangladesh Water Development Board
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Chandimari, Barisal
Telephone # 0431- 71869 (Office)
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তারিখ: ৩১/০৮/২০২০ খ্রি.

-১ দপ্তরসংশোধন :-

বাংলাদেশ পানি উন্নয়ন বোর্ড কর্তৃক বাংলাদেশীয় উপদ্বীপ বীর উন্নয়ন প্রকল্প-১ (সিইআইপি-১) এর আওতায় পোল্ডারসং ৪০/২, বাপাউবে, পানচরখাটা, বরিশাল এলাকা পানি ব্যবস্থাপনা সংশ্লিষ্ট পঠনের কাজে নিয়োজিত বেসরকারী উন্নয়ন সংস্থা সুশীলন এর স্মারকসং-সিইআইপি-১/৩০২/২০২০ তারিখসং ২০/০৮/২০২০ খ্রি. মোতাবেক নিম্নোক্তকর্তার কার্যালয়সমূহে নিম্নোক্তকর্তার কার্যালয়ে পানি ব্যবস্থাপনা বিধিমালা, ২০১৪ এর বিধি-৪০(২) অনুযায়ী নিম্নলিখিত প্রদান করা হলো।

ক্রমিক	পানি ব্যবস্থাপনা মসলের নাম	ঠিকানা	নিম্নলিখিত নং ও তারিখ	স্বাক্ষর
১	পূর্বাঞ্চলীয় পানি উন্নয়ন বোর্ড	গ্রাম: ইমান আলী সড়ক, ডাকঘর: পানচরখাটা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	উপসংশোধন/পানচরখাটা-৩০২/২ তারিখ: ৩১/০৮/২০২০ খ্রি।	
২	মহকুমার পানি ব্যবস্থাপনা মসল।	গ্রাম: মহকুমার, ডাকঘর: হাটখোলা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	উপসংশোধন/পানচরখাটা-৩০২/৩ তারিখ: ৩১/০৮/২০২০ খ্রি।	
৩	চৌমুহাটী পানি উন্নয়ন বোর্ড	গ্রাম: চৌমুহাটী, ডাকঘর: হাটখোলা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	উপসংশোধন/পানচরখাটা-৩০২/৪ তারিখ: ৩১/০৮/২০২০ খ্রি।	
৪	হেট্টে টেংরা পানি ব্যবস্থাপনা মসল।	গ্রাম: হেট্টে টেংরা ও পানবাড়িয়া, ডাকঘর: হেট্টে টেংরা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	উপসংশোধন/পানচরখাটা-৩০২/৫ তারিখ: ৩১/০৮/২০২০ খ্রি।	
৫	পানচরখাটা পানি উন্নয়ন বোর্ড	গ্রাম: পানচরখাটা, ডাকঘর: হেট্টে টেংরা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	উপসংশোধন/পানচরখাটা-৩০২/৬ তারিখ: ৩১/০৮/২০২০ খ্রি।	
৬	তাকালবাড়িয়া বরিকাতা পানি উন্নয়ন বোর্ড	গ্রাম: তাকালবাড়িয়া, ডাকঘর: আমলাপাড়া। উপজেলা: পানচরখাটা, জেলা: বরিশাল।	উপসংশোধন/পানচরখাটা-৩০২/৭ তারিখ: ৩১/০৮/২০২০ খ্রি।	
৭	ইকব্রুনিয়া পানি উন্নয়ন বোর্ড	গ্রাম: ইকব্রুনিয়া, ডাকঘর: চরসুয়ান। উপজেলা: পানচরখাটা, জেলা: বরিশাল।	উপসংশোধন/পানচরখাটা-৩০২/৮ তারিখ: ৩১/০৮/২০২০ খ্রি।	

উল্লেখ্য, পানি ব্যবস্থাপনা মসল সংক্রান্ত নিম্নলিখিত সনদ আত্র দপ্তর থেকে প্রদান করা হবে।

Mond.
31.8.2020
উপ-প্রধান সম্প্রসারণ অফিসার
বাপাউবে, বরিশাল।
তারিখ: ৩১/০৮/২০২০ খ্রি.

- স্মারকসং- ৭৩(২০)/সিইআইপি-১/পোল্ডার ৪০/২
অনুলিপি সদয় অবগতি/অবগতি ও প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য প্রেরণ করা হলো।
- ১) প্রধান প্রকৌশলী, নক্ষত্রাঞ্চল, বাপাউবে, বরিশাল।
 - ২) প্রধান পানি ব্যবস্থাপনা, বাপাউবে, ঢাকা।
 - ৩) অতিরিক্ত প্রধান প্রকৌশলী ও প্রকল্প পরিচালক, সিএমইউ, সিইআইপি-১, বাপাউবে, ঢাকা।
 - ৪) প্রধান সম্প্রসারণ অফিসার, বাপাউবে, ঢাকা।
 - ৫) তত্ত্বাবধায়ক প্রকৌশলী, পটুয়াখালী পানি উন্নয়ন সার্কেল, বাপাউবে, পটুয়াখালী।
 - ৬) পরিচালক, অডিট পরিদপ্তর, বাপাউবে, ঢাকা।
 - ৭) নির্বাহী প্রকৌশলী, বরিশাল পওর বিভাগ, বাপাউবে, বরিশাল।
 - ৮) নির্বাহী প্রকৌশলী, সিএমইউ, সিইআইপি-১, বাপাউবে, ঢাকা।
 - ৯) চেয়ারম্যান, চরসুয়ানী ইউনিয়ন পরিষদ, বরিশাল।
 - ১০) জনাব মোহাম্মদ অর রশীদ, সম্প্রসারণ উপদপ্তর-ক, বাপাউবে, পটুয়াখালী।
 - ১১) টিমলিটার, সিইআইপি-১, সুশীলন, বরিশাল।
 - ১২-১৩) সজাপতি/সম্পাদক, পানি ব্যবস্থাপনা মসল, গ্রাম: ----- ডাকঘর: -----, উপজেলা-পানচরখাটা, জেলা-বরিশাল।
 - ১৪) মতরকমি।

Mond.
31.8.2020
উপ-প্রধান সম্প্রসারণ অফিসার
বাপাউবে, বরিশাল।
তারিখ: ৩১/০৮/২০২০ খ্রি.

- স্মারকসং- ৭৭(১৯)/সিইআইপি-১/পোল্ডার ৪০/২
অনুলিপি সদয় অবগতি/অবগতি ও প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য প্রেরণ করা হলো।
- ১) প্রধান প্রকৌশলী, নক্ষত্রাঞ্চল, বাপাউবে, বরিশাল।
 - ২) প্রধান পানি ব্যবস্থাপনা, বাপাউবে, ঢাকা।
 - ৩) অতিরিক্ত প্রধান প্রকৌশলী ও প্রকল্প পরিচালক, সিএমইউ, সিইআইপি-১, বাপাউবে, ঢাকা।
 - ৪) প্রধান সম্প্রসারণ অফিসার, বাপাউবে, ঢাকা।
 - ৫) তত্ত্বাবধায়ক প্রকৌশলী, পটুয়াখালী পানি উন্নয়ন সার্কেল, বাপাউবে, পটুয়াখালী।
 - ৬) পরিচালক, অডিট পরিদপ্তর, বাপাউবে, ঢাকা।
 - ৭) নির্বাহী প্রকৌশলী, বরিশাল পওর বিভাগ, বাপাউবে, বরিশাল।
 - ৮) নির্বাহী প্রকৌশলী, সিএমইউ, সিইআইপি-১, বাপাউবে, ঢাকা।
 - ৯) চেয়ারম্যান, চরসুয়ানী ইউনিয়ন পরিষদ, বরিশাল।
 - ১০) জনাব মোহাম্মদ অর রশীদ, সম্প্রসারণ উপদপ্তর-ক, বাপাউবে, পটুয়াখালী।
 - ১১) টিমলিটার, সিইআইপি-১, সুশীলন, বরিশাল।
 - ১২-১৩) সজাপতি/সম্পাদক, পানি ব্যবস্থাপনা মসল, গ্রাম: ----- ডাকঘর: -----, উপজেলা-পানচরখাটা, জেলা-বরিশাল।
 - ১৪) মতরকমি।

Mond.
31.8.2020
উপ-প্রধান সম্প্রসারণ অফিসার
বাপাউবে, বরিশাল।
তারিখ: ৩১/০৮/২০২০ খ্রি.

উপ-প্রধান সম্প্রসারণ অফিসার এর দপ্তর
উপসংশোধন পানি উন্নয়ন বোর্ড
নিম্নোক্তকর্তার কার্যালয় (৩য় তলা)
চৌমুহাটী, বরিশাল।
ফোন # ০১৩১-৭১৮৯৯ (অফিস)
স্মারকসং-সিইআইপি-১/পোল্ডার ৪১/১



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Bangladesh Water Development Board
BIP Bhaban (2nd Floor)
Chandimari, Barisal
Telephone # 0431- 71869 (Office)
E-mail: dceowdbbarisal@yahoo.com
তারিখ: ৩১/০৮/২০২০ খ্রি.

ক্রমিক নং	পানি ব্যবস্থাপনা মসলের নাম	ঠিকানা	নিম্নলিখিত নং ও তারিখ	স্বাক্ষর
০১	উত্তর ব্রজব্রহ্মচর পানি ব্যবস্থাপনা মসল	গ্রাম: ব্রজব্রহ্মচর, পো: ব্রজব্রহ্মচর। উপজেলা: বরিশাল সদর, জেলা: বরিশাল।	বরিশ-৩০১০১ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০২	আইট্রা পানি ব্যবস্থাপনা মসল	গ্রাম: আইট্রা, পো: আইট্রা। উপজেলা: বরিশাল সদর, জেলা: বরিশাল।	বরিশ-৩০১০২ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০৩	শুর্ভ চরকাপাড়া পানি ব্যবস্থাপনা মসল	গ্রাম: শুর্ভ চরকাপাড়া, পো: শুর্ভ চরকাপাড়া। উপজেলা: বরিশাল সদর, জেলা: বরিশাল।	বরিশ-৩০১০৩ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০৪	আবিকশালী চৌমুহাটী পানি ব্যবস্থাপনা মসল	গ্রাম: আবিকশালী চৌমুহাটী, পো: বরিশাল। উপজেলা: বরিশাল সদর, জেলা: বরিশাল।	বরিশ-৩০১০৪ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০৫	নক্ষত্রাঞ্চলীয় পানি ব্যবস্থাপনা মসল	গ্রাম: নক্ষত্রাঞ্চলীয়, পো: নক্ষত্রাঞ্চলীয়। উপজেলা: বরিশাল সদর, জেলা: বরিশাল।	বরিশ-৩০১০৫ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০৬	চৌমুহাটী পানি উন্নয়ন বোর্ড	গ্রাম: চৌমুহাটী, ডাকঘর: হাটখোলা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	বরিশ-৩০১০৬ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০৭	মহকুমার পানি উন্নয়ন বোর্ড	গ্রাম: মহকুমার, ডাকঘর: হাটখোলা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	বরিশ-৩০১০৭ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০৮	চৌমুহাটী পানি উন্নয়ন বোর্ড	গ্রাম: চৌমুহাটী, ডাকঘর: হাটখোলা। উপজেলা: পানচরখাটা সদর, জেলা: বরিশাল।	বরিশ-৩০১০৮ তারিখ: ৩১/০৮/২০২০ খ্রি।	
০৯	উত্তরব্রজব্রহ্মচর পানি ব্যবস্থাপনা মসল	গ্রাম: উত্তর ব্রজব্রহ্মচর, পো: বরিশাল। উপজেলা: বরিশাল সদর, জেলা: বরিশাল।	বরিশ-৩০১০৯ তারিখ: ৩১/০৮/২০২০ খ্রি।	

2.11 WMA registration:

Shushilan team also prepared the WMA registration papers and documents like tops heet, application, executive committee list, 56 representative list, membership register, agreement paper, polder map, voter list, supportive information, first meeting copy of executive committee, special general meeting copy, ad-hoc committee & resulation, election committee, tofsil and bylaw with the help of executive committee of Water Management Association. To review the submitted documents, Chief Extension Officer of Bangladesh Water Development Board, Dhaka has given registration of 2 WMA for the polder 40/2 & 41/1.



স্মারক নং-এসস/সাক/এসসে-৫৫/১৬৬

তারিখ: ৩১/০৩/২০২১ খ্রি

- দপ্তরসেপ-

অন্য ৩১/০৩/২০২১ খ্রি: তারিখ উপ-প্রধান সম্প্রদায় অফিসার, বাপডিবে, বরিশাল এর স্মারক নং-২৮-২/উন্নয়ন/বরিশাল/সিইআইপি-১/বরগ/পোল্ডার-৪০/২ তারিখ ১৫/০২/২০২১ খ্রি এবং ৩৫২/উন্নয়ন/বরিশাল/সিইআইপি-১/বরগ/পোল্ডার-৪০/২ তারিখ ২৩/০৩/২০২১ খ্রি মোতাবেক উপকূলীয় বাঁধ উন্নয়ন প্রকল্প-১ (সিইআইপি-১), দক্ষিণ অঞ্চল, বাংলাদেশ পানি উন্নয়ন বোর্ড, বরিশাল এর নিম্নবর্ণিত পানি ব্যবস্থাপনা এসোসিয়েশনকে (WMA) "অংশগ্রহণমূলক পানি ব্যবস্থাপনা নির্দেশনা, ২০১৪" এর বিধি-৪০(২) অনুযায়ী নিবন্ধন প্রদান করা হলো।

পানি ব্যবস্থাপনা এসোসিয়েশনের নাম	প্রকল্প ও পোল্ডারের নাম	উিকার	নিবন্ধন নং	তারিখ
২	৩	৪	৫	৬
৪০/২ পোল্ডার পানি ব্যবস্থাপনা এসোসিয়েশন	উপকূলীয় বাঁধ উন্নয়ন প্রকল্প-১ (সিইআইপি-১) পোল্ডার ৪০/২	৪০/২ পোল্ডার পানি ব্যবস্থাপনা এসোসিয়েশন গ্রাম: ছাত্তাবাস, ডাকঘর: চরদুয়ানী, উপজেলা: পাথরঘাটা, জেলা: বরগনা।	বাপডিবে/সাক/ এসসে. ৫৫/২০২১	৩১/৩/২০২১ খ্রি

(স্বাক্ষর)
(স্বাক্ষর করিম)
প্রধান সম্প্রদায় অফিসার
বাপডিবে, ঢাকা

স্মারক নং- এসস/সাক/এসসে-৫৫/১৬৬/১(১৫)

তারিখ: ৩১/০৩/২০২১ খ্রি

অনুলিপি সদয় অবগতি/অনুপস্থিত ও প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য প্রেরণ করা হলো (স্বাক্ষরিতা বিহীন নয়)

১. প্রধান পানি ব্যবস্থাপনা, বাপডিবে, ঢাকা।
২. প্রধান প্রকৌশলী, অফিসিয়াল, বাপডিবে, বরিশাল।
৩. প্রকল্প পরিচালক, পিএস ইউ, সিইআইপি-১, ঢাকা।
৪. তত্ত্বাবধায়ক প্রকৌশলী, পটুয়াখালী পানি উন্নয়ন সার্কেল, বাপডিবে, পটুয়াখালী।
৫. পরিচালক, অডিট পরিদপ্তর, বাপডিবে, ঢাকা।
৬. উপ-প্রধান সম্প্রদায় অফিসার, বাপডিবে, বরিশাল।
৭. নির্বাহী প্রকৌশলী, বরগনা পল্লী বিকাশ, বাপডিবে, বরগনা।
৮. বিদ্যুৎ বন কর্মকর্তা, সামাজিক বন বিভাগ, বরগনা।
৯. উপজেলা চেয়ারম্যান, পাথরঘাটা উপজেলা পরিষদ, পাথরঘাটা, বরগনা।
১০. উপজেলার নির্বাহী অফিসার, পাথরঘাটা, জেলা: বরগনা।
১১. চেয়ারম্যান, পাথরঘাটা সদর/চরদুয়ানী ইউনিয়ন পরিষদ, পাথরঘাটা, জেলা: বরগনা।
১২. উপসেইা, ৪০/২ পোল্ডার পানি ব্যবস্থাপনা এসোসিয়েশন।
১৩. সাক্ষরিত/সম্পাদক, ৪০/২ পোল্ডার পানি ব্যবস্থাপনা এসোসিয়েশন,
গ্রাম: ছাত্তাবাস, ডাকঘর: চরদুয়ানী, উপজেলা: পাথরঘাটা, জেলা: বরগনা।
১৪. বিন বিহার, সুশীল, সিইআইপি-১, পোল্ডার ৪০/২।
১৫. মন্তব্য করি।

(স্বাক্ষর)
(স্বাক্ষর করিম)
প্রধান সম্প্রদায় অফিসার
বাপডিবে, ঢাকা

<p>বাংলাদেশ পানি উন্নয়ন বোর্ড প্রধান সম্প্রসারণ অফিসার এর দপ্তর পানি ভবন ব্লক-বি, লেভেল-৯ (১০ তলা) ৭২, গ্রীন রোড, ঢাকা-১২১৫ ফোন # ০২-২২২২৩০০৬৭</p>		<p>Bangladesh Water Development Board Office of the Chief Extension Officer Pani Bhabon Block-B, Level-9 (9th Floor) 72, Green Road, Dhaka-1215 Telephone # 02-222230067 E-mail: ceobwdb.dhaka@gmail.com</p>
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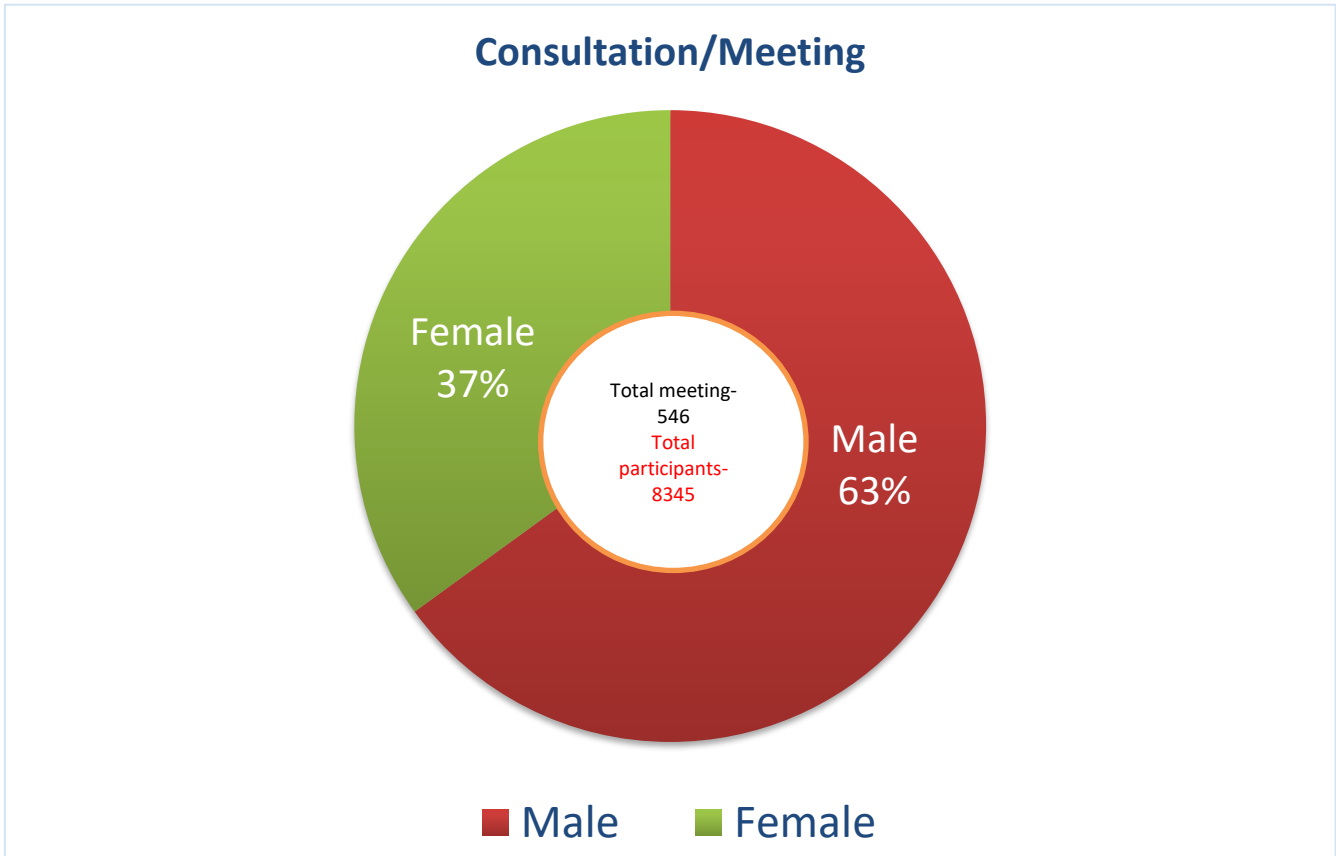
স্মারক নং:

তারিখ:

পানি ব্যবস্থাপনা এসোসিয়েশন এর নাম	প্রকল্প ও পোন্ডারের নাম	ঠিকানা	নিবন্ধন নং	তারিখ
১	২	৩	৪	৫
বুড়িরচর পানি ব্যবস্থাপনা এসোসিয়েশন	উপকূলীয় বান্ধ উন্নয়ন প্রকল্প-১ (সিইআইপি-১) পোন্ডার ৪১/১	বুড়িরচর পানি ব্যবস্থাপনা এসোসিয়েশন গ্রাম: বুড়িরচর ডাকঘর: বুড়িরচর উপজেলা: বরগুনা সদর জেলা: বরগুনা	বাপাউবো-ঢাকা/ এ্যাসো./২১/২০১৬	৩১/৩/২০২১ খ্রি:

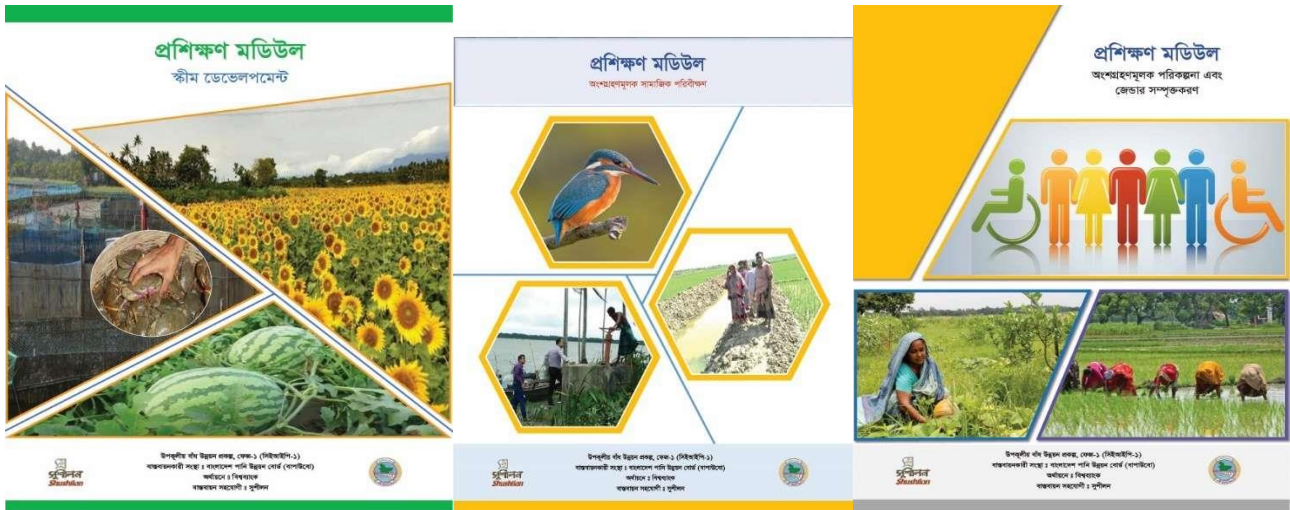
2.11 Overall consultation/meeting:

In the project period we have conducted total number of 546 consultation/meeting and attended 8345 participants on different issues like water management group/association formation, afforestation group and committee formation, group saving, training, IPM & technology support, monthly meetings, and others where 37% women and 63% men has been participated. Please see the graph.



2.13 Training module development:

Shushilan training cell and appointed consultants developed total number of 9 training modules such as (1) Group management (Role & responsibilities and constitution of WMOs) (2) Accounts and financial Management of WMOs (3) participatory planning and gender mainstreaming (4) Schemes development and implementation (5) Alternative livelihood of WMOs (6) Integrated Pest Management (IPM), (7) Participatory social monitoring (8) Establishment of WMOs/WMA for BWDB & community organizers (9) Capacity building of Afforestation for the skill develop of the 28 water management groups members and staffs. After developed all training modules as per contract, Shushilan submitted it to the project management unit of Bangladesh Water Development Board for approval. After review by the PMU, they gave comments and suggested submitting some modules again after incorporate.



Finally Shushilan received total number of 9 approved modules for training conduction.

2.14 Training on establishment of WMOs:

Bangladesh water development board (BWDB) implemented the **Coastal Embankment Improvement Project, Phase-1 (CEIP-1)** to achieve three objectives such as (1) Social mobilization including setting up WMOs for introduction of Integrated Water Resource Management (IWRM) practices through preparation and implementation of Social Action plan through engagement of local communities and community groups for Participatory Social Action Plan (SAP) and participatory operation & maintenance (O&M) of schemes (2) Implementation of afforestation program especially in the foreshore areas with ecologically appropriate species by adopting social afforestation approach and (3) Implementation of Integrated Pest Management (IPM) and Integrated Crops Management (ICM) practices under polder 40/2 & 41/1. According to contract package no CEIP-1/A2 & B1/S1-D, Shushilan is supporting the Bangladesh water development board (BWDB) for implementation of Coastal Embankment Improvement Project, Phase-1 (CEIP-1).



Basically, under this project, reconstructed embankment, sluice gates, proper management of sluice gates related canals, afforestation on both sides of the embankment to be protected and effective engagement of water management groups and water management associations will be involve to the sustainable agriculture practice of people in the Polder area. In that case, formation of effective water management groups and water management associations is essential to achieve the expected results of the project. There are several steps/stages of formation of water management groups and water management association. There are various stages such as demarcation of water management group and association, formation of ad-hoc committee, formation of election committee, formation of executive committee, formation of project, management and maintenance committee, registration and more. Through this training, the staff of consultancy services organization will get a clear idea about various stages/processes of formation of water management group and water management association. Besides, it is important to receive the training of the field level staff of the Bangladesh Water Development Board, whether each phase of water management

group and water management association is being followed properly or to form an organization in joint venture. At the same time, since the consultancy services organization Shushilan will no longer be responsible after a specified period, this training will make more skill of the field level staff of the Bangladesh Water Development Board to follow-up and monitoring the formed water management group and water management association activities more efficient. Under the project, IPM activities for sustainable agriculture and afforestation will be implemented. Through this training, with the help of expats, Community Organizer and field staff of the Bangladesh Water Development Board will be able to gain knowledge and skills on how to create a separate subgroup for forestry and agriculture from the water management group.

Objectives of the training:

To enhance the knowledge and skills of the Community Organizer and field level staff of the Bangladesh Water Development Board to form and formation of water management groups and water management associations under the CEIP-1 project.

Training Content:

The contents of 3 days training of BWDB staff and Community Organizer on establishment of WMO/WMA were as bellow:

- ❖ Overview of CEIP-1 (Project brief /Infrastructure of CEIP-1/ Nature of polder work/ Public responsibility)
- ❖ The challenge of CEIP-1
- ❖ Social Mobilization Issue in CEIP-1
- ❖ Clear concept on mechanism of implementation of afforestation program by WMO. Beneficiaries selection for Social afforestation, benefit sharing mechanism & role of beneficiaries Role of NGOs under CEIP-1 on afforestation
- ❖ Concept of IPM Impacts of pesticides on Environment and mitigation under CEIP1
- ❖ Discussion/Weightage on PWM(Rule , Policy, Present status of PWM in BD), ad hoc committee , member enrolment and its regulation writing, technique of regulation writing, formation of election committee and its regulation writing. WMO election procedure, preparation of By-laws, first MC and its regulation writing, WMA formation, training with WMO and venue management, Saving and Record keeping, Sub committees and registration of WMO/MWA
- ❖ Strategy, preparation and use of communication material

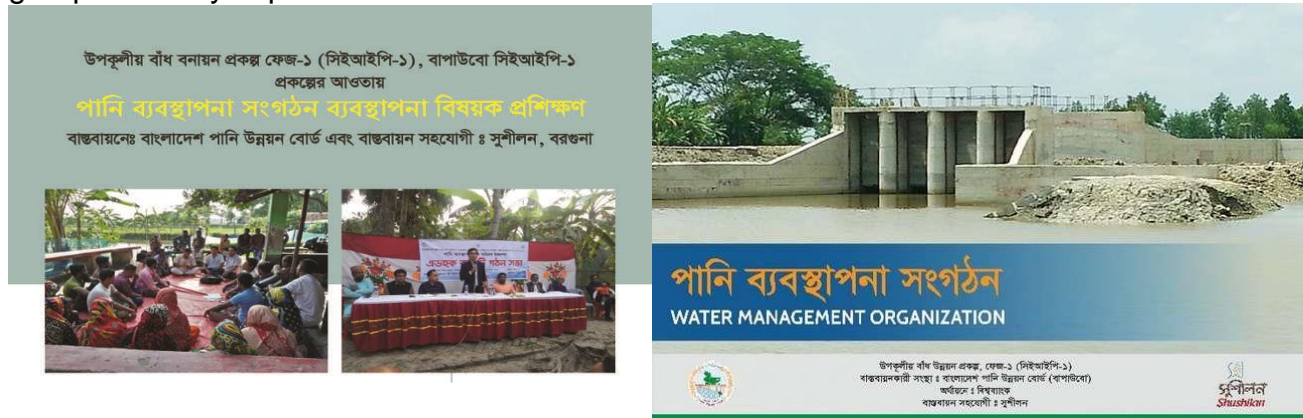
Outcome of the training:

After getting 3 days training on establishment of WMOs/WMA, all participants has achieved clear assumption and understanding about Overview of CEIP-1 (Project brief /Infrastructure of CEIP-1/ Nature of polder work/ Public responsibility), the challenge of CEIP-1, social Mobilization Issue in CEIP-1, clear concept on mechanism of implementation of afforestation program by WMO. Beneficiaries selection for Social afforestation, benefit sharing mechanism & role of beneficiaries, role of NGOs under CEIP-1 on afforestation, concept of IPM Impacts of pesticides on Environment and mitigation under CEIP1, discussion/Weightage on PWM (Rule, Policy, Present status of PWM in BD), ad hoc committee, member enrolment and its regulation writing, technique of regulation writing, formation of election committee and its regulation writing. WMO election procedure, preparation of By-laws, first MC and its regulation writing, WMG/WMA formation, training with WMO and venue management, Saving and record keeping, sub committees and registration of WMO/MWA, strategy, preparation and use of communication material etc.

2.15 Training on group management:

Introduction:

Shushilan conducted training on group management (Role, responsibilities, and constitution of WMOs) from 20-25 July 2020 within 660 participants those who are the members of 28 water management groups under polder 40/2 & 41/1. There are very few people organizations in Bangladesh and in the world to manage the two main natural elements like water and soil. Formation of Water management organization in the coastal polders of Bangladesh through CEIP-1 project is a very good initiative. Water management group is the heart of this project. Water management group will responsible to operate, manage and maintenance of drainage channel, sluice gates, embankment, afforestation and polder agriculture. To increase agriculture production, WMG will responsible to ensure proper irrigation supply. Besides, to make the embankment more protected, WMG is responsible to provide guard service to success the afforestation. So, how manage the water management group was very important to know executive committee and members of each WMG.



Objectives of the Training:

- Skill developed to the executive committee members for effective group management.
- To share participatory water management rule 2014 and water management group formation process detail.
- Informed WMG leaders about their role and responsibility for better WMG management.
- Make a platform to share experience, knowledge, resources, plan and technology between water management group members.

Training Content:

- People participation for water management
- Why organization
- Objectives and importance of water management organizer formation
- Structure of water management organization
- Water management group formation
- Main activities of water management organization
- Participatory water management rule 2014
- Role and responsibilities of water management group
- Activities of water management group
- Role and responsibilities of water management association
- Structure of executive committee of water management group and duration time.
- Role and responsibilities of adviser committee
- Water management group formation process, bylaws, record keeping, meetings procedure, registration, regulation writing, audit, account, important documents

Outcome of the training:

After getting day-long training on group management all participants have achieved clear knowledge and learning how to build a strong and functional water management group/organization. They have expressed their commitment that they will operate and maintain their catchment area all water structure by their water management group.

After getting training, Selim Reza, president of the north Burirchar water management group of Barguna Sadar Upazila, said, "We have formed water management groups for the development of ourselves and the area. The operation and management of sluice gates will be sustainable, canal, drainage, and drainage channel management will be further improved, sustainable embankment management will be strengthened, agricultural water management will be sustainable, more crop production, income, and employment will be increased through the water management groups".

Another training participant, Jhumur Bepari, a member of the Executive Committee of Hoglapasha Bharani canal water management group in Patharghata Upazila, said, "Women's connection with agriculture and water is natural. We have enrolled a lot of women in every water management team. We know that the Water Development Board and the Shushilan will provide training to develop skills for strengthening organizational development and livelihood assistance to enhance capabilities. Interaction with each group, self-relationship will be developed. A strong network will be formed with the service provider/organization. "Women will be empowered and water management groups will be developed." Compile training report submitted separately.

2.16 Training on Accounts and Financial Management:

Introduction:

Under the project, 28 water management groups have been formed in Barguna Sadar & Patharghata Upazila under polder 40/2 & 41/1. Water Management Groups are practicing savings and different schemes related on agriculture and small business in their catchment area. So, to maintain group savings, group finance and scheme loan properly, training on Accounts and Financial Management was important for management committee. To consider effective accounts and finance management of WMG/WMA, Shushilan conducted training on **Accounts and Financial Management** from 07 December to 08 December 2020 within 210 participants those who are executive committee members of 28 water management groups under polder 40/2 & 41/1 in this reporting period.



Objectives of the Training:

- Proper manage and maintenance for group accounts and finance.
- Group savings collection, control and deposit to bank properly
- Effective loan disburse and collection
- Properly profit sharing within members

- Proper record keeping and maintain cash follow.

Training Content:

- Group saving
- Member selection and selection criteria
- Saving group formation
- Turn from group to Organization
- Skilled develop for group
- Saving program introduce and practice
- Bank account open
- Maintain saving register, saving book and saving ledger
- Investment policy
- Investment plan preparation
- Investment management committee formation
- Main investment register
- Role of investment management committee
- Loan disbursement and collection
- Maintain cash book

Outcome of the training:

After getting day-long training on accounts and financial management, all participants have achieved clear knowledge and learning how to maintain and manage their WMGs accounts and finance properly. They have expressed their commitment that they will work together as per organizational bylaw.

2.17 Training on Participatory Planning and Gender Mainstreaming:

Introduction:

Under the project, 28 water management groups have been formed in Sadar & Patharghata Upazila of Barguna District. The water management group is essentially a locally integrated agricultural water management initiative aimed at ensuring the responsibility, rights, and availability of water use for all through sustainable inland water management. Diversification of area appropriate crops and increase in production, which is essential for increasing income and food security. Water management groups will coordinate agricultural water management, advanced agriculture, and technical knowledge. In addition to increasing production, it is also linked to the market, creating job opportunities for agricultural workers and engaging women in income-generating activities. Under the social mobilization component, we have conducted training (26 November to 02 December 2020) on participatory planning and gender mainstreaming within 672 participants those who are members of 28 water management groups under polder 40/2 & 41/1 in this reporting period.



Objectives of the Training:

- Participants will be able to learn about plan, importance of plan, types of plan, WMG action plan & its importance, and women participation in planning and women contribution in development.
- Participants will achieve clear assumptions about rights, human rights and basic rights.
- They will learn about gender, gender & sex, gender mainstreaming and gender mainstream practice and process in water management group.
- They will also learn about equity & equality of opportunity and access to opportunity

Training Content:

- What is plan?
- Why need to make plan
- Importance of participatory plan
- Organization (WMOs) action plan
- Women participation in planning
- Women role/contribution in development
- Right, human right and basic right
- State obligation to protect right
- Sex, gender and difference between sex & gender
- gender mainstreaming and gender mainstream practice and process in water management group
- Equality of opportunity
- Equality of access to opportunity

Outcome of the training:

After getting day-long training on participatory planning and gender all participants have achieved clear knowledge and learning how to make participatory plan for organization and gender mainstreaming practice in organization level. They have expressed their commitment that they will work together as per plan considering gender issues.

After getting training, Humayun Kabir, president of the Maitha Water Management group of Barguna Sadar Upazila, said, "Planning and gender training is very important for every WMGs. Through this training, we have prepared our yearly action plan related to embankment, sluice gates, afforestation, canal and others water structures including social activities. We will work together as per plan as possible as. If we can continue our water management organization will be strengthen must".

Another training participant, Surma Akther member of Ecorbunia Khal water management committee in Patharghata Upazila, said, "Through this training, we have understood clearly that man & women have equal rights. We would like to practice this training learning in our water management group for women empowerment and our organization sustainability also. We believe that if we work together as per our prepared plan, women will be empowered and water management groups will be developed."

2.18 Training on Livelihood Development:

Introduction:

CEIP-1 is initiated to achieve three objectives such as (1) Social mobilization including setting up WMOs for introduction of Integrated Water Resource Management (IWRM) practices through preparation and implementation of Social Action plan through engagement of local communities and community groups for Participatory Social Action Plan (SAP) and participatory operation & maintenance (O&M) of schemes (2) Implementation of afforestation program especially in the foreshore areas with ecologically appropriate species by adopting social afforestation approach and (3) Implementation of Integrated Pest Management (IPM)

and Integrated Crops Management (ICM) practices under polder 40/2 & 41/1. Under the afforestation component, we have conducted training on livelihood development within 520 participants from 22-31 August 2020 those who are the members of 28 water management groups under polder 40/2 & 41/1 in this reporting period.



Objectives of the Training:

- Be able to explain about mug pulse production.
- Be able to describe the process of preserving mug pulse.
- What are seeds? Can identify what is good seed/bad seed.
- Can tell about the properties and importance of good seeds
- Can analyze, modify, collect and preserve improved seed varieties.
- Explain about setting up a nursery in the backyard.
- Be able to analyze the needs of the nursery.
- Be able to identify nursery seedling production process.
- Explain the process of cow fattening.
- Be able to analyze about cow selection and purchase.
- Be able to identify the habitat and food of cows.
- Explain the disease of cows and its cure.
- Explain about the production of crab.
- Able to analyze crab farming methods.
- Able to store crabs, apply food and manage ponds.
- Be able to explain the process of watermelon cultivation.
- Can identify diseases of watermelon.
- Able to identify lobster characteristics.
- Can talk about selection and preparation of ponds for lobster farming.
- Get ideas about food management for lobster
- Can analyze water quality and caution in lobster farming.
- Able to identify *Kuchia* features.
- Controlled breeding techniques of *Kuchia* fish can tell about pond selection and preparation.
- Can collect and analyze brood *kuchia* fish.
- Can analyze caution in *Kuchia* fish cultivation.
- Be able to do value chain analysis.

Training Content:

- Alternative livelihood
- Benefits of alternative livelihood
- Types of alternative livelihood
- Nursery and vegetables cultivation
- Quality seeds preservation
- Mug pulse cultivation

- Watermelon cultivation technology
- Cow fattening
- Lobster farming
- Crab fattening and nursery
- Kuchia fish cultivation

Outcome of the training:

After getting day long training on livelihood development, all participants has achieved clear knowledge and learning about Alternative livelihood, benefits of alternative livelihood, types of alternative livelihood, nursery and vegetables cultivation, quality seeds preservation, mug pulse cultivation, watermelon cultivation technology, cow fattening, lobster farming, crab fattening and nursery and kuchia fish cultivation briefly.

2.19 Training on scheme development and implementation:

Introduction:

The water management group is responsible to implement small scale schemes related canal excavation & re-excavation, embankment repair, construction and others for its sustainability and socio-economic development in the catchment area. So, it is needed to develop scheme selection, plan, implementation process, budget preparation and benefit sharing capacity of WMGs members. To consider this issue, Shushilan conducted training on scheme development from 24 December to 29 December 2020 within 400 participants those who are members of 28 water management groups under polder 40/2 & 41/1 in this reporting period under the social mobilization component.



Objectives of the Training:

- Participants will be able to create a training environment.
- Will be able to explain the purpose of the training.
- Will be able to learn about scheme.
- Be able to describe on small crab production
- Be able to calculation about crab cultivation.
- Be able to stock crab, its food supply and pond management.
- Be able to able to cultivation watermelon cultivation and its diseases selection.
- Be able to analysis Value.
- Able to evaluate training

Training Content:

- Scheme select
- Types of schemes, objectives, timeline, plan, budget and implementation process
- Crab fattening scheme
- Watermelon cultivation scheme

- Sunflower cultivation scheme
- Scheme plan preparation on interested crops and small project

Outcome of the training:

After getting day-long training on scheme development, all participants have achieved clear knowledge and learning on scheme, scheme selection, and scheme plan preparation, scheme budget preparation and benefit sharing. They have expressed their commitment that they will work together as per prepared scheme plan for better livelihood.

2.20 Training on Participatory Social Monitoring:

Introduction:

The water management group is basically responsible to operate and maintenance of sluice gates, drainage channel, embankment, agriculture, social afforestation and others water structures in the polder area. So, it is needed to develop the monitoring and evaluation capacity of WMGs members. To consider this issue, Shushilan conducted training on participatory social monitoring from 21 December to 26 December 2020 within 364 participants those who are members of 28 water management groups under polder 40/2 & 41/1 in this reporting period under the social mobilization component.



Objectives of the Training:

- Participants will be able to create a training environment.
- Will be able to explain the purpose of the training.
- Will be able to describe participation and social participation.
- Be able to describe monitoring and why monitoring is done.
- Be able to describe the formation of the monitoring team.
- Be able to explain the responsibilities and duties of the monitoring team.
- Be able to gain ideas about the monitoring process.
- Be able to gain knowledge about monitoring topics / activities and results.
- Be able to create monitoring plan
- Able to evaluate training

Training Content:

- Participation and Social participation
- Types of social monitoring
- Participatory social monitoring
- Why is monitoring done?
- Monitoring team formation
- Role and responsibilities of monitoring team
- Monitoring process and topics
- Result of monitoring
- Draft monitoring plan preparation

Outcome of the training:

After getting day-long training on participatory social monitoring, all participants have achieved clear knowledge and learning on monitoring, evaluation, social monitoring, monitoring plan preparation and importance of social monitoring on developments projects and water structures. They have expressed their commitment that they will work together as per prepared monitoring plan for more functioning the polder based water structures. Compile training report submitted separately.

2.21 Display picture drama show:

As per contract, an approved schedule Shushilan has displayed a total number of 15 picture drama shows under polder 40/2 & 41/1. Through the facilitation of Shushilan CEIP-1 Barguna team, Desh Bondona Cultural Team displays every picture drama show according to the schedule. Before display picture drama show, the team ensured effective publicity for mass gathering, Confirm Executive Committee and WMG members for effective participation, Make sure Artists and all logistics, selected venue, and proper documentation and reporting preparation. In every picture drama show, average 3/4/5 hundred people participated to observe. Md Salim Reza, President of Uttar Burirchar Water Management Group said “through this picture drama show we have received clear information about the importance of WMG's, water structure manage, and maintenance benefit, afforestation importance, sustainable/climate-resilient agriculture practice, gender issues in detail”.



Picture song & drama show Schedule

Month	Date	Show No	Location & Polder No	Timeline	Facilitation	Remarks
October 2020	14/10/2020	1	Boromiar Bazar, Middle Burirchar, Barguna, P 41/1	30.00 PM-05.00 PM	Yasmin Jahan, Habibur Rahman & Mustafa Bakuluzzaman	As per contract total 15 show (Today show-1)
	15/10/2020	2	Manikkhal Govt primary School Campus, Burirchar, Barguna, P 41.1	10.00 AM-12.00 PM	Nafisa Taranum, Habibur Rahman & Mustafa Bakuluzzaman	As per contract total 15 show (Today show-2)
		3	Maitha Chairman Bazar Burirchar, Barguna, P 41/1	3.00 PM-05.00 PM	Dolon Sarkar, Nafisa Taranum & Mustafa Bakuluzzaman	

Month	Date	Show No	Location & Polder No	Timeline	Facilitation	Remarks
16/10/2020		4	CH High School Campus Hazarbiga Burirchar, Barguna, P 41/1	10.00 AM-12.00 PM	Nafisa Taranum, Habibur Rahman & Mustafa Bakuluzzaman	As per contract total 15 show (Today show-2)
		5	Purakata Farighat Balurmat Burirchar, Barguna, P 41/1	3.00 PM-05.00 PM	Yasmin Jahan, Habibur Rahman & Mustafa Bakuluzzaman	
17/10/2020		6	Kawrabunia Bazar, Burirchar, Barguna, P 41/1	10.00 AM-12.00 PM	Dolon Sarkar, Nafisa Taranum & Mustafa Bakuluzzaman	As per contract total 15 show (Today show-2)
		7	KoroitolaSonakhali, Burirchar, Barguna, P 41/1	3.00 PM-05.00 PM	Yasmin Jahan, Habibur Rahman & Mustafa Bakuluzzaman	
18/10/2020		8	Gabtola Bazar, Burirchar, Barguna, P 41/1	3.00 PM-05.00 PM	Dolon Sarkar, Nafisa Taranum & Mustafa Bakuluzzaman	As per contract total 15 show (Today show-1)
19/10/2020		9	Sototangra Bazar, Charduani, Patharghata, P 40/2	10.00 AM-12.00 PM	Forhad Hossain, Lokman Hossain & Md. Shahin Islam	As per contract total 15 show (Today show-2)
		10	Khalifarhat School, Charduani, Patharghata, P 40/2	3.00 PM-05.00 PM	Nazma Khatun, Abdullah Mamun, & Md. Shahin Islam	
20/10/2020		11	Ecorbunia, Govt. Primary School Campus, Charduani, Patharghata, P 40/2	10.00 AM-12.00 PM	Forhad Hossain, Lokman Hossain & Md. Shahin Islam	As per contract total 15 show (Today show-2)
		12	Charduani Bazar, Charduani, Patharghata, P 40/2	3.00 PM-05.00 PM	Nazma Khatun, Abdullah Mamun, & Md. Shahin Islam	
21/10/2020		13	Hoglapasha Govt. Primary School Campus, Charduani, Patharghata, P 40/2	10.00 AM-12.00 PM	Forhad Hossain, Lokman Hossain & Md. Shahin Islam	As per contract total 15 show (Today show-2)
		14	Taltola Bazar, Charduani, Patharghata, P 40/2	3.00 PM-05.00 PM	Nazma Khatun, Abdullah Mamun, & Md. Shahin Islam	
22/10/2020		15	Gohorpur Village Club, Patharghata, P 40/2	10.00 AM-12.00 PM	Forhad Hossain, Lokman Hossain & Md. Shahin Islam	As per contract total 15 show (Today show-1)

2.22 Participatory social monitoring & evaluation:

In the project period, we have organized social monitoring and evaluation activity under polder 40/2 & 41/1. Total number 28 president and secretary from 28 water management group under both polder participated in this event. According to the bellow schedule, both teams worked effectively and prepared an investigation report.



PLAN FOR SOCIAL MONITORING AND EVALUATION

Team & Polder	Day & Date	Timeline	Subject/Topics	Location	Responsible/ Facilitator
Total 28 (President & secretary per WMG) from polder 41/1	Day-1 23-01-2021 (Saturday)	9.00 - 10.00 am	<ul style="list-style-type: none"> Short discussion with SME team for program objectives Embankment repair/construction site visit and informal discussion with authority Its impact and sustainability assessment Recommendations 	Barguna District Office & Purakata Farighat	Shushilan CEIP-1 team
		10.00-11.00 am	<ul style="list-style-type: none"> Visit ongoing sluice gates construction activities and discussion with authority Visit completed sluice gate but not open Its impact and sustainability assessment Assess present negative impact on agriculture, environment and livelihood Recommendations 	Napitkhali & Borolobongola	Shushilan CEIP-1 team
		11.00-12.00 pm	<ul style="list-style-type: none"> Afforestation site visit, its importance and management process assess and discuss with concern group, committee and department Assess benefit sharing mechanism Recommendations 	Napitkhali & Sotolobongola	Shushilan CEIP-1 team
		12.00-01.00 pm	<ul style="list-style-type: none"> Drainage channel (canal) excavation, re-excavation activity assess Its impact study Recommendations 	Dakhhin Hazarbigaha	Shushilan CEIP-1 team
		01.00-2.00 pm	<ul style="list-style-type: none"> Prayer and Lunch break 		

Team & Polder	Day & Date	Timeline	Subject/Topics	Location	Responsible/ Facilitator
		03.00-5.00 pm	<ul style="list-style-type: none"> Sharing meeting and group work for SME report preparation 		UTDC govt. model primary school
Total 28 (President & secretary per WMG) from polder 40/2	Day-1 24-01-2021 (Sunday)	9.00 - 10.00 am	<ul style="list-style-type: none"> Short discussion with SME team for program objectives Embankment repair/construction site visit and informal discussion with authority Its impact and sustainability assessment Recommendations 	Patharghata Office, Putavanga, Kaliarkhal	Shushilan CEIP-1 team
		10.00-11.00 am	<ul style="list-style-type: none"> Visit ongoing sluice gates construction activities and discussion with authority Visit completed sluice gate but not open Its impact and sustainability assessment Assess present negative impact on agriculture, environment and livelihood Recommendations 	Maserkhal & Gohorpur	Shushilan CEIP-1 team
		11.00-12.00 pm	<ul style="list-style-type: none"> Afforestation site visit, its importance and management process assess and discuss with concern group, committee and department Assess benefit sharing mechanism Recommendations 	Charduani & Gohorpur	Shushilan CEIP-1 team
		12.00-01.00 pm	<ul style="list-style-type: none"> Drainage channel (canal) excavation, re-excavation activity assess Its impact study Recommendations 	Charduani Bazar & Tangra Bazar	Shushilan CEIP-1 team
		01.00-2.00 pm	<ul style="list-style-type: none"> Prayer and Lunch break 		
			03.00-5.00 pm	<ul style="list-style-type: none"> Sharing meeting and group work for SME report preparation 	Charduani High School

2.23 Courtyard meetings:

Meeting Minutes

Though the project period, we have organized a total number of 9 courtyard meeting from 13 to 16 July 2020 with (1) South Burirchar water management group (2) Kawrabunia water management group (3) Purba, Charakgasia water management group (4) Manikkhali Sonbunia water management group (5) Takar khal water management group (6) Gohorpur Khal water management group (7) Boroitola khal water management group (8) Maitha water management group and (9) Charduani Bazar Khal water management group under the polder 40/2 & 41/1. In the meeting total of 193 members of 9 water management groups have participated.



Venue: Water management group office

Date: July 2020

AGENDA OF THE MEETING:

1. Staff introduce
2. WMGs registration
3. Training
4. Demonstration plot support
5. miscellaneous

Sl.	Agenda	Discussion & Decision	Responsible Person
1.	Staff introduce	In the meeting, members of 9 water management group introduce themselves with their designation in water management group. Decision: Water management group members will arrange monthly meeting continuously	WMG executive committee
2.	WMGs registration	At the meeting, Community Organizer discussed that we had submitted every WMGs documents for registration to DCEO of BWDB, Barishal. But they have given some feedback to re-correct. We have to re-correct Bylaws, area information, bank account open, membership register copy attested by WMG's President & Secretary for registration. So, we are requesting executive members to support those documents preparation. Decision: ❖ Executive committee will support for their WMG registration papers preparation.	WMG executive committee
3.	Training	In the meeting, Community Organizer discussed that under the project, we are conducting different types of training under both polders for the capacity building of water management group's members. Already, we have selected members by EC for training. Decision: Executive committee will play vital role to ensure active participation in training.	WMG executive committee and participants
4.	Demonstration plot support	In the meeting, Community Organizer discussed that under the project, we will provide demonstration plot support for IPM practice. Already, we have finalized a total of 200 farmers' lists for this support. We will communicate to inform the selected farmer to receive this support timely.	WMG executive committee and selected farmers

Sl.	Agenda	Discussion & Decision	Responsible Person
		Decision: Executive committee will provide support for better IPM practice in the field level.	

CONCLUDING SPEECH:

At the end of every meeting, the mention WMG president request all water management group members to maintain their role and responsibilities properly to strengthen their group activities. Finally, He declared to close the meeting with given thanks for active participation.

2.24 Exchange visit:

Shushilan organized exchange visit for better learning and sharing. Exchange visit have been conducted in Barguna Sadar, Patharghata, Amtali and Kuakata to enhance the participants knowledge, skills and capabilities of the members of 28 water management groups and 2 water management association under both polder. Total number of 188 members from WMG & WMA participated in this exchange visit.



Through the exchange visit, 188 participants (76 WMGs members and 112 WMAs members) learned about savings collection and banking, loan disbursement, investment sector creation, dividend distribution, IGA, social and humanitarian initiatives, women's employment, team strengthening strategies, retention of necessary records and documents.

EXCHANGE VISIT 2021

Team & Polder	Draft Day & Date	Timeline	Subject/Topics	Location	Responsible /Facilitator
Team-1, Total 60 (WMA members & staff) from polder 40/2	Day-1 07-02-2021 (Monday)	7.00 - 08.00 am	• Organized team at Nishanbaria Khayaghat	WMG area to Patharghata	Shushilan CEIP-1 team and WMA committee
		8.00 - 09.30 am	• Travel from Nishanbaria to Purakata farighat	Patharghata to Purakata	
		9.30 - 11.30 am	• Reached to South west water management group	Mohiskata, Amtoli	
		11.30-01.00 pm	• Visit WMG activities and learning - sharing meeting with committee & members	Mohiskata, Amtoli	
		01.00-02.00 pm	• Travel to Kuakata	Mohiskata, Kuakata	
		02.00-03.00 pm	• Prayer and Lunch break	Kuakata	
		03.00-5.40 pm	• Solidarity sea-beach view	Kuakata	

Team & Polder	Draft Day & Date	Timeline	Subject/Topics	Location	Responsible /Facilitator
		6.00-9.00 pm	<ul style="list-style-type: none"> Travel back from kuakata to Patharghata and raffle-draw 	Kuakata to Patharghata	
Team-2, Total 60 (WMA members & staff) from polder 41/1	Day-2 09-02-2021 (Tuesday)	8.00 - 09.00 am	<ul style="list-style-type: none"> Organized team at Shushilan Office 	WMG area to Shushilan	Shushilan CEIP-1 team and WMA
		9.00 - 09.30 am	<ul style="list-style-type: none"> Travel from Shushilan to Purakata farighat 	Shushilan to Purakata	
		9.30 - 11.00 am	<ul style="list-style-type: none"> Reached to South west water management group 	Mohiskata, Amtoli	
		11.00-01.00 pm	<ul style="list-style-type: none"> Visit WMG activities and learning - sharing meeting with committee & members 	Mohiskata, Amtoli	
		01.00-02.00 pm	<ul style="list-style-type: none"> Travel to Kuakata 	Mohiskata, Kuakata	
		02.00-03.00 pm	<ul style="list-style-type: none"> Prayer and Lunch break 	Kuakata	
		03.00-5.40 pm	<ul style="list-style-type: none"> Solidarity sea-beach view 	Kuakata	
		6.00-9.00 pm	<ul style="list-style-type: none"> Travel back from kuakata to Barguna and raffle-draw 	Kuakata to Barguna	
Team-3 Total 34 (EC members, WMG & staff) from polder 41/1	Day-3 06-02-2021 (Wednesday)	8.00 -8.30 am	<ul style="list-style-type: none"> Organized team at Shushilan Office 	Barguna	Shushilan CEIP-1 team
		9.00 -10.30 am	<ul style="list-style-type: none"> Reached to Patharghata & Meeting with WMA 	Patharghata	
		10.30 -12.00 pm	<ul style="list-style-type: none"> Visit Gohorpur WMG activities and learning -sharing meeting with committee & members 	Charduani	
		12.00 -1.00 am	<ul style="list-style-type: none"> Afforestation field visit and meeting with Gohorpur WMG 	Gohorpur	
		01.00-03.00 pm	<ul style="list-style-type: none"> Prayer and Lunch break 	Patharghata	
		03.00-04.30 pm	<ul style="list-style-type: none"> Overall learning sharing & raffle-draw 	Patharghata	
		04.30-06.30 pm	<ul style="list-style-type: none"> Travel back from Patharghata to Barguna 	Patharghata to Barguna	
Team-4 Total 34 (EC members, WMG & staff) from polder 40/2	Day-4 04-02-2021 (Thursday)	8.00 -9.00 am	<ul style="list-style-type: none"> Organized team at Shushilan Office 	Patharghata	Shushilan CEIP-1 team
		9.00 -10.30 am	<ul style="list-style-type: none"> Reached to Barguna & Meeting with Shushilan team 	Barguna	
		10.30 -12.00 pm	<ul style="list-style-type: none"> Visit Uttor Borolobongola WMG activities and learning -sharing meeting with committee & members 	Uttor Borolobongola	
		12.00 -1.00 am	<ul style="list-style-type: none"> Visit Boat museum, Elish foara & WMA election 	Barguna	
		01.00-03.00 pm	<ul style="list-style-type: none"> Prayer and Lunch break 	Barguna	
		03.00-04.00 pm	<ul style="list-style-type: none"> Overall learning sharing & raffle-draw 	Barguna	
		4.00-06.00 pm	<ul style="list-style-type: none"> Travel back from Barguna to Patharghata 	Barguna to Patharghata	

Chapter-03: Social Forestry

The purpose of the present mission is to implement ecological based social afforestation approach with engagement of local community and multi-stakeholders including local Forest Department (FD) for effective implementation of afforestation interventions in the foreshore areas of Patharghata and Barguna. As per schedule of activities the protocol, Social Forestry (SF) training module and a modality of contract agreement based on Social Forestry Rules 2004 (amendment up to 2011), Tree Plantation Manual 2003 and Afforestation Policy in BWDB Polder 1998 have been prepared. Based on the approved modality by the PMU, CEIP-1, the land ownership and implementing partners for the afforestation have been identified. Under this Social forestry component, Awareness raising activities (Baseline survey, Meeting, materials distribution), Afforestation beneficiary selection, Afforestation group formation, Monthly meeting with social forestry group, half yearly meeting with forest department, Capacity building training on Afforestation, Afforestation agreement sign were the planned activities as per contract.

3.1 Awareness raising activities:

Through the project period, we have conducted a lot of formal and informal activities to raise awareness about social forestry within the polder community people. As per the baseline report, more than 96% respondents of polder didn't know about the social forestry program and more than 99% of respondents were no knowledge on benefit-sharing of social forestry. Very limited respondents have been found as the member of social forestry but most of the respondents had the interest to be the member of social forestry and also interested for guard service to protect social forestry. To overcome the situation, we have conducted several meetings with polder community people, forest department, embankment site visit, group meeting, and consultation, etc. Besides this, we have also distributed afforestation-related awareness materials like project brief, leaflet, poster, stickers, and flipchart with the polder people for mass awareness creation. Finally, the polder people interested and enrolled membership in the social afforestation group for providing guard support to the planted embankment forest.

3.2 Afforestation beneficiary selection:

As per participatory social afforestation rule 2004, Shushilan and social forestry department Barguna Sadar and Patharghata has selected beneficiary jointly under polder 40/2 and 41/1. To consider the criteria like Landless, less than 50 percent of the land; Miserable woman; backward group, Poor tribal; Poor Forest Villager; Indigent freedom fighters or indigent children of freedom fighters and People affected by the establishment construction, we have enrolled Afforestation beneficiary. If there are not enough beneficiaries, the beneficiaries can be selected from among the nearest residents of the area. Selected beneficiaries should be interested in engaging in social forestry activities.

3.3 Social afforestation group formation:

Shushilan and the local forest department have jointly formed a total number of 28 social forestry groups and forest management committees under polder 40/2 and 41/1. Total 1087 members enrolled for 28 social afforestation group (14 groups under polder 40/2 and 14 groups under polder 41/1) those who are also a member of the water management group. It is also mentioned that 35% of women have been enrolled within the social afforestation group that indicates significant women participation in the social afforestation group under polder 40/2 and 41/1.

3.4 Monthly meeting with social forestry group:

Under the project period, we have conducted total number of 21 monthly meeting with the social forestry groups under the polder 40/2 & 41/1. In the meeting, the assigned Community Organizer discussed different topics related to the afforestation like the importance of social

afforestation, embankment plantation, role, and responsibility of social forestry beneficiaries, share distribution system, the executive committee's role and responsibility, afforestation training, awareness materials and benefit sharing agreement. We have distributed awareness materials with the every monthly meeting participants. Through this monthly meeting, social forestry group members expressed their interest to receive training on afforestation.



Decision:

1. Social afforestation group members will conduct and participate every monthly meeting
2. Every beneficiary will share benefit as per tri-party agreement.
3. Forest department will provide support to complete the agreement process
4. Social forestry group members interest to receive training on afforestation.

At the end of the meeting, the meeting president of the concern water management group request all social forestry group members to maintain their role and responsibilities properly. Finally he declared to close the meeting with given thanks for active participation.

3.5 Half yearly meeting with forest department:

We have conducted a total number of 6 half-yearly meeting through the project period at Barguna Sadar and Patharghata forest range office under the polder 41/1 and 40/2 through to maintain health safety. Invited participants from the concern forest department, UP members, social forestry group members and others participated in this half-yearly meeting. Through the facilitation of Md Shahin Islam, Deputy Team Leader of Shushilan, participants introduced between each other. Then different issues like agreement, role and responsibility of beneficiary, group formation, management committee formation, capacity building training, afforestation importance to protect disaster and benefit sharing has been discussed in the meeting in details.



Through this meeting:-

- Committee members learn about their role and responsibilities for sustainable forest management by the Range & Bit Officer.
- Polder 41/1 embankment plantation update shared in the meeting by Range Officer within the participants
- Participants received clear message about benefit sharing/agreement.
- Forest beneficiaries agreed to contribute 8% to WMG & 2% to WMA after getting benefit as per agreement.
- Handed over the final afforestation beneficiary list and afforestation management committee list and agreement to the concern Range Officer of the Forest Department officially.

In the meeting, we have distributed afforestation awareness materials like posture, leaflet, and sticker within participants. Finally the Range Officer/Bit Officer declared to close the meeting with given thanks to all for active participation.

3.6 Training on Social Afforestation:

Introduction:

Social afforestation is one of most important component of CEIP-1. To protect and more strengthen coastal embankment social afforestation program has been implemented under polder 40/2 & 41/1 in Patharghata & Barguna Sadar under CEIP-1. From 28 WMGs, Shushilan has formed 28 social afforestation groups with the combination of 1087 members successfully. In both side of reconstructed embankment, Forest Department has completed plantation also. Under the social afforestation component, Shushilan have conducted capacity building training social afforestation (13 to 14 December 2020) within 132 participants under polder 40/2 & 41/1 in this reporting period.



Objectives of the Training:

- Participants will be able to learn about environment and forest.
- Awareness raising among the coastal public to protect the adverse effects of climate change
- Initiatives to create resilient green belts to mitigate natural disasters in coastal areas to reduce the adverse effects of climate change
- Learn about an idea of the techniques of adaptation to the changed natural environment
- Gain a clear idea of the impacts of climate change, what to do to reduce the loss of life and property due to its adverse effects
- To provide ideas about the benefits of social forestry to the coastal population and to involve them in social forestry
- Assistance in increasing the economic potential of the coastal people through social forestry
- Formation of afforestation group from water management organization: learn about role, responsibilities and functions
- To acquire knowledge about setting up and management of forest nurseries
- Gain ideas about embankment afforestation and coastal afforestation maintenance and protection methods in the afforestation process.

Training Content:

- Social afforestation
- Objectives of social afforestation
- Social afforestation policy
- Features of social afforestation activities

- Benefit of social afforestation
- Selection of social afforestation beneficiary
- Features of social afforestation beneficiary selection
- Related party of social afforestation
- Role of social afforestation party
- Role and responsibilities of contracted beneficiaries
- Role and responsibilities of Forest Department
- Role and responsibilities of land owner (BWDB)
- Responsibilities of contracted NGO
- Pruning and Thinning
- Share distribution
- Social afforestation management
- Role of social afforestation management committee
- Role of advisory committee
- Use of tree plantation fund
- Coastal embankment afforestation
- Trees selection for coastal embankment, maintenance and its importance
- Protection and sustainability of coastal embankment
- Importance of tree, afforestation award, posture, leaflet, sticker and success story

Outcome of the training:

After getting day-long training on social afforestation all participants have achieved clear knowledge and learning how to protect, maintenance and manage embankment afforestation successfully. They have expressed their commitment that they will work together through planning and with the help of forest department and water management group/association.

3.7 Afforestation agreement:

We have successfully completed afforestation agreement within social forestry group, water management group and water management association under polder 40/2 and 41/1. After getting instruction with a written draft agreement copy from the project management unit, we discussed the issues with the local forest department, afforestation management committee, the management committee of the water management group, and the association first. Then, we have written the agreement draft group-wise for stamp print. Finally, we organized an afforestation agreement signing meeting where the afforestation management committee, the management committee of the water management group, and the association participated. In the meeting, they have completed all agreements through our facilitation. We have already submitted the original agreement copy to the concerned forest department.

Chapter-04: Implementation of Integrated Pest Management

Shushilan has identified the existing IPM practice & developed an IPM plan for the working area. Shushilan is ready to apply farmers' driven ecology-based pest control mechanism and plan to reduce synthetic chemical pesticides through promoting Bangladesh Agriculture Extension Policy and engaging the DAE in implementing and monitoring of IMP activities. Shushilan team will also facilitate the targeted community including WMOs to develop a constructive IPM including components of (i) awareness /dissemination of information, (ii) technical capacity building (iii) implement Integrated Plan and Soil Nutrient Management techniques (including organic fertilizers, composting and worm culture) and (iv) determine pesticide residue on crops. DAE, BARI and BRRI also have some successful examples to implement IPM. Shushilan is coordinated with local staff of DAE for capacity building and input supports of the beneficiaries. Moreover, the Organization will engage Agriculture related Standing Committee of Union Parishad to support the beneficiaries. Main challenge of the IPM is to ensure the right price and the right market. A bottom-up approach followed for further mainstreaming the IPM practice among the target groups (farmers, fishermen, forest product users). Moreover, IPM specialist provided technical assistance with the community organizers, WMGs leaders and lead farmers for effective management of pesticides, ecologically based pest control practices. Under this integrated pest component IPM beneficiary selection, IPM training conduction and Provide demonstration plot support were the planned activities as per contract.

4.1 IPM beneficiary selection:

Under the project period, we have selected a farmer's demonstration support list to provide IPM support. Based on the different criteria like farmer's interest, previous experience, agriculture land, member of the poor family, membership of water management group, we have listed 200 farmers primarily through WMG executive committee under polder 40/2 & 41/1. We submitted the selected farmers list to the project management unit for approval. To review the list, PMU approved the selected farmers list for next action.

4.2 Training on Integrated Pest Management:

Introduction:

The use of chemical fertilizers and pesticides in agriculture is very harmful to human health, other animals and natural elements like soil and water. In addition, the use of chemical fertilizers and pesticides in agriculture has increased the production cost of farmers. Integrated Pest Management (IPM) is an environmentally sound approach which is based on the multidisciplinary and interdisciplinary involvement in agricultural pest problems. IPM recognises the presence of these "Pests" as part of the agro-ecosystems, provided that their populations are kept below economic threshold level. In other words, IPM could be defined as a crop protection system that is structured to use a variety of control procedures rather than relying on chemical pesticides as a sole control method. This system integrates cultural, biological, chemical, and other control methods in harmonized manner. SO that the eventual result is greater than the sum of all involved methods. In addition, IPM is an integral part of the Integrated Crop Management, which in turn, should be a part of Integrated Resource Management of a given ecosystem. Farmers' participation is a prerequisite to the success of IPM programs. Under the IPM component, we have conducted training (26-29 July 2020) on integrated pest management within 364 farmers those who are members of 28 water management groups under polder 40/2 & 41/1 in this reporting period.



Objectives of the Training:

- Disseminate IPM knowledge to the farmers for better implementation and understanding
- Create scope for polder farmers to learn vast on IPM through experience sharing
- Farmers awareness creation to practice IPM through rice, vegetables and other crops demonstration/plot
- Inspired farmers to reduce pesticide on crops production
- Popularize IPM and Soil Nutrient Management techniques (including organic fertilizers, composting and worm culture)
- Make platform to share experience, knowledge, resources, and technology between both polders farmers.

Training Content:

- IPM
- IPM benefits
- How to control insects and diseases through integrated pest management
- Pesticide impact on life & nature
- Personal protection equipment's
- Different insects and recovery mechanism
- Organic pesticide preparation and application method
- Different IPM practices

Outcome of the training:

After getting day-long training on IPM, all participants have achieved clear knowledge and learning about IPM, IPM benefits, control insects and diseases through integrated pest management, pesticide impact on life & nature, personal protection equipment, different insects and recovery mechanism, organic pesticide preparation and application method and different IPM practices deeply. The farmers expressed their commitment to use organic pesticides instead of chemical pesticides.

4.3 IPM demonstration Support:

As per baseline recommendation, IPM & ICM activities needs to be initiated to reduce the dependencies on chemical fertilizers or pesticides. The households can use organic fertilizers and pesticides instead of chemical fertilizers and pesticides. In this regard, awareness program from the CEIP-1 needs to be initiated to popularize IPM & ICM practice. To consider the baseline survey recommendation, the project initiated to provide IPM technology support to polder farmers under polder 40/2 & 41/1. Then we select 200 farmers list from both polder as per project allocation. After getting PMU approved list, we had distributed demonstration support like resilient rice seed, technology for organic pesticide, compost, pheromone trap, light trap, parching, and hand net to the selected farmers through the project period.



The selected farmers installed IPM demonstrations in their field. After getting this support, farmers are very happy. Farmers used the supported technology for better IPM practices in their agriculture field under polder 40/2 and 41/1 in Patharghata and Barguna. Finally, they succeed to reduce production cost received more production.

Chapter-05: Knowledge Development

5.1 Flipchart development, print & distribution:

Through the project period, we have developed 4 types of flipchart on water management organization, social afforestation, IPM, and ICM.

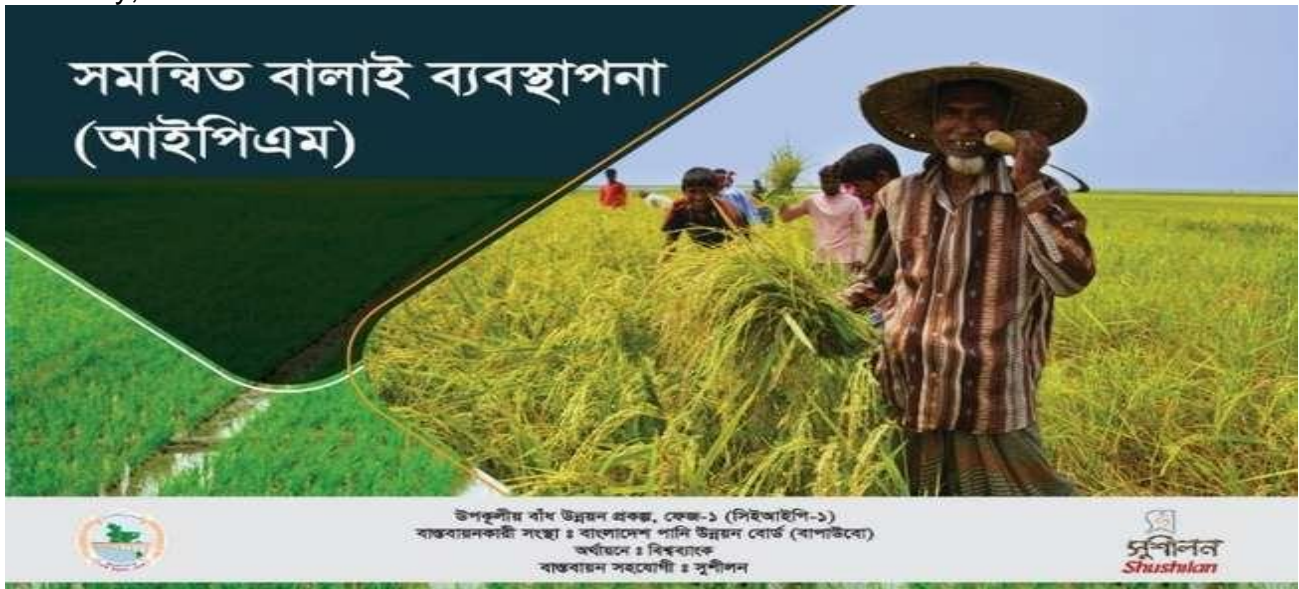
Topic-1 Water Management Organization (WMO): In the flipchart of the water management organization, we have incorporated different types of contents such as what is water management organization, objectives of water management organization, water management organization formation process, sustainable strategy to operate, manage, and maintenance of sluice gates to reduce climate risk and ensure huge agriculture production, water structure (canal) re-excavation, monitoring, and proper utilization of water for agriculture sector development, sustainable embankment management for climate & disaster risk reduction and saving culture for WMO strengthen.



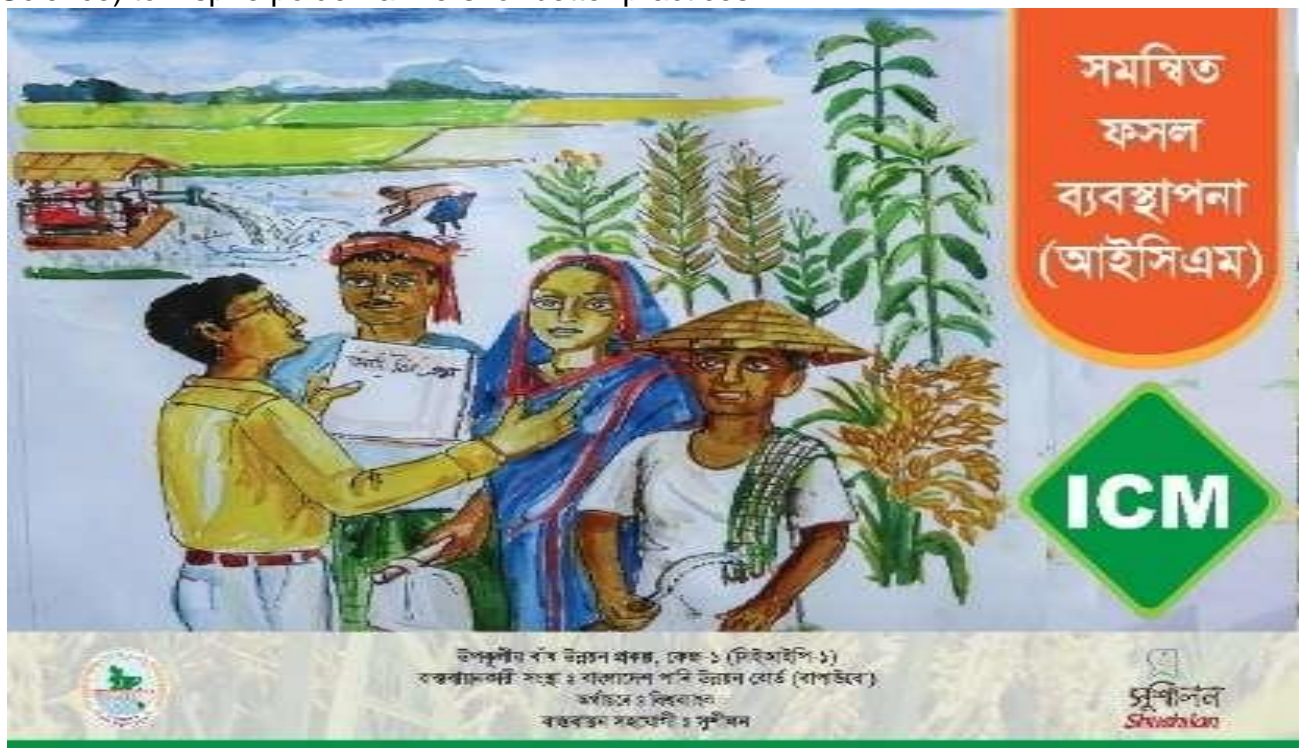
Topic-2 Social Afforestation: In the social afforestation flipchart, we have incorporated different types of contents related to social afforestation such as what social afforestation, types of social afforestation, social afforestation nursery, benefits of social afforestation, cause of climate change, and adverse impact of climate change, how we can reduce climate change risk? Role of social afforestation beneficiaries, share the result distribution among the social afforestation beneficiaries.



Topic-3 IPM: In the IPM flipchart, we have incorporated different types of contents related to IMP such as what is IMP? objectives of IMP, those are damaging crops, control insets through organic management, different types of organic practices, and those are crops friends, IPM summary,



Topic-3 ICM: In the ICM flipchart, we have incorporated different types of pictures related to ICM. Actually, we have focused ICM practices through pictures and *KHNONA* (Indigenous Science) to inspire polder farmers for better practices.



Shushilan printed 150 copies of the flipchart and distributed this within the stakeholders and water management groups. Water management groups are using this knowledge document in their monthly meeting for more awareness creation within the members.

5.2 Project brief development, print & distribution:

As per the contract, we have developed 2 types of project brief both in Bangla and English focused on project background, objectives, polder information, activities, and result. After getting approval by PMU, Shushilan printed and distributed a total number of 1500 copies in Bangla and 300 copies in English within the stakeholders through WMG's meeting, training & field work.



5.3 Poster development, print & distribution:

As per contract, we have developed 3 types of the poster on water management group, social afforestation and IPM. After getting approval from PMU, Shushilan printed and distributed a total number of 5000 copies of the poster in Bangla within the stakeholders, water management group's members, and PMU through meeting, training & fieldwork.



5.4 Leaflet development, print & distribution:

As per contract, we have developed 3 types of the leaflet on water management group, social afforestation and IPM. After getting approval from PMU, Shushilan printed and distributed a total number of 5000 copies of the leaflet in Bangla within the stakeholders, water management group's members, and PMU through meeting, training & fieldwork.



total number of 2000 copies of the sticker within the stakeholders, water management group's members, and PMU through meeting, training & fieldwork.

বেড়িবাঁধে গাছ লাগাই দূর্যোগ থেকে রক্ষা পাই

বিষ মুক্ত সবজি চাষ খাদ্য পুষ্টি বার মাস

উপকূলীয় বাঁধ উন্নয়ন প্রকল্প, ফেজ-১ (সিইআইপি-১)
বাস্তবায়নকারী সংস্থা : বাংলাদেশ পানি উন্নয়ন বোর্ড (বাপাউবো)
অর্থায়নে : বিশ্বব্যাংক
বাস্তবায়ন সহযোগী : সুশীলন



উপকূলীয় বাঁধ উন্নয়ন প্রকল্প, ফেজ-১ (সিইআইপি-১)
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বাস্তবায়ন সহযোগী : সুশীলন



পানি ব্যবস্থাপনা দলের কল্যাণ

অধিক ফলন অধিক ধান

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বাস্তবায়ন সহযোগী : সুশীলন



5.6 Video documentary:

Under the project, we have made a draft video documentary focused on project interventions. As per the approved video story and script by the project management unit, we have prepared a draft video documentary by the hired firm. The hired firm already shot in the field under polder 40/2 & 41/1 effectively. To review the draft copy, PMU had given some feedback. Then Shushilan is taken action again with the hired firm to incorporate the PMU feedback. Finally, the firm has completed the video documentary that submitted to the PMU already.



5.7 Lesson learned workshop:

Shushilan organized a lesson learned workshop at DC conference center, Barguna dated 23 February 2021. The formal lesson learned workshop started with the registration of all participants. The honorable Executive Engineer of BWDB, Barguna presided over the workshop. Md. Ashrafur Islam, ADC general of Barguna District Administration participated as chief guest in the workshop.



Shushilan organized a lesson learned workshop at DC conference center, Barguna dated 23 February 2021. The formal lesson learned workshop started with the registration of all participants. The honorable Executive Engineer of BWDB, Barguna presided over the workshop. Md. Ashrafur Islam, ADC general of Barguna District Administration participated as chief guest in the workshop.

- Venue: DC conference center, Barguna
- Date: 23 February 2021
- Number of participants: 125

Then Mustafa Bakuluzzaman, Team Leader of Shushilan shared project short description implemented activities like project inception workshop, staff training on the establishment of water management organization, the baseline survey, formation of the water management group and association, skill development training for water management group and association members, picture drama show, exchange visit, courtyard meeting, awareness materials prepared and distribution, video documentary, social afforestation beneficiary selection, identify land ownership, afforestation group formation, management committee the formation, afforestation benefit-sharing agreement, monthly meeting with social afforestation group, half-yearly meeting with the concern forest department, IPM farmers support list preparation, IPM demonstration support, participatory social monitoring and evaluation activity, impact, lesson learn, recommendation through PowerPoint presentation. After his presentation, Shushilan displayed a Video documentary and picture drama show related to CEIP-1 under package D in the workshop venue. Through this lesson learned workshop, Shushilan has distributed certificates within 28 water management group under polder 40/2 & 41/1. Then the Team The leader requests participants to take part in open discussion in the event. Some participants expressed their opinion the successful implementation of CEIP-1 project through Shushilan. At the end of the event, the president of the lesson learned workshop (the honorable XEN of Barguna) has declared to close the event and given thanks to all for active participation.

Chapter-06: Project impacts

6.1 Strengthen WMOs formation:

Through to follow a Government manual “Participatory water management manual-2014” 28 WMGs and 2 WMAs has been formed under the 40/2 & 41/1. Polder community has realized its importance. Being enterprising, the water management groups have prepared their **annual action plan** to carry out their role and responsibilities.



The WMGs are cooperating in social, humanitarian and inter-ethnic issues. If anyone water management group has a problem, it is taking the initiative to solve the problem by contacting with other water management groups.

6.2 Developed skill of WMG & MWA members:

The efficiency of water management groups and water management association’s leaders has increased. The water management team and the association are conducting regular discussion meetings by setting the agenda every month. They are writing the resolutions of the monthly meetings themselves, maintaining the savings register, keeping income-expenditure accounts, depositing savings and disbursing employment loans to the members, depositing the savings in the bank. In addition, they maintain effective communication with various government and non-government organizations to receive services and deliveries. It is also accepting cooperation with the water management association to manage the group well. Conducting regular meetings with the social forestry group and the sluice gate management committee to ensure proper management.



6.3 Institutional structure development for WMOs:

Water management groups and associations have institutionalized their organization. They have rented office rooms on their own initiative to run the activities of the water management group smoothly. Many group members have given room support to operate the group activities. Every water management group has set up a temporary office to operate its activities. Md. Rafiq, the President of Koraitala Sonakhali Water Management Group under the polder 41/1 said, “Own office is very important for the group. If there is an office, it is understood that the group has survived. To conduct meetings every month, savings collection and loan

disbursement are not possible without an office. Moreover, if the group does not have its own address with the office, how will people know about us? That is why we have continued our group activities with the office”.



Md. Zakir Hossain, President of 40/2 Polder Water Management Association, said, “We have the total number of 15 permanent and temporary offices with a signboard for the effective operation and management of 14 water management groups and 1 water management association. All the work of the water management group and association is being managed from the office every month”.

6.4 Established water structures management platform:

Through the CEIP-1 sluice gates, canals, embankments have been constructed under each water management group catchment area. Basically, the main role and responsibilities of the water management group are to manage and maintain sluice gates, canals, embankments including other works. The water management groups will operate and manage their connected water structures through coordination with the concerned Water Development Board. To manage and maintain, they are contracted with the concerned Water Development Board. As a result of the successful project implementation, water management groups and water management associations are already working on regular supervision, management, and maintenance of water structures, embankments, and afforestation in their area under both the polder. The members of the water management groups and association are monitoring and evaluating the condition of sluice gates, canals, and embankment around the entire polder. In addition, they are communicating in writing and verbally seeking the cooperation of the authorities to work on their proper management and maintenance.



Under the Polder, one kind of ownership, mentality, and platform of the water management group and the association has been created on all water structures to make them more protective and sustainable for their livelihood development.

6.5 Created Women Leadership:

Through this project, more than 33% of women have been included as members of water management groups and water management associations. Even in the management committees of the IPM Agriculture and water management group, water management association, and social forestry group, more than 33% of women have been given rank which is a big indicator of women's empowerment. Women are also managing and operating water management group and social afforestation group successfully. They have also received capacity building training on group management, gender mainstreaming, social afforestation management, IPM, social monitoring, scheme development, alternative livelihood, and account & financial management. Through the project period, 37% of women have participated in different types of group consultation/meetings like group saving, training, IPM, monthly meetings, and others. Every month, women leaders of the water management group are going to banks to deposit savings money.



Besides this, they are attending monthly meetings, collecting savings from members, and communicating with other groups, government, and non-government organizations.

6.6 Participation increase in social forestry group:

Once upon a time, the local people did not want to participate in social forestry activities. There was no interest of the people in the care and maintenance of the trees planted along the roads or embankments. Even if trees were planted from the forest department, the cows and goats of the local people have ruined it. As a result, it was not possible to achieve the goals and objectives of social forestry. However, under the CEIP-1 project, it has been possible to ensure people's participation in social forestry. Prior to the planting of the embankment, discussions, courtyard meetings, picture drama show, and sharing meeting have been held several times with the people of the local area. Mass awareness has been created about the benefits of planting embankment trees in the area and the people of the area. At present, the members of the social forestry group are more responsible for the regular maintenance of the trees.



The forest department is cooperating with them on a consultative basis, the water management group and the water management association are cooperating on their side, gradually creating green forestry on both sides of the coastal embankment. The people and other animals are living in the green nature and environment. Besides, the ecology of the area is being enriched.

6.7 By-party forest benefit sharing agreement:

Under the CEIP-1 project, the water management group, the water management association, and the social forestry group have signed an agreement on the benefit-sharing on social forestry issues. After getting benefits from the forest department, members of the social forestry group will share 8% to the water management group and 2% to the water management association for its sustainability. Through the social forestry program, everyone will be benefitted at the end of the agreement period. This is an excellent strategy to protect social afforestation.

6.8 Increased IPM practice in agriculture:

The use of chemical fertilizers and pesticides in agriculture is very harmful to human health, other animals including natural elements like soil and water. In addition, the use of chemical fertilizers and pesticides in agriculture has increased the production cost of farmers. Under the CEIP-1 project, initiatives were taken to promote environmentally friendly agriculture and Integrated Pest Management technology assistance to farmers. Under the project farmers received IPM demonstration support like rice seed, technology for organic pesticide, compost, pheromone trap, light trap, parching, and hand net for practice.



As a result, farmers are highly benefited to get IPM technology support. Farmers have got bumper production as per their expectations. Supported farmers have given thanks for this environment-friendly support. Others farmers in that area are also interested to get support.

6.9 Created financial resiliency of WMGs:

Each water management group is collecting regular monthly savings. The management committee of the water management group is collecting these savings from members. The groups are depositing these savings at the rate of 20/40/100 taka. The committee is writing books on the amount of savings deposited by the members and depositing the monthly total savings in the bank. So far, 14 water management groups of 41/1 Polder has saved a total of 5 lac 10 thousand 40 takas. On the other hand, 14 water management groups of 40/2 polders have saved a total of 6 lac 42 thousand takas.



In addition to accumulating savings, water management groups have begun disbursing employment loans with the members. The committee is disbursing the loan through the member's application to the committee under both polders. So far, four water management groups have disbursed employment loans to 16 people for goat rearing, poultry farming, rickshaw purchase, fish farming, and sewing machine purchase. Gradually each water management group is trying to increase their financial capacity and provide employment opportunities to the group members.

Chapter-07:

Monitoring, Evaluation, Reporting and Documentation

Shushilan monitoring and evaluation cell was responsible to carry out the supervisory works and monitoring of ongoing activities under the project.

Quality Control of Deliverables: All supporting logistics and materials were ensured at the beginning of every activity and training. The Community Organizers and Deputy Team Leader was the focus and all the participants in that purpose were aware and skilled up. Necessary materials were also provided to them to make them capacitated on the dynamics of working modalities from top to bottom.

Quality Control of Reports: The Team Leader and Deputy Team Leader developed the drafts of various reports such as inception report, progress report, baseline report, and project completion report. Before submission, the reports have been closely reviewed by the team leader of Shushilan for appropriateness of the language and fulfillment of the requirements of the assignment.

Complying with the Reporting Requirements:

As per agreements, Shushilan decided to submit five types of reports including Inception Report, Monthly Progress Reports, Quarterly Progress Reports, Baseline Report, and Project Completion Reports. Those are

Inception Report: Shushilan has submitted an inception report with a clear indication of organizing, time-bound plan, quality assurance plan, management plan and reporting date, the composition of the team, elaborating the methodology and approach plan, providing a comprehensive work plan with specific dates per activity, etc. The inception report was submitted as a draft. Then project management unit of the Bangladesh Water Development Board had given some feedback in the inception report. After getting the feedback we have prepared the report again that submitted to Project Director, CEIP-1, BWDB, Dhaka dated 4th July 2019.

Baseline Report: Shushilan had submitted the draft baseline survey report to Project Director, CEIP-1, of Bangladesh Water Development Board, Dhaka for feedback and comments. The project management unit had given some feedback and comments to incorporate. Then Shushilan had incorporated to fulfill the feedback and comments and submitted the report again. But The World Bank demanded to PMU to submit the baseline report polder wise. Again, Shushilan completed the baseline polder wise and submitted to Project Director and others dated 18 January 2021.

Monthly Progress Reports: At the end of every month, Shushilan has submitted a monthly progress report indicating cumulative progress of implementation of the assignment, status of mobilization, problems encountered, an attempt made to resolve the problems, database and help & facilitation needed from the contracting authority to address the unsolved issues within the 1st week of the next month. We have submitted total number of 12 monthly progress report through the project period.

Quarterly Progress Reports: At the end of every quarter, Shushilan has submitted a quarterly progress report indicating cumulative progress of implementation of the assignment, status of mobilization, problems encountered, an attempt made to resolve the problems, database and help & facilitation needed from the contracting authority to address the unsolved issues. We have submitted total number of 7 quarterly progress report through the project period.

Project Completion Report: The Team Leader, Deputy Team Leader with inputs from Community Organizers developed this project completion report combining of project aim and objectives, approaches and methodology, project beneficiaries, project implementation process and activities, project outcomes by reflecting the overall learning during the course of implementation. This is submitted to the Project Director, CEIP-1, of Bangladesh Water Development Board, Dhaka.

Chapter-08: Lesson Learned and Recommendation

Lesson learned:

- ❖ Extensive public participation for the formation of water management and water management association. Local people, Union Parishad representatives, journalists, teachers, social workers, administration representatives, Water Development Board representatives, and people from all sectors participated in every water management group and association formation events. This is very rare in the case of other projects.
- ❖ The formation process of water management groups and associations is also a good learning. Generally, no rules are followed in forming any association, or organization under other projects. Since water management groups and associations have been formed following the rules of the government, all these organizations are more likely to be sustainable.
- ❖ Conduct regular monthly meetings. The water management group and the association are conducting every monthly meeting including setting agenda, which is rare for other projects. Regular meetings are no longer held even after the project is over.
- ❖ Provided a series of training to enhance the skills and competencies of the water management group and the association committee and general members of the association. A total number of 8 types of training have been given under this project. Usually in the case of other projects the management for the groups or associations are not given so much training for operation and maintenance.
- ❖ Women's participation. Through this project, more than 33% of women have been included as members of water management groups and water management associations. Even in the management committees of the IPM Agriculture and water management group, water management association, and social forestry group, more than 33% of women have been given rank which is a big indicator of women's empowerment. Generally, a certain percentage of women's participation is not mandated in every project.
- ❖ One of the prerequisites in the process of forming water management groups and associations is the accumulation of regular monthly savings. Assistance to members on easy terms loans from savings. As a result, the members have started small businesses, tailoring, fish farming, livestock rearing, etc. with their own savings, which is leading the organization towards sustainability.
- ❖ Internalization. Under the project, an agreement has been signed between the water management group, the water management association and the social forestry group on the benefit-sharing on social forestry issues. Although the members of the social afforestation group are directly responsible to protect planted trees for more strengthening the embankment, the water management group and the water management association are also indirectly responsible. In addition, everyone will benefit financially at the end of the agreement period which is an excellent mechanism to make the group and organization long-lasting and sustainable.

Recommendations:

1. As the water management organizations are formed very newly, they need to adopt long-term planning and regular nursing at the field level to make them efficient and strong in management. For example, more training and demonstration support execution for resilient and pesticide free agriculture practice, training on sluice gates operation and maintenance, income generating/livelihood support, scheme development and implementation by organization and others

2. Creating Ownership for Sustainable Management and Maintenance of water related Infrastructure, needs Office and Livelihood Support for Water Management Organization.
3. The members of the water management group and the association need skills and cooperation capacity for linkage with various government and non-government departments.
4. It is needed to involve and assist the water management groups and associations in implementing climate and disaster resilient agricultural activities in the Polder area.
5. Need to form 2 more water management groups in Ailapatakata Union under Barguna Sadar to ensure operation and maintenance of the total number of 6 FS, 1 DS and 6.70 km embankment.
6. Need to create more opportunities for strengthening the capacity of water management groups and associations through NGOs before extending the duration of the project.
7. Since the water management group and the association will operate and maintain all the infrastructures constructed under the project, it is necessary to form water management group and association before starting the infrastructure construction work for effective supervision.

Chapter-09: Success Stories

“Water Management Group, Our Right Establish Platform”

Local farmers, fishermen, small traders, handicraftsmen, boatmen, landless, destitute, and project affected families, who are directly or indirectly positive or negatively affected by the project has been formed 28 water management groups under Polder 41/1 (Barguna Sadar) and Polder 40/2 (Patharghat) in the coastal Barguna district of Bangladesh. Peoples believe that with proper control of sluice gates, more crops will produce, water for life, and sustainable management has to be ensured. Bangladesh Water Development Board implemented Coastal Embankment Improvement Project (phase 1) (CEIP-1) with the financial support of the World Bank and co-implemented by Shushilan to make the coastal embankment more powerful and sustainable for dealing with natural disasters.



Under the project, 28 water management groups have been formed in Sadar & Patharghata Upazila of Barguna District. The water management group is essentially a locally integrated agricultural water management initiative aimed at ensuring the responsibility, rights, and availability of water use for all through sustainable inland water management. Diversification of area-appropriate crops and increase in production, which is essential for increasing income and food security. Water management groups will coordinate agricultural water management, advanced agriculture, and technical knowledge. In addition to increasing production, it is also linked to the market, creating job opportunities for agricultural workers and engaging women in income-generating activities.

Shushilan has assisted the Water Development Board to form water management groups for the successful implementation of the project. In the meantime, work area survey, area demarcation, area demarcation consultation meeting, convener committee formation through publicity, awareness discussion meeting, 75% member enrollment for each group, formation of the election committee, the formation of the management committee have been completed.

Selim Reza, president of the north Burirchar water management group of Barguna Sadar Upazila, said, “We have formed water management groups for the development of ourselves and the area. The proper operation and management, sluice gates will be sustainable, canal, drainage, and drainage channel management will be further improved, sustainable embankment management will be strengthened, agricultural water management will be sustainable, and more crop production, income, and employment will be increased through the water management groups”.

Jhumur Bepari, a member of the Executive Committee of Hoglapasha Bharani canal water management group in Patharghata Upazila said, “Women's connection with agriculture and water is natural. We have enrolled a lot of women in every water management group. Water Development Board and the Shushilan has provided a lot of training to develop our skills for

strengthening organizational development, registration assistance, and livelihood assistance to enhance capabilities. Interaction with each group, self-relationship will be developed. A strong network will be formed with the service provider/organization. "Women will be empowered and water management groups will be developed. Already we are supporting the income-generating purpose for our livelihood development. We shall overcome in a day"

Coastal farmers are benefited to get IMP training and technology support

Bangladesh is an agricultural country. Farmers cultivate a variety of crops throughout the year in every agro-ecological zone of the country. But due to geographical reasons, insects always attack the crop. As result, so many crops are damaged. However, it is possible to make up for this loss if you are aware. The farmers of Barguna have benefited by getting integrated pest management (IPM) training and technology support and adopting strategies.



In this regard, farmer Mitnur Rahman of Maitha Water Management Group of Barguna Sadar Upazila said, "I cultivate different types of vegetables throughout the year. To control insects in vegetable cultivation used to cost a lot of money for pesticides. But this year Shushilan has helped me IPM training and pheromone traps through the CEIP-1 project. I have cultivated pumpkins, sweet pumpkins, beans, *barbati*, and cucumbers by trapping pheromones in an area of about 2 acres. Harmful insects are dying and not being able to damage the crop. My vegetables are now detoxified. I am also selling in the market to meet the demand of my family. I benefit from both nutrition and money, and I'm happy. "

Selim Mallick, a farmer of Uttar Sotolobongola Water Management Group of the same Upazila, said, "Quality seeds are the most important technology in agriculture. If the seeds are good, the yield is also good. In my own experience and in IPM training, I have learned that the best seed selection in crop cultivation is the most important. This year, during the Aman season, Shushilan helped me with BR-23 rice seeds through the CEIP-1 project. The yield has been quite good. I am very happy. I am also now advising other farmers to collect, cultivate and preserve good quality seeds"

Shahidul Islam, another farmer Boroitola Water Management Group of Patharghata Upazila, said, "It was not known that parching was a technology for paddy fields. This time during the Aman season, Shushilan supported parching me in plant 30 decimal of the paddy land. I was very surprised. Every day, birds sit on the stalks and catch and eat other harmful insects including *padda*, *majra*, and grasshopper. I understand that pesticides are not the only solution. It is also possible to compensate for crop losses by using technology like parching in paddy fields. I got a good yield. This technology is very good for keeping the environment good and reducing the cost of paddy production"

It is also mention that based on the different criteria like farmer's interest, previous experience, agriculture land, member of the poor family, membership of the water management group, we had listed 200 farmers primarily through WMG executive committee under polder 40/2 & 41/1. As per the approved list, we had distributed demonstration support

like rice seed, technology for organic pesticide, compost, pheromone trap, light trap, parching, and hand net to the selected farmers. In a word, Coastal farmers are benefited to get IPM training and technology support through the CEIP-1 project.

Embankment Plantation... Protecting life and livelihood

The coastal areas of Bangladesh are at high risk due to natural disasters and climate change. People in the coastal areas are lost today due to rising sea levels, salinity, river erosion, waterlogging, cyclone, tidal wave, drought, etc. The land of the coastal region is relatively low. As a result, Bangladesh Water Development Board has been constructing polders in the entire coastal region since the sixties and seventies with the aim of protecting the coastal areas and agricultural work throughout the year. But the polder embankment was not conducive to tidal surges. The government is implementing Coastal Embankment Improvement Project-1 to make the embankment stronger and more suitable for natural disasters. Besides, several levels of afforestation have been done under the project to protect the embankment from storms, tidal surges, and river erosion. About 1.5 lakh trees have been planted in the renovated embankment of Polder 41/1 and 40/2 in the coastal Barguna district. On both sides of the embankment, coconut, palm, mango, *amalki*, jackfruit, *boira*, guava, *chambal*, *raintree*, etc. have been planted with fruit forest and medicinal plants. Shushilan and the local forest department have jointly formed a social forestry group and forest management committee to look after and conserve the trees. A total of 28 groups and committees are working to save each tree.



Md. Shahaalam Khan, President, Gaharpur Social Forestry Party, Patharghata Upazila, said: "We have joined the afforestation group of landless, less than 50 decimal landowners, poor

women, backward groups, poor tribal, poor forest villagers, indigent freedom fighters or indigent children of freedom fighters and those affected by embankment construction. The forest department has helped us with trees and a little money. We guard the forested trees in front of each house. We do not allow anyone to grow vegetables by the side of the tree. When a tree dies, we pick up the dead tree and plant a new one. If any stump/stem of the tree is damaged, we fix it. These trees will make our embankments sustainable and strong, reduce disaster risk, and create our jobs."

Social afforestation group member, Tania Akhter said, "One day, a cow ran away from one's barn and destroyed 16 trees. We bought 17 new trees with the money from that person and planted again. I have recovered the compensation of the tree from that person. A member has been dropped from the forestry group for failing to control his cows despite repeated requests. We are one of the caretakers. The people of the area have become very aware after planting trees besides embankment. Abdul Salam, a member of our water management team, sold 3 goats. Because if he left his goat, would damage the tree. No one damages the branches and leaves of any tree in the embankment".

Imran Hossain, president of Paschim Burirchar Social Forestry Group of Barguna Sadar Upazila, said, "There are trees and shrubs around the embankment. The scene in the area has changed. The area is green now. "Planting trees is empowering and leading women, preventing desertification, creating forest resources, reforesting marginal and fallow lands, and reaping financial benefits with a positive impact on the environment."

Range Officer of Barguna Sadar Upazila Md. Matiur Rahman said, "At first the interest of the people was less but now there is a very positive response. Shushilan successfully formed the social forestry groups and committees, enhancing their skills has created through excellent training and awareness. The members of the forestry groups are very aware. Now the trees have grown much bigger which is invisible. Finally, they are beginning to realize that this embankment is for them, this forestry is for their development".

Conclusion:

Shushilan has gained valuable experiences through the project implementation time to achieve the project goal and objectives. During the implementation of the project, Shushilan has faced Covid-19 has pandemic and cyclone Bulbul. Even then, Shushilan has been able to successfully implement all the activities of the project as per the agreement. A total of 28 water management groups have been formed under the Polder 40/2 and Polder 41/1 and 2 water management association also that are registered by BWDB. To enhance the skill and capacities of The Water Management Group and the Water Management Association, Shushilan has trained a total of 3322 people in 8 issues successfully. In addition, 200 farmers of both polders have been assisted in setting up IPM demonstration plots on 7 technologies, which have yielded what they expected at limited production costs. IPM technology support

has gained immense popularity among farmers in the area. Shushilan has formed 28 social forestry groups with the advice and cooperation of PMU and Forest Department with a total membership of 1086. We have conducted 546 consultation/meeting and attended 8345 participants on different issues. In addition, the Water Management Group, Association, agriculture, forestry, awareness meeting, picture drama, exchange visit, video documentary production, knowledge material development, and distribution have all successfully implemented as per the contract. In the implementation of each program, Shushilan has coordinated with the Water Development Board, Forest Department, Agriculture Department, local government, and the people. Shushilan has also submitted all types of reports in a timely manner as per the advice and demand of the Bangladesh Water Development Board and Project Implementation Unit.

Although it was challenging to implement all the activities as per schedule for the project in such a short period of time, Shushilan's skilled staff has successfully completed the work with hard work and talent. Shushilan thinks that more activities need to be carried out to achieve sustainably the operation, maintenance, management of water structures, and above all sustainability of water management groups and associations. Shushilan team was highly committed to contribute to the success of "Coastal Embankment Improve Project, Phase-1 (CEIP-1)". We are proud to be a part of it and we are grateful to PMU/BWDB/ Ministry of Water Resources for awarding us the assignment.

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