



**Bangladesh Water Development Board**

**Blue Gold Program**

**Report on**

**Orientation on Community-led Agricultural**

**Water Management (CAWM) for Field Staff**



**16 to 17 July, 2017**  
**SDA Conference Room**  
**Patuakhali.**

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## 1. Introduction:

It is commonly perceived that salinity is the main reason for non-adoption of improved agricultural technologies and low productivity in the coastal zone of Bangladesh. But actually the poor water management/ waterlogging, in particular, lack of drainage during and at the end of the rainy season is the root cause of low production in polder areas and also lack of coordination among the polder dwellers on water management and that community coordination is needed to enable wide scale adoption of improved agricultural technologies in the polder ecosystems. To overcome of this problem Blue Gold Program started new intervention which was piloted in polder-30 of Khulna zone, commonly known as Community Water Management, in six area of 4 polders and four areas of 2 polders in Patuakhali and Khulna respectively.



To orient the field staff of different implementing agencies (DAE, BWDB) and Blue Gold TA part about community water management, two orientation courses were conducted in Patuakhali on 16 to 17 July'2017 . The specific objectives of this two days course were as follows:

### 1.2 Objectives:

- To improve understanding of the concept of Internal Polder Water Management and Community Water Management (CWM) specifically;
- To develop understanding and techniques to execute a crop-water system analysis for a CWM area in a participatory manner through practical/field observation.
- To develop team spirit and familiarizing with the roles & responsibilities for different field staff members in CWM areas;
- To develop understanding on the main activities, timeline and process steps for CWM;

### 1.3 Venue:

Conference Room of SDA, Patuakhali.

## 1.4. Duration:

The orientation course covered one and half days including half days field visit. A detail training agenda is attached as annex-1.

## 1.5. Participants:

Field staff different Government (BWDB, DAE) and BG TA parts working in CWM areas in Patuakhali were attends in the training. The number of the participants are given below and the details list of registered participants of Patuakhali are attached herewith as Annex-2.

## 2.The Orientation Process:

The orientation course starts with introducing each other at around 09.30 am followed by the objective of the orientation course. After that the orientation course starts its main business.

### 2.1. 1<sup>st</sup> Session:

In the very first session participants of this course had the chance to know about community water management (CWM). A brief introduction about CWM, its process, benefits/opportunities and its experience of polder -30 was presented with the help of PPT and open discussion. At the end of this session in reply to the question of benefit of CWM the trainees and observer came up with following benefits of CWM:



#### **Benefit of CWM/difference between CWM and traditional Practice:**

01. Opportunities for introducing new crop/variety
02. Proper management of water
03. Well coordination among BWDB, DAE, UP and WMOs
04. Maximum production
05. Proper and coordinated Planning for water management

06. Introducing new technology
07. Proper use of fallow land
08. Market development
09. Strengthening local organization/WMOs

## 2.2. 2<sup>nd</sup> Session:

Again PPT was presented in front of the participants about experience of water management in polder-30 where CWM was piloting first time in Blue Gold during last year. The session concluded with open discussion about the various aspects of CWM activities.

## 2.3. 3<sup>rd</sup> Session:

In this session all the trainees are divided in to four group according to their working area i.e. polder area where CWM will be implemented. And then they sat for plenary discussion to identify the steps for starting cwm activities in the selected area and all the four groups prepared a list of steps for carrying out CWM activities. After that they finalize the steps through presenting the posters and open discussion. The steps are finalized are as follows:



### **The steps for implementing CWM activities:**

01. Area selection
02. Awareness/motivational meeting with WMOs
03. Prepare farmers list
04. problem Identification
05. Identify land type
06. Soil test
07. identify cropping pattern and crop planning
08. Starts training
09. Variety selection
10. Seed bed preparation
11. land preparation –prepare field/plot channel and Ail
12. Transplanting
13. Intercultural operation
14. Harvesting and marketing
15. Preparation for next crop cultivation



## 2.4. 4<sup>th</sup> Session:

Before lunch break participants are briefed about the field visit and they sat for plenary discussion to prepare checklist and questionnaire for collecting data/information to analysis crop water relation situation of CWM area. Pakkhi and Bazarghona WMG of polder 43/2D in Patuakhali were preselected for field visit.



### Explanation on Crop-water system analysis

Objective: Map the major crop and water problems and opportunities in the CWM area and some indicative solutions.

Methodology: In field exercise consisting of transect walks and interviews with local WMG representatives

### Steps:

1. Formulation of questions by studying the location map (catchment area map) and summary information on socio-economic, crop and marketing characteristics of the CWM area.
2. Determination of essential points to visit in the field
3. Actual field visit and gathering/introduction with WMG group
4. Actual walk trough / transect walk with 2 or 3 WMG representatives, simultaneously making observations and asking questions
5. Write up of main problems and opportunities; verification with WMG representatives
6. Using the location maps to indicate: existing cropping patterns, main water management bottlenecks and potential opportunities (e.g. alternative water routes), main marketing problems and opportunities; verification with WMG representatives

### Field Visit:

#### Preparation of Field Visit:

Before lunch break participants are briefed about the field visit and they sat for plenary discussion to prepare checklist and questionnaire for collecting data/information to analysis crop water relation situation of CWM areas. The participants were divided into 4 groups .Group-1 was consist of Pakhia( Polder No.43/2D) and Dharandi (Polder No.55/2A) WMG, Group-02 Bara Bighai (Polder No.43/2A)and Aungulkata(Polder No.43/2F) WMG Group -03 was consist of Kewabunia (Polder No.43/2A),Kallan Kalas WMG and Group-04 Bazar Ghona (Polder No 43/2d),Khekuani(43/2F) and Chawla WMG



After lunch all the participants which were already formed by four groups under the supervision of two BG TA staff started journey by office car and two rented micro bus. Group no- 1 & 2 went Pakhia to analysis of crop water relationship management Group no- 3 & 4 went Uttar Bazarghona to analysis of crop water relationship management The four groups spread out to the four corners of the CWM area and interviewed farmers and WMG members to analysis the present crop water situation of the selected CWM area. After collecting the data they came back to the venue and prepared themselves for presenting their observation in the next day morning

## 2.4. Field Visit:

### Analysis of Crop Water relationship management

#### Group no- 1 & 2

went Pakhia to analysis of crop water relationship management.

**Name of WMG:** Pakhia

**District:** Patuakhali

**Registration no.** Patua-2032, Dated.25.11.14

**Number of Members:** 189 (Male-113, Female-76)

**Number of khal:** 04 nos.



**No of pipe culvert:** 01nos.

**Information about CAWM**

**Land size of CAWM area:** 132 acre

**Location:** Mridhapara ,Pakhia

**Major Cropping pattern:**

“Mung Bean- Fallow- T Aman”.

Major crop during rabi season are Mung (80%) Ground Nut (5%), Chilli (3%), Sesame (2%) and fallow (10%) and Local Aman is the major crops in Aman season.

**Land type:** East part of this area (CWM) is almost levelled and west part is medium to high land

**Water Infrastructure:**

**Number of Cannel:** Asuar Suta khal is the main cannel connected with nilkhola sluice.

**Number of Sluice gate:** 0 but the channels are connected to nilkhola sluice

**Inlet/outlet:** Three inlets exist in this area.

<b>Present Problems of Water Management</b>	<b>Solution of the current water management problem:</b>
<ol style="list-style-type: none"><li>1. Normal flow of the khal Water is not possible due to water hyacinth.</li><li>2. Water Flow of the khal become slow due to Net Badth and Jhail</li><li>3. Crop production cannot possible in time for water lodging in the crop field.</li><li>4. One side of crop field is high and another side is low.</li><li>5. The khal of this area is silted up.</li></ol>	<ol style="list-style-type: none"><li>1. Ashuar suta khal required to re-excavate around 900 meter</li><li>2. Ramer ma cannel also need to re-excavate around 200 meter</li><li>3. Three inlets should be repaired for proper water management</li><li>4. A regulator is essential on culvert near the west side of Rashid sikder house to control/properly manage the water flow of Ashuar suta khal.</li></ol>

**Opportunities of CWM**

1. Collectively water hyacinth can be cleaned
2. It is easy to manage properly the water resources and water management related infrastructure
3. The farmers group of CWM can collectively buy inputs and sell their products which will be financially benefited.
4. It is possible to cultivate new/diversified crop/ HYV variety and thus production will be increased.
5. New and improved technology can be introduced
6. It will creates more employment opportunities



**Problem of Marketing:**

- 01. The road from Purba Marichbunia to Care road is made of soil as a result it is difficult to transports goods from the field.
- 02. They often didn't get actual price of their production especially rice as it is local variety.

**Group no- 3 & 4**

went Uttar Bazarghona to analysis of crop water relationship management.

**Name of WMG:** Uttar Bazarghona

**District:** Patuakhi



**Problem and solution of current management**

<b>Present Problems of Water Management</b>	<b>Solution of the current water management problem:</b>
<ul style="list-style-type: none"><li>1. Water lodging due to fulfill of Khal. (Ketvani)</li><li>2. Culvert is small in size.</li><li>3. Khals are full fill through water hyacinth.</li><li>4. Water lodging due to High and low Agricultural Land.</li><li>5. Fish cultivation in khal by using net.</li><li>6. Salt in high land during Robi Season.</li><li>7. Insufficient irrigation water during Robi season.</li></ul>	<ul style="list-style-type: none"><li>1. Re-excavation of Khal. (Ketvani khal)</li><li>2. Need big size culvert.</li><li>3. Clean water hyacinth.</li><li>4. Constructed field channel. Small pipe and ail should be constructed.</li></ul>

## Existing and proposed cropping pattern

Major Cropping pattern:	Proposed Cropping Pattern
1. Mung Bean- Fallow- T. Aman	1. Mung Bean –T. Aus(BRRI Dhan-48)-T. Aman(BRRI Dhan-52)
2. Ground Nut –Fallow –T. Aman	2. Sunflower –T. Aus(BRRI Dhan-55)- T. Aman(BRRI Dhan-73)
3. Chili –Fallow –T. Aman	3. Wheat (BARI Wheat-26) – Broadcast Aus - T. Aman(BRRI Dhan-77)
4. Sweet Potato –Fallow –T. Aman	4. Mustard (BARI-15) – T. Aus(BRRI Dhan-27)- T. Aman(BRRI Dhan-76)
5. Sesame –Fallow –T.Aman	5. Potato (Diamond) – T. Aus (Local)- T. Aman(Local)

### Scope and Barrier of the CAWM

#### Social Scope:

Most of the farmers are interested to adopted new technologies.

#### Social Barrier

Women are not interested to work in the field because of religious barrier.

#### Technological scope:

Farmers are interested to adopted new technologies.(Extension of new varieties, use balance fertilizer, line sowing, pouching, Light trap).

#### Technological barrier:

But some farmers get fear to adopted new technology.

#### Possible Scope through CAWM:

Through Proper water management cultivate crop according to proposed cropping Pattern the cropping intensity will increase 300% or more instead of 200%.

#### Marketing Problem:

Damaged road, Kacha road, insufficient vehicle, low market price, and syndicate.

#### Scope:

Collectively buy and sell Agricultural Product

## 2.5 5<sup>th</sup> Session: (Brief Discussion on FFS curriculum of T Aman for CWM area)

To orient newly developed curriculum of T Aman FFS for CWM area, a plenary discussion was held in group wise and the participants asked to get back comments or observation on FFS module which was developed in two consecutive workshops held on last June'2016 in Patuakhali . The session came up with the following observation:

01. Time allocated for each session was too low compare to sub content included.
02. The amount of sub-content was too much to cover in one session.
03. It will be difficult to keep all the farmers around 4 to 5 hours.

## 2.6 6<sup>th</sup> session: (Experience of Market Orientation FFS)

A PPT was presented in front of the audience to share the experience of MFS in Blue Gold Program. In this session participants had the chance to gather knowledge on Market Orientation, Collective action and MFS and how could they apply knowledge of MFS in CWM FFS activities.



## 2.7 7<sup>th</sup> session: (Roles and Responsibilities)

In this session participants were requested to write down their roles and responsibilities on VIPP cards and after that all the duties are discussed in large group and finalized. The roles and responsibilities are given bellow according to different agencies who are working under Blue Gold Program.

DAE: Sub-assistant Agricultural Officer

01. SAAO will conduct FFS session especially production technology related topics
02. Will select farmers with the help of COs.
03. They will provide new and improved technology/innovation to the farmers

Blue Gold TA staff: Community Organizers (COs)

01. CO will help to arrange different meeting with WMG/WMA
02. They will motivated farmers to actively participated in the FFS session
03. COs will play an important role for well coordination among BWDB, DAE, BG and WMG at field level

BWDB: Extension Overseer (XOs)

01. They can regularly update the water management situation to the concern BWDB office for water management.
02. They will ensure proper water management

Blue Gold TA staff: Producer Group Facilitators (PF)

01. Help to conduct session related to market orientation
02. Help farmers for collective action (such as inputs- seed, fertilizers etc buy)
03. Will help farmers to establish linkage with different actors

## 2.8 Closing of the Workshop:

The orientation course officially closed around 3.00 PM followed by a brief evaluation of the participant's reaction about the training course through open discussion and question and answer. All most all the participants expressed their satisfaction and gratitude to authority to arrange such type workshop. They mentioned that there are lot of new things they learnt in this workshop such as- Community water management and its benefits, Analysis of crop water system, MFS, collective action etc. Finally everybody argued that it will help them to carry out their regular activities as well as implement of CWM activities.



## 3. Observation and Recommendation:

Though these two courses can be considered as successful and appreciated by all the participants but some observation and recommendation were made by the observer, resources persons and trainees on Orientation on CWM courses and these are:

### Major Observations:

01. The participants felt they had learnt new information and practical skills. Examples:

a) One SAAO said in his 30 year career he had often heard about water management and knows it is important for crops, but he never had a good understanding what it really meant and how to discuss it with farmers. He feels now more confident.

b) One CO expressed, she only knew how to collect statistical data from WMGs and was happy to learn how to collect crop-water data in the field. We ourselves noticed that some COs demonstrated an inability to read maps and did not know the difference between sluice, outlet and inlet. They got some better understanding during this training.

02. Participants also emphasized that this was the first time they work so closely together: TA team, DAE and BWDB. For some of them the polder team concept was new and they appreciated this type of working and team building.

03. Good balance between information/presentation and practical group work. And Time allocation of the workshop was also good.

04. Surprisingly, all groups came up with similar Steps 'how to start CWM'. Either the exercise set up was too prescriptive or there was an honest agreement and understanding among field staff how to start CWM due to proper intro presentations.

05. In the field visit the participants were not officially introduced and the visit also made immediately after lunch which is not proper time for any visit.

#### **Major Recommendation:**

01. CWM Orientation can rather be called a "Training", because encompasses a considerable number of practical skills that are being taught.
02. CWM orientation/ training should not only be provided to staff working in CWM areas. It is highly recommendable to develop a similar training for all polder teams. A training "Internal Polder Water Management", in which they can get skills to do crop-water system analysis in the field, receive an understanding of different water management infra and learn methods to do action planning with WMOs with help of maps. The later skills can also be of direct benefit to the WMA Action Planning workshops.
03. CWM orientations can be organized for LGIs, UAOs and XENs and possible other GoB departments.
04. All the presentation (PPT) should be prepared in Bangla and hand-outs should be provided.
05. Some minor improvements are recommended in relation to showing more visual materials at the start of the workshop, explaining better the function of different water management infrastructures (for COs and SAAOs especially) and during a few sessions what more interaction with the participants.
06. Zonal Coordination meeting should be held between BWDB and DAE to solve the seed crisis during the pick period of the season. BADC, BARI, BRRI and private seed company should be included to solve the seed crisis.



### 3.1 Agenda

#### Day 1.

Time	Topics	Methods	Facilitators
8:45-09:15	Registration		
09:15-09:30	Official Opening	Speech and Game	
09:30-10:15	Introduction and concept of CAWM- Including why and benefits of CAWM Background, objectives and main activities of CAWM	PPT Presentation, Discussion	
10:15-10:45	Example and Challenges of CAWM Experience from last year piloting 10CAWM under BGP	Experience sharing	
10:45-11:00	Tea Break		
11:00-11:45	How to Start CWM(Steps of Implementation with WMG and WMA)	Small Group Discussion. VIPP	
11:45-01:00	Orientation for field visit and Crop water systems analysis	Maps; Presentation	
01:00-2:00	Lunch and Prayer Break		
02:00-05:00	Field Visit and Crop-water systems analysis(Problem and prospectus)	Field visit	
Evening Time	Prepare brief group presentation Review the day learning	Small Group Work	

#### Day2:

Time	Topics	Methods	Facilitators
09:00-09:30	Open discussion about field visit and group present Crop-water systems analysis (Problem, opportunities and probable solutions.)	Experience sharing Presentation and discussion	
09:30-10:30	Team Building-Dream and Catchments	Model preparation	
10:30-10:45	Tea Break		
10:45-11:15	Review of CAWM FFS Curriculum(review of experience and suggestion)	Presentation and Large Group Discussion	
11:45-12:30	Presentation timeline and roles &responsibilities of field staff in CAWM activities.	Presentation & plenary discussion	
12:30-01:00	Review and closing		
01:00-02:00	Lunch and Prayer break		

**Participants list & attendance of the Orientation.**

Sl no.	Name and Designation	Organization	Contract no.
1	Seuly Akter	CDF	01787006237
2	Md. Hamuyan Kabir	SAAO	01716472928
3	Haralal Ch.Mistari	SAAO	01731601165
4	Md.Belal Hossain	SAAO	01762292398
5	Md. Forkan	Ex.Member	01734982873
6	Pervin Akter	SAAO	01718850312
7	Milon Rani Datta	CDF	01719633649
8	Amulya Ch. Mondal	SAAO	01718452247
9	Md. Abu Saleh	SAPPO	01721332665
10	Imran Hossain	SAAO	01785033013
11	Md. Sahanur		01753834124
12	Md. Altaf Hossain	Vice President, Uttar Khekuani	01738402752
13	Md. Anwar Hossain	Join Secretary, Uttar Aungal Kata	01735994280
14	Abdul Malek Sikder	Casher, Uttar Aungal Kata	0174684204
15	Abul Kalam Azad	President, Dakkhin Dharandi Bazar	01712308560
16	Md. Masud Khan	Member, Dakkhin Dharandi Bazar	0175326972
17	Md. Hasan Imam	CDF	01728943229
18	Mukul Rai	CDF	01746723352
19	Abdul Awal	SAAO	01727642715
20	Sarif Mizanur Rahman	XO	01714444228
21	Md. Abdus Sattar	SAPPO	01715351840
22	Md. Nurul Islam	SAAO	01748649483
23	Md. Wahab Khan	SAAO	01715485336
24	Md. Moniruzzaman	AEO	01717479785
25	Abdus Salam	SAAO	01713965226
26	S.M. Badrul Alam	UAO	01718365612
27	Md. Abul Kashem	President, Pakkhia	01734248548
28	Manindra Chandra	Secretary, Pakkhia	01733124670
29	Md. Dalil Uddin	Secretary, Chawla	01731769170
30	Md. Jobbar Pada	Casher, Keabunia	01737260318
31	Md. Abdus Salam	President, Uttar Bazar Ghona	01718907003
32	Md. Shorab Hossain	Uttar Bazarghona	01703529626
33	Md. Hawlader	Choula	01782605112
34	Sultan Ahmed	West BroBighei	01753829256
35	Forkan Akon	West BroBighei	01778645582
36	Md. Musa Akon	SAAO	01718748077
38	Girindra Nath sarker	CDF	01761853329
39	SK. Mohibullah	ZSE, BGP	01719391458
40	Amal Kr. Ray	CDF, Water Management	01716032983
41	Md.Matior Rahman	Sr.Socio-Economist	01727499065
42	Md. Mosarraf Hossain Chowdhury	SAAO	01752839137
43	Md. Kabir Khan	Member, Kallan Kalash Main Khal	01764481412

44	Md. Abul Basar	CDF, BGP	01724430164
45	Md. Motaleb Khan	Member, Kallan Kalash Main Khal	01777048020
46	Md. Mamun or Rashid	XO, BWDB	01713531560
47	Mr. Narottam Biswas	SAAO	01724767722
48	Md. Gias Al Hasan	TC, BGP	01781078877
49	Md. Atikur Rahman	TC, BGP	01717449956
50	Md. Saifullah	BDC, BGP	01728243512
51	Sanjib Mridha	UAO	01722096969

**N:B Participants Male-46,Female-05= Total 51.**

**Prepared by**

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**BGP, Patuakhali.**