Report on
CAWM Planning Workshop

12-13 May'2019, Patuakhali

Blue Gold Program

BWDB Office

23/1 Motijheel Commercial Area, Hasan Court, 8th Floor, Dhaka 1000

(T) +88 02 711 15 25; +88 02 956 98 43

Gulshan Office

148 BCIC Bhabon, 4th Floor, Motijheel C/A, Dhaka 1000

(T) 880 (2) 9512823

Content

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 Community Agricultural Water Management (CAWM) from 2016 in sub-catchment level.

This year (2019-2010) also 21 CAWM area are selected, among these 13 in 6 polders of Patuakhali, 6 in 2 polders of Khulna and 2 in Satkhira. With an aim to improve the understanding the concept of CAWM and share the previous experience with Govt. staff (DAE, BADC, BWDB), WMA and farmers of selected CAWM area, two days' workshop was organized in Patuakhali from 12 to 13 May'2019 at Islamic Foundation Auditorium.

2. Workshop objectives:

This year two days' workshop has been designed slightly differently than the previous year by segregating the participation of different type of participants. 1st day of the workshop has been designed for representatives of DAE (concerned DD, UAO and SAAOs), representatives from BWDB, BADC, BARI and WMA members with an aim to disseminate the experience of CAWM. On the hand 2nd day only for SAAOs from DAE, CDF from BGP TA and Advance farmers from CAWM area to orient them about CAWM and prepare an action plan for Aman season. The specific objective of this two days' workshop were:

Day-01 objectives:

- To improve understanding of the concept of community led Water Management and experience sharing on CAWM implementation;
- To develop understanding crop-water system analysis for costal area of Bangladesh and crops selection for CAWM;

Day-2

Participants: CAWM Farmers and related SAAOs and BGP staff

- To develop team spirit and familiarizing with the roles & responsibilities for different field staff members in CAWM areas;

- To develop understanding on the main activities, timeline and process steps for CAWM;
- To prepare an action plan for implementing CAWM.

3. Participants:

Following different participants attend in the two days' workshop and details list of registered participants was attached as annex-1:

#	Date	Participants from different Organization						Total Participants		
	Day	DAE	BWDB	BADC/ BARI	BGP-CDF	WMA	Farmers	Male	Female	Total
01	Day-1	14	-	01	09	11	-	33	02	35
02	Day-2	11	-	01	09		25	46	01	47

4. The Workshop Process:

4.1 Course Opening:

The workshop started with the welcome speech by the Zonal coordinator, Mr. FM Shorab Hossain followed by self-introduction. Later on, Mr. Hridoyasshor Datta, Deputy Director, DAE Patuakhali inaugurated the two days workshop by expressing the success of this workshop. In his inaugural lecture he asked WMA leader about the objectives of CAWM and other agricultural activities at polders level. After that the objective and background this workshop was shared with participants by large group discussion by Mr. Abul Kashem.

4.2 Concept and experience of CAWM:

In this session participants had the opportunities to know about the concept, implementation process and experience of community agricultural water management (CAWM) activities. In the power point presentation Mr. Shorab Hossain and Mr. Shamim Ahmed provide the details of CAWM activities implemented, its challenges, success and upscaling plan of 2019-2020.

After that Mr. Shaifullah presented the success of Uttar Khekuani WMG; where CAWM was implemented in 2017-18.

At the end of this session Mr. Abul Kashem recap the session and tried to ensure the learnings of this session with interactive discussion.

4.3 Crop Water System Analysis:

Mr. Shahidul Islam, Principal Scientific Officer, Bangladesh Agricultural Research Institute (BARI), presented some irrigation technology/ innovations tested by BARI especially suited for the coastal region. A brief of these innovations is given bellow:

1. **Cropping Pattern:** Relaying of grass pea and cow pea with Transplanted Aman rice. This cropping pattern is suitable for areas where water is not available in rabi season.
2. **Vegetable cultivation with mulching:** This is very much suitable for saline prone areas.
3. **Drip Irrigation with mulching:** This innovation can be applied where irrigation water is not available for vegetable cultivation (Tomato).
4. **Irrigation through Kua (small pond system):** This system can be easily applied to the southern region where a small pond of (8x8) sft. and 6 ft depth by which farmer's can easily irrigate the crops for one time in 10-12 decimal of lands.
5. **Alternate Furrow System:** This sustainable water saving system is easily applied to sunflower and maize cultivation.
6. **Modified Sorjon method:** A modified sorjon method is developed where crops and fish can be cultivated at a time.

4.4 Prospectus of selected CAWM area for 2019-2020:

Mr. Amal Kumar presented a summary of present cropping pattern and water management related problem in newly selected 13 CAWM area for Patuakhali zone. Concerned SAAOs of particular area provide necessary correction of his information. Through this discussion it was found that in Kalapara the major cropping pattern is "T Aman- Fellow- Fellow" where local varieties are the major in Aman season. On the other hand, "T aman- Rabi – Fellow" is major cropping pattern in CAWM area of polders 55/2A, 55/2C, 43/2B and 43/2A where local Aman and Mung are the dominant crops/variety in aman and rabi season respectively. But problem is that Mung often faces climatic risk due late aman cultivation.

Day-1 closing:

Due to time shortage (Ramadan time) and absence of BADC representatives, last session of day-1 (partnership with BADC) could not conducted. In the day-1 closing session three Upazila Agricultural Officer (Kalapara, Galachipa and Patuakhali sadar) expected that in these planning workshop BWDB representative attendance is very much essential so that they can share agricultural problems of polders areas with the concerned BWDB representatives for better production. In the closing remarks District Training Officer, DAE expressed his gratitude to the organizer of this workshop and expecting the success of CAWM activities.

4.5. Day-2:

On 13 may, 2019 again Mr. shorab Hossain welcome the participants as 25 advance farmers from 13 newly selected CAWM areas with concerned SAAOs of DAE. Mr. Abul Kashem briefed the participants about day-1 discussion and tried to bridge day-1 discussion with day-2 participants.

4.6. Water Management Problem Analysis:

In this session participants went to a group work for analyzing the crop water system of selected CAWM areas. The participants were divided in to 13 groups comprising concerned SAAOs, CDF and Farmers of particular CAWM areas. The participants (especially farmers and CDF) were asked to collect information in advances to analyze the problems for better crop production and identify solutions. In this group work each group prepared a map of the particular CAWM catchment where indicated the water infrastructure, water management related problems, present cropping pattern, possible solution of the problems and proposed cropping pattern with preferred variety. After completing the map each group present their map as poster presentation to the selected judge's panel. In the following table a brief of this group exercise outcomes was attached.

Ploder	WMG	Area of CAWM (Ha)	Present Cropping Pattern	Water Management Related Problem	Proposed Cropping Pattern
47/3	Paschim Modhukhali	100	T Aman- Fellow- Fellow 80% local and 20% HYV (BRRI Dhan-11, 23)	50% land remain water logged Water scarcity and salinity during Rabi season Sluice did not work properly	T Aman- Rabi- Fellow Aman (BRRI-52 for high land and BRRI-76 for low land) Rabi – Boro/ Mung/ Ground nut/ Watermelon
47/3	Melapara	75	T Aman- fellow- fellow 60% Local Aman and 40% HYV	During Aman season land become goes under waterlogged condition due to heavy rain	T Aman (BRRI-52 for high land and BRRI-76 for low land)
47/3	Golbunia Aramganj	81	T Aman- fellow- fellow Aman: 60% local, 40% HYV	40% land remain waterlogged during Asher to Shrabon and due to lack of gated culvert could	T Aman (BRRI-52 for high land and BRRI-76 for low land)

Ploder	WMG	Area of CAWM (Ha)	Present Cropping Pattern	Water Management Related Problem	Proposed Cropping Pattern
				not control water management	
47/4	Company Khal	32	T Aman- 10% Rabi- Fellow Aman: 55% local, 45% HYV	Due uneven land type (high low land) both water logging and water scarcity found during Aman season	T Aman- Rabi- Aus T Aman (BRRI Dhan52 & BRRI Dhan 76) Rabi (100%) Boro, Sunflowere, Mung
47/4	Monsatoli Khal	30	Taman- Rabi (30%)- Fellow Taman-60% local, 40% HYV	Due lack of proper drainage system most of the land goes under waterlogging condition.	Aman: BRRI Dhan-52 & 76 Rabi: Boro (BRRI dhan 28 58), Mung-6,
47/4	Adam Ali Khali	30	T Aman- Rabi (30%)- Fellow Taman-60% local, 40% HYV Rabi (30%) Groundnut, mung	Due to lack of proper IPWM infrastructure (gated culvert)	T Aman – Rabi- Fellow T Aman: 52 for high land 76 for low land Rabi (100%): Mung, Maize, groundnut
43/2B	Ramdula	35	T Aman- Rabi (30%)- Fellow Taman-70% local, 30% HYV	30% remain water logged during Aman season Water scarcity during Rabi season	Aman (BRRI Dhan 76) Rabi: BARRI Mung-6, Sunflower- hysan-33 Aus: BRRI dhan-48
55/2A	Akhoibaria Baher Mouzo	27	T Aman- Rabi- Fellow Taman-40% local, 60% HYV	Due silted up field channel land remain water logged during Aman season	Taman- Sharisha- Mung T Aman: BRRI Dhan-52
55/2A	Betagi Sankipura Radhasetaram	90	Aman- Rabi(70%)-Fellow Aman: 70% local, 30% HYV	40% land become water logged during Aman season	T Aman(BRRI Dhan 52)
55/2C	Kachua MohishDanga	30	Taman-Rabi-Fellow	Due to lack of proper drainage system water logged	T Aman (BRRI dhan 52 & 76)
55/2C	Budharam Khal	100	T Aman- Rabi- Fellow	Due silted up field channel land remain water logged during Aman season	Aman (BRRI Dhan 52 and BRRI dhan 76)

Ploder	WMG	Area of CAWM (Ha)	Present Cropping Pattern	Water Management Related Problem	Proposed Cropping Pattern
55/2C	Lamna Guabaria	70	T Aman- Rabi-Fellow Aman (70% local & 30% HYV)	Due to silted up field channel 30% land remain water logged during Aman season	Aman (BRRI dhan 52)
43/2A	Hartoki Baria	30	T Aman- Rabi- Fellow	Due uneven land type (High land) and lack of IPWM infrastructure (gated culvert) water scarcity emerged during Aman season	T Aman- Rabi- Aus T Aman (BRRI dhan 76) Rabi: BARI Mung-6/ Sunflower

4.7 CAWM Implementation Process:

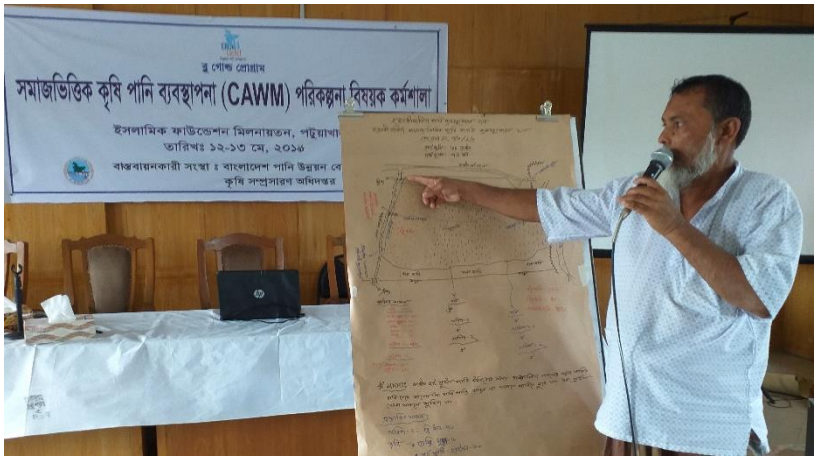
In this session participants had the opportunity to discuss about the implementation process of CAWM activities and the roles and responsibilities of concerned persons, organization (WMA/WMG, BWDB, DAE and BGP-TA team). Through open discussion the concept of CAWM and its benefit were discussed for the participants.

4.8 Action Plan Preparation:

Again participants were divided in to two groups for preparing action plan for upcoming Aman season. 1st group comprising all the farmers, CDF and SAAOs of polders 47/3 and 47/4 while second group comprising polders 55/2A, 55/2C, 43/2B and 43/2A. After completing the group works one SAAOs from each group presented action plan which are given bellow:

#	Activities	Timeline	
		Kalapara (47/4, 47/3)	Patuakhali (55/2C, 2A, 43/2B & 43/2A)
01	Identification/selection of Farmers of CAWM area	Last week of May	2nd week of June
02	Inauguration of FFS session	1st Week of June	4th week of June
03	Identification of Water management related problem of CAWM catchment	2nd Week of June	1st week of July
03	Motivate farmers for synchronized crop production and collectively seed collection	2nd week of June	1st to 2nd week of July
04	Seedbed Preparation and seed sowing	2nd to 3rd week of June	4th week of June
05	nursing of seedling/seedbed	Up to last week of June	
06	Land preparation (collectively)	2nd to 3rd week of July	2nd to 3rd week of July
07	Fertilizer Application (Basal dose)	During final land preparation	During final land preparation
08	Transplanting	4th week of July	4th week of July
09	Intercultural operation (Fertilizer application, weeding, rouging, pest management	Up to harvesting	Up to harvesting
10	Record keeping (Budget, expenditure of Farmers)	From seed to seed	From seed to seed
11	Rouging for seed production	2nd week of Sep to last week of Oct	
12	Drain out water from the field	Last week of October	1st week of Nov
12	Harvesting and FFD	2nd week of Nov	3rd to 4th week Nov

5. Closing of the Workshop:



In the concluding speech Mr. Shorab Hossain remined the participants that the action plan prepared in this workshop and selection of variety of Aman rice should be recheck with other farmers and WMGs members at the very beginning of CAWM FFS so that everybody should have same participation to make the CAWM success. Finally, the two days workshop came an end with vote of thanks.

Workshop Agenda

Day-01 (May 12, 2019)

Time	Topics	Sub-topics	Methods	Facilitators
09.00-09.30	1. Course opening	- Inauguration - Introduction - Logistic Information	Plenary Discussion	DD, DAE Shorab, Kashem
09.30-10.00	2. Background, objective and agenda	- Background & objectives - Review of workshop agenda - Expectation from participants	Large Group Discussion	Shorab & Kashem
10.00-11.00	3. CAWM Concepts and Background	- Experience sharing on CAWM (Benefits, challenges and learning) - Plan for 2019-20	PPT & Experience Sharing	Shorab, Shamim & Shaifullah
11.00-11.15	Refreshment			
12.00-12.30	4. Crop water system analysis for coastal area	- Develop understanding crop-water system analysis for costal area of Bangladesh and crops selection for CAWM	Interactive Discussion with PPP	Dr. Shahidul Islam, PSO, BARI, Shaifullah
12.30-13.00	5. CAWM prospectus in selected CAWM area	- Review of present cropping pattern and prospectus in 1919-20	Interactive Discussion	Atik & Amol
13.00-14.00	Lunch & Prayer Break			
14.00-15.00	6. Partnership Development for CAWM	- Partnership Development and its benefits - How to develop linkages and partnership with GoB and other service providing agency/company - Day review and conclusion	VIPP and Interactive Discussion	Kashem & BADC Officials
15.00-15.30	Review and day conclusion	- Day session review and conclusion	Plenary Discussion	Atik

Day – 02 (May 13, 2019)

Time	Topics	Sub-topics	Methods	Facilitators
09.00-09.30	Review and bridging 1st day sessions	- Introduction of the da-2 participants - Introduction of first day session bridging with 2nd day session	Interactive discussion	Atik
09.30-10.30	7. Problem analysis and Identify the solutions	- Group wise map preparation - Presentation on Crop-water system analysis - Analysis and identify the best solutions	Group Exercise & Model Preparation	Atik, Sydur & Amol
10.30-10.45	Refreshment break			
10.45-12.00		- Demonstration of maps with possible best solution - Review and identify best solutions	Demonstration	Atik, Sydur & Amol
12.00-13.00	8. CAWM Implementation steps	- CAWM implementation process - Coordination with Catchment Plan to WMA - CAWM plan in 2019-2020	Interactive Discussion with PPP	Shorab, Kashem & Shamim
13.00-14.00	Lunch break			
14.00-14.30	9. Presentation on CAWM Training Module	- Brief presentation of FFS curriculum Presentation - Methods and guideline	Presentation & Large Group Discussion	Atik and selected SAAO
14.30.15.30	10. Preparation of CAWM Implementation Action Plan	- Presentation timeline and roles & responsibilities of field staff in CWM activities - Preparation and presentation of action plan for implementing CAWM	Presentation & plenary discussion	Atik & Amol
15.30-16.00	Workshop closing	- Review of workshop learning - Closing remarks and wrap up	Speech	XEN, BWDB, Shorab & Kashem