

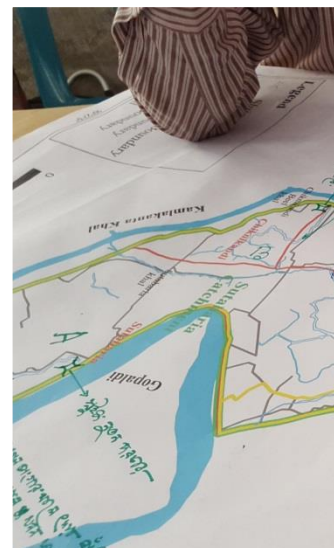
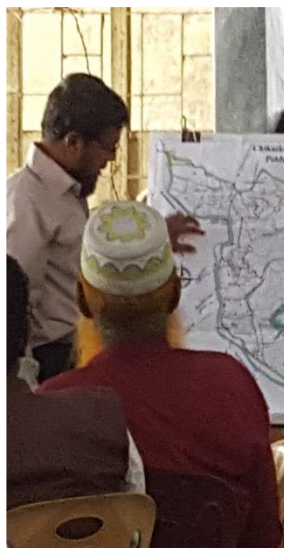


Government of the Netherlands

Embassy of the Kingdom of the Netherlands
Dhaka, Bangladesh



Bangladesh Water Development Board (BWDB)
Department of Agricultural Extension (DAE)



Water and Land Use Planning Workshop Report

Conducted on 9 March 2016 in Polder 55/2C

April, 2016



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Blue Gold Program

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Issue and revision record

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1. Introduction

1.1 Background to Blue Gold Program

The Blue Gold Program (BGP) aims to reduce poverty and improve food security through equitable water management and increased and diversified agricultural production in approximately 160,000 ha coastal polders in Bangladesh. BGP plans, implements and monitors its activities polder wise and in an integrated manner to ensure that water management interventions will contribute to more increased and diversified agricultural production.

1.2 Background of the Workshop in Polder 55/2C

As part of its planning process for polder 55/2C, Blue Gold Program organized a day long planning workshop on water and land uses in polder 55/2C on the 9th of March 2016.

The planning workshop for water and land uses at polder level is one of the first key activities in the polder development planning process (after Upazila and Union Parishad orientations and community sensitisation and mobilisation). The workshop objective is to get a general understanding of the current polder situation regarding cropping, fisheries and water management conditions as well as the potentials for crop, fish and water management interventions in the polder together with key polder stakeholders. The ultimate aim of the workshop is to pave the way for more detailed field investigations at locations considered to be problematic by the community and to prepare for further catchment consultation and planning sessions with the Water Management Organisations (WMOs).

1.3 Specific objectives

The specific objectives of this workshop are listed below:

- To map the current land use pattern (crops and fisheries)
- To map existing water management problems (e.g. areas of water logging and water scarcity, non-functioning structures, khal condition and other structures)
- To map out proposed land uses e.g. cropping diversification/ intensification, possible aquaculture/ shrimp cultivation areas and others
- To indicate the water management problems for the proposed land uses and potential water infrastructural solutions
- To map out existing and proposed home based production, potential constraints and solutions

1.4 Venue and Schedule

The workshop was held at Lamna Salehin Madrasa, Lamna, Galachipa inside polder 55/2C. The duration of the workshop was from 09:00 am to 05:00 pm.

The workshop consisted of four parts; 1st part - Inauguration, 2nd part - Identification of current cropping pattern and existing situation of water management; 3rd part - Proposed cropping patterns and water management intervention, 4th part - Possible home based production and its constraints. In the inauguration, participants introduced themselves and the objective of the workshop was explained with a brief introduction on Blue Gold Program. The catchment area boundaries of the polder were explained to them. The second and third part of the workshop was basically group work to identify the current situation. Under polder 55/2C, there are five Union Parishads, but one Union has a very small territory in polder 55/2C, so only four groups were formed from Union members (one group

encompassing members from two Unions). The four groups were provided with union maps to identify present cropping pattern, existing situation of water management and proposed cropping pattern. Apart from the four groups, another group was also formed by DLS and DoF representatives to work on possible opportunities and constraints for homesteads gardening, poultry, fishery and animals/dairy.

The agenda of the workshop has been attached in Annex 1. The actual schedule diverged a little from the agenda. A brief schedule of the workshop is shown in the following table (Table 1.1).

Table 1.1 Actual schedule of the workshop

Time	Topics	Methods
10.30 - 10.45	1. Welcome and Inauguration	Lecture, Discussion
10.45 - 11.00	2. Blue Gold Objectives and Agenda	Lecture, Discussion
11.00 – 11.20	3. Introduction to the identified catchment areas/boundaries in the polder	PPT presentation, Discussion
11.20 - 11.35	<i>Refreshment</i>	
11.35 - 01.00	4. Mapping current land use/ cropping pattern and existing situation of water management	Group Work by 4 groups
01.00 - 02.00	5. Mapping proposed cropping pattern for diversification/intensification and mapping water management constraints including possible fish sanctuaries, shrimp cultivation areas, fish-crop systems, etc. 6. Mapping home based production: livestock, vegetable cultivation and aquaculture	Group Work by
02.00 - 03.00	<i>Lunch Break</i>	
03.00 - 04.30	7. Group presentations <ul style="list-style-type: none"> o Crop and water (4 groups) o Home based production (1 group) 	Group Presentations Question Answer & Group Discussion
04.30 - 05.00	8. Review, Closing & Snack	

1.5 Detailed Content of the Workshop

The specific content of the workshop is described in more detail below:

General Introduction

- 1) Workshop Objective
- 2) Brief Introduction on Blue Gold Program
 - Explanation on various activities/ clusters of Blue Gold Program
 - Brief discussion on fine tuning (FT) polder, and why 55/2C is considered as FT polder and about the limitation of scope of work in FT polders
- 3) Introduction about the identified catchment areas/boundaries in the polder

Work of 4 Main Groups per Union

- 4) Mapping of current land use/cropping pattern in the polder
- 5) Mapping existing water management situation and various issues
 - Areas of water logging
 - Water scarcity areas
 - Non-functioning structures
 - Silted up khals

- Crop damage and water retention/ shortage time, etc.
- 6) Mapping proposed cropping diversification/ intensification and possible fish sanctuaries, shrimp cultivation areas, fish-crop systems, etc
- 7) Mapping water management constraints to introduce the proposed intensification of crops/diversified crops and fishery interventions and identification of possible solutions and challenges

Work of separate group from DLS and DoF

- 1) Mapping home based production on
 - vegetable cultivation
 - fish culture
 - poultry
 - animals/ diary
- 2) Exploring possible constraints and opportunities
- 3) Developing preliminary solutions

1.6 Participants of the Workshop

The list of all the participants who attended the workshop is given in the following table. (Table 1.2)

Table 1.2 Participants of the Workshop

Stakeholders	Participants
Blue Gold Program TA Team	Component Leader- Food Security and Agricultural Production, Component Leader- Business Development, PDP Coordinator, Senior Socio-Economist, Community Organization Expert, Agriculturalist, Value Chain Expert, Training Coordinators, Socio-Economist, Civil Engineer, Fisheries Expert, Master Trainer, Gender/ IGA Specialist, GIS Specialist, GIS Coordinator, COs (21 staff members in total)
Polder Community	Experienced Farmers from WMGs (16 members)
Government & LGI Representatives	2 UP members
BWDB Field Officials	XOs (2 members)
DAE Officials	SAAOs (7 members)
DoF and DLS Officials	4 members

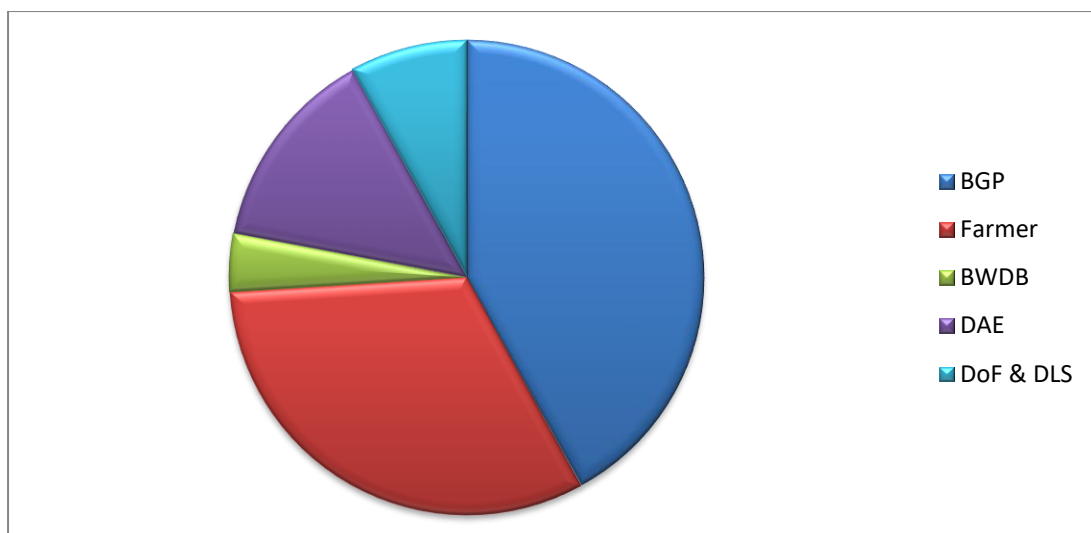


Figure 1 Participants of the Workshop



Figure 2 Group Work on Existing Cropping Pattern

1.7 Workshop Proceedings

Training Coordinator, Khairul Islam, started the workshop with a warm greetings. He welcomed all the participants to the workshop and expressed thanks for their participation. Then all the participants were asked to introduce themselves.

After the introduction Md Ashraful Islam, Agriculturist gave a short explanation on the objectives of the workshop and various activities of Blue Gold Program. Amran Hossan, GIS Specialist, showed with the help of a Power Point Presentation the existing catchment areas within the polder 55/2C. All the UP participants, WMG representatives and SAAOs from DAE were divided into four groups and each group was provided with their respective Union Maps. The groups were instructed to mark the existing cropping patterns and water management conditions on their maps using colour markers. The maps have been attached in the Annex 2. The groups then presented their individual findings, in most cases SAAOs presented on behalf of the group. Another group was formed with DLS and DoF

representatives, they identified the various home based productions; possibilities, constraints and solutions. Finally after all presentations and discussions, a closing speech was provided.



Figure 3 Explaining Catchment Area to the participants



Figure 4 Group Presentations by the Participants



Figure 5 Group Discussion among participants

2. Workshop Outputs

2.1 Compilation of Group Work

There were in total five groups formed among the participants. List of participants in each group has been summarized below.

Table 2.1 Group Presentations by the Participants

Group No.	Name of Ups/ Stakeholders	Topic
01	Bakul Baria UP, Betaki Sankipur UP	Present Cropping Pattern, Existing Water Management Situation, Proposed Cropping Pattern and Water Management Solutions to enable Proposed Cropping Pattern
02	Alippur UP	
03	Chiknikandi UP	
04	Kalagachia UP	
05	DoF, DLS	Home-based Production

2.1.1 Group - 1: Bakul Baria UP and Betaki Sankipur UP

Table 2.2 Present Cropping Pattern of Group - 1

Sl. No.	Cropping Pattern	% of Areas covered	Remarks
1.	Mung Bean → T Aush → T Aman	15 %	
2.	Grass Pea → T Aush → T Aman	5 %	
3.	Red Lentil → Fallow → T Aman	2 %	
4.	Mung Bean → Fallow → T Aman	45 %	
5.	Ground Nut → Fallow → T Aman	3 %	
6.	Sesame → Fallow → T Aman	10 %	
7.	Grass Pea → Fallow → T Aman	15 %	
8.	Chili → Fallow → T Aman	8 %	
9.	Sweet Potato → Fallow → T Aman	2 %	
10.	Water melon → Fallow → T Aman	5 %	

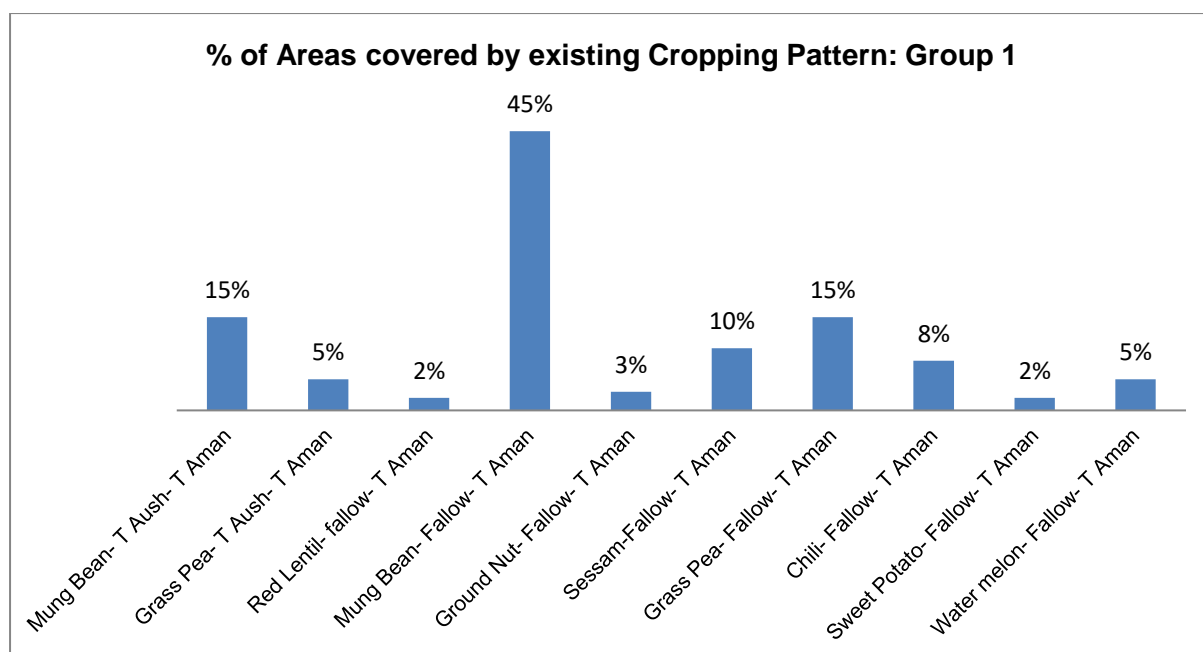


Figure 6 Existing Cropping Pattern for Group – 1

Table 2.3 Existing Water Management Situation of Group - 1

Sl. No.	Present Situation/ Requirement	Remarks / Solution
1.	No outlet at Hiraganj	Outlet Construction
2.	Sluice required at Kalu Howlader Bari Khal	Sluice Construction
3.	Sluice gate required at Patabunia Bazar	Sluice Repair
4.	Need for re-excavation of Ulasir Khal	Re-excavation of Ulasir Khal
5.	Culvert required at Ulasir Khal	Culvert construction at Ulasir Khal
6.	Sonamia Sluice khal excavation needed	Re-excavation of Sonamia Khal

Table 2.4 Proposed Cropping Pattern of Group - 1

Sl. No.	Proposed Cropping Pattern	% of land	Risk	Profitability	Constraints to crop/cropping system diversification
A.	Potato →Fallow →HYV Aman	10	High	High	i. Drainage of water ii. Availability of good quality seed iii. Lack of cold storage iv. Marketing
B.	Wheat →T Aush →HYV Aman	20	Medium	High	i. Drainage of water ii. Availability of quality seed iii. Lack of Thresher/Mill
C.	Maize →Fallow →HYV Aman	5	Medium	High	i. Drainage of water ii. Availability of quality seed iii. Lack of Thresher/Mill

Sl. No.	Proposed Cropping Pattern	% of land	Risk	Profitability	Constraints to crop/cropping system diversification
D.	Water melon →Fallow →HYV Aman	10	High	High	i. Drainage of Water/ Water Management ii. Availability of quality seed iii. Marketing system
E.	Mustard →T Aush →HYV Aman	5	Medium	High	i. Drainage of water ii. Availability of quality seed iii. Marketing system
F.	Sunflower →Fallow →HYV Aman	5	Medium	High	i. Drainage of water ii. Availability of quality seed iii. Marketing system

2.1.2 Group - 2: Alippur UP

Table 2.5 Present Cropping Pattern of Group - 2

Sl. No.	Cropping Pattern	% of Areas covered	Remarks
1.	Mung Bean → T Aush → T Aman	15 %	
2.	Grass Pea → T Aush → T Aman	5 %	
3.	Red Lentil → Fallow → T Aman	5 %	
4.	Mung Bean → Fallow → T Aman	40 %	
5.	Ground Nut → Fallow → T Aman	5 %	
6.	Sesame → Fallow → T Aman	10 %	
7.	Grass Pea → Fallow → T Aman	5 %	
8.	Chili → Fallow → T Aman	5 %	
9.	Sweet Potato → Fallow → T Aman	5 %	
10.	Others	5 %	

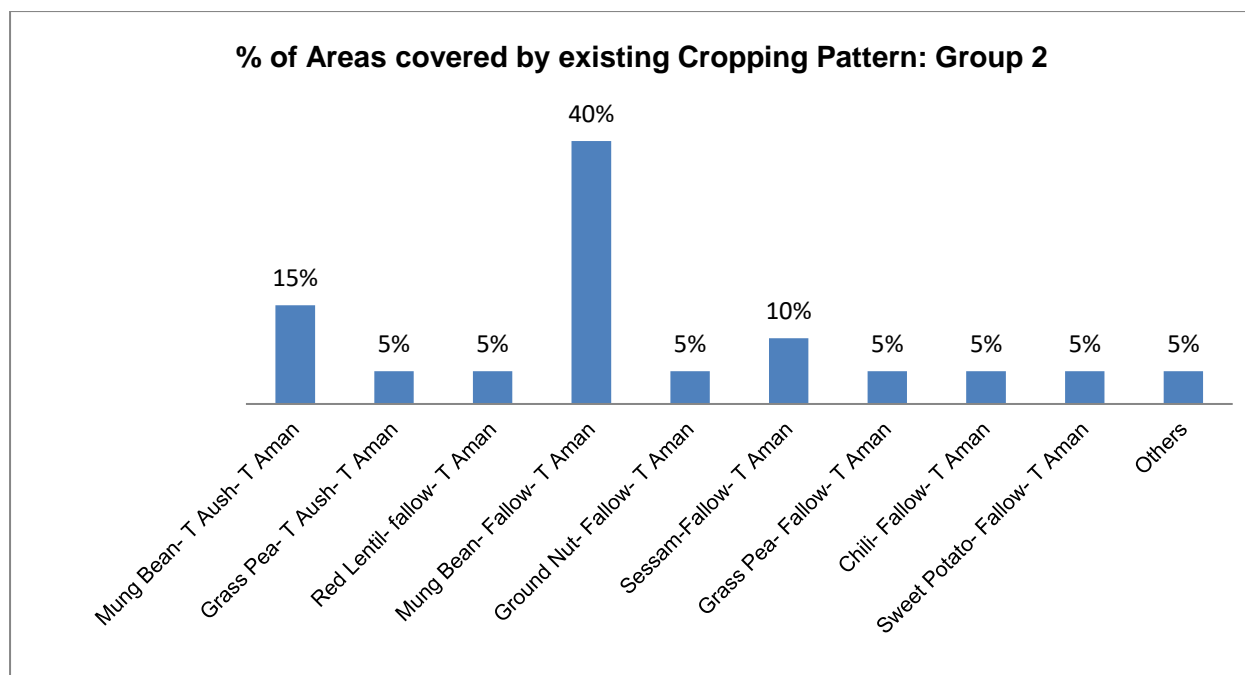


Figure 7 Existing Cropping Pattern for Group - 2

Table 2.6 Existing Water Management Situation of Group - 2

Sl. No.	Present Situation/ Requirement	Remarks / Solution
1.	Khal silted up	Required re-excavation of about 1 km from Madhupura Bazar to Ajit Munshi Housh
2.	Damaged Embankment	Need for re-sectioning of embankment: 2 Km from Katakhal sluce gate to south side
3.	Potkatoli Khal silted up	Need re-excavation from house of Ali Azam's to Duari's
4.	Talbaria Canal (Chandpur Moubaria) silted up	Need re-excavation from house of Abdul Khalek to Kalai Howlader house (about 2 Km)
5.	Chandpur canal silted up	Excavation from Abit Khan to kala miar bazar (2.5 Km)
6.	Damaged Embankment	Re-sectioning from Paschim Alipura Budharamer Bandh to Bibirai high School (2 Km)
7.	Canal Silted up	Excavation from Firoz Khan's house to Moslem Munsu house (1 km)
8.	No Sluce Gate	New sluce required at Hira gazir Char
9.	Canal fully silted up	Excavation from Bibirai to Hira Gazir Char
10.	Chandpur Sluce damaged	The vent/ gate requirs repair
11.	Embankment damaged	Required to re-section from chandpur sluce to its north side (about 1km)
12.	Canal Silted up	Need for re-excavation from House of Wajed Majumder to Katakhal Canel
13.	Canal silted up at chandpur	From Moslem Mridha house to Aziz sarder house

Table 2.7 Proposed Cropping Pattern of Group - 2

Sl. No.	Proposed Cropping Pattern	% of land	Risk	Profitability	Constraints to crop/cropping system diversification
A.	Sunflower →Fallow →HYV Aman	10	Medium	High	i. Irrigation water ii. Availability of quality seed iii. Lack of processing mill
B.	Maize →Fallow →HYV Aman	80	Low	High	i. Drainage of water ii. Processing iii. Marketing
C.	Wheat →T Aush →HYV Aman	10	Low	Medium	i. Irrigation water ii. Availability of quality seed

- A. Grass pea could be replaced by Sunflower
 B. Lentil and Grass Pea could be replaced by Maize
 C. Others and Sesame could be by Wheat

2.1.3 Group - 3: Chiknikandi UP

Table 2.8 Present Cropping Pattern of Group - 2

Sl. No.	Cropping Pattern	% of Areas covered	Remarks
1.	Mung Bean → T Aush → T Aman	15 %	
2.	Grass Pea → T Aush → T Aman	5 %	
3.	Red Lentil → Fallow → T Aman	5 %	
4.	Mung Bean → Fallow → T Aman	40 %	
5.	Ground Nut → Fallow → T Aman	10 %	
6.	Sesame → Fallow → T Aman	10 %	
7.	Grass Pea → Fallow → T Aman	5 %	
8.	Chili → Fallow → T Aman	5 %	
9.	Sweet Potato → Fallow → T Aman	3 %	
10.	Betel Leaf	2 %	Mazhi Gram Mouza

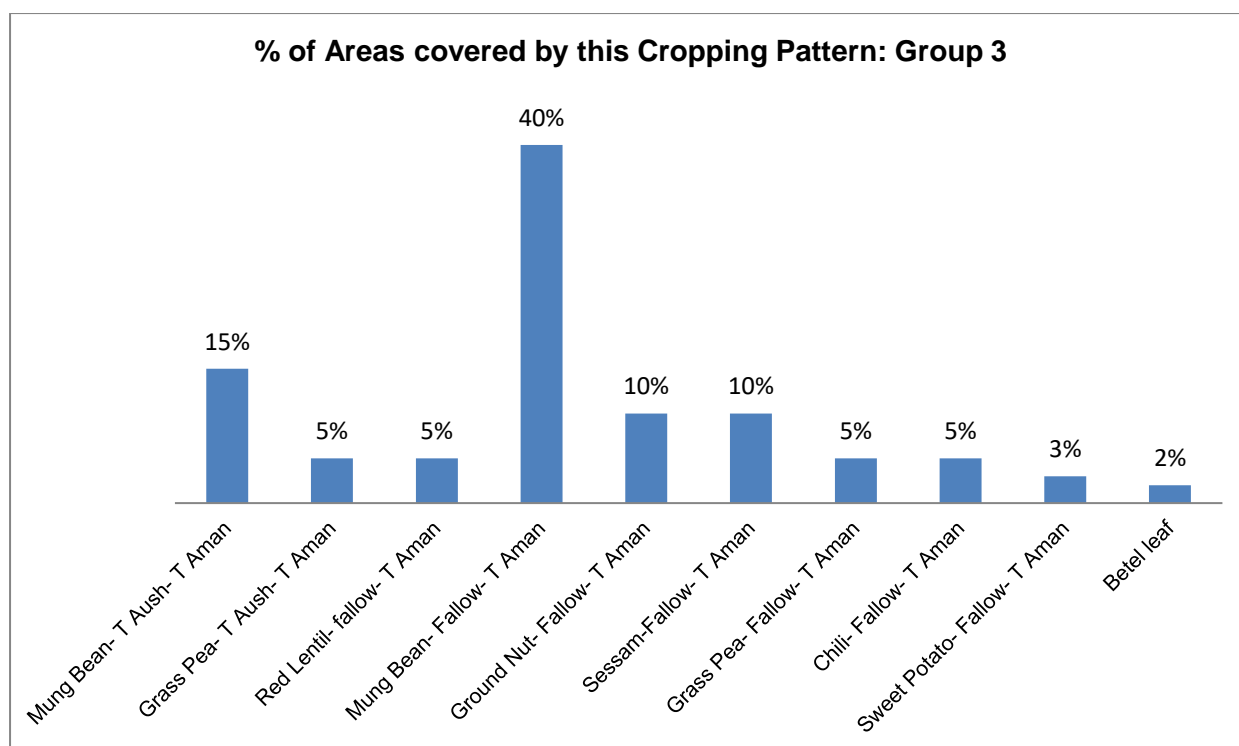


Figure 8 Existing Cropping Pattern for Group - 3

Table 2.9 Existing Water Management Situation of Group - 3

Sl. No.	Present Situation/ Requirement	Remarks
1.	Waterlogging of about 100 ha land in Mazhigram Mouza	Need for a new canal excavation near Banshbaria from Aku balir house
2.	Waterlogging of about 150 ha land in Sutabaria Mouza because many cross dams were made by influential people and Jangal Danga Canal became dead	Removal of the cross dams and re-excavation of the canal
3.	No sluice on Jangal Danga canal	New Sluice required
4.	Kachua Sluice damaged	Need to repair the vent of the sluice
5.	Silted up canal	Re-excavation of canal in Kalaraza Mouza from Kachua Sluice

Table 2.10 Proposed Cropping Pattern of Group - 3

Sl. No.	Proposed Cropping Pattern	% of Land	Risk	Profitability	Constraints to crop/cropping system diversification
A.	Watermelon →Fallow →T Aman / Potato →Fallow →T Aman	10	High	Medium	i. Lack of hybrid seed ii. Lack of money iii. Irrigation water iv. Potato seed unavailable

B.	Sunflower Wheat	→Fallow →Fallow	→T Aman / →T Aman	5	Medium	Medium	i. Irrigation water ii. Availability of quality seed iii. Lack of money
C.	Watermelon Wheat	→Fallow →T Aush	→T Aman / →HYV Aman	10	Medium	Medium	i. Irrigation water ii. Availability of quality seed iii. Lack of money
D.	Sunflower Watermelon	→Fallow →Fallow	→T Aman / →T Aman	5	Medium	Medium	i. Irrigation water ii. Availability of quality seed iii. Lack of money
E.	Watermelon Potato	→Fallow →Fallow	→T Aman / →T Aman	5	Medium	Medium	i. Irrigation water ii. Availability of quality seed iii. Lack of money

2.1.4 Group - 4: Kalagachia UP

Table 2.11 Present Cropping Pattern of Group - 4

Sl. No.	Cropping Pattern	% of Areas covered	Remarks
1.	Mung Bean → T Aush → T Aman	10 %	
2.	Grass Pea → T Aush → T Aman	10 %	
3.	Red Lentil → Fallow → T Aman	10 %	
4.	Mung Bean → Fallow → T Aman	40 %	
5.	Ground Nut → Fallow → T Aman	2 %	
6.	Sesame → Fallow → T Aman	5 %	
7.	Grass Pea → Fallow → T Aman	5 %	
8.	Chili → Fallow → T Aman	10 %	
9.	Sweet Potato → Fallow → T Aman	5 %	
10.	Watermelon → Fallow → T Aman	5 %	

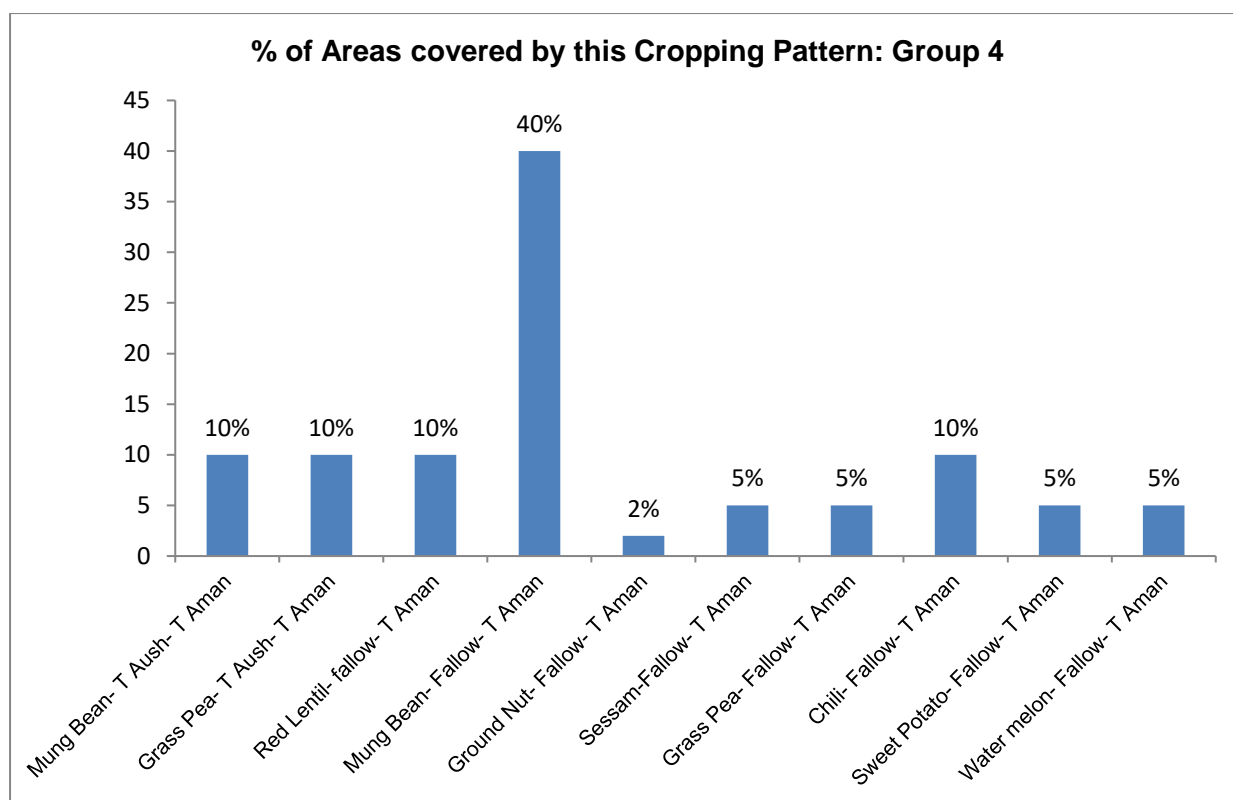


Figure 9 Existing Cropping Pattern for Group - 4

Table 2.12 Existing Water Management Situation of Group - 3

Sl. No.	Present Situation/ Requirement	Remarks
1.	Water flow disrupted in Katakhal Canal	Need a new canal excavation near Banshbaria from Aku balir house
2.	Water flow disrupted, cross dam on canal from Samsu fakir house to Kader Mridha's house	Requires canal re-excavation about 2km and culvert
3.	Jatibari Sluice damaged	Need to repair the sluice
4.	From Jatibari sluice to Ismail Khan's house several cross dams built on canal for fish cultivation	Re-excavation of canal and removal of cross dams
5.	Damage of Kallan kalash sluice	Need to repair the sluice
6.	Silted up Kallan kalash canal	Re-excavation of about 8 km canal
7.	Silted up Bishkhali canal	Need culvert and re-excavation of 2 km canal
8.	Silted up Koromjatala canal	Need culvert in Koromjatala canal
9.	Silted up Chhilar Canal	Re-excavation of the khal

Table 2.13 Proposed Cropping Pattern of Group - 4

Sl. No.	Proposed Cropping Pattern	% of Land	Risk	Profitability	Constraints to crop/cropping system diversification
A.	Watermelon →Fallow →T Aman / Potato →Fallow →T Aman	10	High	Medium	i. Lack of hybrid seed ii. Lack of money iii. Climate Disaster

B.	Grass pea Wheat	→HYV Aush →HYV Aush	→T Aman / →T Aman	15	Medium	Medium	i. Irrigation water
C.	Sunflower	→Fallow	→T Aman	10	Medium	High	i. Marketing ii. Processing

2.2 Home-based Production

2.2.1 Homestead Cultivation

Opportunities:

1. Homestead cultivation possible in 40 ~ 60 % of the houses in this area
2. Vegetable cultivation on the bank of pond
3. Short varieties fruit tree plantation
4. Sapling on bed methods (Lebukhali model)
5. Bombai Chilli cultivation
6. Papaya tree plantation
7. Organic manure production
8. Poultry farming/rearing
9. Cultivation of Sweet Potato (Mete/Gonz Alu)
10. Motivating the owner of new houses

Problems:

1. Marketing
2. Lack of quality seed
3. Lack of quality nursery
4. Lack of training

2.2.2 Fish Culture

Table 2.14 Present Status of Fish Culture

Sl. No.	Status	Alipur UP	Chiknikandi UP	Bakul Baria & Betaki Sanki para
1.	Big size pond/ joint venture	150	200	60 – 70
2.	Small size pond	200	1200/120	30 – 40
3.	Number of hatcheries	1	none	none
4.	Number of nurseries	4	none	08
5.	Number of Ghers			15
6.	Number of canal used	10		15
7.	Type of fish	Rui, Katla, Pangash, Telapia, Mrigel/Carp etc.		

Problems:

1. Lack of fish feed
2. Water scarcity during Feb - April (Falgun-Choitra)
3. Scarcity of quality fish fry
4. Scarcity of fingerlings (4.5 inch to 5.5 inch)
5. Unavailability of medicines
6. Scarcity of limestone during pond preparation
7. Lack of technical knowledge
8. Marketing problem
9. Common disease such as dropsy/ bacterial gill disease

Potential Solutions:

1. Establish small factory for fish feed in the area
2. Establish new fish hatchery
3. Improve roads communication
4. Tube well establish near ponds
5. Provide financial help to fish farmers

2.2.3 Poultry**Table 2.15 Opportunities, Problems and Solutions for Poultry Production**

Opportunities	Problems	Solutions
<ol style="list-style-type: none"> 1. 99 % local breed 2. One commercial farm 3. 7 duck farms 4. Poultry feed trader 	<ol style="list-style-type: none"> 1. High rate of feed required 2. Marketing 3. Lack of technical knowledge 4. Lack of technical manpower of DLS 	<ol style="list-style-type: none"> 1. Training to farmers 2. Supply of low price, good quality feed 3. Improve road communication 4. Interest free loan service

2.2.4 Animal/ Dairy**Table 2.16 Opportunities, Problems and Solutions for Animal/ Dairy Production**

Opportunity	Problem	Solution
<ol style="list-style-type: none"> 1. Cow rearing and fattening 2. One artificial insemination center at Kalagachia for improved breeding 3. Goat rearing 	<ol style="list-style-type: none"> 1. Lack of cow feed 2. Marketing 3. Lack of capital 4. Malnourishment and various diseases 	<ol style="list-style-type: none"> 1. Training for farmers 2. Preserve grazing land 3. Improve road communication 4. Interest free or low rate loan service

2.3 Overall output

On the maps on the next pages, one can find the overall output of the workshop. Figure 10 demonstrates the existing and proposed cropping patterns in Polder 55/2C and Figure 11 the proposed water management interventions in Polder 55/2C.

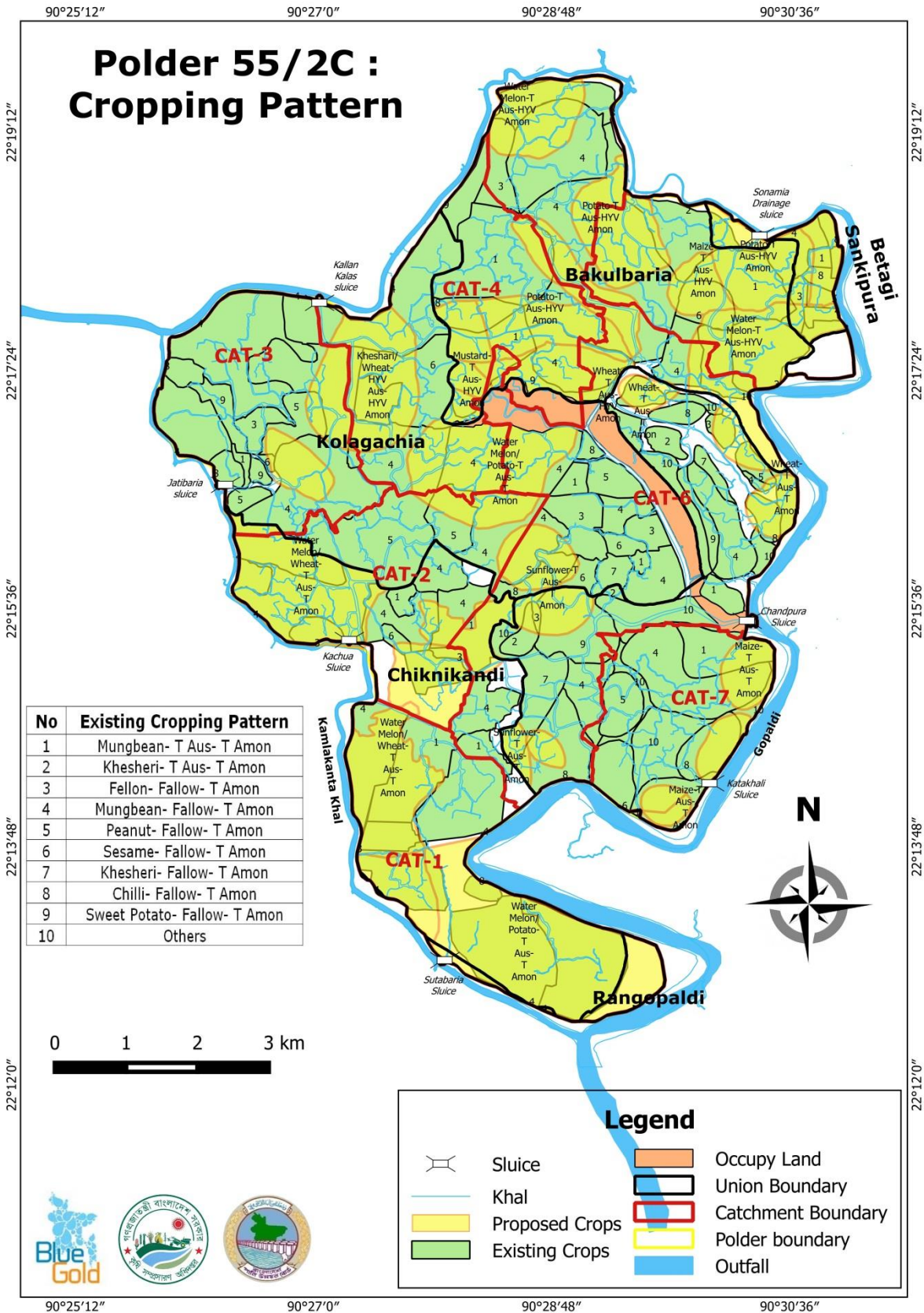


Figure 10: Existing and Proposed Cropping Patterns in Polder 55/2C

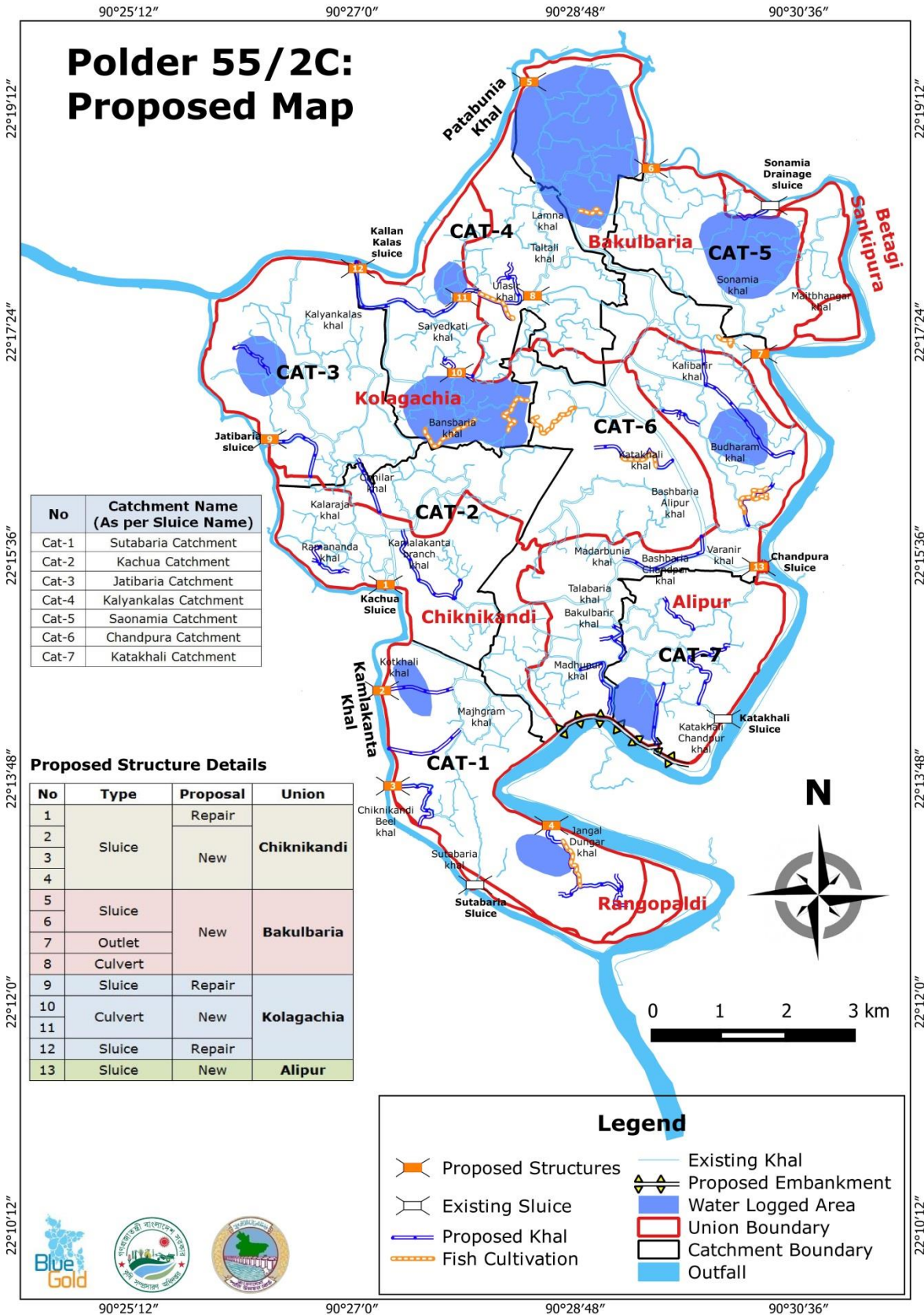


Figure 11: Proposed Water Management Interventions for Polder 55/2C

3. Conclusions and Closing

After group presentations and some plenary discussions, Md Ashraful Islam concluded the workshop in a way to understand how Blue Gold Program can assist farmers to improve their agricultural production situation. All the works and activities suggested cannot be realised in a day or at a time. Considering various limitations, Blue Gold Program might perform/address some issues raised in the workshop. Blue Gold Program can work on the following activities to improve agricultural activities in the polder:

- Contribute to the re-excavation of main khals and sluice-gate repairs. In that sense it should be noted that BGP has a limited budget, but we have scope to assist farmers in block cultivation with quite a number of crops.
- We have to motivate and raise awareness among farmers to diversify cropping in Rabi season.
- We need to start Market Oriented FFS on other field crops than just rice. The proposed cropping patterns should be demonstrated in their locality.
- Short trainings can be organized for the farmers to build awareness among them and also video-show programs can be arranged.

Hein Bijlmakers, also thanked all the participants for their active participation and mentioned about the importance of the output from this workshop for the improvement of agricultural production in this polder.

Finally, Mr Ashraf expressed thanks to all the participants for their valuable efforts in the workshop and for making the workshop successful. He also thanked the Lamna Salehin Madrasa for Training Hall facilities, thanked the Blue Gold Zonal team for all sorts of supports and closed the workshop activities.

Annex 1. Agenda of the Workshop

Bangladesh Water Development Board

Blue Gold Program

Water and Land Use Planning Workshop for Polders 55/2C

Venue: Lamna Salehin Madrasa, Lamna, Galachipa,

Date: 09 March 2016

Time	Content/sub content	Methods	Resource Person
09.00- 09.30	1. Welcome and Inauguration <ul style="list-style-type: none"> ▪ Welcome Address ▪ Inauguration of Workshop ▪ Participant's Introduction 	Lecture, Discussion	
09.30-10.00	2. Blue Gold Objectives and Agenda <ul style="list-style-type: none"> ▪ Objective and Agenda of the orientation ▪ Blue Gold objectives and activities 	PPT presentation, Discussion	
10.00-10.15	Refreshment		
10.15-11.00	3. Introduction the identified catchment areas/boundaries of the polder areas	PPT/ Poster presentation and Large group Discussion	
11.00-01.00	4. Mapping current land use/cropping pattern and existing situation of Water Management <ul style="list-style-type: none"> ▪ Map Out existing Land Type ▪ Map out Existing Cropping Pattern ▪ Map out present Water Management situation (Problem) ▪ Group Work Presentation 	Large Group Discussion/ Group Exercise/ Poster Presentation	
01.00-02.00	Lunch Break		
02.00-03.30	5. Mapping proposed cropping Pattern for diversification/intensification and Mapping water management constraints to introduce proposed cropping Pattern including possible fish sanctuaries, shrimp cultivation areas, fish-crop systems, etc. <ul style="list-style-type: none"> ▪ Group Exercise for Mapping Proposed Cropping Pattern ▪ Group Work Presentation 	Large Group Discussion/ Group Exercise/ Poster Presentation	
03.30-04.30	6. Mapping home based production: livestock, vegetable cultivation and aquaculture <ul style="list-style-type: none"> ▪ Define constraints and opportunities ▪ Develop preliminary solutions 	Question Answer and Group Discussion	
04.30-05.00	7. Review, closing and Lunch		

Water and Land Use Planning Workshop for Polders 2A

Venue: Lamna Shaleh Madrasa, Bakulbaria Patuakhali. Date: 09 March'2016

List of Registered Participants

#	Name	Designation	Organization	Mob. No./ Email Id
WMG Representatives				
01	Md. Abdur Razzak	Cashier	Katakhalı WMG	01703735156
02	Md. Nur Hossain	member	Chiller Khal WMG	01729786241
03	Maksudur Rahman	Member	kharizzama Khal WMG	
04	Md. Waliul Islam	Member	Kallankolos Khal	01713869035
05	Md. Zakir Hossain	Member	Vadra Bari Khal	
06	Md. Fakrul Islam	Convenor	Ruhit pur Khal	01712492683
07	Md. Firoz Alam Khan	Convenor	Budharam Khal	01735648179
08	AbdurRazzak Sarder	Member	Budharam Khal	01749144763
09	Md. Jasim Uddin	Convenor	Sutabaria khal	01732946676
10	Md. Abdul Mridha	Member	Kachua Mahish Danger WMG	
11	Md. Shahab Uddin	Secretary	Bakul Baria Kharizzama	
12	Md. Dilder Molla	President	Ranuar Khal	
13	Md. Abul Kashem	Convenor	Lamna Khal	
14	Md. Habibur Rahman	Convenor	Ulashir Khal	01703735156
15	Md. Reazul Islam	Convenor	Kamarkhalı Khal	01749144763
16	Md. Farid Uddin	Member	Bashbaria WMG	
17				
DAE				
18	Md. Anowar Hossain	SAAO	DAE, Dasmına	
19	Hafiz Ahmad	SAAO	DAE, Dasmına	
20	Md. Nurul Amin	SAPPO	DAE, Galachipa	
21	Md. Aminul Islam	SAAO	DAE, Dasmına	
22	Md. Zakir Khan	SAAO	DAE, Galachipa	
23	Md. Mosaraf Hossain	SAAO	DAE, Galachipa	
24	Md. Abu Zafar Haolder	SAAO	DAE, Dasmına	
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25	Md. Nazrul Islam	Work Assist	LGED, Galachipa	
BWDB				
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#	Name	Designation	Organization	Mob. No./ Email Id
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DLO/DoF				
28	Md. Almin Amin	VFA	DLO, Galachipa	
29	Md. Selim Khan	VFA	DLO, Dasmina	
30	Md. Mahbubul Talukder	UFO	DoF, Dasmina	01712146629
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UP Representative				
53	Md. Mamotaj Billah	member	Bakulbaria UP	
54	Bibekanado Debnath	member	Chiknikandi UP	001732383822

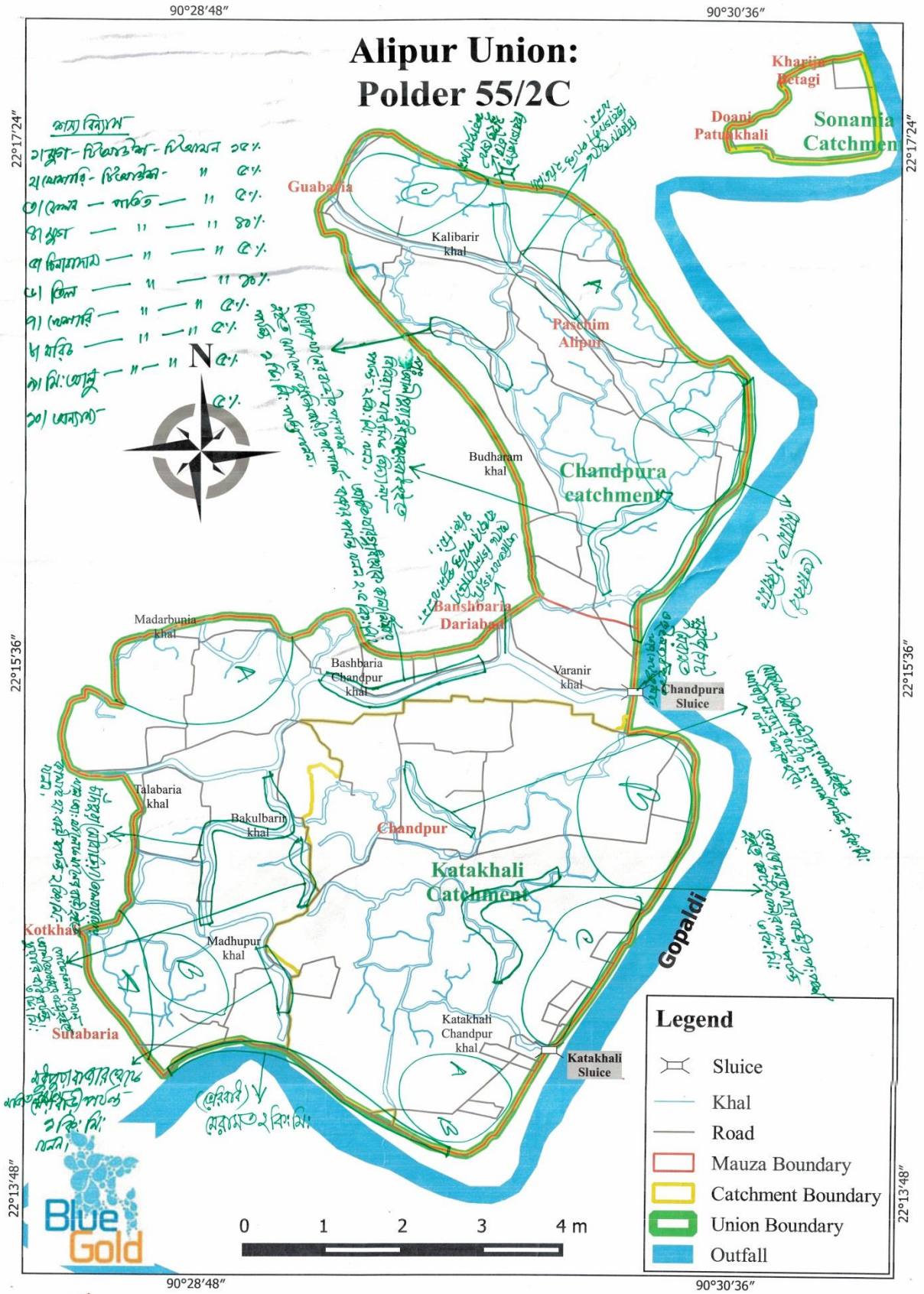


Figure 16 Alipur Union - Identification of Cropping Pattern

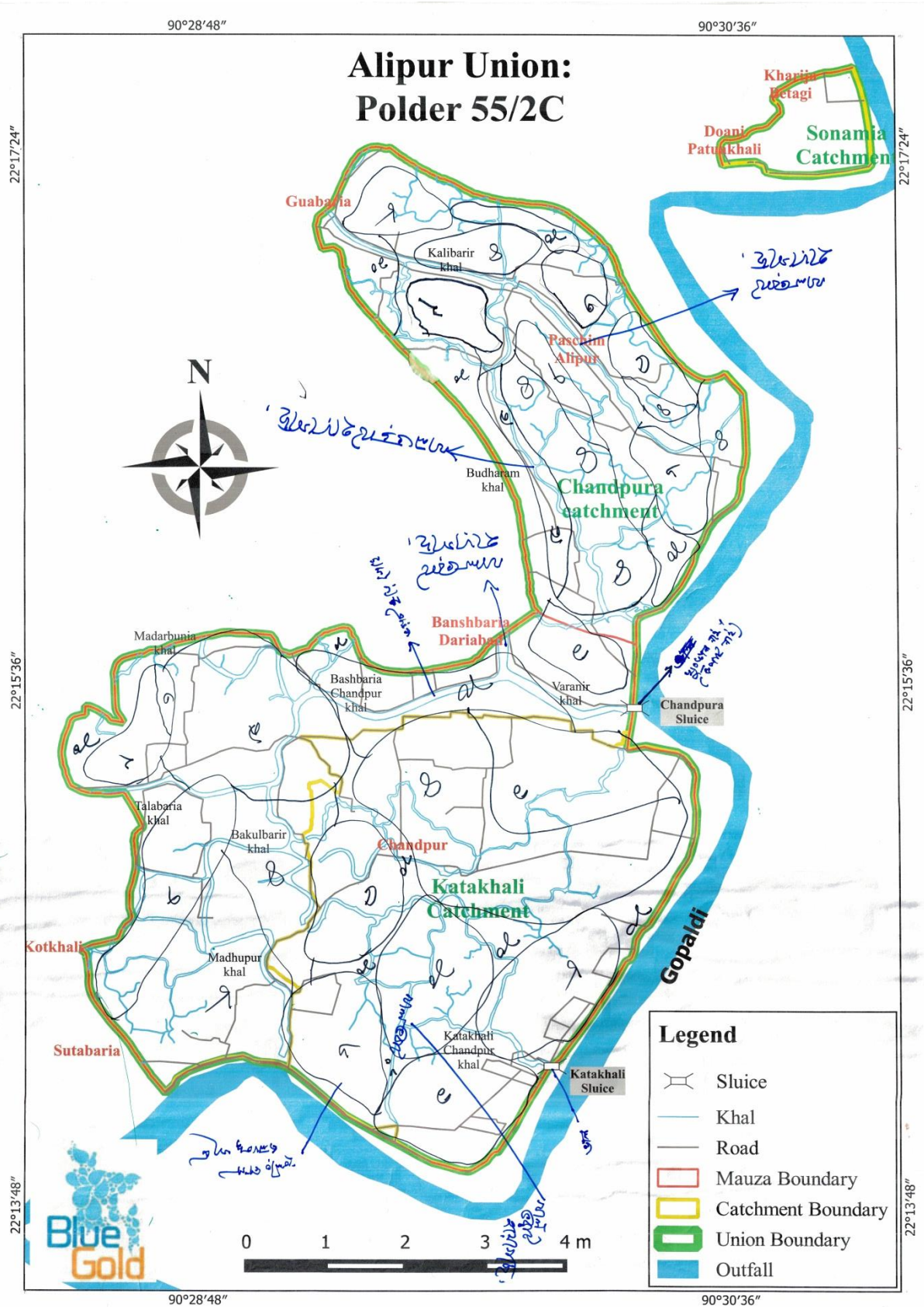


Figure 17 Alipur Union - Existing Water Management Situation & Requirements

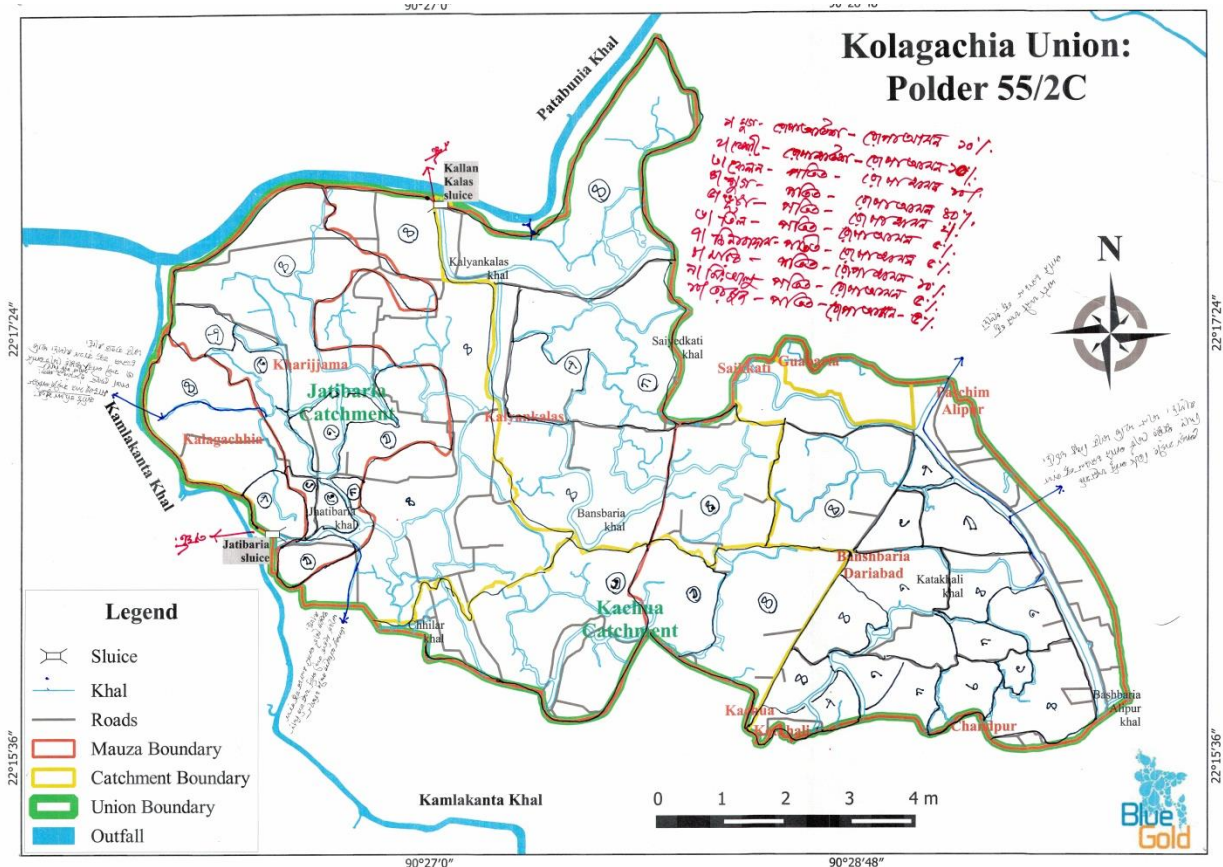


Figure 18 Kolagachia Union - Identification of Cropping Pattern

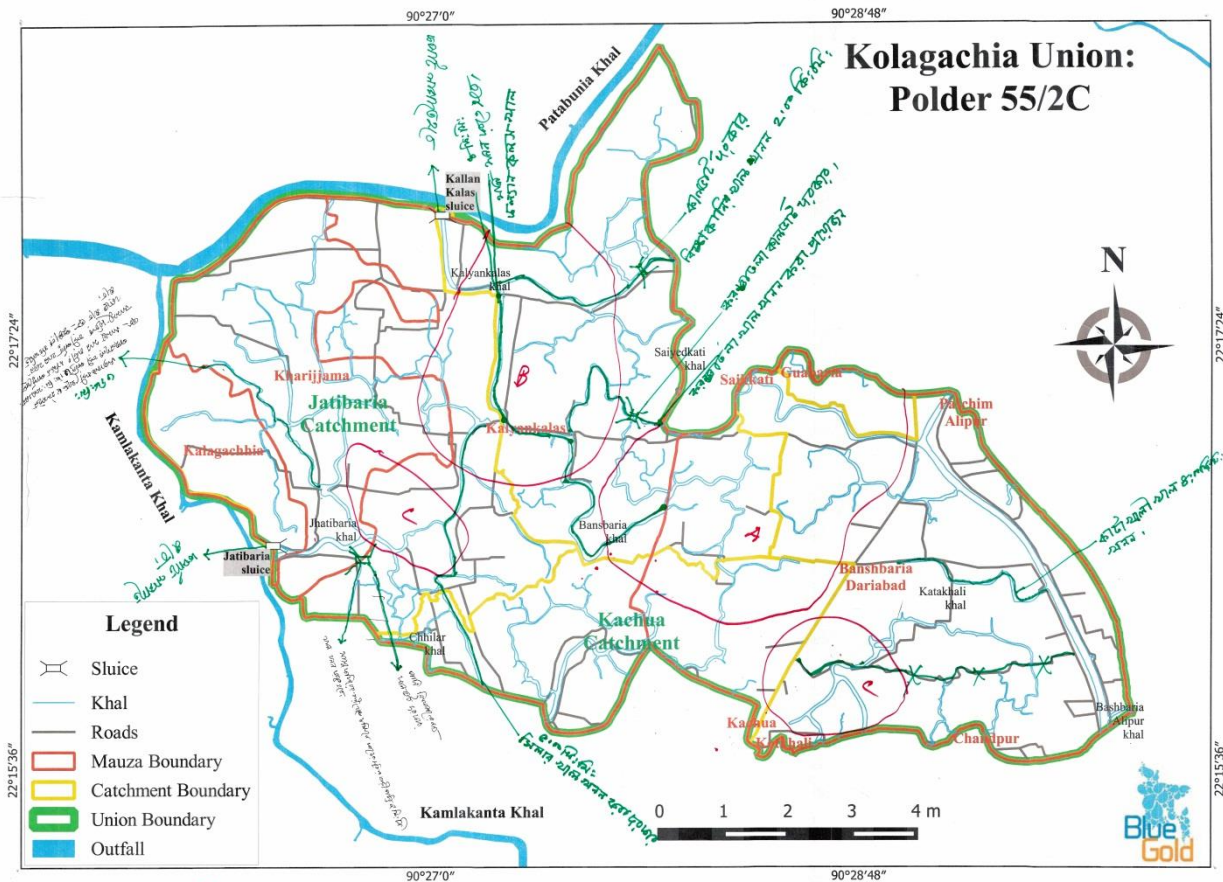


Figure 19 Kolagachia Union - Existing Water Management Situation & Requirements