



Government of the People's Republic of Bangladesh

Ministry of Housing and Public Works

Urban Development Directorate (UDD)

Preparation of Development Plan for Fourteen Upazilas

Package-04

(Saghata Upazila, District: Gaibandha; Sariakandi Upazila and
Sonatala Upazila, District: Bogra)

FINAL SURVEY REPORT

PARTICIPATORY RURAL APPRAISAL (PRA)

Of

Sonatala Upazila, Bogra

June, 2017



Modern Engineers Planners & Consultants Ltd.

Letter of Transmittal

Ref No.: MEPC/UDD/2017/47

Date: 04.06.2017

To

The Project Director

“Preparation of Development Plan for Fourteen Upazilas” Project

Urban Development Directorate (UDD)

82 Segun Bagicha, Dhaka-1000.

**Subject: Submission of the Final Survey Report on Participatory Rural Appraisal (PRA)
of Sonatala Upazila, Bogra.**

Dear Sir,

I have the pleasure to submit herewith the Final Survey Report on Participatory Rural Appraisal of Sonatala Upazila, Bogra District under “**Preparation of Development Plan for Fourteen Upazilas Project**” Package No: 04 (Saghata Upazila, District- Gaibandha; Sonatala Upazila and Sariakandi Upazila, District- Bogra) for your kind information and further action.

Thanking you and assuring you of our best services.

Best Regards

.....
(Engr. A. Sobahan)

Managing Director of MEPC

.....
(Shamim Mahabubul Haque)

Team Leader, Package-4

Executive Summary

For sustainable development, comprehensive development plans for both rural and urban areas are essential. Despite limited resources, the Government of Bangladesh (GoB) has focused on the planned development at different layers of administrative organizations of the country. Upazilas now considered very important strata of development that will incorporate all social, economic, and administrative and infrastructure services for the region. This is in line with the national policy that intends to bring development, administrative and services facilities to the doorstep of the people by providing access to better delivery of government services at the local tiers under the city or municipality level even.

For participatory planning and development, grassroots participation has now been well established, and the use of PRA methodologies offers proven results from the local people's active participation. The "Preparation of Development Plan for Fourteen Upazilas" included this component in its overall planning process to involve local people so that they own their development plans and contribute to the substantial processes of planning by sharing their perceptions and informed views at different stages of the project.

Sonatola Upazilas surrounded by Sariakandi Upazila of Bogra district to the east, Shibganj Upazila of Bogra district to the west, Gobindaganj Upazila of Gaibandha district to the north, and Gabtali Upazila of Bogra District to the south (Figure 2.1). According to Bangladesh Population Census 2011, the Upazila has 45,869 households with a total population of 186,778 (BBS, 2011). Sonatola Upazila consisting of seven Unions and one municipality occupies a total area of 156.75 square kilometers.

The findings of the PRA sessions conducted in seven (7) unions, and 9 municipal wards of Sonatola Upazila of Bogra District under Rajshahi Division. Established as Thana (police station) in 1984, Sonatola became an upazila in 1984 named after it's the main administrative center - Sonatola. The PRA team confirmed the schedule of PRAs of Sonatola Upazila while doing PRAs in Saghata Upazila and before the completion of the last PRA session, one PRA field facilitators' team conducted one PRA of Sonatola Upazila. PRA expert observed PRA sessions conducted on municipal wards held at the Sonatola Auditorium on the last day. The PRAs conducted by two team of field PRA facilitators took time from June 17 to June 22, 2015 in this Upazila. Field facilitators resided in Sonatola Upazila Dak Bungalow and Primary Training Institute (PTI) facility for a week to complete the PRA fieldwork. Sonatola Upazila has seven unions and one municipality.

PRA findings obtained in forms of resource maps, problems and potentials Venn diagrams, and development needs workshops of seven unions of Sonatola Upazila and nine wards of Sonatola Pourashava need to be incorporated in the preparation of development plan for Sonatola Upazila. However, these findings need to be examined by and matched with technical analysis of data gathered from other sectoral surveys designed under the current project. It is evident from PRA findings that most of unions are flood prone, affected by river erosion, and lack necessary road, health services, income generation activities and necessary educational institutions. Local people believe that their major potentials include many particularly unemployed people, agricultural land and produce, and two rivers that can be utilized for the comprehensive development of this Upazila. The residents of Sonatola municipality reported common problems, such as, poor drainage system, inadequate street lighting, the need for electricity, the problem of gas and water supply along with health and educational development. The participants of PRA sessions think that their localities have potentials that can be used for the remedy of their problems if development schemes are undertaken for short, medium and long-term with adequately allocated budget.

PRA findings must be carefully used as these are based on local people's perceptions and opinions. But the importance of these findings is huge as the development plan is for the local people, and they must own whatever the plan is formulated for their local areas. This plan will be meaningless unless local people's views and expectations were not incorporated in the development planning processes. Instead of the achieving the fruits of the benefits of development plan, taxpayers' money to be spent in the development planning process will be wasted if the local people do not implement the formulated plan at the end. Hence development plans must count local peoples' views and perspectives in preparing development plan. This report presents and highlights the problems, resources, and development expectations of the local people despite these PRA findings have various limitations as mentioned earlier. However, technical analysis must be corroborated with PRA findings when needed to prepare informed development plan for next 20 years.

Table of Contents

	Page No.
Letter of Transmittal	i
Executive Summary	ii
Table of Contents	iv
List of Tables	vi
List of Maps	vi
List of Abbreviations/Acronyms	vii
CHAPTER ONE: PARTICIPATORY RURAL APPRAISAL (PRA)	1
APPROACH AND METHODOLOGY	
1.1 Introduction	1
1.2 Project Context for PRA	1
1.3 Purpose of PRA	2
1.3.1 Mapping Resources and Identifying areas	4
1.3.2 Identifying Problems and Potentials	4
1.3.3 Proposing Development Priorities	4
1.4 PRA Tools	4
1.4.1 Social/Resource Mapping	4
1.4.2 Venn Diagram (Problems and Potentials)	4
1.4.3 Technology of Participation (ToP) Consensus on Development Needs	5
1.5 Participants and Facilitators of PRA Sessions	5
1.5.1 The Participants	5
1.5.2 PRA Facilitators	5
1.6 PRA Settings and Schedule of PRA Sessions	5
1.7 PRA Process	6
1.7.1 Preparation	6
1.7.2 Field Work	7
1.7.3 Documentation and Compilation of PRA Sessions	7
1.8 Quality Control Measures	8
CHAPTER TWO: UNION-LEVEL PRAs OF SONATALA UPAZILA	9
2.1 Overview	9
2.2 Spatial Aspects	9
2.3 Major Problems and Potentials	10

2.3.1	Problem Identification	10
2.3.2	Problems Prioritization through Venn Diagram	12
2.3.3	Potential Identification	12
2.3.4	Identification of Potentials through Venn Diagram	12
2.3.5	Identification of Prioritized Problems, Causes, Impacts and Potentials	13
2.4	Perceived Development Priorities	14
2.4.1	Short term Development Priorities	14
2.4.2	Mid Term Development Priorities	15
2.4.3	Long Term Development Priorities	16
CHAPTER THREE: MUNICIPALS WARD LEVEL PRAs OF SARIAKANDI UPAZILA		18
3.1	Overview	18
3.2	Spatial Aspects	18
3.3	Major Problems and Potentials	18
3.3.1	Problem Identification	18
3.3.2	Problems Prioritization through Venn Diagram	19
3.3.3	Potential Identification	19
3.3.4	Identification of Potentials through Venn Diagram	19
3.3.5	Identification of Prioritized Problems, Causes, Impacts and Potentials	20
3.4	Perceived Development Priorities	21
CHAPTER FOUR: CONCLUSION		23
4.1	Key Observations	23
4.2	Limitations of PRA Sessions	23
4.3	Implications of PRA Findings	24
REFERENCES/BIBLIOGRAPHY		25
APPENDICES		26
Appendix-I		27
Appendix-II		130

List of Tables

	Page No.
Table 1.1 : Distribution of Unions and Municipal Wards by Upazila	6
Table 1.2 : Schedule of PRA at Sonatala Upazila	6
Table 2.1 : Major Problems and Affected Unions of Sonatala Upazila	10
Table 2.2 : Major Potentials of Unions of Sonatala Upazila	12
Table 3.1 : Major Problems and Affected Wards of Sonatala Paurashava	19
Table 3.2 : Spatial Aspects of Major Potentials of Sonatala Paurashava	19
Table 3.3 : Short Term Development Priorities of Sonatala Paurashava	21
Table 3.4 : Mid Term Development Priorities of Sonatala Paurashava	21
Table 3.5 : Long Term Development Priorities of Sonatala Paurashava	22

List of Maps

	Page No.
Map 1.1 : Location of Three Project Upazilas under Package-4	3
Map 2.1 : Boundary Map of Sonatala Upazila	11

List of Abbreviations/Acronyms

AAP	: Action Area Plan
ADP	: Annual Development Program
BBS	: Bangladesh Bureau of Statistics
BWDB	: Bangladesh Water Development Board
CS	: Cadastral Survey
DLRS	: Directorate of Land Record and Survey
FY	: Fiscal Year
GIS	: Geographic Information System
GoB	: Government of Bangladesh
ICA	: Institute of Cultural Affairs
IT	: Information Technology
KM/km.	: Kilometer
LGED	: Local Government and Engineering Department
MEPC	: Modern Engineers Planners & Consultants Ltd.
MoHPW	: Ministry of Housing and Public Works
NGO	: Non-Government Organizations
PD	: Project Director
PM	: Project Manager
PDB	: Power Development Board
PRA	: Participatory Rural Appraisal
PRSP	: Poverty Reduction Strategy Paper
PWD	: Public Works Department
RAP	: Rural Area Plan
REB	: Rural Electrification Board
RHD	: Roads and Highways Department
SoB	: Survey of Bangladesh
SP	: Structure Plan
SRP	: Sub-Regional Plan
Sq. Ft.	: Square Feet
Sq. Km.	: Square Kilometer
Sq. M.	: Square Meter
Sq. Mile	: Square Mile
ToP	: Technology of Participation
ToR	: Terms of Reference
UP	: Union Parishad
UAP	: Urban Area Plan
UDD	: Urban Development Directorate
UNO	: Upazila Nirbahi Officer

CHAPTER ONE: PARTICIPATORY RURAL APPRAISAL (PRA) APPROACH AND METHODOLOGY

1.1 Introduction

For sustainable development, comprehensive development plans for both rural and urban areas are essential. Despite limited resources, the Government of Bangladesh (GoB) has focused on the planned development at different layers of administrative organizations of the country. Upazila is now considered very important strata of development that will incorporate all social, economic and administrative and infrastructure services for the region. This is in line with the national policy that intends to bring development, administrative and services facilities to the doorstep of the people by providing access to better delivery of government services at the local tiers under the city or municipality level even.

For participatory planning and development, grassroots participation has now been well established, and the use of PRA methodologies offers proven results from the local people's active participation. The Project Entitled "Preparation of Development Plan for Fourteen Upazilas" included this component in its overall planning process to involve local people so that they own their development plans and contribute to the substantial processes of planning by sharing their perceptions and informed views at different stages of the project.

As the "Preparation of Development Plan for Fourteen Upazilas" project centers on Upazila as the significant tier in development planning, this PRA report is on Upazila basis. This chapter describes the background and purpose of PRA workshop, and the processes and tools used in PRA sessions and PRA settings, participants and facilitators as well.

1.2 Project Context for PRA

The preparation of development plan will accelerate the economic and socio-political development at Upazila level. This project aims to prepare development plan for the next 20 years to be completed in five stages/tiers involving the preparation of Sub-regional Plan and Structure Plan for the whole Upazila and surrounding areas, the preparation of Urban Area Plan and Rural Area for Municipalities/Paurashava (where exists) and rural areas of Upazila respectively and finally the preparation of Action Area Plan in the form of sectoral projects and programs for immediate intervention based on local needs, problems and opportunities.

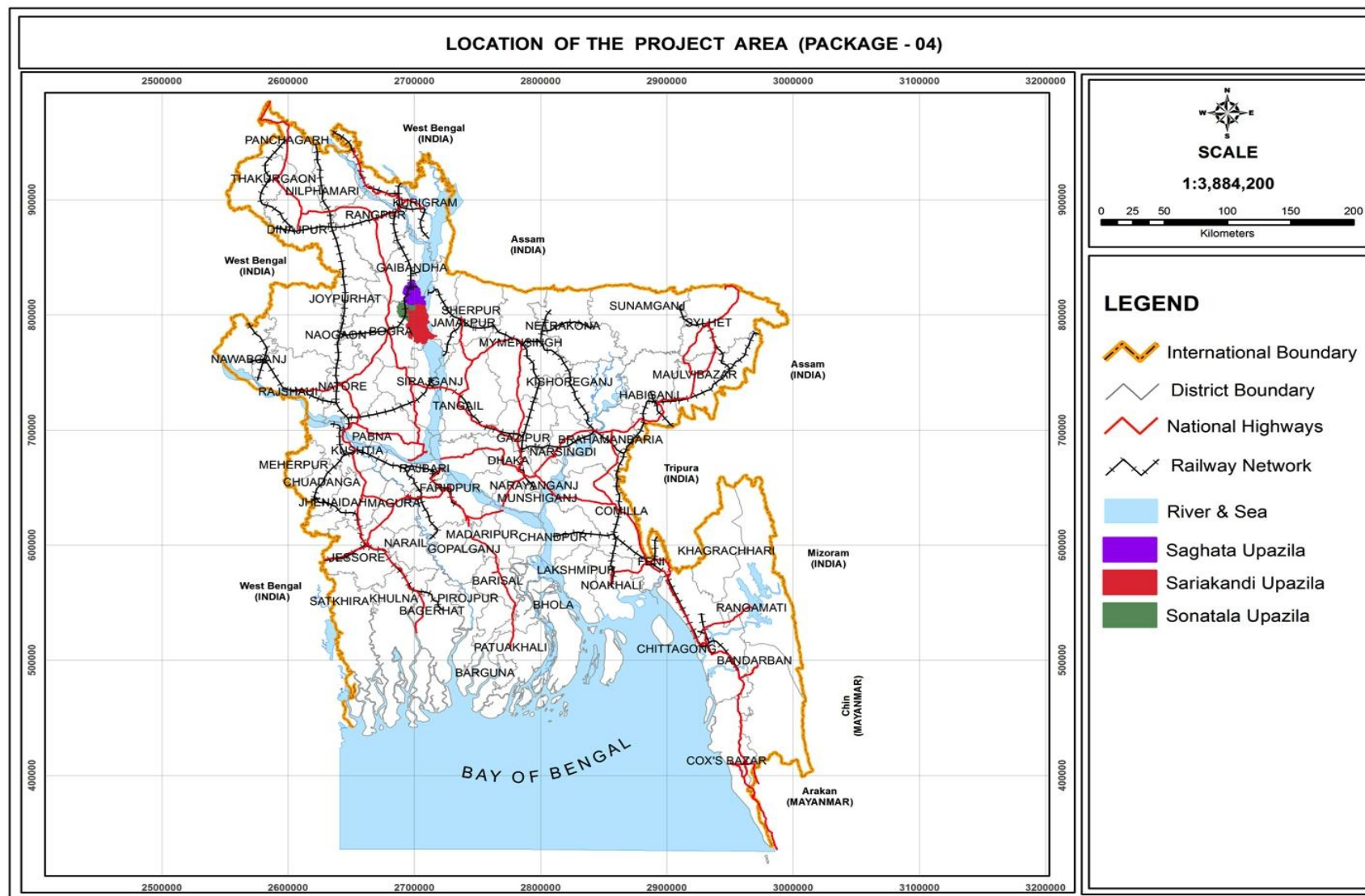
Given the importance of such comprehensive development plan as realized in the national policy supporting development control and discouraging unauthorized and unplanned development either in urban area or in rural area, local people's role are the key, and PRA

workshops are one of the best effective means to discover local residents' views and perceptions of the necessity of planned land transformation, the protection of the most valuable agricultural land from any other unplanned transformation, the identification of development constraints and local development potentials, and the determination of development needs and priorities in their respective localities. The Package 4 of the Pilot 14 Upazila project includes three Upazilas under two districts belonging to two divisions, which are very close neighbour located from the north to the south – Sonatola is in between Saghata and Sariakandi (Map1.1). Saghata Upazila is under Gaibandha District of Rangpur Division. Sonatola and Sariakandi Upazilas are under Bogra Districts of Rajshahi Division. Two municipalities are located in two upazila Headquarters – Sonatola and Sariakandi. This report is based PRA sessions conducted in 7 unions and 9 municipal wards of Sonatola Upazila. Among three project Upazilas under Package 4, PRAs were completed in the middle of the PRA fieldwork.

1.3 Purpose of PRA

The main goal of the Participatory Rapid Appraisal (PRA) workshops is to get local people's experiences, views and insights to the local development planning process with the use of three popular tools namely social mapping, Venn diagram and Technology of Participation (ToP) Consensus workshop method. PRA sessions are purposed to (a) involve the local people to identify their own problems, potentials, development needs and planning priorities for next 20 years; (b) supplement and facilitate matching PRA findings with different sectoral findings, particularly spatial analysis, and (c) make participants own the project and its activities towards realizing participatory planning approach. PRA sessions enabled the planning team to get people's in-depth knowledge and views about their assets, problems, potentials, development needs and planning aspirations. Each PRA is conducted to achieve the following three major interlocking objectives.

Map 1.1: Location of Three Project Upazilas under Package 4



Source: National GIS Database and Modified by MEPC

1.3.1 Mapping Resources and Identifying Areas

Social maps mapped local areas assets, resources and features (natural, physical, environmental, social, economic etc.), located problems and resources spatially and depict the areas as problem or risk and potential.

1.3.2 Identifying Problems and Potentials

Problem and potential Venn diagrams, associated causes, effects and relevant potentials analysis enabled participants identify the major problems and potentials of the area in terms of the severity and impacts of problems or potentials.

1.3.3 Proposing Development Priorities

Using the Technology of Participation (ToP) Consensus Workshop Method, participants were able to identify priorities for development and planning for next 20 years for sub-regional, structural, urban, rural action plans based on the identified locations, issues, problems and potentials through social mapping and Venn diagram.

1.4 PRA Tools

PRA is a set of tools, and various tools have been in practice. Given the nature of the project and purpose of PRA, at union and municipal ward level, each PRA used three key techniques namely social map for resource mapping, Venn diagram for major problem and potential identification and ToP consensus workshop method for determination of development needs and priorities for their respective localities. With the aid of facilitators, these techniques were used.

1.4.1 Social/Resource Mapping

The participants drew a social map locating different types of resources, such as, roads, settlements, health facilities, pond, agricultural land, river, market places, post office, schools/ colleges/madrashas/mosques/religious buildings, graveyard, factories, embankment, flood/ hazard prone area, flood shelter, bus stand, launch ghat, forest, etc. using marker or sign pen on a big art paper. The participants first marked the north direction of the map and then drew the boundary of the Union/Wards of Paurashava on the on paper by wooden pencil.

1.4.2 Venn Diagram (Problems and Potentials)

Participants discussed among themselves about all the problems they were facing, the causes and effects of those problems, and then they identified five major problems. Based on the severity and impact of problems, participants used the circular shaped paper to indicate the most

severe problem varying the size of the circle in the descending order. Then they listed potentials and identified the major potentials of the area.

1.4.3 Technology of Participation (ToP) Consensus on Development Needs

Participants are reminded of the whole group about what they got from previous sessions (resources/assets, potentials, problems, risks etc.) showing map and diagrams hanged in front of them. Then they are invited for brainstorming of the focus question --- What they want to see take place in next 20 years in their area. The ideas will be organized, clustered, named and then reflected on which are needed to do immediately, which are in the medium term and which are in the long run.

1.5 Participants and Facilitators of PRA Sessions

1.5.1 The Participants

For each PRA, 15-20 persons who were knowledgeable, willing and local resident of the union or municipal wards were invited. Among the participants, Ward Members/Ward Councilors, Teachers, Businessmen/dealers/brokers/traders, NGOs/CBOs/Clubs, Imams/religious priests or leaders, Farmers/laborer, Journalist, Professional (physician/engineers), Local elite/politician/other were included.

1.5.2 PRA Facilitators

Three persons in the field were responsible for communication with the local government leaders, local administration, and local officials to identify and confirm participants following the above-mentioned criteria, facilitating PRA sessions and documenting individual sessions. Among three, two persons interchangeably played role as facilitator and co-facilitator, and one person was dedicated to communicate, coordinate and document the PRA session. There was also a logistics officer who assisted timely material distribution, and taking notes and photos/videos of the PRA Session.

1.6 PRA Settings and Schedule of PRA Sessions

PRA workshops are conducted in a convenient time when the Union Chairman and members along with local knowledgeable and experienced participants were able to spend few hours at a convenient location decided by the local people. Facilitators contacted with local contact persons and arranged timely arrival and facilitation of these workshops. The distribution of PRA workshops by Union are presented in the following table. In Saghata Upazila, 10 PRA sessions are held in 10 UPs followed by 7 PRA sessions in 7 Unions of Sonatala and 12 PRA sessions in 12 Unions of Sariakandi (Table 1.1). Most of the PRA sessions are conducted in the UP council meeting rooms for union level PRAs.

Table 1.1: Distribution of Unions and Municipal Wards by Upazila

Upazila	No. of Unions	No. of Municipalities	No. of Municipal Wards	Time
Saghata	10	0	-	June 9 -16, 2015
Sonatala	7	1	9	June 15-22, 2015
Sariakandi	12	1	9	June 23-30, 2015
Total	29	2	18	

Source: Field Survey, 2015

Each session lasted at least 3 hours 30 minutes and some sessions went up to 4 hours. It had following components.

- i. Registration (sign up);
- ii. Opening, introductions, expectations;
- iii. Social mapping;
- iv. Venn diagram;
- v. Technology of Participation (ToP) Consensus Workshop;
- vi. Reflection and closing.

1.7 PRA Process

1.7.1 Preparation

Social expert and the planning team of the Package: 04 set several times to discuss the goals and procedures of the PRA. Then the Project Director and his UDD team set with the social expert with other planning team members to finalize the tools of PRA, the detailed steps of PRA techniques followed and the formats of the sessions, the criteria of participants and the reporting were settled. Later the social expert hired field facilitators followed by a one-day training in PRA tools. Social expert had practiced sessions with core field facilitators. The Project Director and his team set schedule of PRA sessions with the Social Expert and MPEC management.

Table 1.2: Schedule of PRA at Sonatala Upazila

Sl.	Union/Ward	Date	Time	Venue
01	Tekani Chukainagar	17-06-2015	10:30AM-1:30PM	UP Complex
02	Pakulla	17-06-2015	10:00AM-3PM	UP Complex
03	Digdair	18-06-2015	11:00AM-2:30PM	UP Complex
04	Sonatala	18-06-2015	10:00AM-3:30PM	UP Complex
05	Balua	19-06-2015	2:30-6:30PM	UP Complex
06	Jorgacha	21-06-2015	10:30AM-1:30PM	UP Complex
07	Madhupur	22-06-2015	10:30-2:30PM	UP Complex

Sl.	Union/Ward	Date	Time	Venue
08	Ward No. 5, 6, 9	21-06-2015	10AM-3:00PM	Municipality Complex
09	Ward No. 2, 7, 8	20-06-2015	11AM-3:00Pm	Municipality Complex
10	Ward No. 1, 3, 4	20-06-2015	10AM – 3:00PM	Municipality Complex

Source: Field Survey, 2015

***Note:** From Sl. No. 08 to Sl. No. 10 are under Sonatala Paurashava.

1.7.2 Field Work

For field work, field facilitators collected materials including maps and logistics, official letter, and contact lists along with necessary administrative paperwork in consultation with the management. Trained field facilitators are responsible for contacting, inviting and confirming minimum number of participants of PRA representing the target area (Union/Municipal Ward) maintaining professional standards and integrity by informing the purpose of contacts, the role of host and consulting agencies of the project, the previous visits and contacts by the project team, the procedure of conducting PRA sessions. PRA sessions were scheduled in consultation with the UP Chairman, members and secretary for Union-level PRAs and Mayor, councilors and secretary/other official for municipal level PRAs/In selecting Upazilas and unions and municipalities, collected LGED's GIS-based maps were used to schedule PRA sessions keeping the time, distance, and availability of participants. Field facilitator team was accommodated in one or closely located lodging facility so that they can reflect on each session after completion.

Each PRA session ensured the presence of Union Chairman at Union level PRAs, and municipal ward councilors for municipal level PRAs. In the beginning of the session with registration sheet sign up, the concerned UP chairman or Municipal Mayor/ward councilor was requested to open the session, then the lead facilitator introduced the facilitators team, and invited participants to get introduced each other. Later the facilitators through interactive discussions, ice breaking and warming up highlighted the context of PRA, the goals and objectives of the PRA as well different methods of PRA. The stages and outcome of different tools - resource mapping, problem and potential Venn diagrams and ToP Consensus workshop on development needs and priorities for their local Union/Municipality and the role of participants in these different stages were oriented alerting the importance of local people's views and accurate information for local development and planning process was strongly emphasized.

1.7.3 Documentation and Compilation of PRA Sessions

After completing each PRA session, field facilitators compiled all notes and checked meta cards, flip charts and sticky wall materials to document individual PRA report covering the group dynamics, description of the Union/Municipality and outputs like social map, identification of problems and potentials and long-term, medium-term and short-term

development needs. Field facilitators ensured quality, reliability and validity of PRA outcomes keeping in mind that PRA analysis would be matched with other technical analysis (13 surveys including socio-economic survey). Field facilitators submitted all PRA reports and field materials (hard and soft copy) to the Project Director's office and to MEPC Office so that the team leader can integrate PRA findings along with socioeconomic survey data with other spatial topographic, hydro-geological and environmental, land use, transport data during the comprehensive development planning stage.

1.8 Quality Control Measures

The social expert observed first few PRA sessions in each Upazila to monitor the quality of PRA sessions and outputs. In some Upazila, the Project Director, and/or his representatives were observers in some sessions. Before the first day of facilitation, the Social Expert trained field facilitators in practical aspects of facilitation tips, rapport building, sitting arrangements, conflict resolution, and documentation. In the first three days of fieldwork, the social expert was full time present in sessions taking lead facilitation charge as part of training the field facilitators in real world situations. At the end of each day, field facilitators did peer discussion and reflection on what they did and how they could do better in next sessions, which were shared with the social expert on regular basis to maintain quality of PRA procedures.

CHAPTER TWO: UNION-LEVEL PRAs OF SONATALA UPAZILA

2.1 Overview

This chapter describes the findings of the PRA sessions conducted in seven (7) unions and 9 municipal wards of Sonatala Upazila of Bogra District under Rajshahi Division. Established as Thana (police station) in 1984, Sonatala became an upazila in 1984 named after it's the main administrative center - Sonatala. The PRA team confirmed the schedule of PRAs of Sonatala Upazila while doing PRAs in Saghata Upazila and before the completion of the last PRA session, one PRA field facilitators' team conducted one PRA of Sonatala Upazila. PRA expert observed PRA sessions conducted on municipal wards held at the Sonatala Auditorium on the last day. The PRAs conducted by two team of field PRA facilitators took time from June 17 to June 22, 2015 in this Upazila. Field facilitators resided in Sonatola Upazila Dak Bungalow and Primary Training Institute (PTI) facility for a week to complete the PRA fieldwork. Sonatola Upazila has seven unions and one municipality. Seven unions of Sonatala Upazila are:

- i. Tekani Chukainagar is 1 No. Union
- ii. Pakulla is 2 No. Union
- iii. Digdair is 3 No. Union
- iv. Sonatala is 4 No. Union
- v. Balua is 5 No. Union
- vi. Jorgacha is 6 No. Union
- vii. Madhupur is 7 No. Union

2.2 Spatial Aspects

Sonatola Upazilas surrounded by Sariakandi Upazila of Bogra district to the east, Shibganj Upazila of Bogra district to the west, Gobindaganj Upazila of Gaibandha district to the north, and Gabtali Upazila of Bogra District to the south (Figure 2.1). According to Bangladesh Population Census 2011, the Upazila has 45,869 households with a total population of 186,778 (BBS, 2011). Sonatola Upazila consisting of seven Unions and one municipality occupies a total area of 156.75 square kilometers.

Sonatola upazila is largely rural as 12.2 percent of its total population (1,86,778), live in urban areas (Bangladesh Population Census 2011, BBS, 2011). Sonatola Upazila has 131 villages and 105 mouzas (Based on records collected from Upazila Agricultural Office, Sonatola dated 20/10/2014). Sonatola Pourashava is the central place for most of the business, economic and administrative activities. Like Saghata, Sonatola Upazila has two major rivers --- Jamuna and

Bangali, and is also affected by flood, mostly Tekani Chukainagar, Pakulla and Jorgacha Union from north to south. The Upazila has 331.61 acre khas land and char land as well. Based on local Union Parishads records, asset and risk maps and PRA exercises, resources of seven unions are described below. The boundaries of different unions are checked with LEGD maps (Map 2.1).

2.3 Major Problems and Potentials

According to the Bangladesh Population Census 2011 of Bangladesh Bureau of Statistics (BBS), the Upazilas total population is 186778 (BBS, 2011). The Upazila has total area of 156.73 square kilometer. The sandy land area, homogeneous topography, moderate moisture etc. are the common geographical characteristics of the Upazila. Another important geographic characteristic of this Upazila is char land. These are important factors for future land use planning and socio-economic development of the Upazila.

2.3.1 Problem Identification

Based on PRA sessions, below mentioned problems are identified and spatially located union wise (Table 2.1). But these are peoples' perception based and need technical surveys and analysis for accurate exact locations and physical planning. In addition to these problem, some participants mentioned drug addiction, problems of widow and old person allowance, unemployment, and poverty, which are not so acute in all unions.

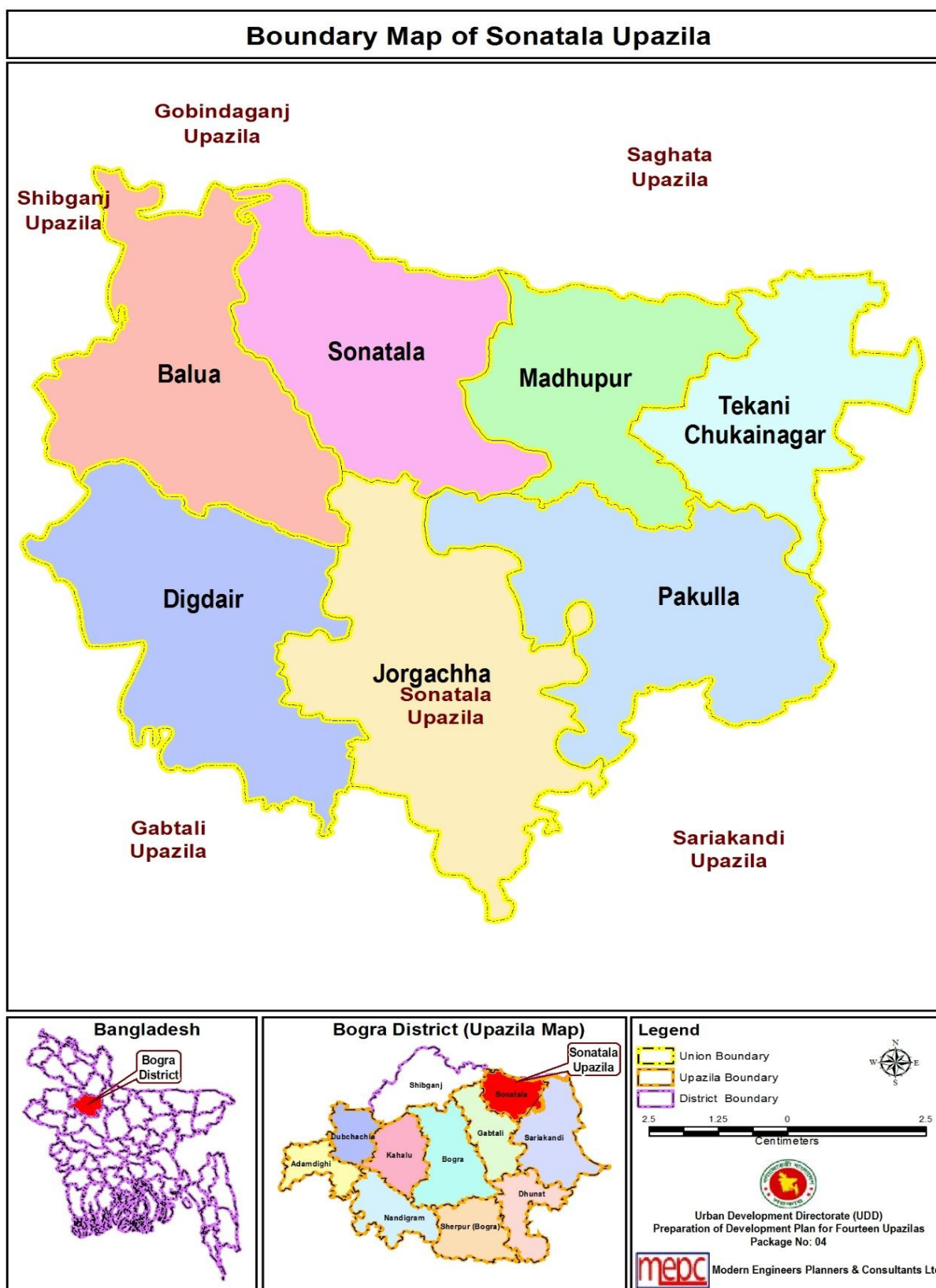
Table 2.1: Major Problems and Affected Unions of Sonatala Upazila

Major Problems Identified	Affected Unions	Remarks
Poor transportation problem/Problems of communication system	1, 2, 3, 4, 5, 6	6 unions
River Erosion/Flood	1, 2, 4, 6, 7	5 unions
Unemployment	1, 2, 7	3 unions
Lack of necessary educational institution	1, 2, 3, 4	4 unions
Lack of sufficient doctors and inadequate health services	1, 2, 3, 5	4 unions
Problems of electricity connection	3, 4, 6, 7	4 unions
Problems of pure water and sanitation	4, 5,	2 unions
Water logging problem	5,	1 unions
Unavailability of cold storage	5,	1 unions
No agriculture information centre	6,	1 unions
Problems of widow and old person allowance	6	1 unions

Source: Field Survey, 2015

***Note:** 1= Tekani Chukainagar Union, 2= Pakulla Union, 3= Digdair Union, 4= Sonatala Union, 5= Balua Union, 6= Jorgacha Union, 7= Madhupur Union.

Map 2.1: Boundary Map of Sonatala Upazila



Source: MEPC

2.3.2 Problems Prioritization through Venn diagram

From the Venn diagram the most common problems (Top 5) have been identified as following:

- i. Poor Transportation Problem/Problems of Communication System,
- ii. River Erosion/Flood,
- iii. Lack of sufficient doctors and Inadequate Health Services,
- iv. Proper education and institutional infrastructure problem, and
- v. Electricity problem.

2.3.3 Potential Identification

Based on PRA sessions, the below mentioned potentials are identified and spatially located union-wise (Table 2.2). But these are based on peoples' perception that needs technical surveys and analysis for determining accurate and exact locations and for physical planning of the Upazila.

Table 2.2: Major Potentials of Unions of Sonatala Upazila

Identified Major Potentials	Affected Unions*	Remarks
Agriculture Land and Production (Rice, Jute and Rabi Crops)	1, 2, 3, 4, 5, 6, 7	7 Unions
Registry office, Bank and NGOs	1, 2,	2 Unions
Manpower	2, 3, 4, 5, 6, 7	6 Unions
Cattle Rearing	2, 3, 5, 6, 7	5 Unions
Water bodies for fisheries	1, 2, 4, 6, 7	5 Unions
Dairy and Poultry Farm	1, 2, 3, 4, 5	5 Unions
Technical and Vocational Education	4, 7	2 Unions

Source: Field Survey, 2015

***Note:** 1= Tekani Chukainagar Union, 2= Pakulla Union, 3= Digdair Union, 4= Sonatala Union, 5= Balua Union, 6= Jorgacha Union, 7= Madhupur Union.

2.3.4 Identification of Potentials through Venn diagram

From the Venn diagram the most common Potentials (Top 5) have been identified as following:

- i. Agricultural Land and Production,
- ii. Fisheries and Livestock,
- iii. Manpower,
- iv. Cattle Rearing,
- v. Dairy and Poultry Farm.

2.3.5 Identification of Prioritized Problems, Causes, Impacts and Potentials

1. Communication/Transportation Problem

Communication problem is the main key trouble of Sonatala Upazila. All the unions are mostly affected by communication problem. Main reasons for communication problem are katcha road, weak condition of bridge and culvert and problem in embankment. As the consequences, people of the Upazila are suffering in various ways; such as, bad effect in business, misery to go educational institution, problem in emergency medical service, economic loss and time loss. There are two potentials for roads problem. They have unemployed people and cheap labor.

2. River Erosion

River erosion is one of the significant problems for Sonatala Upazila. Most of the unions are affected by river erosion. The main reason for river erosion is flood. People of the Upazila are suffering in various ways; such as, breakdown of homestead land and agricultural land. Migration along with over crowd also happens for this river erosion problem. Constructing embankment is the only one potentiality of this problem. People of this locality think that if embankment is constructed by government allowance/support, tourism and fisheries will be promoted.

3. Medical Facilities Problem

The third most excruciating problem to the people of the Sonatala Upazila is lack of proper health services. It occurs as the result of unavailability of hospital in this union. Besides, though this union has community clinics but these clinics do not provide emergency health services. Consequently, number of death and disabled people are increasing day by day. Existing community clinic can be more modernized and upgraded to a modern hospital. Required land for establishing a new hospital or upgrading the clinic can be made available in this union.

4. Proper Education and Institutional Infrastructure Problem

Lack of standard education is one of the main problems of Sonatala Upazila as a finding from the Venn Diagram. The reasons behind this problem are lack of consciousness of guardian, poverty, inadequate training programs for teachers and insufficient number of classrooms. For these reasons, people of the Upazila are suffering from increase of absence in the class, child labor, dropout of students and social deviation. There are two related potentials for the standard education system. They are sufficient educational institutions and stipends for students.

5. Electricity Problem

Most of the area in this union lies in the flood prone area as well as susceptible to river erosion. As a result, electric supply cannot spread out all over the union. Irrigation and education system

hamper as well as building farm and industries hinder as the consequence of the lack of electricity supply. People of the unions have enough demand for this electricity and they think they can pay electricity bill.

2.4 Perceived Development Priorities

The ToP (Technology of Participation consensus workshop) on development needs and priorities identified under short-term (within five years), mid-term (within ten years) and long-term (within twenty years) basis. PRA participants of the Unions identified most of the development goals (advance medical service, generate employment, install drainage system, advance irrigation system and establish religious institutions) to accomplish in five years. They want improvement of communication system in the mid-term and establish the union as a model union as a long-term vision.

2.4.1 Short Term Development Priorities

1. Tekani Chukainagar Union

The PRA participants of ToP Workshop in Tekani Chukainagar Union identified some problems for the short-term development. An overwhelming majority opined for the provision of electricity, reducing unemployment and providing medical treatment within 5 years (short term needs). Many participants want crime control and provision of government allowance need to keep under short term goals and some reported they can be midterm and long term action.

2. Pakulla Union

The PRA participants of ToP Workshop in Pakulla Union identified Establishment of rehabilitation center, employment generation, control of river erosion, poverty eradication, provision of health services and development of roads transportation were identified as short term needs.

3. Digdair Union

PRA participants of Digdair Union unanimously agreed to increase employment, the development of health, the development of electricity, the prevention of drug addiction and the development of communication system under short-term needs.

4. Sonatala Union

The PRA participants of Sonatala Union included 100 percent electricity, employment generation, standard education, improved transportation and 100 percent river bank erosion control as short-term needs.

5. Balua Union

The PRA participants of ToP Workshop in Balua Union identified some problems for the short-term development. Supply of pure drinking water and sanitation, drainage system, improved transportation system, modern health service and development of mosque as short-term needs

6. Jorgacha Union

In the ToP session, Jorgacha Union participants came up with some short term ideas or plans. In the short term, the development of road communication, the construction of model union complex and the establishment of agriculture information service center were agreed by the majority.

7. Madhupur Union

The ToP Workshop on Development Needs and Priorities shows that PRA participants of Madhupur Union perceive improvement of roads and transportation system, improvement of education system, women empowerment and electrification as the short-term needs.

2.4.2 Mid Term Development Priorities

1. Tekani Chukainagar Union

For mid-term development, the participants wanted development of livelihood in char areas should be under midterm needs. Some participants want development of education system under midterm process.

2. Pakulla Union

The PRA participants of ToP Workshop in Pakulla Union identified Establishment of rehabilitation center, employment generation, control of river erosion, poverty eradication, provision of health services and development of roads transportation were identified as mid-term needs.

3. Digdair Union

ToP Workshop in Digdair Union, most of the participants kept education development under mid-term needs.

4. Sonatala Union

The PRA participants of Sonatala Union included digitalization of Union Parishad, improved transportation, standard education, employment generation and sanitation as mid-terms goals.

5. Balua Union

PRA participants of Balua Union mentioned electrification, education, drainage, pure drinking water and sanitation, improved transportation as medium-term needs.

6. Jorgacha Union

In the midterm, the development of education and the generation of employment were suggested.

7. Madhupur Union

The ToP Workshop on Development Needs and Priorities shows that PRA participants perceive river erosion control, women empowerment, employment generation and education system development as medium-term needs for Madhupur Union.

2.4.3 Long Term Development Priorities

1. Tekani Chukainagar Union

During the ToP Consensus session, it is noticed that the majority participants of PRA suggested education development may be long term but some want education under midterm. Most of the participants agreed that repair of religious institutions will be long term process.

2. Pakulla Union

The PRA participants of ToP Workshop in Pakulla Union identified Establishment of rehabilitation center, employment generation, control of river erosion, poverty eradication, provision of health services and development of roads transportation were identified as long term needs.

3. Digdair Union

During the ToP Consensus session, majority of the participants emphasized on the prevention of child marriage and the development of drainage system as long term needs.

4. Sonatala Union

During the ToP Consensus session, the PRA participants of Sonatala Union included digital UP, river erosion control and electrification as long-term needs.

5. Balua Union

During the ToP Consensus session, all the participants mentioned modern crop preservation system as long-term needs for the development of Balua Union.

6. Jorgacha Union

In the long term process, the PRA participants of Jorgacha Union voted equal weight to achieve economic solvency and establish market place in every village.

7. Madhupur Union

In this ToP Consensus session, the participants of PRA at ToP session demanded river bank erosion control, women empowerment and employment generation as long-term needs for Madhupur Union.

CHAPTER THREE: MUNICIPALS WARD LEVEL PRAs OF SONATALA UPAZILA

3.1 Overview

This chapter describes the findings of the PRA sessions conducted in nine wards of Sonatala Paurashava. The PRA team confirmed the schedule of PRAs while fixing dates for union-level PRAs of Sonatala Upazila. PRA expert were present in some of the ward-level PRA sessions held at the Sonatola Auditorium facilitated. Sonatola Paurashava has an area of 12.86 square km area with 26,200 people. For PRA sessions, PRA sessions for 3 wards are conducted together, and the Wards were selected based on adjacent wards following the LGED map. PRAs for 9 wards were conducted into three sessions with 3 wards in each day.

- i. Ward No. 1, 3 and 4
- ii. Ward No. 5, 6 and 9
- iii. Ward No. 2, 7 and 8.

3.2 Spatial Aspects

Sonatala Paurashava is subdivided into 9 wards and 16 mahallas. Sonatala Paurashava is surrounded by Shalimara Union in the north, Madhupur Union, Sonatala Union and Shalimara Union in the east and Balua hat and Sonatola Union in the west and south respectively.

3.3 Major Problems and Potentials

Geographically Ward No. 1, 3 and 4 are in more vulnerable position than other wards due to their proximity to the Jamuna River. These wards are flood-prone area for the absence of river embankment. The PRA participants reported that their communication roads were not so good because of flood and river erosion. Among Ward No. 2, 7 and 8, Ward No. 2 has problems of broken roads, traffic jam and sanitation problem. Ward No. 8 is a flood prone area. Sanitation problem is a major problem in Ward No. 7 and 8. Electricity was mentioned a common problem for all these Wards. Ward No. 5, 6 and 9 are facing the problem of electricity, poor transportation system, insufficient street light, unplanned drainage system, lack of educational institutes, problem of sanitation and pure drinking water.

3.3.1 Problem Identification

Based on PRA sessions, the below mentioned problems are identified and spatially located municipal ward-wise (Table 3.1). But these are based on people's perception that needs technical surveys and analysis for determining accurate and exact locations and for physical planning of the Upazila.

Table 3.1: Major Problems and Affected Wards of Sonatala Paurashava

Identified problems	Affected Wards	Remarks
Water logging/problems of drainage system/no supply water	Ward 1, 3, 4, 5, 6	5 Wards
Problem of communication/road, bridge and culvert repair	Ward 1, 3, 4, 5, 9	5 Wards
Problem of electricity (connection)	Ward 1, 3, 4, 9	4 Wards
Insufficient medical facility	Ward 1, 3, 4	3 Wards
Lack of proper education and institutional infrastructure	Ward 4, 9	2 Wards
Problem of public toilet/sanitation	Ward 5, 6, 9	3 Wards

Source: Field Survey, 2015

3.3.2 Problems Prioritization through Venn diagram

From the Venn diagram the most common problems (Top 5) have been identified as following:

- Water logging,
- Communication problem,
- Sanitation problem,
- Medical facilities problem,
- Electricity problem.

3.3.3 Potential Identification

Based on PRA sessions, the below mentioned potentials are identified and spatially located municipal ward-wise (Table 3.2). But these are based on peoples' perception that needs technical surveys and analysis for determining accurate and exact locations and for physical planning of the Upazila.

Table 3.2: Spatial Aspects of Major Potentials of Sonatala Paurashava

Major Potentials	Ward	Remarks
Business	1, 2, 6, 7, 8	5 Wards
Fisheries	3, 4, 5, 7, 8, 9	6 Wards
Livestock	3, 4	2 Wards
Manpower	2, 3, 4, 6, 8	5 Wards
Agricultural land	3, 4	2 Wards
Poultry farm	3, 4, 5, 7, 9	5 Wards
Agricultural crops	2, 5, 7, 8, 9	5 Wards
Cattle rearing	5, 7, 8, 9	4 Wards

Source: Field Survey, 2015

3.3.4 Identification of Potentials through Venn diagram

From the Venn diagram the most common Potentials have been identified as following:

- Fisheries and Livestock,
- Manpower,

- iii. Cattle rearing,
- iv. Agricultural land and production
- v. Poultry farm.

3.3.5 Identification of Prioritized Problems, Causes, Impacts and Potentials

1. Water Logging/Drainage Problem

Shortage and broken drains and water logging are the main problems. The main causes of drainage problem include insufficient drain, blockage of existing drains and lack of planned drainage system. Lack of drainage system brings communication misery. On the other hand, it consequence increase of diseases and increase of mosquito and flees. In addressing drainage problem, river can be a main potential.

2. Communication Problem

Communication problem is the significant problem of Sonatala Paurashava. Main reasons for communication problem are katcha and damaged roads, insufficient allotment for repair and maintenance, narrow road and low level of road and insufficient road lighting. As the consequence people are suffering in various ways; such as, road accident, misery to go educational institution, problem in emergency medical service and others communication problems. Katcha roads are potentials for this sectoral development.

3. Sanitation Problem

Poor sanitation system affects health, and environment. As a result different type of diseases spread out. Municipality supplies ring slab, and different types of NGO's give financial support in these areas.

4. Electricity Problem

Main causes of electricity problem include lack of pillar supply and the supply of electric meter. Because of this problem, residents face problems in accessing telecommunication service, irrigation problem, problem of study, problem in using electrical machines, and increase of theft for no lighting. Lack of sufficient electric supply, shortage of electrical pool, and mismanagement of government through the procrastination of giving new connection created the problem of electricity. Industrialization, education problem, irrigation problem, small and cottage industries are affected because of no electricity.

5. Medical Facilities Problem

The main reason for no clinic is the lack of initiative from the government. Community clinics lack infrastructure and physician and medicine. Therefore mortality, morbidity rate and as well

as a cost of accessing health services are increasing. Absence of medical service center deprives general people from right of medical service facility.

3.4 Perceived Development Priorities

The ToP (Technology of Participation consensus workshop) on development needs and priorities identified under short-term (within five years), mid-term (within ten years) and long-term (within twenty years) basis. PRA participants of the municipal ward level identified most of the development goals (advance medical service, generate employment, install drainage system, advance irrigation system and establish religious institutions) to accomplish in five years. They want improvement of communication system in the mid-term and establish the union as a model union as a long-term vision.

Table 3.3: Short Term Development Priorities of Sonatala Paurashava

Short Term Development Priorities	Ward No.
Drainage Master Plan Implementation	1, 3, 4
100 percent electrification	2, 7, 8
Planned Urbanization	1, 2, 3, 4, 7, 8
Modern Healthcare	2, 7, 8
Improved Transportation/Communication System	1, 2, 3, 4, 5, 6, 7, 8, 9
Development of Education System	1, 2, 3, 4, 7, 8
Development of Recreational Facilities	5, 6, 9
Gas and Water Supply	1, 3, 4, 5, 6, 9
Employment Generation	5, 6, 9
Development of Agriculture System	5, 6, 9
Waste Management System	1, 3, 4
Protection of River Bank	5, 6, 9

Source: Field Survey, 2015

Table 3.4: Mid Term Development Priorities of Sonatala Paurashava

Mid Term Development Priorities	Ward No.
Employment Generation	1, 3, 4
Fisheries Project	1, 3, 4
Industrialization	5, 6, 9
Development of Agriculture System	5, 6, 9
Development of Recreational Facilities	5, 6, 9
Gas and Water Supply	5, 6, 9
100 percent electrification	2, 7, 8
Planned Urbanization	2, 7, 8
Modern Healthcare	2, 7, 8
Improved Transportation System	2, 7, 8
Standard Education	2, 7, 8

Source: Field Survey, 2015

Table 3.5: Long Term Development Priorities of Sonatala Paurashava

Long Term Development Priorities	Ward No.
Development of Recreational Facilities	5, 6, 9
Gas and Water Supply	5, 6, 9
Planned Urbanization	2, 7, 8
Modern Healthcare	2, 5, 6, 7, 8, 9
Improved Transportation System	2, 7, 8
Standard Education	2, 7, 8

Source: Field Survey, 2015

CHAPTER FOUR: CONCLUSIONS

4.1 Key Observations

Based on PRA findings obtained in forms of resource maps, problems and potentials Venn diagrams, and development needs workshops of seven unions of Sonatola Upazila and nine wards of Sonatola Pourashava need to be incorporated in the preparation of development plan for Sonatola Upazila. However, these findings need to be examined by and matched with technical analysis of data gathered from other sectoral surveys designed under the current project. It is evident from PRA findings that most of unions are flood prone, affected by river erosion, and lack necessary road, health services, income generation activities and necessary educational institutions. Local people believe that their major potentials include many particularly unemployed people, agricultural land and produce, and two rivers that can be utilized for the comprehensive development of this Upazila. The residents of Sonatola municipality reported common problems, such as, poor drainage system, inadequate street lighting, the need for electricity, the problem of gas and water supply along with health and educational development. The participants of PRA sessions think that their localities have potentials that can be used for the remedy of their problems if development schemes are undertaken for short, medium and long-term with adequately allocated budget.

4.2 Limitations of PRA Sessions

Despite the planned PRA design and expressed willingness of the Union Parishad and Paurashava leaders along with PRA participants in three project Upazilas, facilitators faced various challenges during the fieldwork. The key problem was time management. Because of the remoteness of some UPs and transportation issues, the start time and end time often was changed unintentionally. Another issue was with the number of participants, some PRA sessions had more than 15 participants, and some had less than 15, although more than 12 -15 participants initially showed up. Because of very small number of participants, few Ward-based PRA sessions were postponed and those were held at a later date with adequate number of participants. The length of PRA session for more than 3.5 hours is another issue. Another issue was the management's inability to pay for transportation cost and per diem for the participants. Most of the participants are rural working people who find difficulties in spending time for no direct benefits out of their participation. Some of the Unions in Sariakandi are in the char areas on the other side of Jamuna River in Sariakandi Upazila, and also some in the distant char areas in Saghata Upazila. Food was also not adequately offered, often time was planned to avoid lunchtime, and even it goes to lunchtime and snacks were offered. Some participants expressed their dissatisfaction and facilitator's team tried to make them understand the limitations of the

management. Another issue was the lack of women's participation, though at least female ward members were ensured to be present. In many PRA sessions, the numbers of female participants were not satisfactory, but some representative knowledgeable female participants were in each session. One major challenge for conducting PRA sessions is the heterogeneity of participants in terms of occupation, social location, education, power differences, and level of knowledge. Some participants understand the planning process and their role; others think they are the project beneficiaries. Another challenge is that participants even the UP elected officials are suspicious of these projects or want direct benefits assuming that the project are just paperwork and looting taxpayers or foreign aid.

4.3 Implications of PRA Findings

PRA findings must be carefully used as these findings are based on local people's perceptions and opinions. But the importance of these findings are huge as the development plan is for the local people, they are more knowledgeable about their local problems and potentials, and they must own whatever the plan is formulated for their local areas. This plan will be meaningless unless local people's views and expectations were not incorporated in the whole development planning process. Instead of the achieving the fruits of the benefits of development plan, taxpayers' money to be spent in the development planning process will be wasted if the local people do not implement the formulated plan at the end. Hence development plans must count local peoples' views and perspectives in preparing development plan. This report presents and highlights the problems, resources, and development expectations of the local people despite these PRA findings have various limitations as mentioned earlier. However, technical analysis must be corroborated with PRA findings when needed to prepare informed development plan for next 20 years.

REFERENCES/BIBLIOGRAPHY

LGED. (2015). <http://www.lged.gov.bd/ViewMap.aspx> Dhaka: Local Government Engineering Department.

ICA Bangladesh. (2015). www.ica-bangladesh.org. Dhaka: ICA Bangladesh.

UDD. (2015). TOR. Dhaka: Urban Development Directorate.

Rahman, M. A. & Ali, M. (2012). Implications of Technology of Participation (ToP) approach in learning and research in Bangladesh. In Timsina, T. P. & Neupane, D. (eds.); *Changing lives, changing societies*, pp 129-135. Kathmandu: ICA Nepal.

ToP Network. (2015). www.top-network.org retrieved December 2, 2015.

Database under National Land Zoning Projects of the Ministry of Land provided by Upazila Agricultural Office in June 2015

APPENDICES

Annexure-I: Individual PRA Report at Union Level of Sonatala Upazila

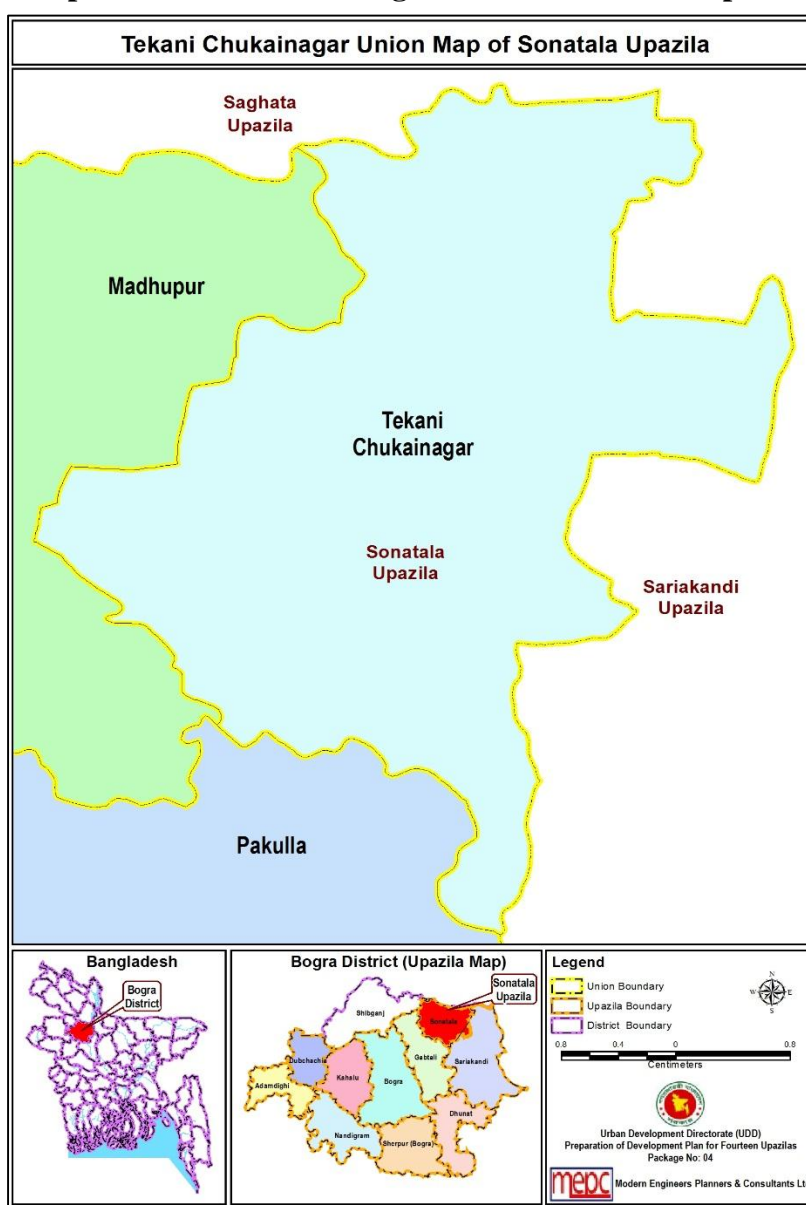
Upazila

1. Tekani Chukainagar Union

1.1 Overview

Tekani Chukainagar union is surrounded by Sahgata Upazila in the north, Sariakandi in the east and Chaluabari union in the east-north. Jamuna River crosses over this union to the north, Pakulla union is in the south and Madhupur union in the west

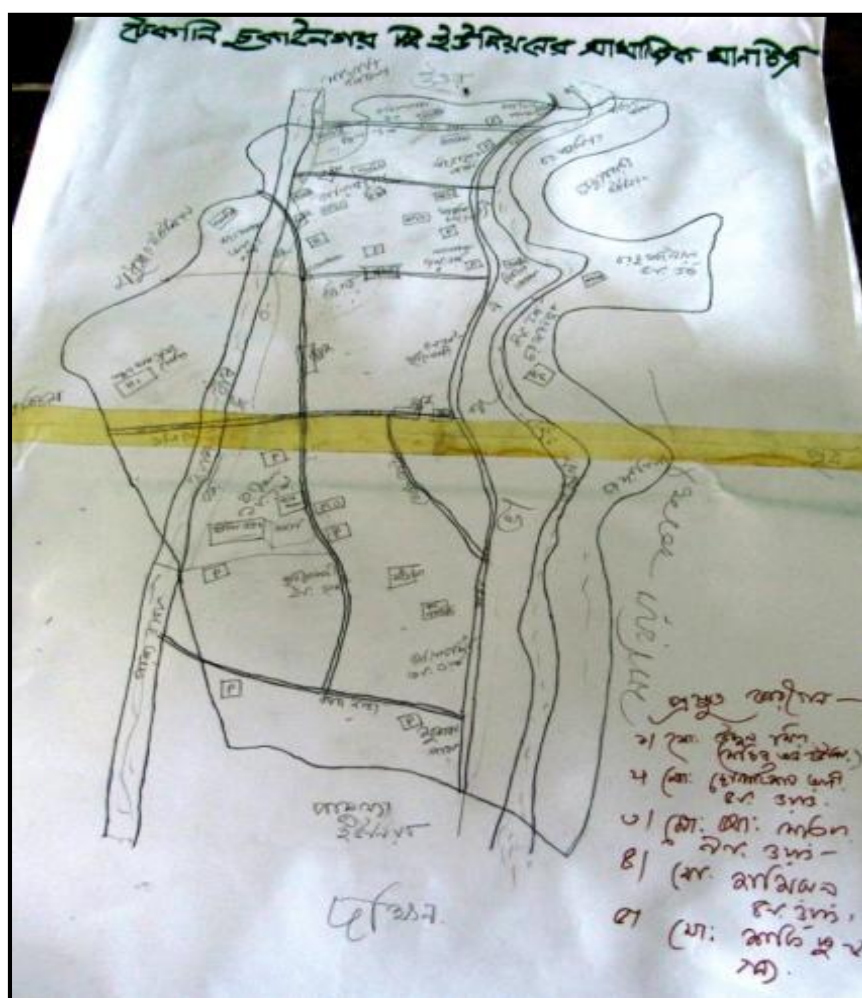
Map 1.1: Tekani Chukainagar Union of Sonatala Upazila



Source: MEPC

1.2 Spatial Aspect

Total number of population of this union is 29,000. Agricultural land, which is the only one potential resource for the people of this locality, covers 3000 hector. Total communication system covers 77 km roads including 32 km paved and 45 km Kachua roads as well as 4 bridges and 20 culverts. Two (2) switch gates are also situated in thus union. Bharatkhalai is mostly flood-prone in Ward No 1, 2, 4 and partially some parts of Ward no 6. River erosion occurs in Wards No 2 and 4. PRA findings show that the residents of Bharatkhalai union face excruciating problems in the daily lives such as river erosion, transportation problem for the lack of necessary road, inadequate health services, unemployment, and lack of necessary educational institution. Local people believe that their major potentials can be utilize for the development of this union. They think that their potentials can be used for the remedy of their problems if development schemes are undertaken for short, medium and long-term with adequately allocated budget.



Source: MEPC

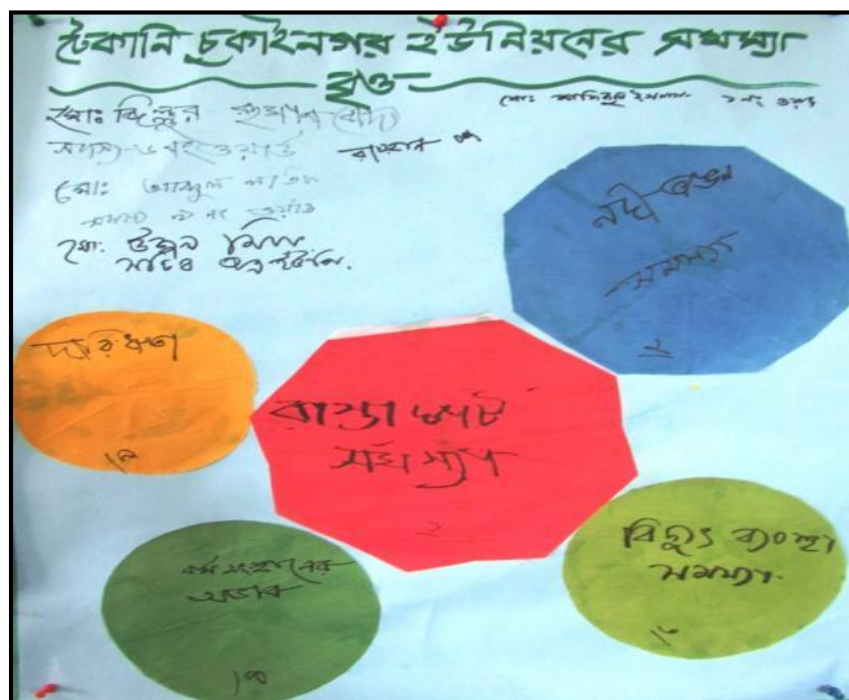
Figure 1.1: Social Map of Tekani Chukainagar Union

1.3 Major Problems and Potentials

1.3.1 Problems of Tekani Chukainagar Union

The participants' identified five most important problems:

1. Poor transportation problem,
2. River Erosion,
3. Unemployment,
4. Lack of necessary educational Institution (school and college),
5. Inadequate health services.



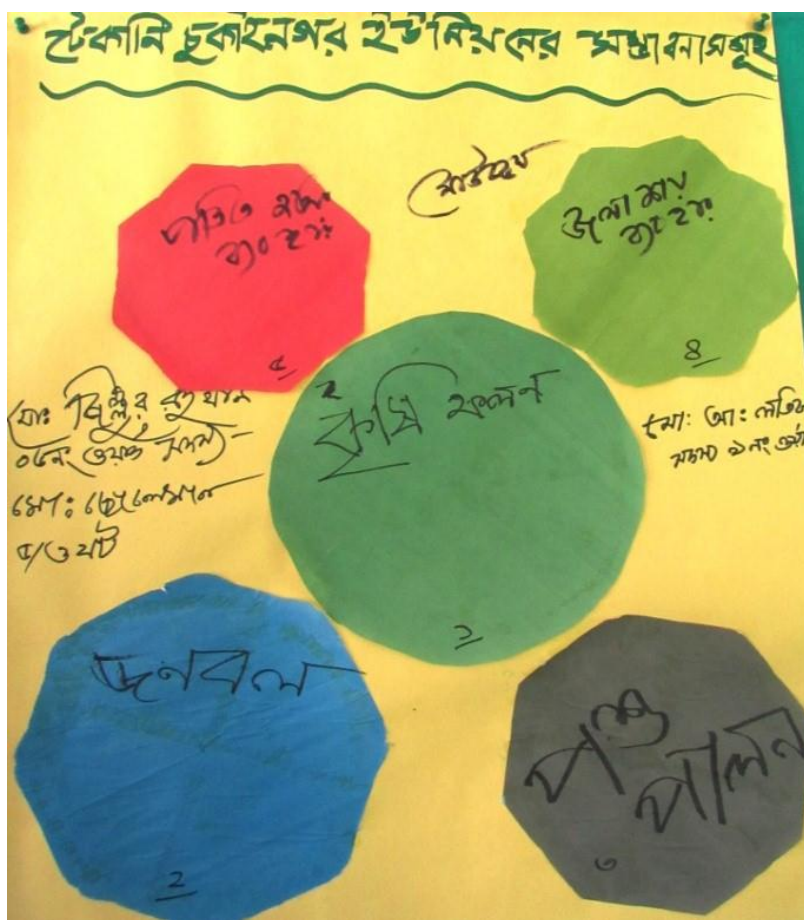
Source: Field Survey, 2015

Figure 1.2: Major Problems Venn Diagram of Tekani Chukainagar Union

1.3.2 Potentials of Tekani Chukainagar Union

The Potentials Venn Diagram identifies the major potentials of Tekani Chukainagar Union:

1. Agriculture (Rice, Jute and Rabi Crops),
2. Fisheries, dairy, poultry farm and nursery,
3. Educational Institutions,
4. Registry office, Bank and NGOs,
5. Health Service center.



Source: Field Survey, 2015

Figure 1.3: Major Potentials Venn Diagram of Tekani Chukainagar Union

1.3.3 Major Problems, Causes, Effects and Relevant Potentials of Tekani Chukainagar Union

1. Communication/Road Problems

It is a most important problem in Tekani Chukainagar union and its main causes are river erosion, lack of repairing roads, flood, lack of allotment and lack of pucca roads. As the consequences of this problem, troubles in normal movement, troubles in marketing, troubles in quick medical treatment and troubles in going to school by students are created. Due to government's improper management no potentials to mitigate this problem have been created.

2. River Erosion

Many of families have left their house into river and they get being helpless. So river erosion has emerged as a great threat for them and also significant problem for this local people. Now we can see what the causes for river erosion are. First of them is the shallowness of river and secondly much bight. Consequences of this problem are damaged agricultural land, destroyed

houses, damaged roads, destroyed institutions and also damaged trees. There are no potentials identified for river erosion.

3. Problem of Electricity

The main cause of this problem is that the government has no taken any effective steps for bringing electricity. At the result, the effects are darkness at the roads, problems in study, crimes committed, irrigation problem and problem in modern medical treatment. To fulfill this demand, the potential is solar electricity. For the lack of government proper initiatives there are no potentials to mitigate this problem.

চিহ্নিত সমস্যা	প্রধান কারণসমূহ	প্রভাবসমূহ	অনিল্লিষ্ট সম্ভাব্য সমাধান
১. বাল্যশিক্ষা সমস্যা	১. নদী জলজমা ২. বন্যা ৩. অসুস্থতার কারণে শ্রমহারা ৪. অসুস্থতার কারণে ৫. পানীয় জল সংকট	১. অসুস্থতার কারণে শ্রমহারা ২. অসুস্থতার কারণে শ্রমহারা ৩. অসুস্থতার কারণে শ্রমহারা ৪. অসুস্থতার কারণে শ্রমহারা ৫. অসুস্থতার কারণে শ্রমহারা	১. অসুস্থতার কারণে শ্রমহারা ২. অসুস্থতার কারণে শ্রমহারা ৩. অসুস্থতার কারণে শ্রমহারা ৪. অসুস্থতার কারণে শ্রমহারা ৫. অসুস্থতার কারণে শ্রমহারা
২. নদী অসুস্থ	১. নদীর জলজমা ২. নদীর জলজমা ৩. নদীর জলজমা	১. নদীর জলজমা ২. নদীর জলজমা ৩. নদীর জলজমা	১. নদীর জলজমা ২. নদীর জলজমা ৩. নদীর জলজমা
৩. বিদ্যুৎ সংকট	১. বিদ্যুৎ সংকট ২. বিদ্যুৎ সংকট ৩. বিদ্যুৎ সংকট	১. বিদ্যুৎ সংকট ২. বিদ্যুৎ সংকট ৩. বিদ্যুৎ সংকট	১. বিদ্যুৎ সংকট ২. বিদ্যুৎ সংকট ৩. বিদ্যুৎ সংকট
৪. বন্যপ্রাণীর আক্রমণ	১. বন্যপ্রাণীর আক্রমণ ২. বন্যপ্রাণীর আক্রমণ ৩. বন্যপ্রাণীর আক্রমণ	১. বন্যপ্রাণীর আক্রমণ ২. বন্যপ্রাণীর আক্রমণ ৩. বন্যপ্রাণীর আক্রমণ	১. বন্যপ্রাণীর আক্রমণ ২. বন্যপ্রাণীর আক্রমণ ৩. বন্যপ্রাণীর আক্রমণ
৫. দারিদ্রতা	১. দারিদ্রতা ২. দারিদ্রতা ৩. দারিদ্রতা	১. দারিদ্রতা ২. দারিদ্রতা ৩. দারিদ্রতা	১. দারিদ্রতা ২. দারিদ্রতা ৩. দারিদ্রতা

Source: Field Survey, 2015

Figure 1.4: Identified Problems, their Causes and Effects with Relevant Potentials of Tekani Chukainagar Union

4. Joblessness

Tekani Chukainagar union has faced much of natural disasters. Besides, there is no electricity and road connection is very bad. So joblessness is increasing and day by day which is a great threat for this union. For this problem, number of unemployment people increased, people get into debt, drug addicted and women suppression also increased. The potentials are agriculture, fisheries and cattle farm for mitigating joblessness.

5. Poverty

Poverty is the overall problem in Tekani Chukainagar. But some of reasons behind this such as river erosion, flood, high birth rate, joblessness, low rate of educated people. The impacts of this problem are drug addiction and increase of crime commission. The only one potential is the manpower.

1.4 Perceived Development Priorities

The PRA participants of ToP Workshop in Union's development planning needs for twenty years identified improved drainage System (24 participants out of 24), eradication of unemployment (16 participants out of 24), and river erosion problem solving (24 participants out of 24) as short-term needs (Table 1.1). For midterm development, the participants wanted unemployment problem solving (8 participants out of 24), and road system improvement (24 participants out of 24). For the long-term development, they choose two needs - development of educational system (24 participants out of 24), and development of Public health (24 participants out of 24).



Source: Field Survey, 2015

Figure 1.5: Development Priorities for Next 20 years of Tekani Chukainagar Union

Table 1.1: Development Needs and Priorities of Tekani Chukainagar Union

Short Term							Mid Term	Long term	
<i>River training</i>	<i>Fulfill the demand of electricity</i>	<i>Development of communication</i>	<i>Crime control</i>	<i>Mitigating unemployment</i>	<i>Increase govt. allowance</i>	<i>Medical treatment</i>	<i>Development of livelihood in char areas</i>	<i>Development of education</i>	<i>Repairing of religious institutes</i>
Control of river erosion	Problem of electricity	Repairing roads	Control crime	Increase job sectors	Economic support to the poor	Need medical hospital	Development of life style in char areas	Well educated	Repair mosque
River digging	Connection of electricity	Problems of roads	Drug free society	Solve unemployment bi fisheries	Provide age allowance	Everyone will be well health			Need mosque
	Provide electricity	Development of communication	Keep peace in society	Mitigating unemployment					
	Development of electricity			Provide cattle					
				Help farmer					

Source: Field Survey, 2015

1.5 List of Participants

টেকনি চুকনৈগর ইউনিয়নের পি.আর.এ (PRA)
উপস্থিতির তালিকা

স্থান: টেকনি চুকনৈগর ইউনিয়ন কমিটি তারিখ: ১৭-০৬-২০১৫ সময়: ১০:০০

ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১	শ্রী: মোহাম্মদ হোসেন	৬৫৫০০০০	০	পূর্বপাড়া	০১৭১৫-৬৪২১০১	
০২	শ্রী: উজ্জ্বল মিয়া	২৫৬৬		পাশ্চাত্যপাড়া	০১৭৬৬-৭৪৬০৪৫	
০৩	" শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫	০৬	পূর্বপাড়া	০১৭৫৫-৬২৫৫৫৫	
০৪	" শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫	০৬	পাশ্চাত্যপাড়া	০১৭৫৫-৭৬৫৫৫৫	
০৫	" শ্রী: মোহাম্মদ হোসেন	"	০৭	বাগিচাপাড়া	০১৭৭৫-৭৪০৬৫৫	
০৬	" শ্রী: মোহাম্মদ হোসেন	"	০৫	উত্তরপাড়া	০১৭৫৫-৭৫৫৫৫৫	
০৭	" শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫	০২	পূর্বপাড়া	০১৭৫৫-৬৫৫৫৫৫	
০৮	" শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫		পাশ্চাত্যপাড়া	০১৭৫৫-০৬৫৫৫৫	
০৯	" শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫		পূর্বপাড়া	০১৭৫৫-৬৬৫৫৫৫	
১০	" শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫		পাশ্চাত্যপাড়া	০১৭৫৫-০৫৫৫৫৫	

মডার্ন ইন্ডিয়ান প্রিন্সিপাল এন্ড কনসাল্টেন্টস লিমিটেড

ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
১১	শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫		পূর্বপাড়া	০১৭৫৫-৮০৫৫৫৫	
১২	শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫	০২, ০৬	"	০১৭৫৫-৫০৫৫৫৫	
১৩	শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫		পাশ্চাত্যপাড়া	০১৭৫৫-৭৫৫৫৫৫	
১৪	" শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫		পূর্বপাড়া	০১৭৫৫-৬৫৫৫৫৫	
১৫	শ্রী: মোহাম্মদ হোসেন	৫৫৫৫৫৫	০৬	পাশ্চাত্যপাড়া	০১৭৫৫-৬৫৫৫৫৫	
১৬	শ্রী: মোহাম্মদ হোসেন	"	০৪, ০৫	পাশ্চাত্যপাড়া	০১৭৫৫-৭৫৫৫৫৫	
১৭	শ্রী: মোহাম্মদ হোসেন	"	০২	"		

Source: Field Survey, 2015

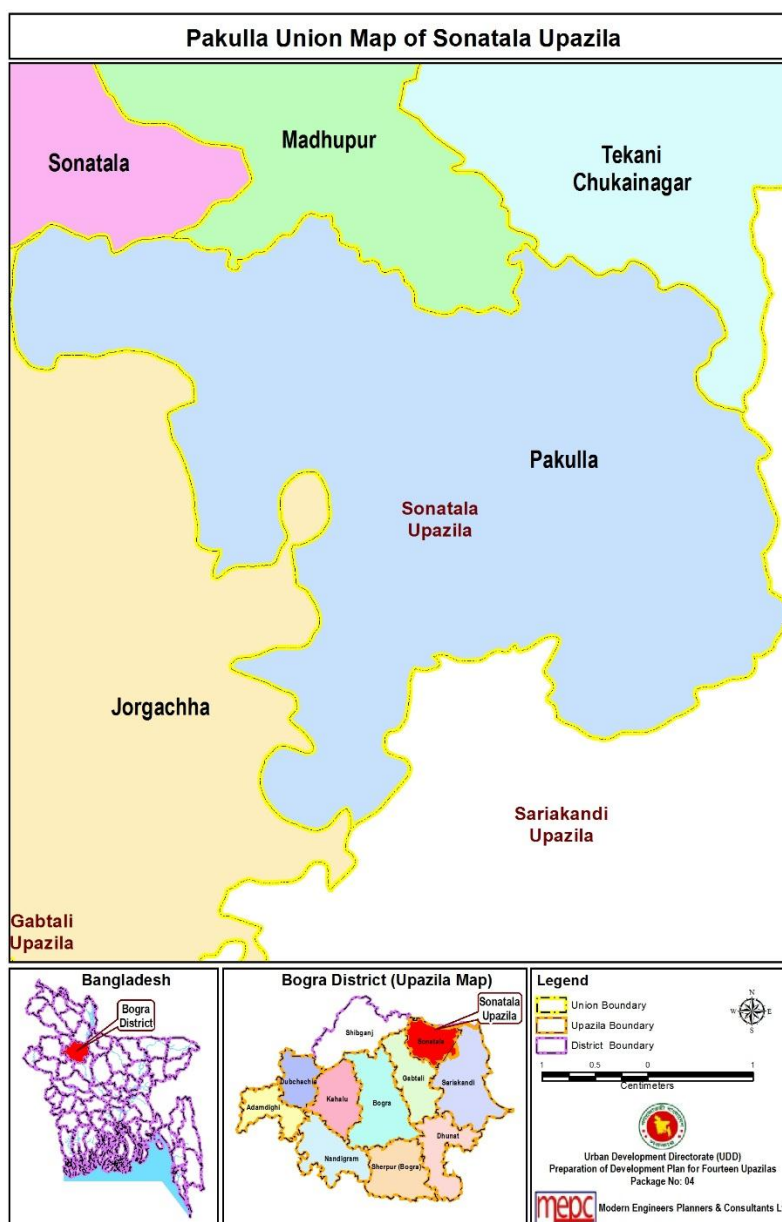
Figure 1.6: List of Participants of Tekani Chukainagar Union

2. Pakulla Union

2.1 Overview

Pakulla Union is bordered by Madhupur and Tekani Chukainagar union in the north, Chaluabari union in the east, Madhupur and Jorgacha union in the west and Hat Sherpur in the south.

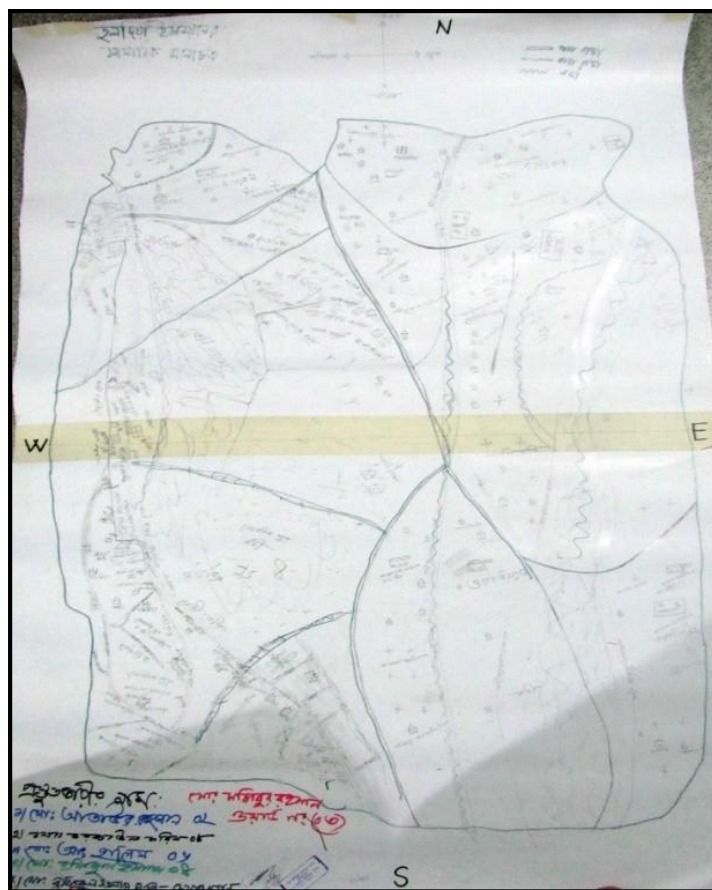
Map 2.1: Pakulla Union of Sonatala Upazila



Source: MEPC

2.2 Spatial Aspect

It consists of 24.091 sq. km area along with 25,905 population. Agricultural production is the main occupation in this locality.



Source: MEPC

Figure 2.1: Social Map of Pakulla Union

2.3 Major Problems and Potentials

2.3.1 Problems of Pakulla Union

The participants identified five most important problems as:

1. Flood occurred from River Erosion,
2. Transportation problem,
3. Unemployment,
4. Insufficient health service,
5. Less opportunity to getting higher education (No college).



Source: Field Survey, 2015

Figure 2.2: Major Problems Venn Diagram of Pakulla Union

2.3.2 Potentials of Pakulla Union

The Potentials Venn Diagram shows the major potentials of Pakulla Union include:

1. Agricultural produce (Rice, Jute, corn, wheat, chilly),
2. Skilled Manpower,
3. Cattle rearing and Poultry,
4. Water land for fisheries,
5. Significant number of NGO's activity.



Source: Field Survey, 2015

Figure 2.3: Potentials Venn diagram of Pakulla Union

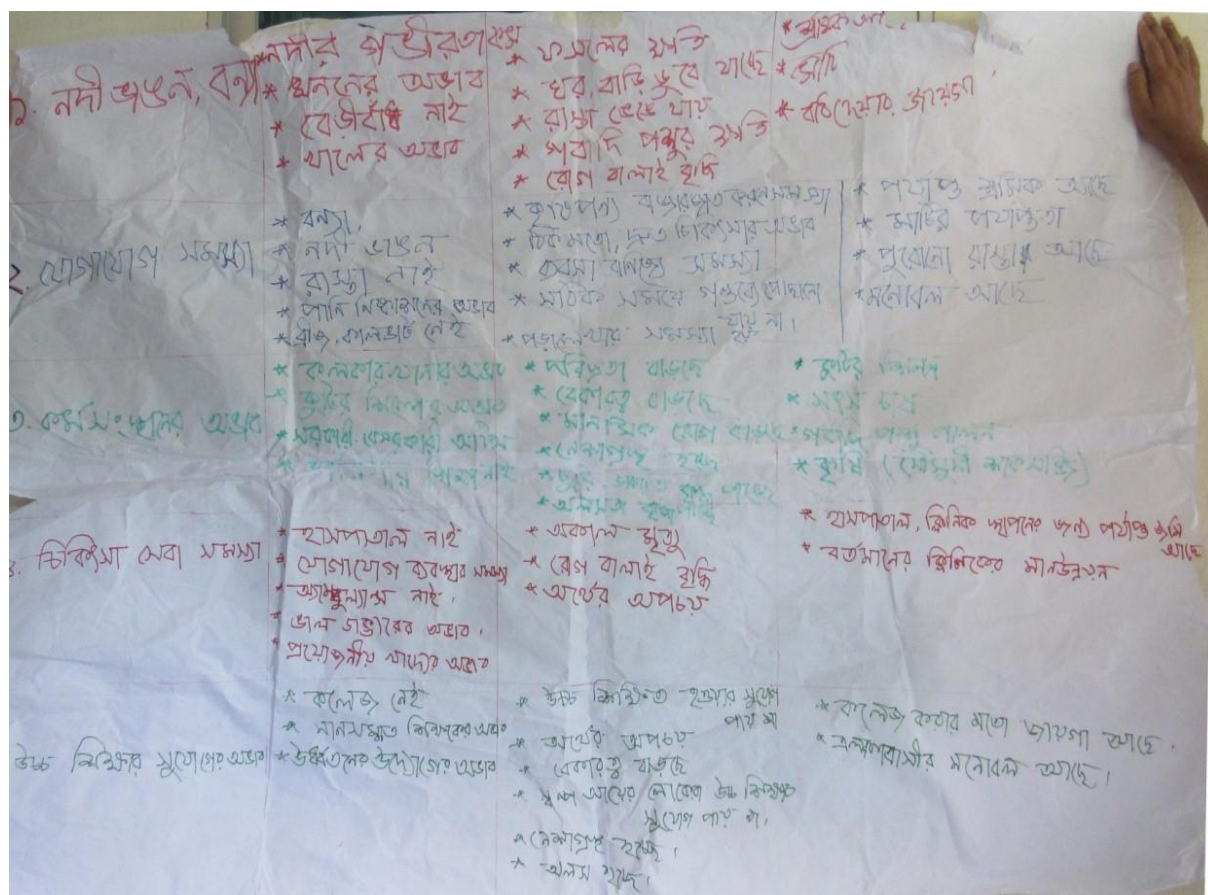
2.3.3 Major Problems, Causes, Effects and Relevant Potentials of Pakulla Union

1. Flood Occurred from River Erosion

Low depth of river, unavailability of embankment and beel causes river erosion as well as flood. People of this union suffers mostly such as crops damage, homestead go under the water, road destroy, loss of cattle and morbidity increases. Necessary embankment needs to be constructed to control the river erosion. People of this union may supply manpower, sand and soil.

2. Transportation Problem

Flood, river erosion, lack of sufficient paved roads, lack of drainage system, bridges and culverts are the reason for the poor transportation problem in this locality. Poor transportation system costs so much to the people of this union. Marketing problem for agro goods, in time health service problem, business problem, education problem and in time communication problem are the result of poor transportation. More paved roads are needed to construct and people of this union think that their soil, old roads and manpower can be used to do that.



Source: Field Survey, 2015

Figure 2.4: Identified Problems, their Causes and Effects with Relevant Potentials of Pakulla Union

3. Unemployment

Unemployment problem is another major problem for the people of Pakulla. Lack of mill factory, technical education, work opportunity, small and cottage industries causes this unemployment problem in this union. Unemployment problem causes pernicious impact in micro and meso level. Increasing poverty, unemployment, mental sicknesses are the direct results from the unemployment problem. At social or community level criminality rises such as thievery, robbery and drug addiction etc. Small and cottage industries, fisheries, cattle rearing and agriculture based goods are the potential of this union.

4. Insufficient Health Service

This union has many problems in this sector. Adequate medicine, ambulance and doctor as well as hospital are so far from the locality. Communication problem is another problem to getting proper health service. As a result mortality rate along with disability rate, different kind of diseases are increasing day by day. Money and time also waste for this reason. This union has enough places for building hospital. Currently FWC and community clinic are running but needed to modernize and include more health services to ensure better health services.

5. Lack of Higher Education

Higher education system goes under severe threat for many reasons. Absence of college, lack of proper education system, consciousness of authority is the main reason for weak education system in this locality. As a result getting higher education, modern or technical education is so far. Therefore, future of young generation is at risk and become uncertain. Unemployment rate and drug addiction are increasing day by day. Pakulla's people are optimistic regarding building new school and colleges. They think, they can provide land place, sand, soil and woods for building well educational system.

2.4 Perceived Development Priorities

PRA participants of Pakulla Union emphasized medical facilities, disaster management, electricity and river embankment as short-term needs, agriculture, employment generation, and river embankment as midterm goals, and employment generation, medical service, and river embankment as long-term needs (Table 2.1). Given their river erosion and disaster issue, river embankment construction needs to initiate immediately and it will take 20 years, and the participants suggest for river dredging.

Table 2.1: Development Needs and Priorities of Pakulla Union

Short Term	<i>Rehabilitation Center</i>	Build Shelter			
	<i>100% electricity</i>	Ensure electricity			
	<i>Control River erosion</i>	Stop river erosion	Build embankment	River management	
	<i>Modern health service</i>	Ensure health service for all	Establish hospital		
	<i>Mitigation unemployment problem</i>	Work opportunity for all	Develop business sector	Establish mill factory	
	<i>Ensure higher education</i>	College establishment			
	<i>Well transportation system</i>	Connected with all over the country	Reconstruction and repair	Well communication system	Paved road
Mid Term	<i>Well transportation system</i>	Connected with all over the country	Reconstruction and repair	Well communication system	Paved road
	<i>100% electricity</i>	Ensure electricity			
	<i>Rehabilitation Center</i>	Build Shelter			
	<i>Modern health service</i>	Ensure health service for all	Establish hospital		
	<i>Mitigation unemployment problem</i>	Work opportunity for all	Develop business sector	Establish mill factory	
	<i>Control River erosion</i>	Stop river erosion	Build embankment	River management	
	<i>Poverty reduction</i>	Fulfill basic need			
Long Term	<i>Well transportation system</i>	Connected with all over the country	Reconstruction and repair	Well communication system	Paved road
	<i>Poverty reduction</i>	Fulfill basic need			
	<i>Rehabilitation Center</i>	Build Shelter			
	<i>Control River erosion</i>	Stop river erosion	Build embankment	River management	
	<i>Ensure health service for all</i>	Availability of machineries	Modern health service	Establish hospital	
	<i>Mitigation unemployment problem</i>	Work opportunity for all	Develop business sector	Establish mill factory	

Source: Field Survey, 2015

2.5 List of Participants

পাকুল্লা ইউনিয়ন পিএ

খান: পাকুল্লা ইউনিয়ন পরিষদ তারিখ: ২৭-০৬-২০১৫ সময়: ১১:০০

ক্রমিক	নাম	পেশা	ওয়েব	গ্রাম	যোগাযোগ নং	স্বাক্ষর
০১	ডা. ক্রিশ্ণা, সত্যিকান্ত কলিকতা	চিকিৎসক	০৮	পাকুল্লা	০১৭০২-০৭৭০০০	সত্যিকান্ত
০২	মো: আবুল কালাম	ই.সি.সি.সি.	০৭	আবুল কালাম	০১৭০৬-২০৬০০৭	আবুল কালাম
০৩	" আবুল কালাম	"	০২	আবুল কালাম	০১৭০৭-২০৭০৭০	আবুল কালাম
০৪	" আবুল কালাম	"	০৪	আবুল কালাম	০১৭০৮-৬০০০০২	আবুল কালাম
০৫	" মো: আবুল কালাম	"	০৫	আবুল কালাম	০১৭০২-৬৪৪০৪৪	আবুল কালাম
০৬	মো: আবুল কালাম	"	০৬	আবুল কালাম	০১৭০৬-২০০০০৬	আবুল কালাম
০৭	আবুল কালাম	"	০৭	আবুল কালাম	০১৭০০৭০২০৭০	আবুল কালাম
০৮	মো: আবুল কালাম	"	০৮	আবুল কালাম	০১৭০৩-১৪৫০৩০	আবুল কালাম
০৯	মো: আবুল কালাম	"	০৯	আবুল কালাম	০১৭০৬-৪০০০০৬	আবুল কালাম
১০	মো: আবুল কালাম	"	১০	আবুল কালাম	০১৭০৭-৬০৬০৭৬	আবুল কালাম
১১	মো: আবুল কালাম	"	১১	আবুল কালাম	০১৭০৮-২০৭০৮০	আবুল কালাম
১২	মো: আবুল কালাম	"	১২	আবুল কালাম	০১৭০৭-২০৪০৪২	আবুল কালাম
১৩	মো: আবুল কালাম	"	১৩	আবুল কালাম	০১৭০৯-২০২০২০	আবুল কালাম
১৪	মো: আবুল কালাম	"	১৪	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
১৫	মো: আবুল কালাম	"	১৫	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
১৬	মো: আবুল কালাম	"	১৬	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
১৭	মো: আবুল কালাম	"	১৭	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
১৮	মো: আবুল কালাম	"	১৮	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
১৯	মো: আবুল কালাম	"	১৯	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২০	মো: আবুল কালাম	"	২০	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২১	মো: আবুল কালাম	"	২১	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২২	মো: আবুল কালাম	"	২২	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২৩	মো: আবুল কালাম	"	২৩	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২৪	মো: আবুল কালাম	"	২৪	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২৫	মো: আবুল কালাম	"	২৫	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২৬	মো: আবুল কালাম	"	২৬	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২৭	মো: আবুল কালাম	"	২৭	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২৮	মো: আবুল কালাম	"	২৮	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
২৯	মো: আবুল কালাম	"	২৯	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম
৩০	মো: আবুল কালাম	"	৩০	আবুল কালাম	০১৭০৯-২০২০০০	আবুল কালাম

মো: আবুল কালাম
পাকুল্লা ইউনিয়ন পরিষদ
সেক্রেটারি

Source: Field Survey, 2015

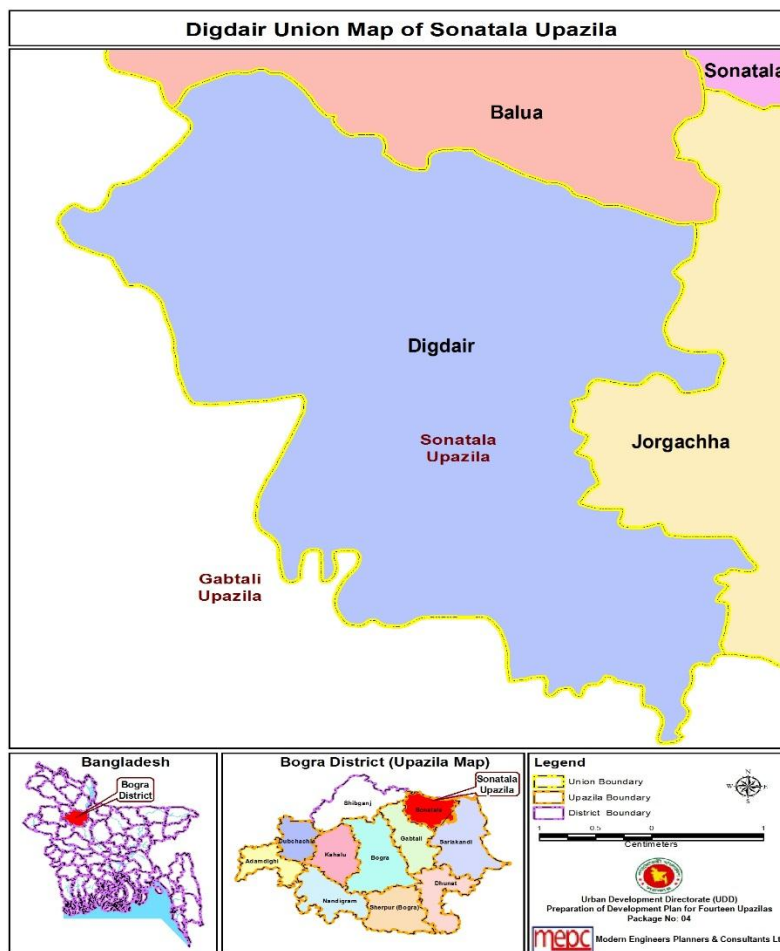
Figure 2.6: List of Participants of Pakulla Union

3. Digdair Union

3.1 Overview

Digdair union is surrounded by Balua in the north side and Jorgacha in the east, Nanglu Union and Bangali River in the west side and Sonarai union in south side and Nepaltoli Union in the east southern side.

Map 3.1: Digdair Union of Sonatala Upazila

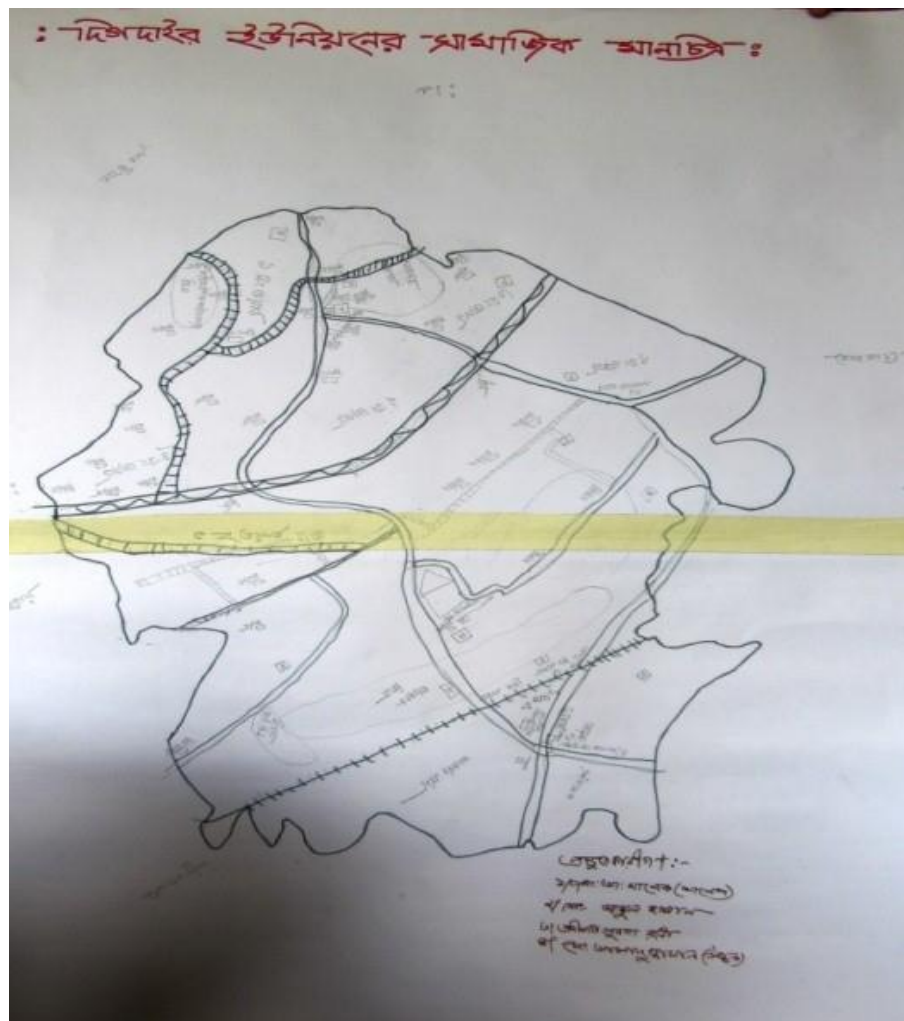


Source: MEPC

3.2 Spatial Aspect

Total land space of this union is 10.09 square mile and total number of population of this union is 24,194. The existing asset and risk map shows total agricultural land of Digdair Union is 6,486 acres, which is the most potential resource for the people of this locality. Besides there are primary schools, high school, madrassa, health complex, railway station, and bus stand. The union's 65% people are educated. There are 86 ponds and 12 big swamps, 6 health service

center and railway service. Because of the river, flood is a major risk, and Wards No. 3, 5, 9 are affected by sudden flood affected and 1800 affected families are living at high risk



Source: Field Survey, 2015

Figure 3.1: Social Map of Digdair Union

3.3 Major Problems and Potentials

3.3.1 Problems of Digdair Union

In the problem-identification session, PRA participants first listed all of the following problems of their union:

1. Problems of communication system,
2. Problems of electricity connection,
3. Problems of sanitation,
4. No latrine in market place,
5. Lack of good sanitation,

6. No sufficient space in market place,
7. No soil test,
8. Lack of agricultural technology,
9. Problems of drainage system,
10. Submerge,
11. Malnutrition,
12. Lack of proper education (no college),
13. Lack of uncontaminated water,
14. Lack of sufficient doctors and medical supplements/instrument,
15. No boundary in Union Complex,
16. Child marriage and polygamy,
17. Natural calamity,
18. Women suppression,
19. Drug addicted,
20. No agriculture research institute.



Source: Field Survey, 2015

Figure 3.2: Problems Venn Diagram of Digdair Union

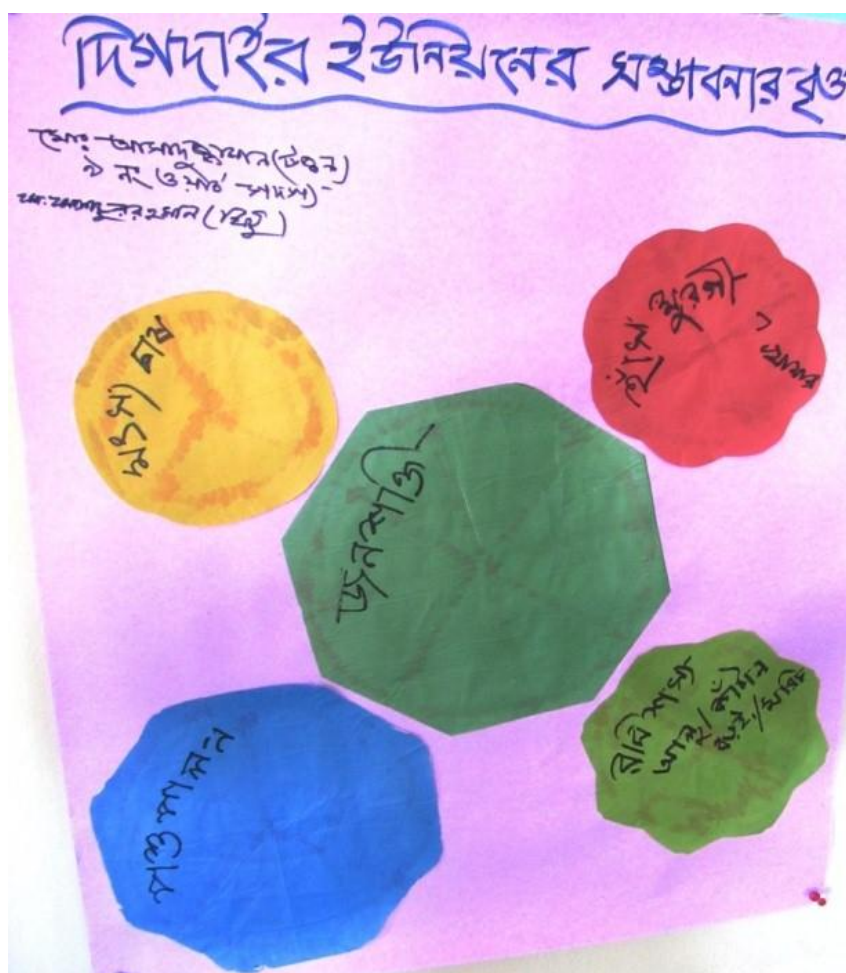
The five major problems put in the problem Venn diagram are:

1. Problems of communication system,
2. Problems of electricity connection,
3. Lack of sufficient doctors and medical supplements/instrument,
4. Drug addicted,
5. Lack of proper education (no college).

3.3.2 Potentials of Digdair Union

PRA participants identified five major potentials in the Venn Diagram that include:

1. Manpower,
2. Poultry farm,
3. Crops (potato, chilly, pulse),
4. Cattle farm,
5. Fisheries.



Source: Field Survey, 2015

Figure 3.3: Potentials Venn diagram of Digdair Union

3.3.3 Major Problems, Causes, Effects and Relevant Potentials of Digdair Union

1. Communication Problem

It is a most important problem in Digdair union and its main causes are lack of repairing roads, flood, lack of public conscious and lack of allotment. As the consequences of this problem are waste of time, damage vehicles, problems in communicating with highway roads, traffic jam and problems in normal movement. Related potential to mitigate this problem is there exist many of katcha and pucca roads which could be repaired.

2. Problem of Electricity

The main cause of this problem is that many of place the electricity is not connected and some place it is not repaired. As a result, the effects are darkness at the roads, not build up any industry, problems in study, foods get rotten, crimes committed, not develop in information and technology and not used electronic instrument. To fulfill this demand, the potential is solar electricity.

3. Problems of Medical and Health Treatment

This problem emerges because of lack of medicine and insufficient latest instruments, lack specialized doctors, unconsciousness and lack sufficient nutrition foods. As for the consequential effects are deprivation of better treatment, need to go far away for diagnosis, people die and new diseases are cropping up. The community clinic and health complex are potentials for this union.

4. Problems of Drug Addiction

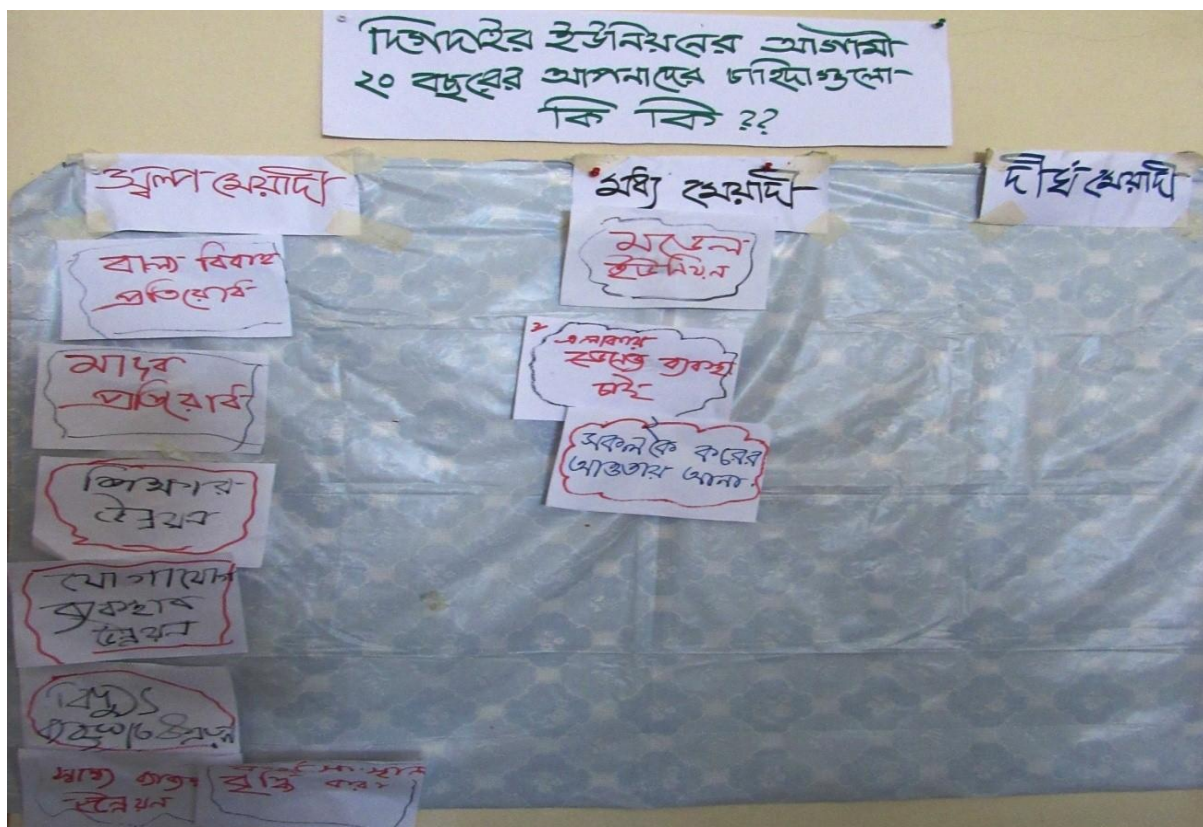
The causes of drug addiction are unemployment, bad peer, lack of education, no proper use of law, unconsciousness of guardians and availability of drugs. The effects are increase of crime commission, attacked in diseases, domestic torture and waste of money, death and increase meritless people. The people of Digdair have no potentials to control this problem.

5. The Problem of Quality Education

Digdair union is geographically a poor area and the people of Digdair deprive from well education system. There have many of reasons behind this problem such as poverty, lack of consciousness; lack of educational elements, bad communication system and the most important cause is that there is no any higher educational institute like college, beside there is no religious institute like madrassa.

3.4 Perceived Development Priorities

PRA participants of Digdair Union mentioned improved transportation system, poverty eradication, education for all model union development, and improved standard of life as short-term needs, and mid-term needs, and the first two items as the long-term needs for their development planning of the Union (Table 3.1).



Source: Field Survey, 2015

Figure 3.4: Development Priorities for Next 20 years of Digdair Union

Table 3.1: Development Needs and Priorities of Digdair Union

Short Term								Mid Term	
Increase Employment	Development of Health	Development of Electricity	Development of Communication System	Development of Education	Prevention of Drug Addiction	Prevention of Child Marriage	Development of Drainage System	Model Union	Bring Everyone into Tax
Increase industry	Health	Need electricity	Pitch on kacha road	Higher education for everyone	Decreasing the using of drug addiction	Stop child marriage	Drainage system	Develop in every sector of union	Bring everyone into tax
Farm	Ensure everyone’s health service	Electricity	Need well road	Agriculture university	Drug addiction free society	Do		Poverty away	
Establish industry	Hospital	Electric Lighting	Well communication	Well education		Do		Model union	
	Sanitation		Road development	Educated society				Develo0pme nt of union	
			Commuter train	Increase quality of education					
			Wide paka road	Increase the rate of women education					

Source: Field Survey, 2015

3.5 List of Participants

দিগদৈ ইউনিয়নের পি.আর.এ (PRA)
উপস্থিতির তালিকা

স্থান: দিগদৈ ইউনিয়ন তারিখ: ১৬/০১/১৫ সময়: ১১:০০

ক্রম নং	নাম	পেশা	ওয়ার্ড নং	জাম	মোবাইল নং	স্বাক্ষর
০১	শ্রী: মোঃ আলেক (খান)	কৃষক	০৬	মহিউল	০১৭১০-৩১২৭৬৭	
০২	শ্রী: আব্দুল হকমান	সহ.মি.সহ	০৬	মুনবাজী	০১৭১০-৭৬৭০০৩	
০৩	শ্রী: মতি মুনতাজ	"		মুহম্মদ হামিদ	০১৭১০-৪৬৭০০৩	
০৪	শ্রী: মুনতাজ হকমান	"		দিগদৈ	০১৭১০-২৪০০০৬	
০৫	শ্রী: মোল্লাহ আলী	"	০২	মোহাম্মদ আলী	০১৭১০-৭৬৭০০৩	
০৬	শ্রী: মিলতানুর রহমান	"	০৭	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	
০৭	শ্রী: মোহাম্মদ আলী	"		মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	
০৮	শ্রী: মোহাম্মদ আলী	"	০১	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	
০৯	শ্রী: মোহাম্মদ আলী	"	০২	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	
১০	শ্রী: মোহাম্মদ আলী	"	০৩	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	

মডার্ন ইন্টারন্যাশনাল প্রাইভেট লিমিটেড

ক্রম নং	নাম	পেশা	ওয়ার্ড নং	জাম	মোবাইল নং	স্বাক্ষর
১১	শ্রী: মোহাম্মদ আলী	কৃষক	০৬	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	
১২	শ্রী: মোহাম্মদ আলী	কৃষক	০৬	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	
১৩	শ্রী: মোহাম্মদ আলী	কৃষক	০৬	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	
১৪	শ্রী: মোহাম্মদ আলী	কৃষক	০৬	মোহাম্মদ আলী	০১৭১০-১৪৬০০৩	

Source: Field Survey, 2015

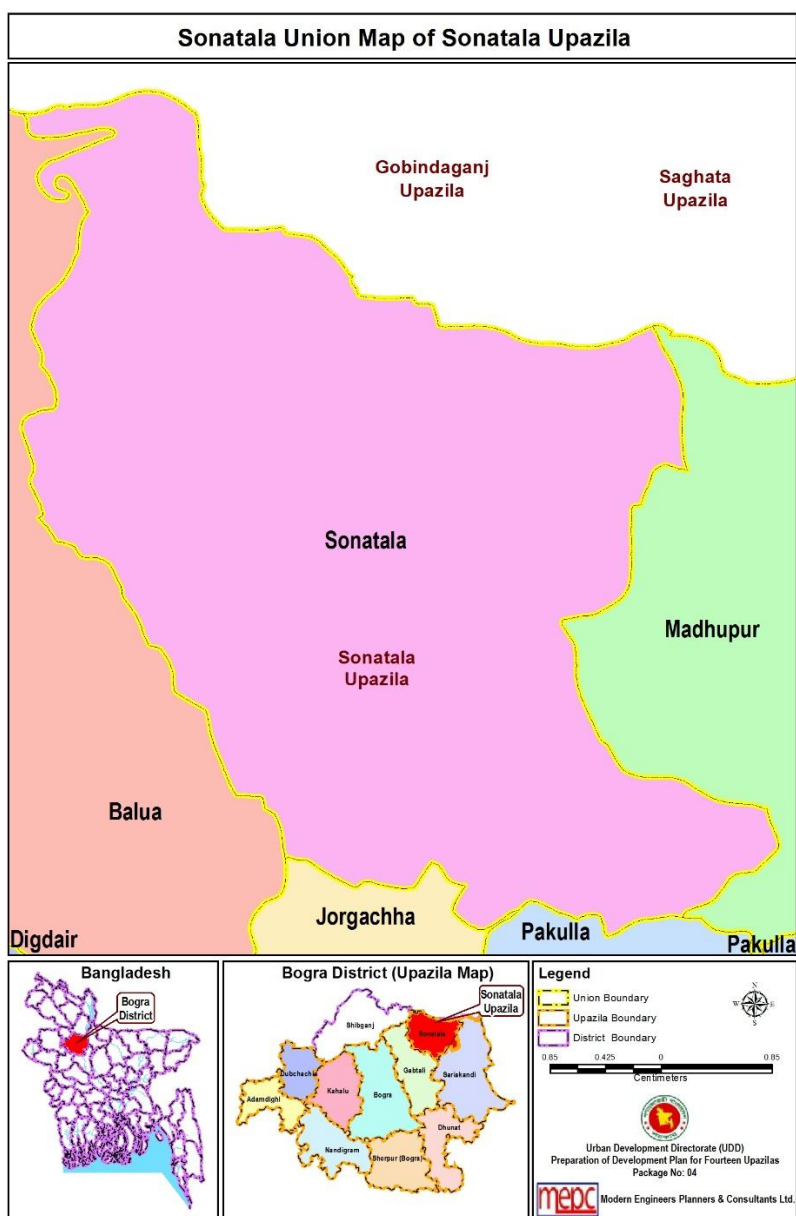
Figure 3.5: List of Participants of Digdair Union

4. Sonatala Union

4.1 Overview

Sonatala Union is surrounded by Sonatala Upazila in the northern side and Jorgacha union in the southern side, Balua union and Madhupur union in the western and eastern side respectively.

Map 4.1: Sonatala Union of Sonatala Upazila



Source: MEPC

4.2 Spatial Aspect

Sonatala Union consists of 10.81 sq.km area along with 19,231 population. Agricultural production is the main occupation in this locality. Total agriculture land is 500 acre, and total

number of roads is 30 km out of which 18 km is paved, 10 km katcha and 2 km brick layered. The number of bridges, rail gates and ferry Ghats are 14, 4 and 1 respectively. According to the existing risk map, 3 km katcha roads, 53 homesteads, 20 acre agricultural land and one ferry ghat lie in risk zone.



Source: MEPC

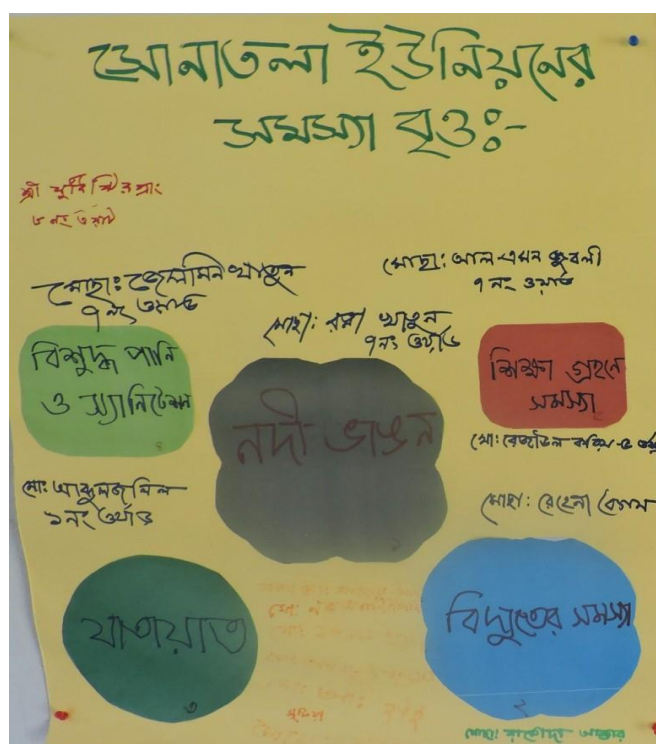
Figure 4.1: Social Map of Sonatala Union

4.3 Major Problems and Potentials

4.3.1 Problems of Sonatala Union

In the problem-identification session, PRA participants first listed all of the following problems of their Union:

1. River Erosion
2. Electricity problem (ward no 1, 2, 3, 8 and 9),
3. Communication problem (katcha road, no sufficient bridge, culvert),
4. Pure water and sanitation,
5. Barriers getting proper education,
6. No protection river erosion,
7. Dowry problem.



Source: Field Survey, 2015

Figure 4.2: Problems Venn Diagram of Sonatala Union

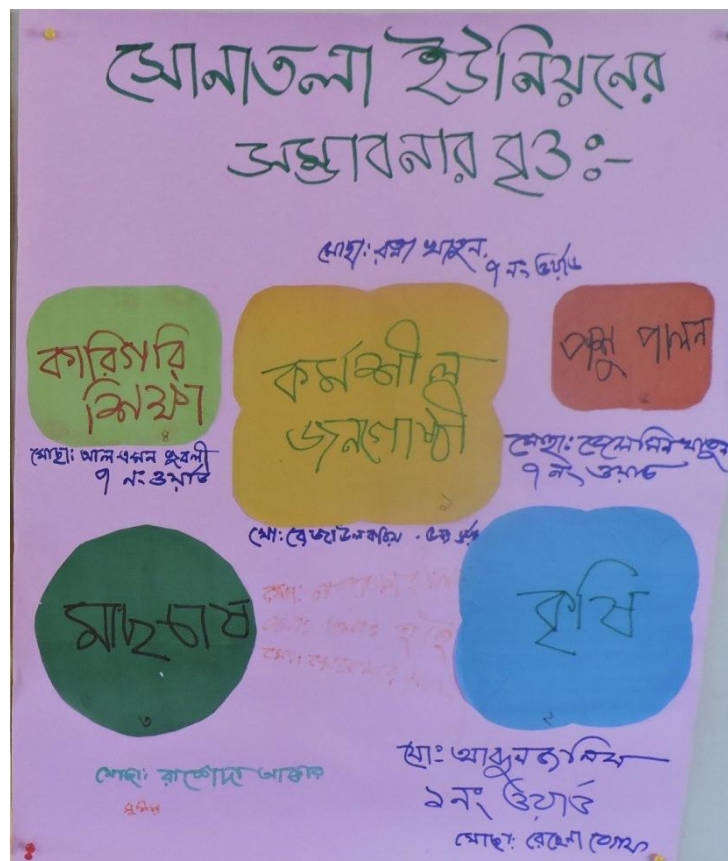
The participant identified major five problems in the Venn diagram. These are

1. River Erosion,
2. Electricity problem,
3. Communication problem,
4. Pure water and sanitation,
5. Barriers in getting proper education.

4.3.2 Potentials of Sonatala Union

The Potentials Venn Diagram identifies the major potentials of the Sonatala Union are:

1. Man power,
2. Agricultural land (Rice, Jute, potato, wheat, chilly),
3. Water land for fisheries,
4. Technical and vocational education (Tailoring),
5. Poultry and dairy farm.



Source: Field Survey, 2015

Figure 4.3: Potentials Venn Diagram of Sonatala Union

4.3.3 Major Problems, Causes, Effects and Relevant Potentials of Sonatala Union

1. River Erosion

River Erosion occurs frequently in this union as the result of decreasing depth of the river and water development board does not work properly in right time. There is no protection embankment on river side. People of the Sonatala Union pay a lot as a result of river erosion. Several time people become homeless; face damage of homestead, destruction of educational institution, increase unemployment and agriculture destruction. People think that they have

enough sand and bamboo for temporarily protect their properties. However, more strengthening of protection system is needed.

2. Electricity Problem

People of the Sonatola Union suffer from scarce of electricity mostly. Lack of sufficient electric supply, mismanagement of government, and procrastination in giving connection has lead to this situation for the union. Lack of industrialization, education problem, irrigation problem and high price of oil are the result of electricity problem. Significant numbers of solar electricity system and shallow machine could improve the electricity problem.

সমস্যা	কারণ	প্রতিরোধ	সংশ্লিষ্ট সংস্থা
বদী জ্বলন	<ul style="list-style-type: none"> → অসুবিধিতা → বাধিত 	<ul style="list-style-type: none"> → অসুবিধিতা → বদী জ্বলন → বদী জ্বলন → বদী জ্বলন → বদী জ্বলন 	<ul style="list-style-type: none"> → বদী জ্বলন → বদী জ্বলন → বদী জ্বলন → বদী জ্বলন → বদী জ্বলন
বিদ্যুৎ সংযোগ	<ul style="list-style-type: none"> → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ 	<ul style="list-style-type: none"> → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ 	<ul style="list-style-type: none"> → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ → বিদ্যুৎ সংযোগ
যাওয়ার	<ul style="list-style-type: none"> → যাওয়ার → যাওয়ার → যাওয়ার → যাওয়ার → যাওয়ার 	<ul style="list-style-type: none"> → যাওয়ার → যাওয়ার → যাওয়ার → যাওয়ার → যাওয়ার 	<ul style="list-style-type: none"> → যাওয়ার → যাওয়ার → যাওয়ার → যাওয়ার → যাওয়ার
সড়ক	<ul style="list-style-type: none"> → সড়ক → সড়ক → সড়ক → সড়ক → সড়ক 	<ul style="list-style-type: none"> → সড়ক → সড়ক → সড়ক → সড়ক → সড়ক 	<ul style="list-style-type: none"> → সড়ক → সড়ক → সড়ক → সড়ক → সড়ক
মিষ্ণু	<ul style="list-style-type: none"> → মিষ্ণু → মিষ্ণু → মিষ্ণু → মিষ্ণু → মিষ্ণু 	<ul style="list-style-type: none"> → মিষ্ণু → মিষ্ণু → মিষ্ণু → মিষ্ণু → মিষ্ণু 	<ul style="list-style-type: none"> → মিষ্ণু → মিষ্ণু → মিষ্ণু → মিষ্ণু → মিষ্ণু
বিদ্যুৎ	<ul style="list-style-type: none"> → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ 	<ul style="list-style-type: none"> → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ 	<ul style="list-style-type: none"> → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ → বিদ্যুৎ

Source: Field Survey, 2015

Figure 4.4: Identified Problems, their Causes and Effects with Relevant Potentials of Sonatola Union

3. Communication Problem

There are not enough bridges, culverts and road side drains in this union. Heavy rain and flood are main causes for destroying paved road and there are no para sitting in this union. As a result education and quick health service system hampered, communication takes more time and painful. People of the Sonatola Union believe that they have enough paved roads. These roads are needed to be repaired, expanded and added to the highway roads for secure and rapid communication.

4. Pure Water and Sanitation

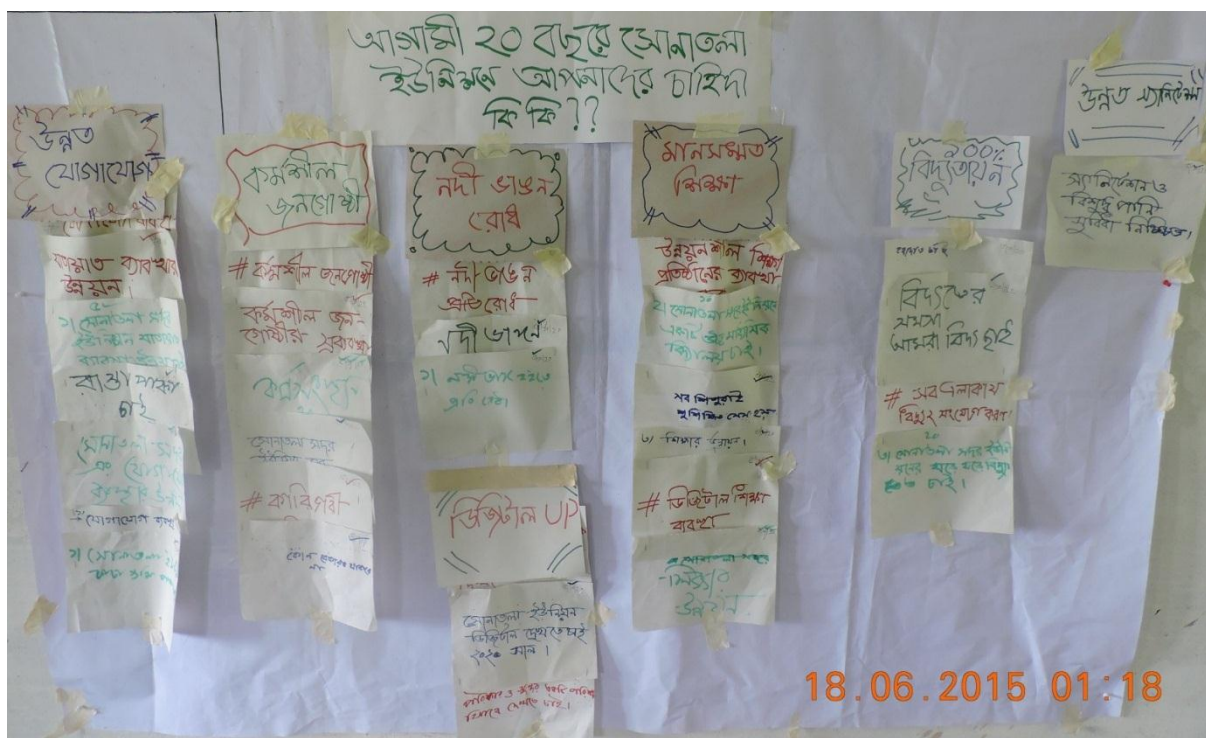
Most of the toilets in this union are katcha. Arsenic problem, inadequate tube wells and unprotected tube wells are main problem for pure water and sanitation. As a result different type of diseases spread out (dermatologic and water related disease).

5. Education Problem

Enough number of high school, college, Madrasha and high qualified educational institutions are absent in this union because of lack entrepreneur. Students of this union are deprived from getting higher education as a result of this problem. Such situation is increasing unemployment problem and child labour day by day. This union has enough resources to build new infrastructure for educational institutions.

4.4 Perceived Development Priorities

In the ToP workshop, Sonatala Union PRA participants want religious institutions, road system, hygiene and sanitation system, river training, medical facilities, and employment generation in the short-term (Table 2.4.4). The PRA participants voted for agricultural development as the midterm goal and education facility as the long-term needs for their Union (Table 4.1).



Source: Field Survey, 2015

Figure 4.5: Development Priorities for Next 20 years of Sonatala Union

Table 4.1: Development Needs and Priorities of Sonatala Union

Short					Mid							Long		
100% Electric supply	Mitigation unemployment	Standard education	Developed transportation system	100% mitigation River erosion	Digital UP	Developed transportation system	Standard education	Mitigation unemployment	100% mitigation River erosion	100% Electric supply	Ensuring sanitation and more	Digital UP	100% mitigation River erosion	100% Electric supply
Ensuring electricity	Work opportunity for all	Developed education	Well-connected transportation of Sonatala Sadar	Prevention of river erosion	Model UP	Well-connected transportation of Sonatala Sadar	Developed education	Work opportunity for all	Prevention of river erosion	Ensuring electricity	100% sanitation	Model UP	Prevention of river erosion	Ensuring electricity
Nonstop service	Technical training	Digital education system	Paved roads	Well transportation system	Safe and clean UP	Paved roads	Digital education system	Technical training	Well transportation system	Nonstop service	Deep tube well	Safe and clean UP	Well transportation system	Nonstop service
	No unemployment	Well functioned high school	Ensuring more development			Ensuring more development	Well functioned high school	No unemployment						
		Ensuring Standard education for all child					Ensuring Standard education for all child							

Source: Field Survey, 2015

4.5 List of Participants

সোনাতলা ইউনিয়নের পি.আর.এ (PRA) উপস্থিতির তালিকা						
স্থান: সোনাতলা ইউনিয়ন সঞ্চালনা			তারিখ: ১৫/৬/১৫		সময়: ১০:৩০ (ম)	
ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১						
০২						
০৩	মোহাম্মদ আল-বরকত	সমাজ কর্মী	৭	কাবিলপুর	০১৭১১-৫৪৬৪৭৪	জুলে
০৪	মোহাম্মদ হুমায়ুন কবীর	U.P সদস্য	৭-৮-৯	কাবিলপুর	০১৭২৫ ৫৫৫২৫২	P
০৫	মোহাম্মদ মুজিব	U.P সদস্য	১১, ১২, ১৩	মুজিবপুর	০১৭২১ ১১১১১১	মুজিব
০৬	মো: জাহাঙ্গীর আলম	ইউনিয়ন সদস্য	১৪	মুজিবপুর	০১৭২১ ৬৬৬৭৭২	জাহাঙ্গীর
০৭	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৫	মুজিবপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
০৮	মো: মো: হুমায়ুন	ইউনিয়ন সদস্য	১৬	মুজিবপুর	০১৭২১ ৬৬৬৭৭২	হুমায়ুন
০৯	মো: নূরুজ্জামান	ইউনিয়ন সদস্য	১৭	মুজিবপুর	০১৭২১ ৬৬৬৭৭২	নূরুজ্জামান
১০	মো: মো: হুমায়ুন	ইউনিয়ন সদস্য	১৮	মুজিবপুর	০১৭১৮-৩০২৬০৭	মুজিব
মডার্ন ইঞ্জিনিয়ারিং প্রানার্স এন্ড কনসাল্টেন্টস লিমিটেড						
ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
১১	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	মুজিবপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১২	মো: মোহাম্মদ হুমায়ুন	(PRA) মুজিব	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১৩	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১৪	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১৫	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১৬	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১৭	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১৮	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
১৯	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
২০	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
২১	মো: মোহাম্মদ হুমায়ুন	ইউনিয়ন সদস্য	১৯	কাবিলপুর	০১৭২১ ৬৬৬৭৭২	মুজিব
২২						
২৩						
২৪						
২৫						

Source: Field Survey, 2015

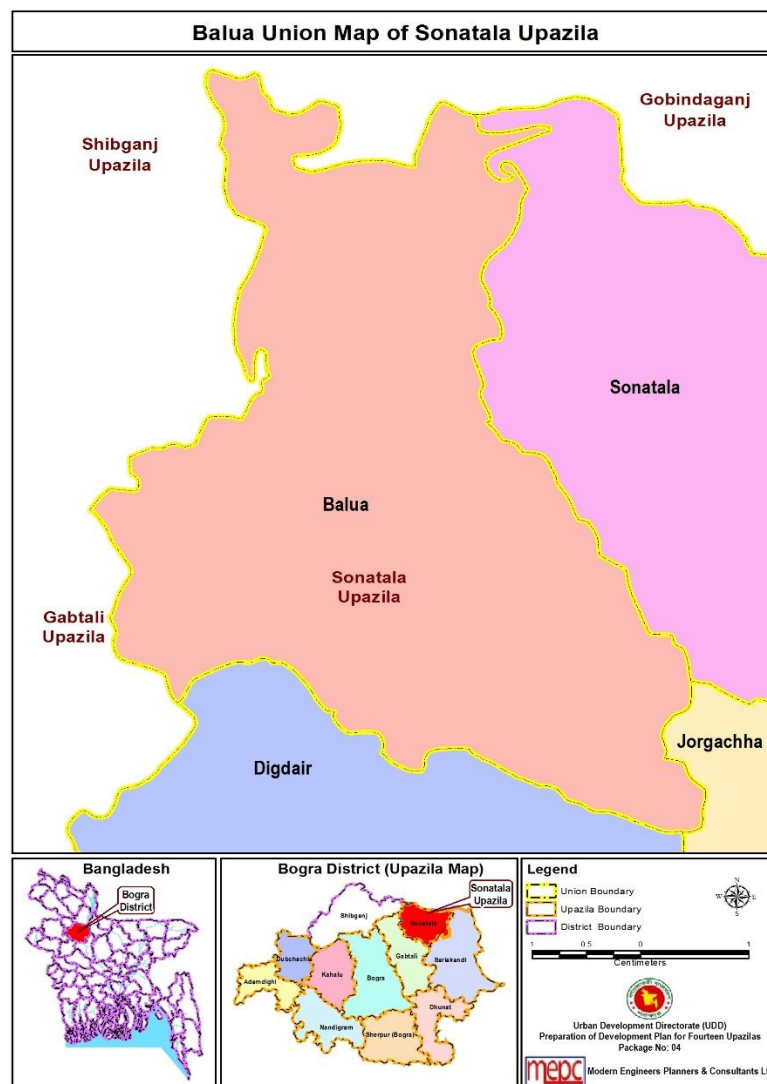
Figure 4.6: List of Participants of Sonatala Union

5. Balua Union

5.1 Overview

Balua union, with an area of 23.83 square km., is surrounded by Gaibandha District, Digdair Union, Sonatola Union and Shibganj Upazila in the northern, southern, eastern and western side respectively.

Map 5.1: Balua Union of Sonatala Upazila

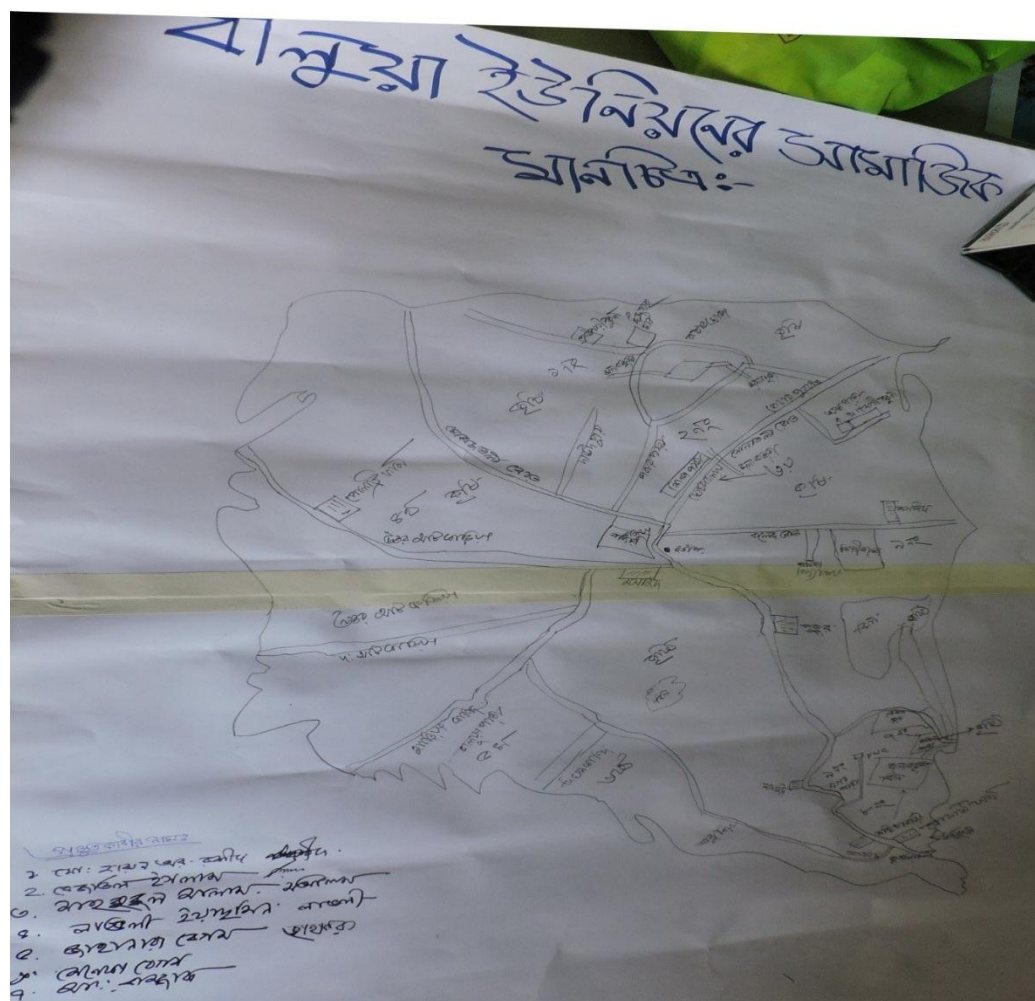


Source: MEPC

5.2 Spatial Aspect

Mainly agriculture based, this union has 25,120 population and 5,098 families out of which 1350 families live in the risk zone. This Union has 28 fisheries, 600 ponds and 3 beels. This union has 64 km. roads area with paved and katcha roads of 10 km. and 54 km respectively.

There are 97 bridges in this locality. Balua union is a flood prone and its Wards No. 1, 3, 4, 5 and 7 are mostly flood affected areas



Source: Field Survey, 2015

Figure 5.1: Social Map of Balua Union

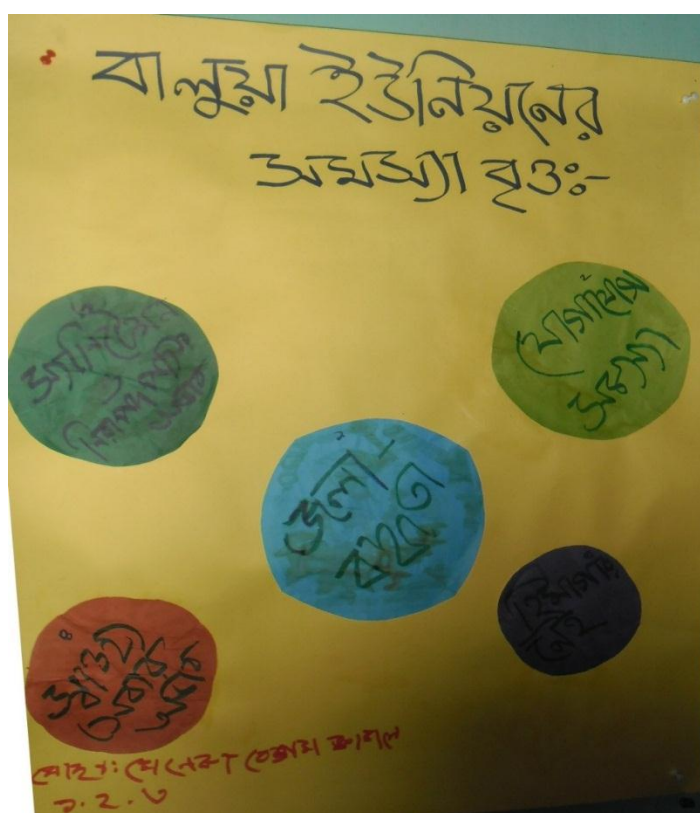
5.3 Major Problems and Potentials

5.3.1 Problems of Balua Union

In the problem-identification session, PRA participants first listed all of the following problems of their union:

1. Dowry, Women and child torches;
2. Roads are not capable of doing easy and rapid communication also needs to par seating (They identified that word no 1, 2, 5, 6, 7, 8 and 9 are facing this problem very badly);
3. Lack of sufficient bridge and culvert;
4. Infrastructural problem in educational institutional;
5. Usury and bribe tendency;

6. No Electricity mention ward no: 3, 6 and 9;
7. Water logging problem mention wards no 2 and 8;
8. Flood affected areas. Mention ward no: 1, 5, 7, 8 and 9;
9. No cold storage;
10. Weak Hat bazaar system;
11. Problem getting pure drinking water;
12. No Community Hospital (ward no: 1, 3, 5, 6, 8 and 9;
13. Barriers to spread Handicrafts Industries (ward: 3);
14. Lack of sufficient sanitation;
15. Shortage of health services.



Source: Field Survey, 2015

Figure 5.2: Problems Venn Diagram of Balua Union

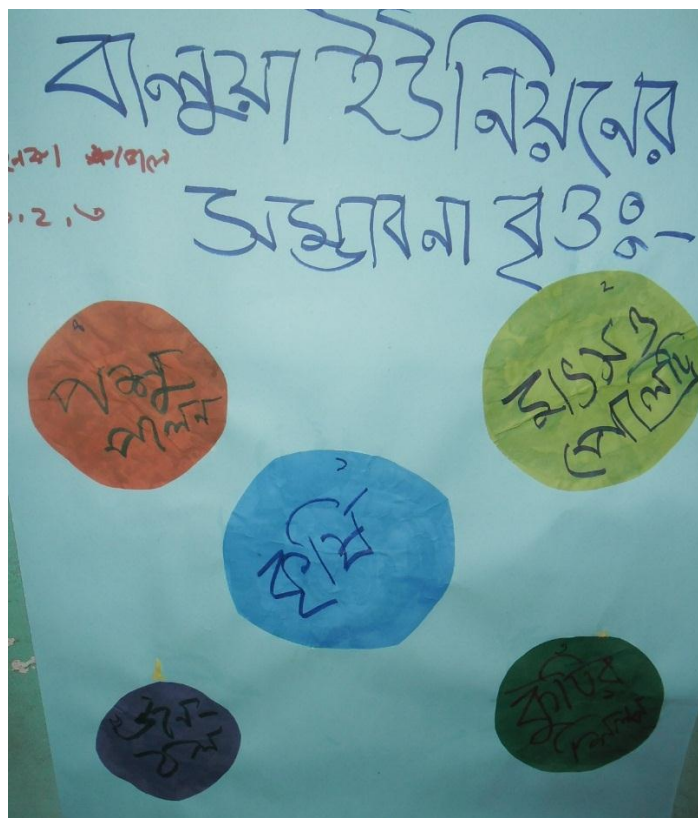
Major problems of Balua Union as presented in the Venn diagram of problems are:

1. Water logging problem;
2. Transportation problem for the damaged road and the absence of paved (pucca) road;
3. Sanitation and pure drinking water problem;
4. Lack of necessary health services;
5. Unavailability of cold storage.

5.3.2 Potentials of Balua Union

The major potentials of Balua Union as presented in the Venn diagram of potentials are:

1. Agricultural land (Chili, Jute, Paddy, Cucumber),
2. Fisheries and Poultries,
3. Small and cottage industries,
4. Cattle rearing, and
5. Manpower.



Source: Field Survey, 2015

Figure 5.3: Potentials Venn Diagram of Balua Union

5.3.3 Major Problems, Causes, Effects and Relevant Potentials of Balua Union

1. Water logging Problem

Building construction without planning, lack of culvert and narrow channel are the causes of water logging problem in this union. Water logging problem causes so many other related problems in this union such as crops damage, fisheries hamper, cattle destroyed and increase of diseases. People of this union think that they have sufficient channels and beels but these are needed to be re-excavated and connected properly. Sufficient manpower is available in this union to do this work.

2. Poor Transportation Problem

Most of the roads in Balua Union are katcha roads with very little right of way which make constructing or repairing of roads difficult that causes causing people's communication hard. Poor transportation system costs so much to the people of this union. People can't get proper price, children can't go to school and emergency access to health services seem harder as a result of poor transportation. More paved roads are needed to be constructed and people of this union think that their soil and manpower can be used to do that.

চিহ্নিত সমস্যা	প্রধান কারণ	প্রস্তাবিত সমাধান	অন্যান্য সম্ভাব্য সমাধান
১. জালিয়াত	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।
২. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।
৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।
৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।
৫. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।	১. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ২. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৩. জালিয়াতের ফলে রাস্তা নষ্ট হয়। ৪. জালিয়াতের ফলে রাস্তা নষ্ট হয়।

Source: Field Survey, 2015

Figure 5.4: Identified Problems, their Causes and Effects with Relevant Potentials of Balua Union

3. Lack of Sufficient Sanitation and Pure Drinking Water

High rate of iron and arsenic in tube-wells and unprotected tube wells, and approximately 40% shortage of sanitation coverage are the main reasons for sanitation and drinking water problem in this union. Consequently, environment becomes polluted and morbidity increases (dermatologic & water related disease).

4. Lack of Health Service

This union has many problems in this sector. Adequate medicine and doctor as well as hospital are very far from the locality. As a result maternal and child mortality rate along with disability rate are increasing day by day. This union has enough places for building hospital. Currently

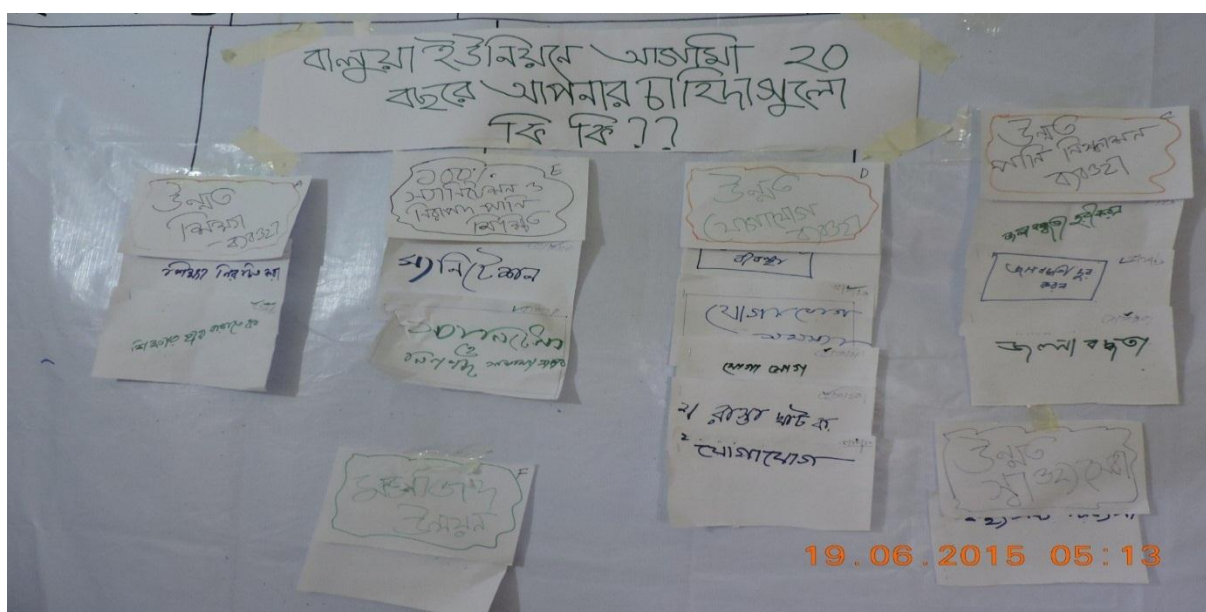
FWC and community clinic are running but needed to be modernized and include more health services to ensure better health services.

5. Unavailability of Cold Storage

Absence of entrepreneur and influential person along with lack of sufficient capital hinder building necessary amount of cold storages. As a result crops perish, people of this union are deprived from getting proper price of crops and ultimately become indifferent to produce agricultural crops. People opine that potential places are available in this union to build cold storages.

5.4 Perceived Development Priorities

The ToP Workshop on Balua Union's Development Needs identifies the installation of electricity, improvement of communication system are the key priorities. During the mid-term, the PRA participants want improvement of education, establishment of model union, and establishment of industries in their union and the control and prevention of crime and delinquency as the long-term goal of the Union's development plan (Table 5.1). Development of communication system was much voted by the participants (97%), river erosion was voted 90% and sufficient electricity was voted 86% of the participants. Development of educational system (92%), developed model union and development of industrialization (83%) are placed in the midterm process of plan implementation. Some participants want electricity in the midterm category. About 70% participants talked about child molestation and rape in long term process (Table 5.1).



Source: Field Survey, 2015

Figure 5.5: Development Priorities for Next 20 years of Balua Union

Table 5.1: Development Needs and Priorities of Balua Union

Short Term							Mid Term			Long Term
<i>Ensured Pure drinking water and 100% sanitation.</i>	<i>Developed drainage systems</i>	<i>Improved Transportation System</i>	<i>Modern Health Service</i>	<i>Development Masque</i>	<i>Ensure 100% Electricity</i>	<i>Ensure modern education systems</i>	<i>Ensured Pure drinking water and 100% sanitation.</i>	<i>Improved Transportation System</i>	<i>Developed drainage systems</i>	<i>Modern crops preservation systems</i>
Water free from arsenic	remedy of water logging	repairing and spreading communication with other district	Well-functioning community clinic	Build and construct Masque	Electricity for all	Increased education rate	Water free from arsenic	repairing and spreading communication with other district	remedy of water logging	Develop crops storage system
developed water management system	well drainage	Construction of roads bridge and culvers.					developed water management system	Construction of roads bridge and culvers.	well drainage	Build Cold storage

Source: Field Survey, 2015

5.5 List of Participants

বালুয়া ইউনিয়নের পি.আর.এ (PRA)
উপস্থিতির তালিকা

স্থান: ২ নং বালুয়া ইউনিয়ন, সোমতল্লা, বগুড়া তারিখ: ২০.০৬.২০১৫ সময়: ২.৩০

ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১	শ্রী: নাহিদা জেদ	স্বাধীন	০১	গাওঁ পাতা	০১৭৩৭১৫৫৩৪	
০২	শ্রী: রাসিমুল হক	U.P. সদস্য	০৬	বিমানচৌধুরী	০২৭২০-৭০৪২-৫২	
০৩	শ্রী: রাসিমুল হক	U.P. সদস্য	০২	দক্ষিণ চাঁচড়া	০২৭১৫৭৪০৬২	
০৪	শ্রী: মোঃ হুমায়ুন কবীর	"	০১	কুমার (মোঃ)	০২৭০৫-৭৪৪৪২২	
০৫	শ্রী: মাহুদ হুসেইন	"	০৩	ছোট বাগুড়া	০১৭৬৭-৭২১৭	
০৬	শ্রী: মোঃ হুমায়ুন কবীর	"	৭-৬-১১	রাসিমুল হক	০১৫৫৩৬৬৪৫২	
০৭	শ্রী: মোঃ হুমায়ুন কবীর	"	০৬	মুন্সিগঞ্জ	০১৭১৬৪০৭০৬৪	
০৮	শ্রী: তাবিকুল ইসলাম	"	০১	বাড়-বালুয়া	০২৭১৭৭১৫৫২০৪	
০৯	শ্রী: মোঃ হুমায়ুন কবীর	"	৪, ৫, ৬	দ. আমলজিদিয়া	০১৭৬০৪০২৩১৭	
১০	শ্রী: হারুন আর-রশিদ	স্বাধীন	০৮	মাহিয়ারা	০১৭৩৩-১১৭৬৭৭	

মডার্ন ইঞ্জিনিয়ার্স প্লানার্স এন্ড কনসাল্টেন্টস্ লিমিটেড

ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
১১	শ্রী: নাহিদা জেদ (স্বতন্ত্র)	U.P. সদস্য	০৭	রাসিমুল হক	০২৭১০-৬৪০০৪৬	
১২	শ্রী: মোঃ হুমায়ুন কবীর	ই.উ.আ. সদস্য	০২.৬	বালিয়ারা	০২৭৬০৮৬০২৬৪	
১৩						
১৪						
১৫						
১৬						
১৭						
১৮						
১৯						
২০						
২১						
২২						
২৩						
২৪						
২৫						

মডার্ন ইঞ্জিনিয়ার্স প্লানার্স এন্ড কনসাল্টেন্টস্ লিমিটেড

Source: Field Survey, 2015

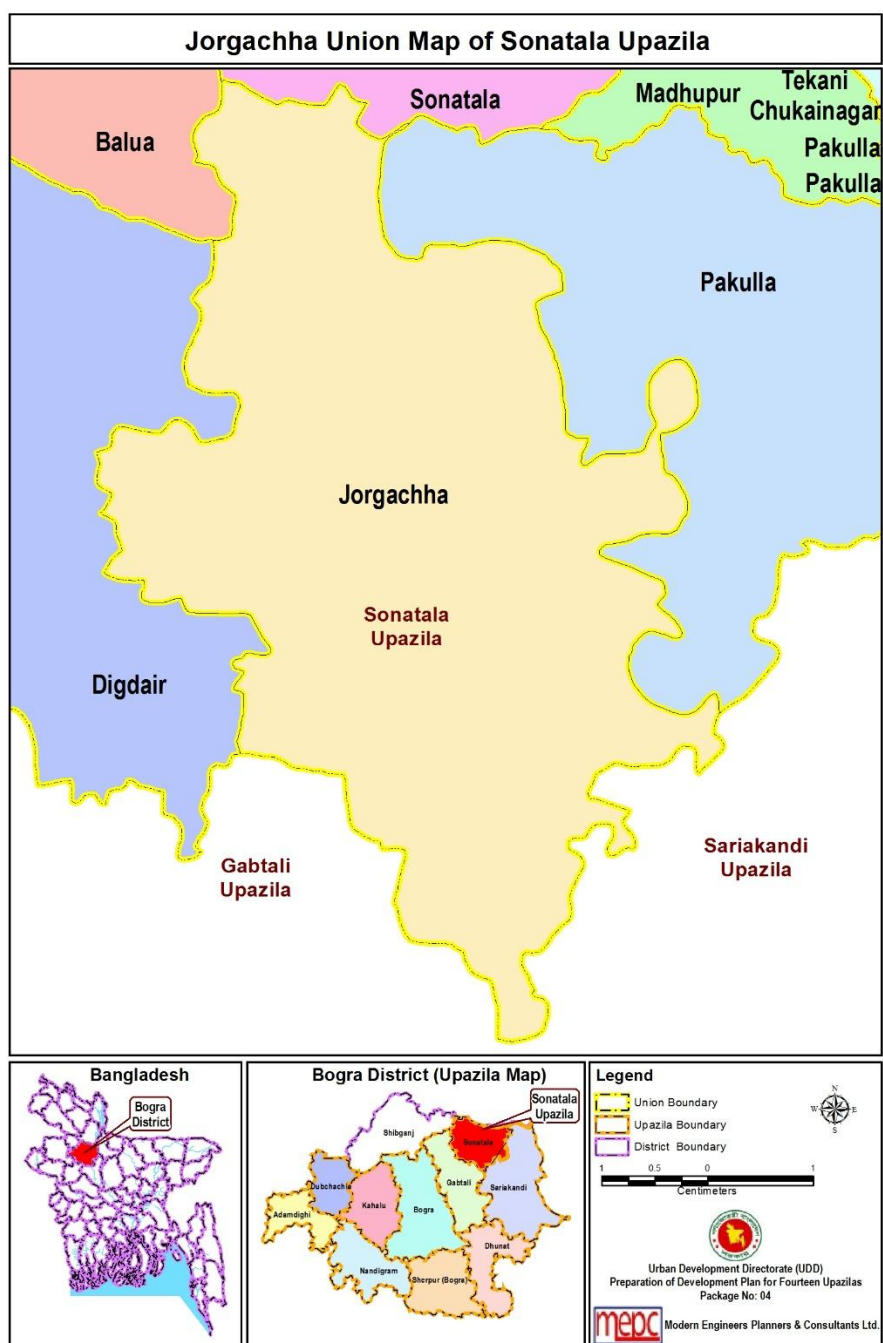
Figure 5.6: List of Participants of Balua Union

6. Jorgacha Union

6.1 Overview

Jorgacha union is surrounded by Sonatala Union in the north, Shariakandi in the south, Digdair Union in the east and Pakulla Union in the west.

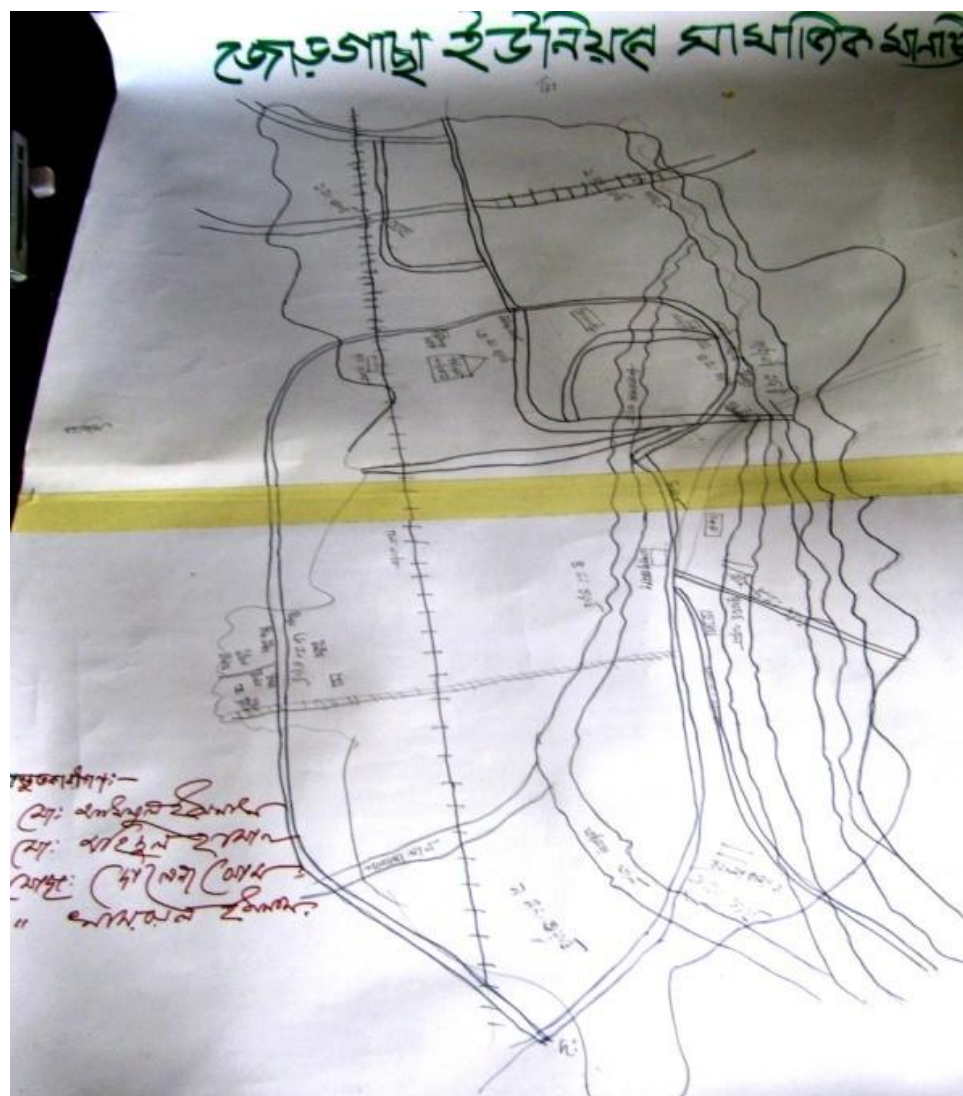
Map 6.1: Jorgacha Union of Sonatala Upazila



Source: MEPC

6.2 Spatial Aspect

Total land space of this union is 30.28 square kilometer and total number of population of this union is 35,662. There are 40 km pucca roads and 35km katcha roads. Agriculture is the most potential resource for the people of Jorgacha union. Total agriculture land is 5,820 acres. Besides 48% people are educated. The union has electricity in 9 wards, 6 community clinics, 18 primary schools, 5 high schools, 7 madrassa, 12 ponds, 3 big swamps, and railway. River erosion is the main risk of this union, and Ward No.1, 2, 3, 4, 6, 7 and 8 are flood affected Wards. Cyclone and storms also affect Ward No. 2, 4, and 8. In this union, 4mosques in Ward No. 1, 2, 5; 2 primary schools in Ward No. 2 and 8; 78 houses in Ward No. 2 and 8. There 8 arsenic-affected tube-wells in Ward No. 5 and 3, 2km katcha roads in Ward No. 2 and 3 km electric line in Ward No. 8 are at risk. Total affected families in Jorgacha union are 1,720



Source: Field Survey, 2015

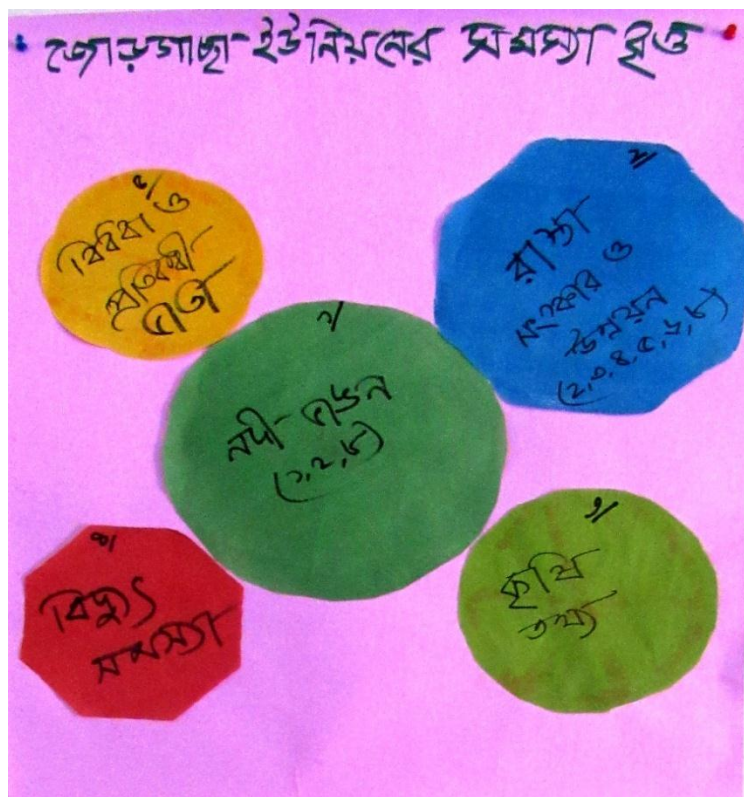
Figure 6.1: Social Map of Jorgacha Union

6.3 Major Problems and Potentials

6.3.1 Problems of Jorgacha Union

In the problem-identification session, PRA participants first listed all of the following problems of their Union:

1. Union complex building is on risky;
2. River erosion in 1, 2, 8 no ward;
3. Lack of road repairing and developing in 2, 3, 4, 5, 6, 8 no ward;
4. No bridge in 2, 3, 4, 5, 6, 8 no ward;
5. No Development of marketplace;
6. Lack of education institutions in 2, 4, 6, 8 no ward;
7. Problems in communication system in 4 no ward;
8. Water logging;
9. Poverty;
10. Sanitation problems;
11. Lack of uncontaminated water;
12. Problems of irrigation system;
13. No repairing of religious institutions;
14. Lack of river embankment;
15. Problems of disable people;
16. Problems of unemployment;
17. Lack of medical treatment;
18. No agriculture information center;
19. Problem of electricity;
20. Less payment of local representatives;
21. Problems of widow and old person allowance;
22. River dredging;
23. No grave yard.



Source: Field Survey, 2015

Figure 6.2: Problems Venn Diagram of Jorgacha Union

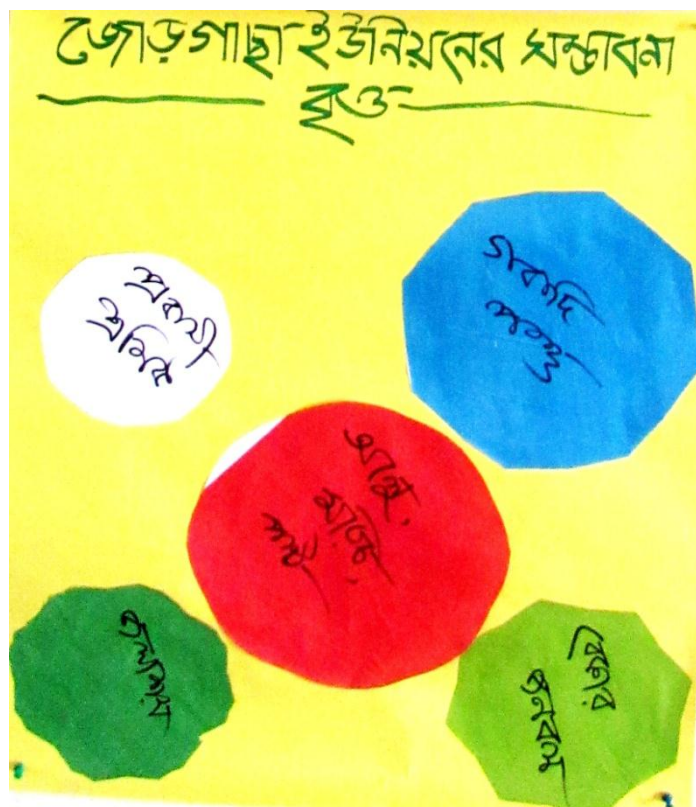
The five major problems of Jorgacha Union put in the Problem Venn diagram are:

1. River erosion in 1, 2, 8 no ward;
2. Problem of road repairing and developing in 2, 3, 4, 5, 6, 8 no ward;
3. No agriculture information center;
4. Problem of electricity;
5. Problems of widow and old person allowance.

6.3.2 Potentials of Jorgacha Union

The Venn Diagram of potentials identifies the significant potentials of this locality as follows:

1. Potato, chilly, jute;
2. Cattle farm;
3. Unemployed manpower;
4. Water bodies;
5. Ex-patriot/migrant labor.



Source: Field Survey, 2015

Figure 6.3: Potentials Venn diagram of Jorgacha Union

6.3.3 Major Problems, Causes, Effects and Relevant Potentials of Jorgacha Union

1. River Erosion

In the union of Jorgacha especially in the ward no 1, 2, 8 and many of the families have left their house into river and became helpless. So river erosion has emerged as a great threat for them and also significant problem for this local people. There are many causes for river erosion. Lack of river training, improper river dredging, shallowness of river and lack of plantation in the bank of river are the major reasons identified for river erosion. As consequences of this problem damaged agricultural land, destruction of houses, problem of movement and communication and destruction of institutions are prominent in this union. The union does not have any opportunity to offer to get rid of this problem.

2. Communication/Road Problems

It is a most important problem in Jorgacha union and its main causes are heavy rain fall, lack of government allotment, no para sitting and no high band beside roads. As the consequences of this problem troubles in normal movement, troubles in quick medical treatment and troubles in marketing crops take place. To mitigate this problem, the people had found the road

construction projects involving both rural women and unemployed manpower could be effective.

চিহ্নিত সমস্যা	প্রধান কারণসমূহ	সম্ভাব্য সমস্যা	অংশীদার সম্ভাব্য সমস্যা
১। মৌসুমি বন্য	১। মৌসুমি বন্যের কারণে ২। মৌসুমি বন্যের কারণে ৩। মৌসুমি বন্যের কারণে ৪। মৌসুমি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	নাই
২। মৌসুমি বন্য	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে
৩। মৌসুমি বন্য	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে
৪। মৌসুমি বন্য	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে
৫। মৌসুমি বন্য	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে ৩. জলি বন্যের কারণে ৪. জলি বন্যের কারণে	১. জলি বন্যের কারণে ২. জলি বন্যের কারণে

Source: Field Survey, 2015

Figure 6.4: Identified Problems, Causes and Effects with Relevant Potentials of Jorgacha Union

3. Problem of Agricultural Information

Jorgacha mainly depends on agriculture but it is a matter of regret that there is no agricultural information service available in this union. There is no information center in Union Parishad complex and government initiatives are also missing. As a result, farmers do not get any guideline about seasonal agriculture and crops get attacked by various pests and diseases. Though the union has professionals with diploma in agriculture but their knowledge are hardly used due to absence of any formal institutional arrangement. These students are only potentials available in this context.

4. Problem of Electricity

The main cause of this problem is that the shortage of supply and troubles in getting connections. At the result, the effects identified are troubles in normal activities, irrigation problem and problem in preserving food products. Due to lack of initiatives from the government at local level no potentials are available to mitigate this problem.

5. Problems of Widow and Disable Allowance

The main cause is that no government allotment for the widow and disabled people. So these helpless people have to struggle for their livelihood. No creating of potentials for mitigating this problem has been found in this union.

6.4 Perceived Development Priorities

The PRA participants of Jorgacha Union in the ToP Consensus Workshop identified safe drinking water, improve transportation, protected river bank, and digitization of the Union as their short-term priorities. They placed agricultural development, modern healthcare system, and standard education system as medium-term needs and industrialization, standard education system and digitalization of the UP as long-term needs of the Jorgacha union (Table 6.1).



Source: Field Survey, 2015

Figure 6.5: Development Priorities for Next 20 Years of Jorgacha Union

Table 6.1: Development Needs and Priorities of Jorgacha Union

Short term			Mid term		Long term	
<i>Developed road communication</i>	<i>Modern UP complex</i>	<i>Agriculture information service center</i>	<i>Development of education</i>	<i>Employment</i>	<i>Economic solvency</i>	<i>Market place in every village</i>
Pitch all roads	Want UP complex	Agriculture information center	Illiterate free society	Unemployment	Eliminate discrimination between rich and poor	Market place in village
Development of roads	3 stored UP complex		Stephen in education	Mitigating unemployment	Disable and age allowance	
All roads will be pitched	Want UP building		Honor's college with computer lab	Fish farm		
Roads of union will be pitched			Development of education	Poverty free society		
Bridge and culvert			Spread of education	Ensure of basic needs		

Source: Field Survey, 2015

6.5 List of Participants

জগদাচার ইউনিয়নের পি.আর.এ (PRA)
উপস্থিতির তালিকা

ইন: ইকিম - পরিচয় আকিম
তারিখ: ২২/০৫/২০১৫
সময়: ১০:৩০

ক্রম নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭২২৭০৮০৭	
০২	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০২, ০৬	উ: মদুয়া	০১৭৬২-১৪৫৪৭২	
০৩	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৯	উ: মদুয়া	০১৭৬৬-৭৯৫২০১	
০৪	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৬	উ: মদুয়া	০১৭৬৬-৭৯৫২০১	
০৫	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০২	উ: মদুয়া	০১৭২৬-০০৫৫৭৭	
০৬	মো: মো: কামাল হোসেন	"	০৪	উ: মদুয়া	০১৭৬৬-৭৯৫২০১	
০৭	মো: মো: কামাল হোসেন	"	"	"	০১৭৬৬-৭৯৫২০১	
০৮	মো: মো: কামাল হোসেন	"	"	"	০১৭৬৬-৭৯৫২০১	
০৯	মো: মো: কামাল হোসেন	"	"	"	০১৭৬৬-৭৯৫২০১	
১০	মো: মো: কামাল হোসেন	"	"	"	০১৭৬৬-৭৯৫২০১	

মডার্ন ইকিমার্স প্রানার্স এন্ড কনসাল্টেন্টস লিমিটেড

ক্রম নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
১১	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১২	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১৩	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১৪	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১৫	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১৬	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১৭	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১৮	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	
১৯	মো: মো: কামাল হোসেন	ইউনি-সদস্য	০৮	উ: মদুয়া	০১৭৬০-০৭৪৬৪২	

Source: Field Survey, 2015

Figure 6.6: List of Participants of Jorgacha Union

7. Madhupur Union

7.1 Overview

Madhupur Union consists of 15.20 square km. and has a total of 21,136 population. This agriculture-based union has 5297 families. This union is encapsulated by Gaibandha district to the north, Tekani Chukainagar to the east, Pakulla Union to the south, and Sonatola Union to the western side.

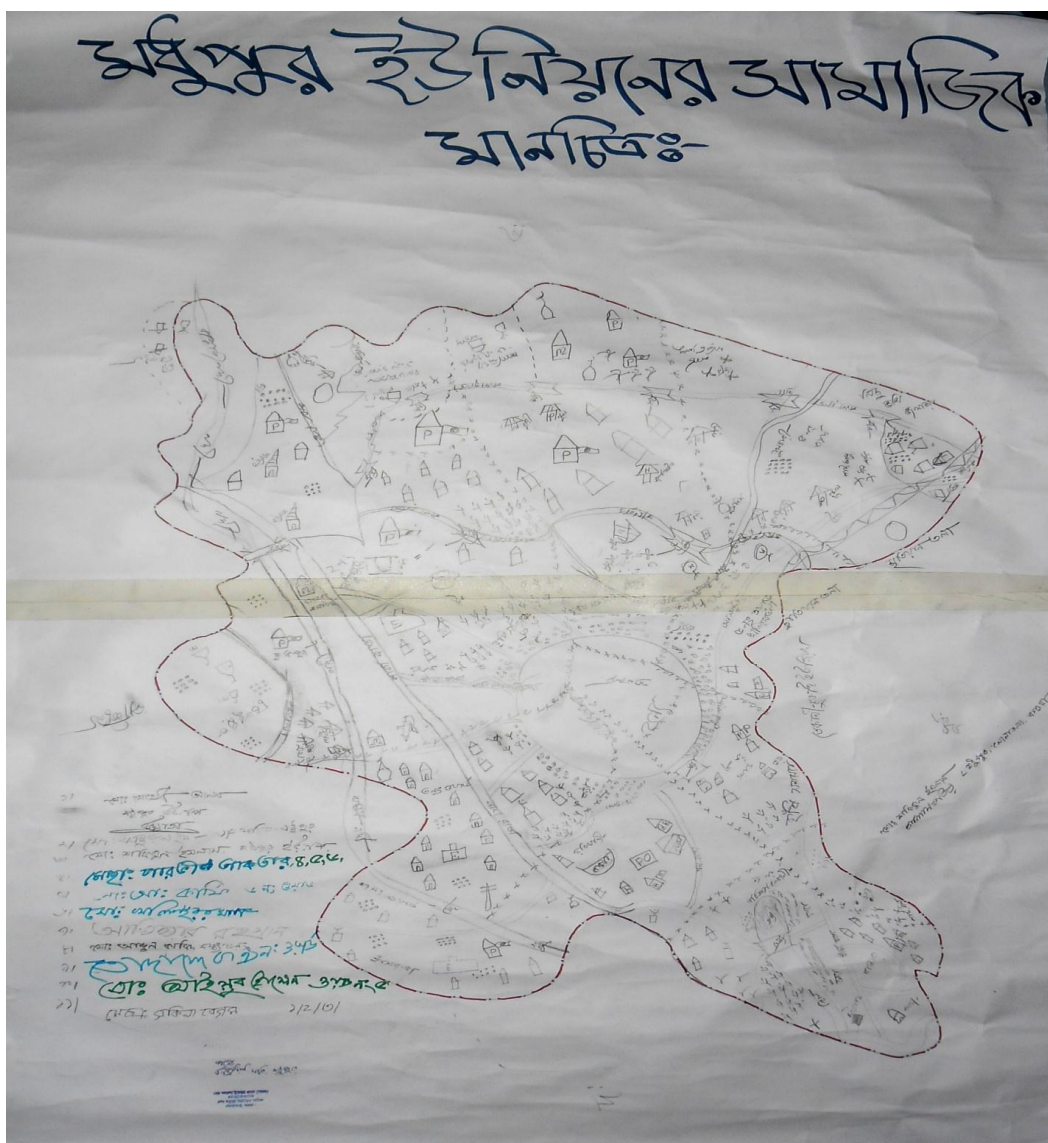
Map 7.1: Madhupur Union of Sonatala Upazila



Source: MEPC

7.2 Spatial Aspect

This union has total 60 km roads including 15 km paved and 45 km katcha roads. The Union has 18 bridges. Total agricultural land consists of 2,910 acre. This union has 4 beels and 3 bazars. Though every wards of this union suffers from flood every year, but sudden flood occurs only at Ward no. 2 where about 815 families, 15 km paved roads and a bridge are at risk.



Source: Field Survey, 2015

Figure 7.1: Social Map of Madhupur Union

7.3 Major Problems and Potentials

7.3.1 Problems of Madhupur Union

In the problem-identification session, PRA participants first listed all of the following problems of their union:

1. No electric supply;
2. Flood (all wards);
3. Katcha roads;
4. lack of proper drainage system (3, 4, 9, 6, 7);
5. Poor health services;

6. Shortage of eligible teachers;
7. Poverty;
8. Unemployment;
9. Child marriage;
10. Eve teasing, gambling, drug addiction, thievery;
11. Insects' problem in agriculture;
12. Irrigation Problem, shortage of good quality pesticide;
13. Ownerless Dog's (harms cattle);
14. Unavailability of veterinary services;
15. No Internet service at UP complex;
16. Absence of Shelter center;
17. Hat Bazaar owned lawlessly;
18. River erosion problem.



Source: Field Survey, 2015

Figure 7.2: Problems Venn Diagram of Madhupur Union

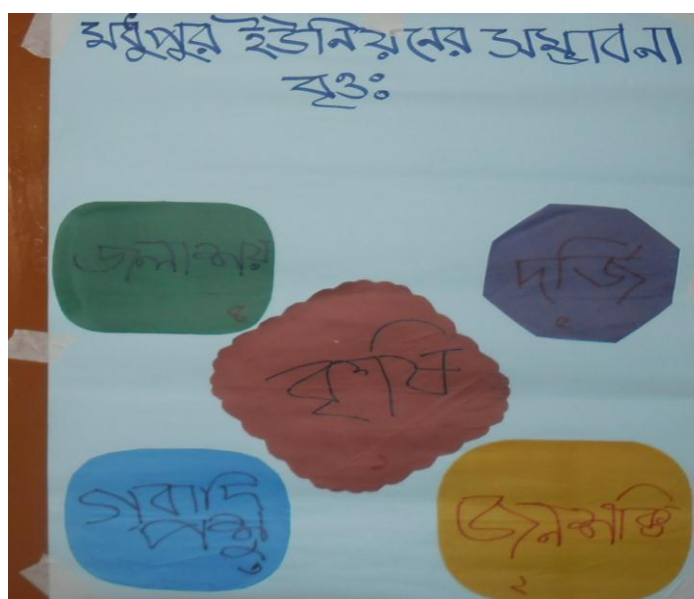
The PRA selected five major problems in the Problems Venn diagram:

1. Unavailability of electric supply (all),
2. Unemployment,
3. Poverty,
4. Flood,
5. Agricultural problem.

7.3.2 Potentials of Madhupur Union

Four major potentials identified by the participants in the Potentials Venn Diagram are the followings:

1. Agriculture (Rice, Chili, Mustard seed, Jute, potato),
2. Manpower,
3. Cattle rearing,
4. Water bodies/ponds,
5. Self-employment (tailoring).



Source: Field Survey, 2015

Figure 7.3: Potentials Venn Diagram of Madhupur Union

7.3.3 Major Problems, Causes, Effects and Relevant Potentials of Madhupur Union

1. Electricity Scarcity

People of the Madhupur Union suffer from scarce of electricity mostly. Lacks of sufficient electric supply, mismanagement of government, and procrastination in giving connection have lead to this situation for the union. Industrialization and the development of business and commerce as well as cattle rearing hamper as the result of scarcity of electricity. Significant numbers of NGOs are working to meet the demand of electric supply of this locality by helping people to get solar electricity system.

2. Unemployment

Unemployment problem is the second major problem for the people of Madhupur. Over population, dependency on one seasonal agricultural production, lack of work opportunity and

electric supply cause this unemployment problem in this union. Unemployment problem causes pernicious impact in micro and meso level. At family level violence against women, domestic violence and child marriage are the direct results from the unemployment problem. At social or community level criminality rises such as thievery, robbery and drug addiction etc. They think if they can use the potentials of their locality properly, they may reduce the unemployment rate. They identified land for agriculture, water bodies for fisheries, cattle rearing and poultry farm as their potentialities.

সমস্যা	কারণ	প্রভাব	সংশ্লিষ্ট সম্ভাবনা
* বিদ্যুৎ সমস্যা	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম
* বেকার	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম
* দারিদ্র্য	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম
* কৃষি	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম
* মৎস্য	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম
* পশুপালন	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম
* পল্লী	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম
* পরিদপন	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম	১. বিদ্যুৎ সরঞ্জাম ২. বিদ্যুৎ সরঞ্জাম ৩. বিদ্যুৎ সরঞ্জাম

Source: Field Survey, 2015

Figure 7.4: Identified Problems, Causes and Effects with Relevant Potentials of Madhupur Union

3. Poverty

Poverty is one of the influential problems in this locality. Over population, lack of proper education, training and work opportunity are the main reason of poverty in this Union. Consequently domestic violence, failure of meeting basic needs and malnutrition are increasing

day by day. They identified land for agriculture, water bodies for fisheries, cattle rearing and poultry farm as their potentialities.

4. Flood Problem

Flood is another nefarious problem in Madhupur union. Flood causes each time as the result of low land and low depth of river. Consequence of flood is so excruciating. People become homeless, lose their crops, cattle, roads and other infrastructural institutions get destroyed. People of this union are industrious and hopeful to work all together combating this flood problem.

5. Agricultural Problem

Agricultural problem is another major problem of Madhupur union. Insufficient insecticides, insect's problem and lack of electricity create different types of problem in this sector. As a result crops are destructed and a large number of money is lost. Integrated Pest Management (IPM) Method, Natural fertilizer is the main potential in this union for this sector.

7.4 Perceived Development Priorities

During the ToP Consensus Workshop, the PRA participants of Madhupur Union identified eight development needs for the short-term priorities, and these needs are – shelter construction for flood victims, flood control measures, healthcare service, sanitation and safe drinking water, improved transportation system, electricity installation, establishment of industries, and standard educational system (Table 7.1). It is also found that the participants perceived flood control measure, development of transportation system, expansion of industries and development of educational facilities are to be continued as the mid-term and long-term needs (Table 7.1).

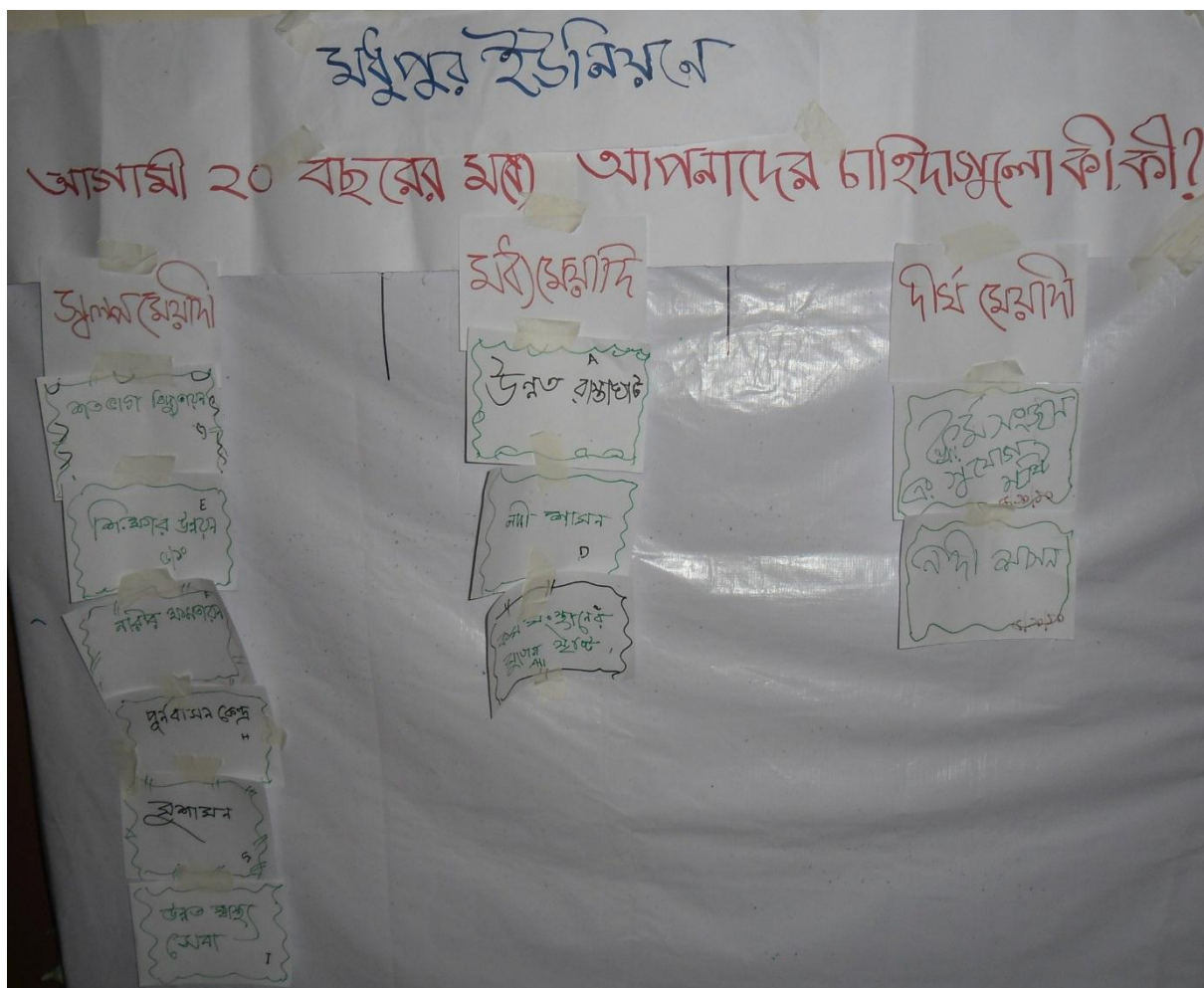


Figure 7.5: Development Priorities for Next 20 years of Madhupur Union

Table 7.1: Development Needs and Priorities of Madhupur Union

Short Term								Mid Term			Long Term		
<i>Rehabilitati on</i>	<i>Well Roads and communicati on</i>	<i>100% Electricity</i>	<i>Good governan ce</i>	<i>Education systems developme nt</i>	<i>Women Empowerm ent</i>	<i>Well Roads and communicati on</i>	<i>Women Empowerm ent</i>	<i>Education systems developme nt</i>	<i>River control</i>	<i>Opportun ity of employe ment</i>	<i>Opportun ity of employe ment</i>	<i>Women Empowerm ent</i>	<i>River contr ol</i>
	All roads paved	Ensuring electricity	Protecting child marriage	Cadet Madrasha	Admit women in police sector	All roads paved	Admit women in police sector	Cadet Madrasha	Control River Erosion	Established garments	Established garments	Admit women in police sector	Control River Erosion
	Well transportatio n system		Prohibited drug addiction	High school	Create jobs in UP for women	Well transportatio n system	Create jobs in UP for women	High school	Built embankment in river side	Handicraft	Each house each farm	Create jobs in UP for women	Built dam in river side
			Shun gambling	Girls school	Stop violence against women		Stop violence against women	Girls school				Stop violence against women	
								Women college					

Source: Field Survey, 2015

7.5 List of Participants

মধুপুর ইউনিয়নের পি.আর.এ (PRA)
উপস্থিতির তালিকা

স্থান: মধুপুর ইউনিয়ন কল্যাণ তারিখ: ২২/৭/১৫ সময়: ১০:৩০

ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১	শ্রীঃ হাট্টুল হোসেন	UNO, Sonatala			০১৭৩৩-৩৩ ৫৫৩৩	
০২	শ্রীঃ মজিবুল হক	সেপারেশন	২	মুন্সিরা -	০১৭২১ ১২৩৪ ৫৬	
০৩	শ্রীঃ মনুজুল হক	ইউনিয়ন সচিব	-	-	০১৭৬৬- ৬৪৬৬২০	
০৪	শ্রীঃ আব্দুল হাকিম	ইউনিয়ন সচিব	০৫	চাকরাখোলা	০১৭৫৪০৬৩০৪৪	
০৫	শ্রীঃ আব্দুল কাদের	" "	০৬	কান্দালা	০১৭৩৫১২৩১৫	
০৬	শ্রীঃ আব্দুল কাদের	" মদ্য	০৭, ০৮	কান্দালা	০১৭২৫০৪৪৩৪৭	
০৭	শ্রীঃ আব্দুল কাদের	" মদ্য	০৬	দুর্গামবাড়	০১৭১৩৪৬৪৫১৭	
০৮	শ্রীঃ বেজাল কবির	" "	০৪	কুলুয়াখোলা	০১৭৬১৫২১৭৫১	
০৯	শ্রীঃ আব্দুল কাদের	" "	০৬	চাকরাখোলা	০১৭২৬৫৪২৭৩	
১০	শ্রীঃ আব্দুল কাদের	" "	০২	মন্দির কান্দালা	০১৭৫৩৭১৫১২০	

মডার্ন ইঞ্জিনিয়ার্স প্রানার্স এন্ড কনসাল্টেন্টস্ লিমিটেড

ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
১১	শ্রীঃ আব্দুল হাকিম	ইউনিয়ন সচিব	০৭	চাকরাখোলা	০১৭১৭০২৪৫০৭	
১২	শ্রীঃ আব্দুল হাকিম	" " মদ্য	০২, ০৩	চাকরাখোলা	০১৭২১৫৫৭৫৭৬	
১৩	শ্রীঃ আব্দুল হাকিম	" " "	০৬, ০৭	মন্দির কান্দালা	০১৭২৩১০৩৩৪৭	
১৪	শ্রীঃ আব্দুল কাদের	" " মদ্য	০২	মন্দির কান্দালা	০১৭২৩১০৩৩৪৭	
১৫	শ্রীঃ আব্দুল কাদের	" " "		চাকরাখোলা	০১৭০৬৬৩১৭৫০	
১৬	শ্রীঃ আব্দুল কাদের	মদ্য	-	মন্দির কান্দালা	০১৭৪৭৬৭৬২৭৬	
১৭	শ্রীঃ আব্দুল কাদের	মদ্য	-	"	-	
১৮	শ্রীঃ আব্দুল কাদের	"	-	"	-	
১৯	শ্রীঃ আব্দুল হাকিম	চাকরাখোলা	-	"	-	
২০	শ্রীঃ আব্দুল হাকিম	চাকরাখোলা	মন্দির কান্দালা	"	-	
২১	শ্রীঃ আব্দুল হাকিম	চাকরাখোলা	মন্দির কান্দালা	"	-	
২২	শ্রীঃ আব্দুল হাকিম	চাকরাখোলা	মন্দির কান্দালা	"	-	
২৩	শ্রীঃ আব্দুল হাকিম	চাকরাখোলা	মন্দির কান্দালা	"	-	
২৪	শ্রীঃ আব্দুল হাকিম	চাকরাখোলা	মন্দির কান্দালা	"	-	
২৫						

মডার্ন ইঞ্জিনিয়ার্স প্রানার্স এন্ড কনসাল্টেন্টস্ লিমিটেড

Source: Field Survey, 2015

Figure 7.6: List of Participants of Madhupur Union

Annexure-II: Individual PRA Report at Ward Level of Sonatala Paurashava

1. Sonatala Paurashava (Ward No- 1, 3, 4)

1.1 Overview

Sonatala Paurashava is subdivided into 9 wards and 16 mahallas. Sonatala Paurashava is surrounded by Shalimara Union in the north, Madhupur Union, Sonatola Union and Shalimara Union in the east, and Balua hat and Sonatola Union in the west and south respectively.

1.2 Spatial Aspect

Ward No. 1, 3 and 4 are in more vulnerable position than other wards of the Paurashava due to their proximity to Jamuna River. These wards are flood-prone areas because of the absence of river embankment. The PRA participants reported that their communications through roads are not so good because of flood and river erosion.

1.3 Major Problems and Potentials

1.3.4 Problems of Ward No- 1, 3, 4

Ward-1

In the problem-identification session, PRA participants first listed all of the following problems of their ward:

1. Lack of drainage system
2. Low level of road
3. Lack of road lighting
4. Waste management problem
5. No traffic system
6. Unplanned commercialization of residential area
7. Lack of stadium repair
8. No children park
9. No supply water
10. No naming of maximum road
11. No auditorium
12. No vehicle stand and passenger shed
13. Sanitation problem.

Major problems of the Ward No. 1 from Venn diagram are:

1. Lack of drainage system

2. Low level of land
3. Waste management problem
4. No passenger shed
5. No supply water

Ward-3

In the problem-identification session, PRA participants first listed all of the following problems of their ward:

1. Lack of drainage system
2. Damaged or risky roads
3. Lack of road lighting
4. No public toilet
5. Waste management problem
6. Lack of play ground
7. No amusement park
8. No clinic or medical service center
9. No supply water
10. No library
11. Lack of para-setting beside road
12. No graveyard
13. No Eidgah field
14. Lack of bridge
15. Narrowness of road in turning.

Major problems identified by the participants of Ward No. 3 from Problem Venn diagram are:

1. Lack of drainage system
2. Damaged or risky roads
3. No clinic or medical service center
4. No supply water
5. Lack of road lighting.

Ward-4

In the problem-identification session, PRA participants first listed all of the following problems of their ward:

1. Lack of drainage system
2. Narrow road
3. Electricity problem

4. No public toilet
5. Lack of parasiding beside road
6. No graveyard
7. No primary school
8. No supply water
9. No Eidgah field
10. Need of Boiragi Para Bridge.

Major problems identified by the participants of Ward No. 4 from Problem Venn diagram are:

1. Narrow road
2. Lack of drainage system
3. No primary school
4. Electricity problem
5. Need of Boiragi Para Bridge.



Source: Field Survey, 2015

Figure 1.1: Major Problems Venn Diagram of Ward No- 1, 3, 4

1.3.5 Potentials of Ward No- 1, 3, 4

The Potentials Venn Diagram identifies the major five potentials of Ward No- 1, 3, 4:

Ward-1

1. Free government land

2. Business
3. Sufficient roads
4. Sufficient educational institution
5. Government ponds.

The general list included railway station as another potential.

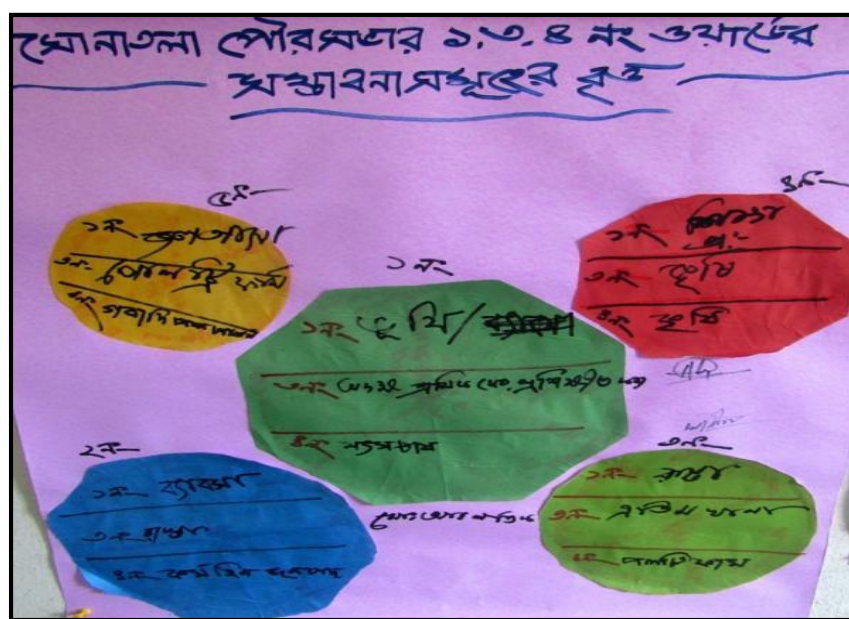
Ward-3

1. Fisheries
2. Livestock
3. Unemployed manpower
4. Agricultural Land
5. Poultry farm.

Other than these, the participants also mentioned roadside for tree plantation and orphanage and madrasa as other potentials of Ward No. 3.

Ward-4

1. Fisheries
2. Unemployed manpower
3. Poultry farm
4. Agricultural Land
5. Livestock



Source: Field Survey, 2015

Figure 1.2: Major Potentials Venn Diagram of Ward No- 1, 3, 4

1.3.6 Major Problems, Causes, Effects and Relevant Potentials of Ward No- 1, 3, 4

1. Lack of drainage system (Ward No. 1, 3 and 4)

The main causes of drainage problem include insufficient drain, and lack of planned drainage system. Lack of drainage system affected people because of water logging, road damage, increase of germs and mosquito. In addressing drainage problem, river can be a main potential.

2. Problems of road (Ward No. 1, 3 and 4)

The causes behind problems of road are insufficient financial allocation by Paurashava for repair and maintenance, narrow roads and low level of road services. Problems of road create sufferings such as problem in marketing and business, time loss, road accident and problem in emergency medical service.

3. No water supply (Ward No. 1, 3)

The main reason behind no supply water is insufficient financial allocation by Paurashava for water supply. Residents drink arsenic and iron contaminated water and suffer from water related diseases. To establish water supply pump and tank there is free government land considered as potential.

চিহ্নিত সমস্যা অসমস্যা	প্রধান কারণসমূহ	প্রভাবসমূহ	অনুল্লিষ্ট সম্ভাব্যসমূহ
১. ব্রহ্মপুত্র (১,৩,৪)	১. নদীর তীরভাগে মাটি ঢাকা পড়ে ২. কাকার মলময় প্রবাহ বয়ে ৩. মালময় প্রবাহ বয়ে বড়ো হলে ৪.	১. অসহনীয় মলময় ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ বয়ে ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. নদীর তীরভাগে মাটি ঢাকা ২.
২. কাকার মলময় (১,৩,৪)	১. মালময় প্রবাহ ২. মালময় প্রবাহ ৩. মালময় প্রবাহ ৪. মালময় প্রবাহ ৫. মালময় প্রবাহ	১. অসহনীয় মলময় ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. নদীর তীরভাগে মাটি ঢাকা ২.
৩. পানির অভাব (১,৩)	১. পানির অভাব ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. অসহনীয় মলময় ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. নদীর তীরভাগে মাটি ঢাকা ২.
৪. বিদ্যুৎ (৪)	১. বিদ্যুৎ সার্বজনীনভাবে ২. বিদ্যুৎ সার্বজনীনভাবে ৩. বিদ্যুৎ সার্বজনীনভাবে	১. অসহনীয় মলময় ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. নদীর তীরভাগে মাটি ঢাকা ২.
৫. বর্জ্য ব্যবস্থাপনা (১)	১. বর্জ্য ব্যবস্থাপনা ২. বর্জ্য ব্যবস্থাপনা ৩. বর্জ্য ব্যবস্থাপনা	১. অসহনীয় মলময় ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. নদীর তীরভাগে মাটি ঢাকা ২.
৬. পানির অভাব (১,৩)	১. পানির অভাব ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. অসহনীয় মলময় ২. ব্রহ্মপুত্রের তীরভাগে ৩. মালময় প্রবাহ ৪. কাকার মলময় বয়ে ৫. প্রবাহ-বিকল্প প্রবাহ	১. নদীর তীরভাগে মাটি ঢাকা ২.

Source: Field Survey, 2015

Figure 1.4: Identified Problems, Causes and Effects with Relevant Potentials of Ward No- 1, 3, 4

4. Electricity problem (Ward No. 4)

Main causes of electricity problem include shortages of electric pole and electric meter supply. Because of this problem, residents face problems in accessing telecommunication service, in irrigation, in children's study, in using electrical machineries, and household appliances, significant increase in theft is also reported due to absence of street lighting.

5. Waste management problem (Ward No. 1)

Waste management problem is caused by the unavailability of sufficient dustbins and waste collection trucks or vans. As consequence, bad smells spread and pollute the environment. For proper waste management there are many free places for waste dumping.

6. No clinic or medical service center (Ward No. 3)

There is no clinic or medical service center in Ward No. 3. The main reason for no clinic is the lack of initiative from the government. Absence of medical service center deprives general people from the right of medical service facility.

7. No vehicle stand and passenger shed (Ward No. 1)

Though Ward No. 1 is a busy area but there is no vehicle stand and passenger shed in Ward No.1. Lack of initiative and financial allocation of Paurashava are the key reasons behind this problem. Absence of vehicle stand and passenger shed affect people's health and comfort. Free government lands are the main potential for installing vehicle stand and passenger shed.

8. No street lighting (Ward No. 3)

The main reasons behind absence of road lighting are no initiative and financial allocation of Paurashava. As a result night communication is risky, and people can become victims of crimes.

9. No primary school (Ward No. 4)

There is no primary school in Ward No. 4. The main reason for this is lack of initiative from the government. For the absence of primary school children are finding it difficult to get proper educational rights. They are compelled to go to other wards for primary education which is likely affect their motivation to education.

10. Need of Boiragi Para Bridge (Ward No. 4)

People of Ward No. 4 are detached from municipal facility due to the absence of Boiragi Para Bridge. The main reason behind this includes the lack of initiative, and no financial allocation in this purpose.

1.4 Perceived Development Priorities

In the ToP (Technology of participation) session, PRA participants give their views and suggestions for their respective ward to become a model ward (Table 3.3). At Ward No. 1, 3 and 4, eight ideas were placed by the participants in the term of short and mid-term needs considering their problems in mind. Damaged, narrow and risky road is a main problem for the general people, and hence all participants wanted improved road communication system. Another priority attached by all participants was to the improvement of the drainage system. They demanded for the drainage Master Plan implementation. Another important problem pointed out to be addressed was no supply water. Problem of waste management was another crying need for the general people. In regard to the educational development most of the participants voted for short-term action (within 5 years) and others for 10 years (midterm). For planned urbanization majority of the participants voted for short-term plan and other voted for further action for 10 years. Among other priorities, participants suggested for fisheries project as mid-term plan and others as short-term plan. In terms of employment majority supported for mid-term action plan and others voted for short-term action plan.

Table 1.1: Development Needs and Priorities of Ward No- 1, 3, 4

Short Term						Mid term	
<i>Stable development of communication system</i>	<i>Water supply</i>	<i>Drainage master plan</i>	<i>Waste management system</i>	<i>Planned urbanization</i>	<i>Educational development</i>	<i>Fisheries project</i>	<i>Employment</i>
Road development	Water supply	Concrete drainage	Dustbin construction	Model union	School repair	Fisheries project	Need of help for poultry farm
Bridge construction		Drainage master plan	Dustbin repair	Construction with planning	School land elevation	Economic help for fisheries	Need of help for livestock farm
Pucca road construction		Improvement of drainage		Planned urbanization	Development of religious institution	Informational help for fisheries	
Road lighting installation							

Source: Field Survey, 2015

1.5 List of Participants

<p>সোনাতলা পৌরসভার পি.আর.এ (PRA) (১৩.৪ নং ওয়ার্ড) উপস্থিতির তালিকা</p>						
স্থান: সোনাতলা পৌরসভা			তারিখ: ২০.০৬.১৫ইং		সময়: ১০.০০ মি	
ক্রম নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১	শ্রী: জাহিদুল	ডাউনমিনিস্ট্র	৪	সোয়াইজ	০২৭৫৭৪৫২০০৫	জাহিদুল
০২	শ্রী: মোহাম্মদ নজিবুল	এক্সার সোয়াইজ	০৬	সোয়াইজ	০১৭০৭ ৪৫৩৩৭০	মোহাম্মদ
০৩	শ্রী: মোহাম্মদ হুসেন সোয়াইজ	কাজী	০৬	সোয়াইজ	০১৭৫০৪৭০০১০	মোহাম্মদ
০৪	শ্রী: মোহাম্মদ হুসেন	কাজী	০৪	সোয়াইজ	০১৭২৭৫৬৬৭৬	মোহাম্মদ
০৫	শ্রী: মোহাম্মদ হুসেন	কাজী	০১	সোয়াইজ	০১৭৪০ ৫৫৬৬০	মোহাম্মদ
০৬	শ্রী: মোহাম্মদ হুসেন	কাজী	০৬	সোয়াইজ		মোহাম্মদ
০৭	শ্রী: মোহাম্মদ হুসেন	কাজী	০১	সোয়াইজ	০১৭২৫৬৬৬২১৪	মোহাম্মদ
০৮	শ্রী: মোহাম্মদ হুসেন	কাজী	০১	সোয়াইজ	০১৭১৬-৯৭২০২	মোহাম্মদ
০৯	শ্রী: মোহাম্মদ হুসেন	কাজী	০১	সোয়াইজ	০১৭৬৪৩১৪২২৬	মোহাম্মদ
১০	শ্রী: মোহাম্মদ হুসেন	কাজী	০৬	সোয়াইজ	০১৭৫৫৫৫৫৫৫	মোহাম্মদ

মজার ইনিয়েন্স প্রদান এড কনসাল্টেন্ট লিমিটেড

ক্রম নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
১১	শ্রী: মোহাম্মদ হুসেন	কাজী	০৪	সোয়াইজ	০১৭১৬-৯৭২০২	মোহাম্মদ
১২	শ্রী: মোহাম্মদ হুসেন	কাজী	০৪	সোয়াইজ	০১৭১৭৬৭৯৫৬২	মোহাম্মদ
১৩	শ্রী: মোহাম্মদ হুসেন	কাজী	০২	সোয়াইজ	০১৭১৬-৯৭২০২	মোহাম্মদ
১৪	শ্রী: মোহাম্মদ হুসেন	কাজী	০২	সোয়াইজ		মোহাম্মদ
১৫	শ্রী: মোহাম্মদ হুসেন	কাজী	০২	সোয়াইজ	০১৭১৬-৯৭২০২	মোহাম্মদ

Source: Field Survey, 2015

Figure 1.5: List of Participants of Ward No- 1, 3, 4

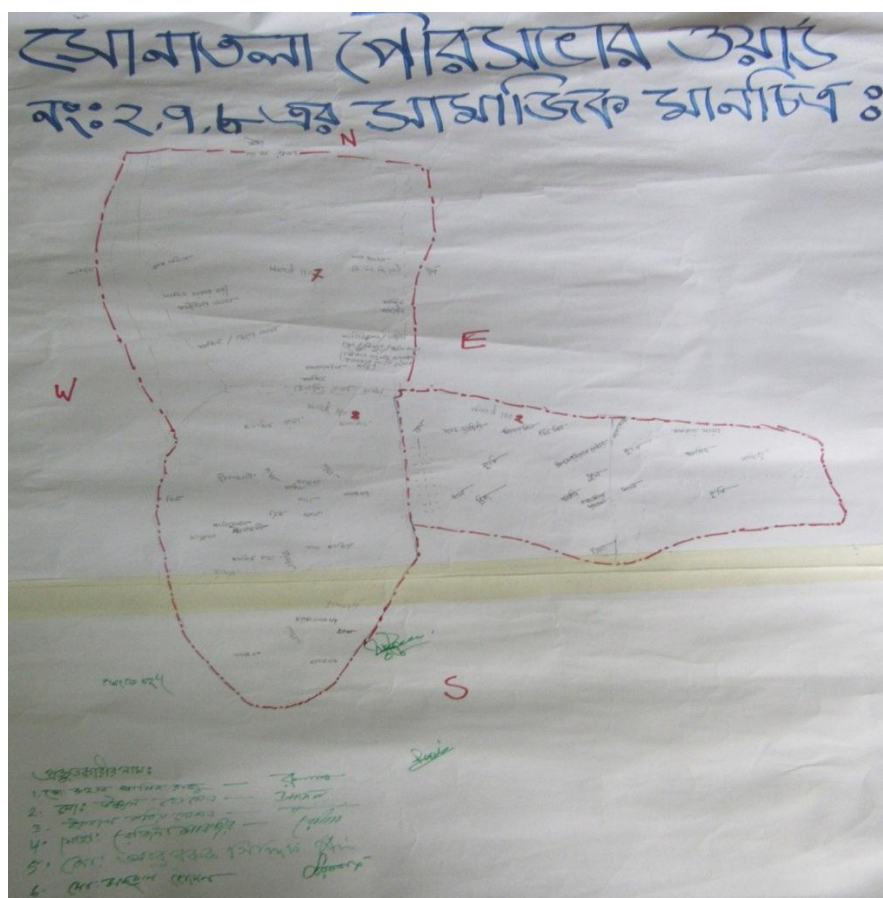
2. Sonatala Paurashava (Ward No- 2, 7, 8)

2.1 Overview

Sonatala municipality consists of 12.86 square km area and 26200 population including 9 wards. Geographically this municipality is surrounded by Shalimara union of northern side, Modhupur union and partially Sonatala and Shalimara union are situated at the eastern side of Sonatala municipality. This municipality is surrounded at western and southern side by Balua hat and Sonatala union respectively. Number of literacy rate of this municipality is 78% and the total numbers of paved road are 2.80 km.

2.2 Spatial Aspect

Ward no. 2, 7 and 8 are the adjacent wards in the Sonatala municipality. Total number of population in each wards are 1729, 1895 and 2206 respectively. Ward no. 2 has broken roads, jam and sanitation problem. Ward no. 8 is flood prone area. Sanitation problem is a major problem in ward no. 7 and 8. Scarcity of electric supply is also an important problem in these wards.



Source: MEPC

Figure 2.1: Social Map of Ward No- 2, 7, 8

2.3 Major Problems and Potentials

2.3.1 Problems of Ward No- 2, 7, 8

In the problem-identification session, PRA participants first listed all of the following problems of Ward No. 2, 7, 8:

1. Insufficient road light
2. Shortage of drainage system
3. Broken roads
4. Poor health service
5. No dustbin
6. No co-operative club for social development
7. Shortage of government primary, junior and high school
8. Shortage of roads and drains
9. Entertainment problem
10. Ownerless dogs
11. Playground shortage
12. Drug addiction
13. No library
14. Shortage of pucca roads
15. Bazar problem
16. No children's park
17. Water logging
18. Shortage of proper treatment and doctor

Ward No- 2

The Venn diagram of problems shows five major problems of Ward No-2. These are:

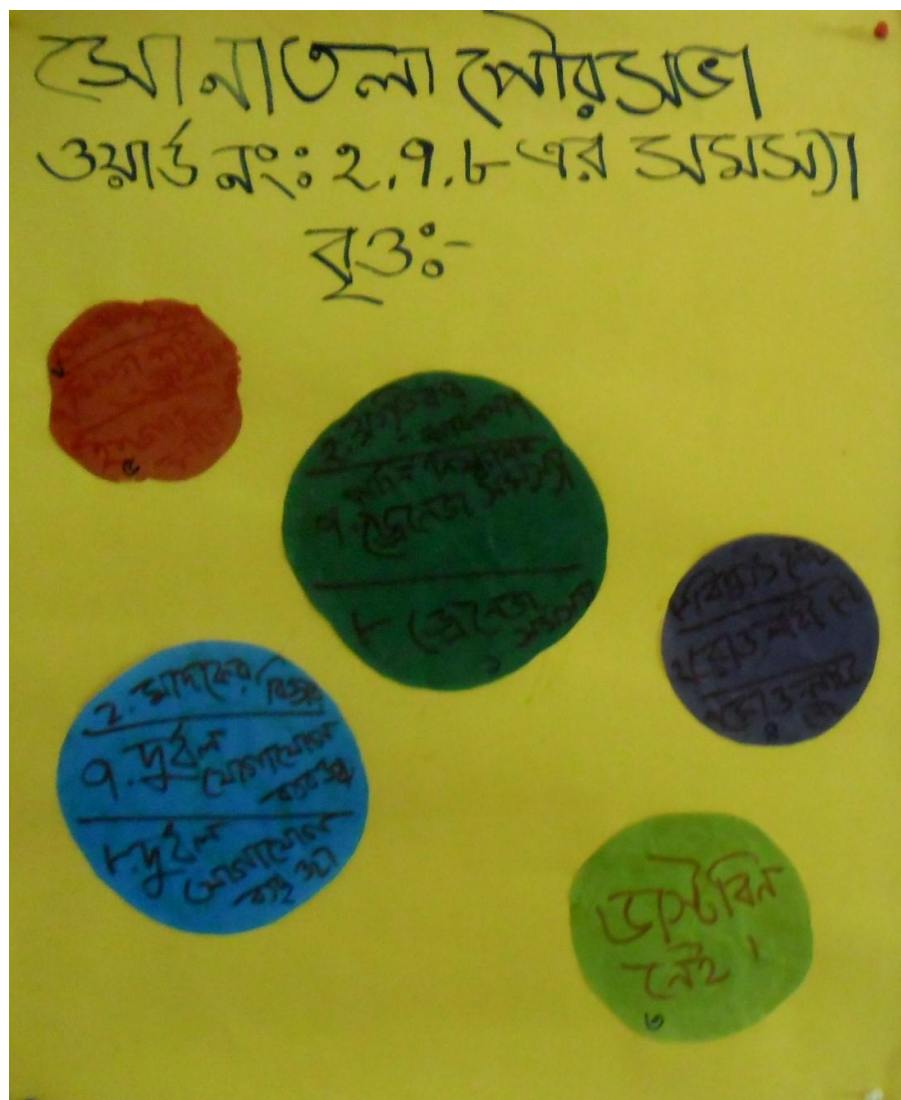
1. Harmful factory
2. Drug addiction
3. No dustbin
4. No road light
5. Communication problem.

Ward No-7

The Venn diagram of problems shows five major problems of Ward No-7. These are:

1. Drainage system
2. Weak transportation

3. No dustbin
4. No road light
5. Shortage of educational institute.



Source: Field Survey, 2015

Figure 2.2: Major Problems Venn Diagram of Ward No- 2, 7, 8

Ward No-8

The Venn diagram of problems shows five major problems of Ward No-8. These are:

1. Drainage system
2. Weak transportation
3. No dustbin
4. No electricity
5. No Eidgah ground.

2.3.2 Potentials of Ward No- 2, 7, 8

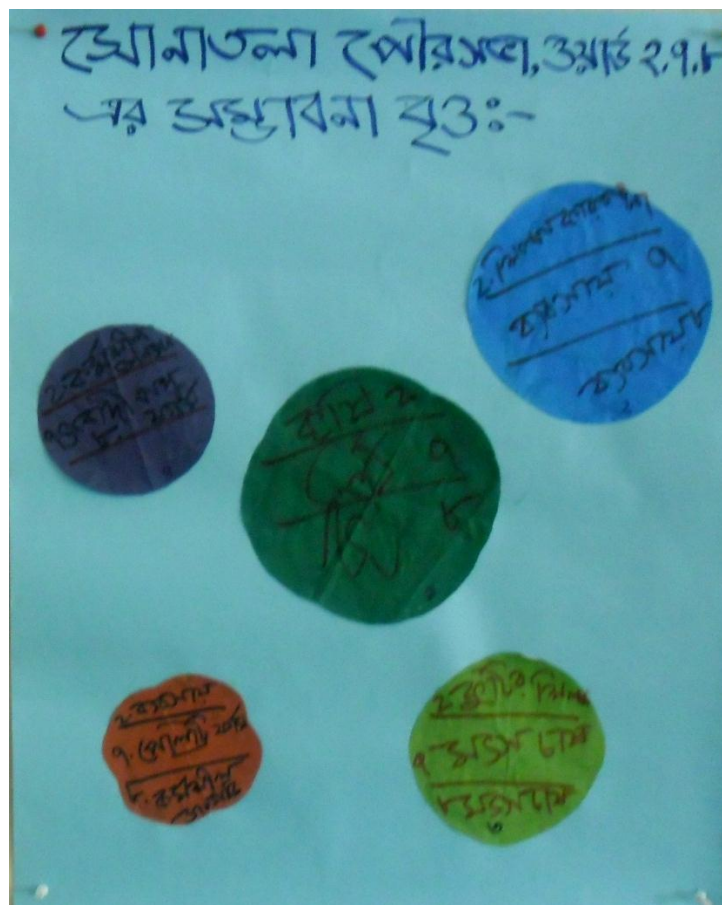
Five major potentials from Venn diagram exercise are the followings.

Ward-2

1. Agricultural crops (paddy, jute, sugarcane, vegetable)
2. Mill factory
3. Small and cottage industries
4. Working manpower
5. Business.

Ward-7

1. Agricultural crops (paddy, jute, sugarcane, vegetable)
2. Business
3. Fisheries
4. Cattle rearing
5. Poultry farm.



Source: Field Survey, 2015

Figure 2.3: Major Potentials Venn Diagram of Ward No- 2, 7, 8

Ward-8

1. Agricultural crops (paddy, jute, sugarcane, vegetable)
2. Business
3. Fisheries
4. Cattle rearing
5. Manpower.

2.3.3 Major Problems, Causes, Effects and Relevant Potentials of Ward No- 2, 7, 8

1. Drainage System Problem

Shortage of drains, broken drains and water logging are the main problems. As a result communication problem arises, and dirty water increases diseases, spread bad smell and pollute the environment. The municipality has enough manpower, soil and sand which are identified as potentials.

2. Harmful Factories

There are some factories that spread out bad smell and poisonous waste. It is very harmful to homesteads living at close proximity since people are affected by many diseases such as Asthma and skin allergy. Living in these areas is very difficult.

3. Poor Transportation System

People of the Sonatala municipality especially from Ward No. 2, 7 and 8 suffer from poor transportation system. Katcha and narrow road along with broken drainage system exacerbate the sufferings. Existence of katcha roads are potentials for this sectoral development since these could be made pucca easily.

4. Drug Addiction

Unemployment, and lack of education cause drug addiction among the young people. Drug addicted people engage in thievery and hijacking. Sometimes premature death or physical disability happens.

5. Electricity Problem

Lack of sufficient electricity supply, shortage of electrical poles, and mismanagement of government through the procrastination of giving new connection created the problem of electricity. Lack of industrialization, education problem, irrigation problem, problems of small and cottage industries all stem from shortage of electricity.

6. Dustbin Problem

Lack of garbage disposal infrastructure, and their repairing facilities and shortage of cleaning manpower are associated with dustbin problem. As a result bad smell spread out and roads go under water leading to the breeding of mosquito, bees, insects and cause various kinds of diseases.

চিহ্নিত সমস্যা	কারণ	প্রভাব/সমস্যা	সংশ্লিষ্ট অঙ্গাণু
১. পানি (১৫) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
২. পানি (২) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> ২. পানি পূর্ণ নাই ২. পানি নষ্ট ৩. পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
৩. পানি (১১) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
৪. পানি (১২) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
৫. পানি (১৩) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
৬. পানি (১৪) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
৭. পানি (১৫) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
৮. পানি (১৬) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
৯. পানি (১৭) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
১০. পানি (১৮) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
১১. পানি (১৯) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
১২. পানি (২০) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
১৩. পানি (২১) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি
১৪. পানি (২২) নিষ্কাশন সমস্যা	<ul style="list-style-type: none"> → পানি পূর্ণ নাই → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি সংগ্রহ করা যায় না → পানি নষ্ট → পানি সংগ্রহ করা যায় না 	<ul style="list-style-type: none"> → পানি → পানি

Source: Field Survey, 2015

Figure 2.4: Identified Problems, their Causes and Effects with Relevant Potentials of Ward No- 2, 7, 8

7. Insufficient Road Light

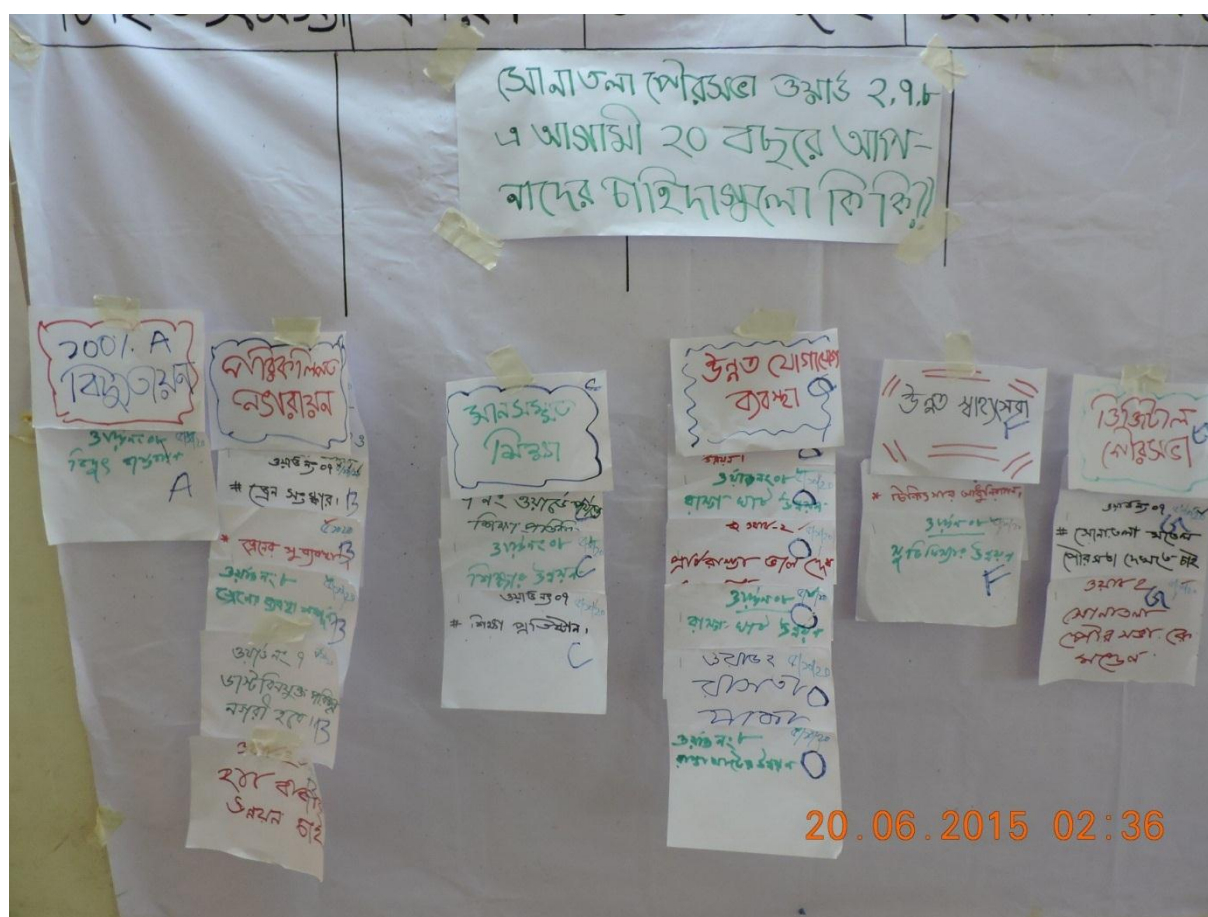
No electricity and inadequate infrastructure is the causes of inadequate street lighting. Because of inadequate street lighting, robberies, road accidents, and fear of crime victimization are common.

8. Shortage of Educational Institution

Lack of initiatives and necessary infrastructure are to the major reasons for the shortage of educational institution. Child marriage, robberies and unemployment are increasing day by day because of the limited educational opportunities.

2.4 Perceived Development Priorities

PRA participants identified 100 percent electrification as short and medium term development needs; digitization as medium and long term needs; and planned urbanization, modern healthcare, improved transportation system, and standard education for all three stages --- short, medium and long-term planning needs (Table 2.1).



Source: Field Survey, 2015

Figure 2.5: Development Priorities for Next 20 years of Ward No- 2, 7, 8

Table 2.1: Development Needs and Priorities of Ward No- 2, 7, 8

Short Term					Mid Term					Long Term					
<i>100% electric ity</i>	<i>Planned urbanizat ion</i>	<i>Well transportati on system</i>	<i>Modern health service</i>	<i>Standar d educatio n system</i>	<i>100% electric ity</i>	<i>Standar d educatio n system</i>	<i>Digital municipa lity</i>	<i>Planned urbanizat ion</i>	<i>Modern health service</i>	<i>Well transportati on system</i>	<i>Well transportati on system</i>	<i>Digital municipa lity</i>	<i>Planned urbanizat ion</i>	<i>Modern health service</i>	<i>Standar d educatio n system</i>
Ensure electric ity	Develop drainage	Paved road	Modern ize healthca re	Sufficie nt educatio nal institute	Ensure electric ity	Sufficie nt educatio nal institute	Model Paurasha va	Develope d drainage	Modern ize healthca re	Paved road	Paved road	Model Paurasha va	Develope d drainage	Modern ize healthca re	Sufficie nt educatio nal institute
	Drain repair	Improve communica tion	Ensure medicin e	Well function ed institute		Well function ed institute		Drain repair	Proper treatme nt	Well communica tion	Well communica tion		Drain repair	Proper treatme nt	Well function ed institute
	Improve drainage system	Drainage system	Ensure doctor					Drainage system		Drainage system	Drainage system		Drainage system		
	Dustbin for clean town	Build bridge, culvert	Proper treatme nt					Dustbin for clean town		Built bridge, culvert	Built bridge, culvert		Dustbin for clean town		
	Develop hat bazar							Develop hat bazar					Develop hat bazar		

Source: Field Survey, 2015

2.5 List of Participants

<p>সোনাতলা পৌরসভার পি.আর.এ (PRA) ওয়ার্ড নং-২, ৭, ৮ উপস্থিতির তালিকা</p>						
স্থান: পৌরসভা ভবন			তারিখ: ২০.০৬.১৫		সময়: ১১:০০	
ক্রঃ নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১	ইকবাল কবির রাসিদ	মাংস বিক্রেতা	০৭	আলুনিয়াই	০১৬২৭-২৬৭১৭৬	
০২	মাসুম বকির মাসুম	কার্টুনিস্ট	০৭	আলুনিয়াই	০১৭১৭-৩৭৫৫২৬	
০৩	মোঃ ইনছাফ জামি	চাকুরী	০২	গাজুলপুর	০১৯৪৭-৬৬৪০২৫	ইনছাফ
০৪	মোঃ হুমায়ুন কবীর	বক্সিং প্রশিক্ষক	৭৬-০১	আলুনিয়াই	০১৭৪৬-১৫৬৬৬৬	মোঃ হুমায়ুন
০৫	মোঃ কবীর হাফিজ	কবায়রী	০৭	মাঃ ওয়াড়	০১৭৩৭-২০৭৭৭২	
০৬	মোঃ আমিন হোসেন	বক্সিং প্রশিক্ষক	০৭	মাঃ ওয়াড়	০১৭৩৬-০৬০৬৭৭	
০৭	মোঃ হুমায়ুন কবীর	কার্টুনিস্ট	০৬	গাজুলপুর	০১৭১৭-৭৭৭২৭৭	
০৮	মোঃ আব্দুল করিম	কার্টুনিস্ট	০২	গাজুলপুর	০১৭৪০-৭৭৭৭৭৭	
০৯	আব্দুল করিম	১০২% প্রকৃতি সোনাতলা পৌরসভা		সোনাতলা পৌরসভা	০১৭১১-৩০৭৭৭৭	
১০	মোঃ হুমায়ুন কবীর	১০২% প্রকৃতি সোনাতলা পৌরসভা		সোনাতলা পৌরসভা	০১৭১০০৬০০৭৭	
১১	মোঃ হুমায়ুন কবীর	চাকুরী	০২	গাজুলপুর	০১৭২১-১৬৩৪৭২	
১২	মোঃ হুমায়ুন কবীর	চাকুরী	৬	আলুনিয়াই	০১৭৭৭-৬৬৭০৭৭	
১৩						
১৪						
১৫						
১৬						
১৭						
১৮						
১৯						
২০						
২১						

Source: Field Survey, 2015

Figure 2.6: List of Participants of Ward No-2, 7, 8

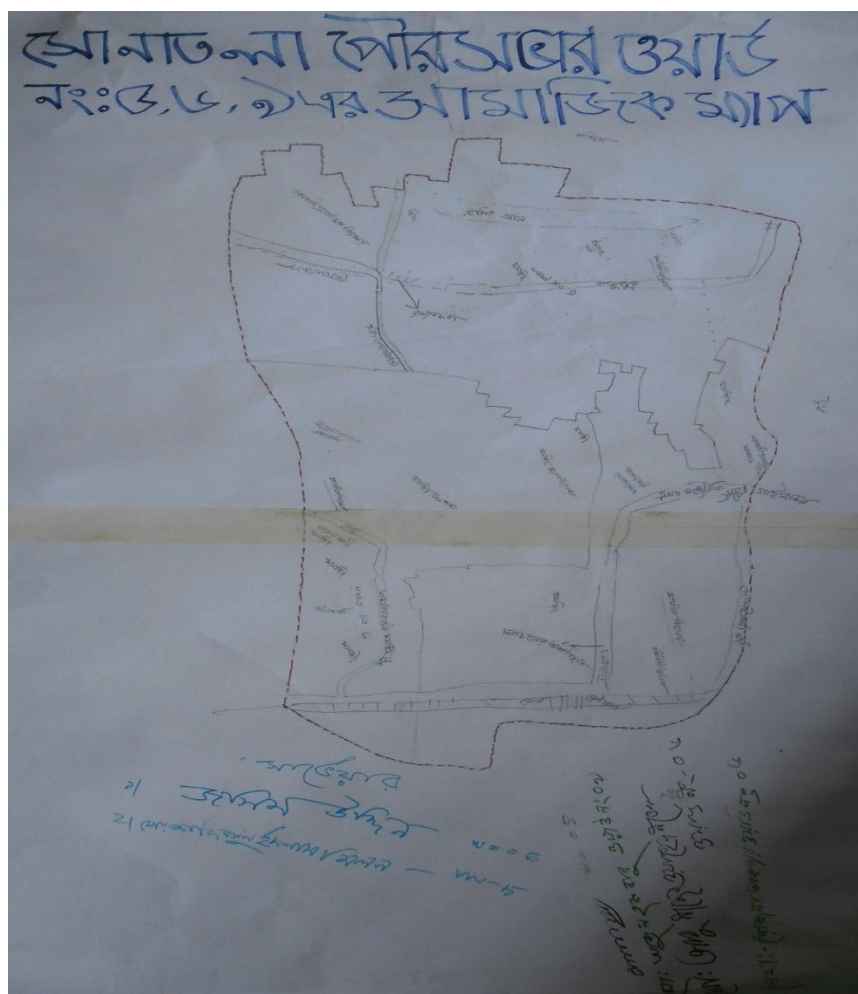
3. Sonatala Paurashava (Ward No- 5, 6, 9)

3.1 Overview

Sonatala Paurashava is subdivided into 9 wards and 16 mahallas. Sonatala Paurashava is surrounded by Shalimara Union in the north, Madhupur Union, Sonatola Union and Shalimara Union in the east, and Balua hat and Sonatola Union in the west and south respectively.

3.2 Spatial Aspect

Ward no. 5, 6 and 9 are the adjacent wards in the Sonatola municipality. Total number of population in each wards are 1743, 1968 and 1653 respectively. Scarcity of electricity is a common problem of these three wards. Poor transportation system, insufficient road light, unplanned drainage system, lack of educational institute, problem of sanitation and pure drinking water and so many problems occurs a harmful life in these three wards.



Source: Field Survey, 2015

Figure 3.1: Social Map of Ward No- 5, 6, 9

3.3 Major Problems and Potentials

3.3.4 Problems of Ward No- 5, 6, 9

In the problem-identification session, PRA participants first listed all of the following problems of Ward No. 5, 6, 9:

1. Road and transportation system (bridge)
2. Lack of drainage system
3. Road lighting problem
4. Lack of sanitation
5. Shortage of electricity
6. Unplanned communication system through jam
7. Shortage of educational institution (ward 9)
8. Shortage of waste management
9. No entertainment facilities (library and playground)
10. Unemployment problem
11. Lack of Deep tube well for irrigation (ward no.-5, 9)
12. Poor health services
13. Pure drinking water (Iron)
14. Lack of religion institutions
15. No Sashan ghat (Hindu religion-ward no. 9)
16. No community clinic (ward no 6).

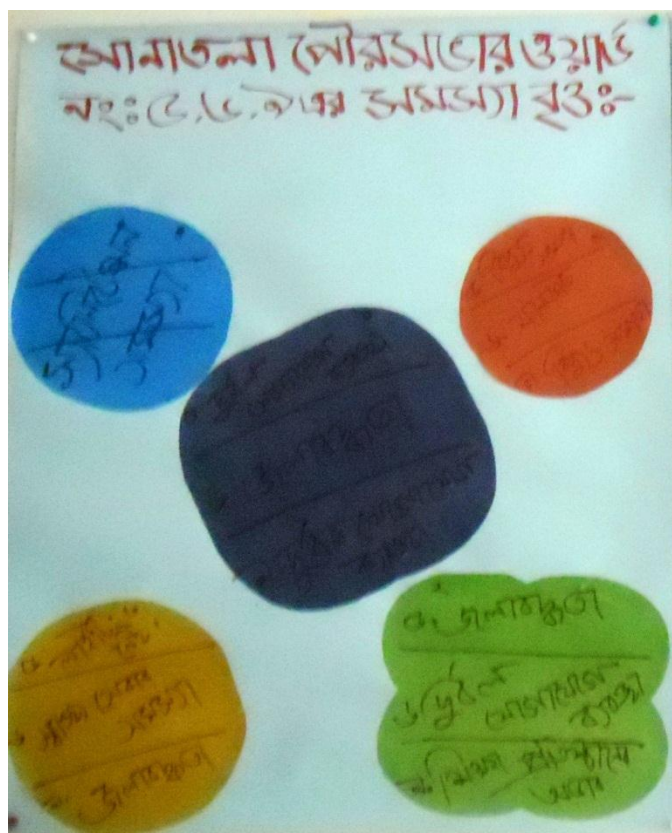
Five major problems of Ward No. 5, 6, 9 identified in Venn diagram are the followings.

Ward No. 5

1. Weak transportation system
2. Lack of drainage system
3. Road lighting problem
4. Lack of sanitation
5. Shortage of electricity.

Ward No. 6

1. Lack of drainage system
2. Weak transportation system
3. Health Service problem
4. Lack of sanitation
5. Traffic Jam.



Source: Field Survey, 2015

Figure 3.2: Problems Venn Diagram of Ward No- 5, 6, 9

Ward No. 9

1. Weak transportation system
2. Shortage of educational institution
3. Lack of drainage system
4. Lack of sanitation
5. Shortage of electricity.

3.3.5 Potentials of Ward No- 5, 6, 9

Five major potentials of Ward No- 5, 6, 9 identified in Venn diagram are the followings.

Ward No. 5

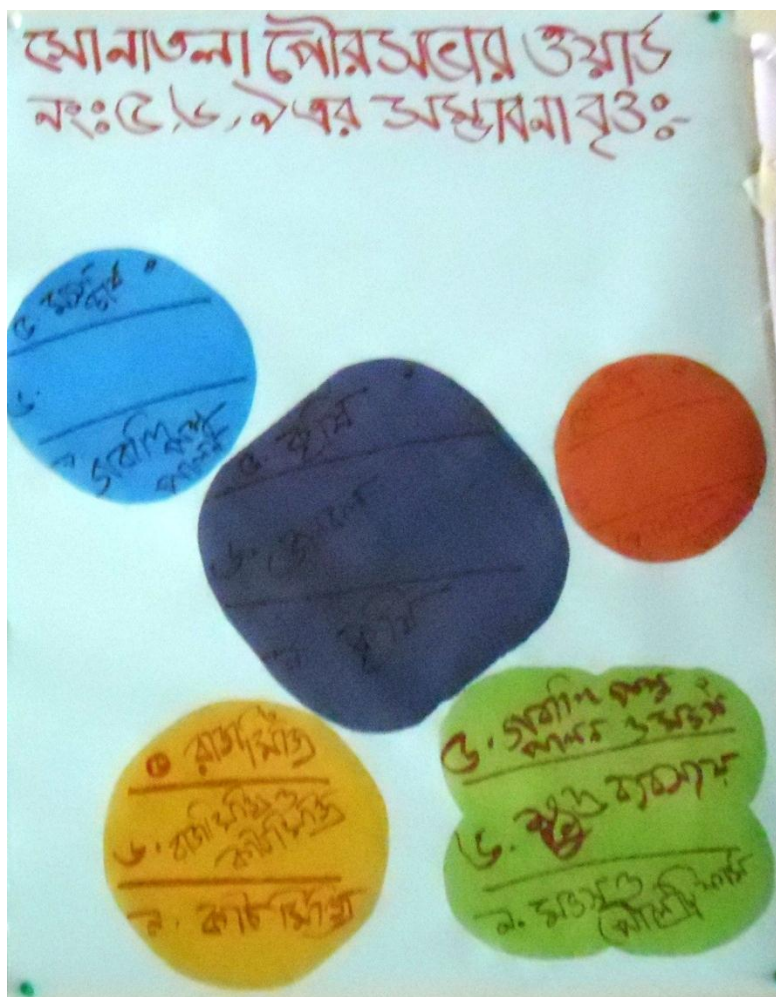
1. Agricultural crops (paddy, jute, sugarcane, vegetable)
2. Cattle rearing
3. Mason
4. Fisheries
5. Poultry.

Ward No. 6

1. Manpower
2. Small business
3. Mason and carpenter
4. Electricity
5. Water connectivity.

Ward No. 9

1. Agricultural crops (paddy, jute, sugarcane, vegetable)
2. Fisheries and poultry
3. Carpentry
4. Cattle rearing
5. Garments factory.



Source: Field Survey, 2015

Figure 3.3: Potentials Venn diagram of Ward No- 5, 6, 9

3.3.6 Major Problems, Causes, Effects and Relevant Potentials of Ward No- 5, 6, 9

1. Poor Transportation System

The inhabitants of Ward No. 5, 6 and 9 suffer from poor transportation system. Narrow road, movement of heavy vehicles, shortage of pucca road, absence of vehicle stops, narrow and unprotected rail crossing, and illegal shops on streets are the main causes of poor transportation system in Ward No. 5, 6, and 9. To them, poor transportation system leads to mobility difficulties, wastage of time, unexpected accidents, and negative impacts on agricultural and economic growth.

2. Weak drainage system

Shortage of drain connection, broken roads, and lack of canals hamper total drainage system of Sonatola municipality. As a result different kind of diseases, bugs and insects are increasing day by day, and bad smell spreads everywhere.

3. Insufficient Street light

Street lighting problem is a major problem perceived by the participants. The lack of street lighting facilitates robberies, drug addiction and road accidents are increasing. Proper initiatives and support from Paurashava could solve these types of problems.

4. Poor Sanitation

Poor sanitation system affects health, and environment. As a result different type of diseases spread out. Municipality supplies ring slab, and different types of NGO provide financial support in these areas.

5. Electricity problem

Inadequate electric supply and absence of electricity are the causes of the electricity problem around these areas. Lack of industrialization, education problem, increased crime incidence, irrigation problem, and street lighting all stem from electricity problem.

6. Health service problem (Ward No. 6)

There is no community clinic in Ward No. 6. In others wards, community clinics lack infrastructure and physician and medicine. Therefore mortality, morbidity rate and as well as cost of accessing health services are increasing.

7. Shortage of educational institution (Ward No. 9)

Lack of initiative and inadequate educational infrastructure is a problem for Ward No. 9.

চিহ্নিত সমস্যা	প্রধান কারণ	প্রতিষেধক	সংশ্লিষ্ট সম্ভাবনামূলক
দুর্বল যোগাযোগ ব্যবস্থা (যানজট)	* অসুবিধাজনক পথ * অসুবিধাজনক যানবাহন * পানীয় পানীয়-এইট * যানবাহনের মধ্যস্থত * ওয়াশিং মেশিন * ওয়াশিং মেশিন	* চলাচলযোগ্য রাস্তা * যানবাহন-এইট * দুর্ঘটনা	* কনক্রিট * পানীয় জল
জলবাহিতা	* জলবাহিতা * জলবাহিতা	* চলাচলযোগ্য রাস্তা * জলবাহিতা * জলবাহিতা	* কনক্রিট * পানীয় জল
শিক্ষা প্রতিষ্ঠানের অভাব এবং - ১	* অভাব * অভাব	* চলাচলযোগ্য রাস্তা * জলবাহিতা * জলবাহিতা	* কনক্রিট * পানীয় জল
স্বাস্থ্যসেবা সমস্যা	* স্বাস্থ্যসেবা * স্বাস্থ্যসেবা	* চলাচলযোগ্য রাস্তা * জলবাহিতা * জলবাহিতা	* কনক্রিট * পানীয় জল
কার্টেজ সমস্যা	* কার্টেজ * কার্টেজ	* চলাচলযোগ্য রাস্তা * জলবাহিতা * জলবাহিতা	* কনক্রিট * পানীয় জল
স্বাস্থ্যসেবা	* স্বাস্থ্যসেবা * স্বাস্থ্যসেবা	* চলাচলযোগ্য রাস্তা * জলবাহিতা * জলবাহিতা	* কনক্রিট * পানীয় জল
বিদ্যুৎ	* বিদ্যুৎ * বিদ্যুৎ	* চলাচলযোগ্য রাস্তা * জলবাহিতা * জলবাহিতা	* কনক্রিট * পানীয় জল

Source: Field Survey, 2015

Figure 3.4: Identified Problems, their Causes and Effects with Relevant Potentials of Ward No- 5, 6, 9

3.4 Perceived Development Priorities of Ward No- 5, 6, 9

PRA participants from Ward No. 5, 6 and 9 identified six items as short-term needs, four items as medium term needs, and three items as long-term needs (Table 3.5). Two items – recreational facilities development, and gas and water supply were placed in all three stages of development planning. Among other development priorities, development of agricultural system was agreed for short and medium-term development; employment generation, improvement of transportation system and protection of riverbank was suggested for short-term development; industrialization as medium term; and modern healthcare system as long-term development needs (Table 3.1).

Table 3.1: Development Needs and Priorities of Ward No- 5, 6, 9

Short							Mid				Long			
<i>Develop entertainment system</i>	<i>Solve unemployment problem</i>	<i>Improved Transportation System</i>	<i>Modern Health Service</i>	<i>Developed Agricultural System</i>	<i>Well protected river bank</i>	<i>Gas, water supply</i>	<i>Industrialization</i>	<i>Developed Agricultural System</i>	<i>Develop entertainment system</i>	<i>Gas, water supply</i>	<i>Industrialization</i>	<i>Modern Health Service</i>	<i>Develop entertainment system</i>	<i>Gas, water supply</i>
Children park	Mill/ industries establishment	Rail station.	200 beds Modern hospital	modern technology	Dam Construction	Water supply	Mill/ industries establishment.	modern technology	Children park	Water supply	Mill/ industries establishment.	200 beds Modern hospital	Children park	Water supply
Play ground	Ensure employment by various modern training	Construction necessary bridge and culvert.	well-functioning community clinic	modern agricultural management			Mitigation of unemployment problem	modern agricultural management	Play ground	Gas supply	Mitigation of unemployment problem	well-functioning community clinic	Play ground	Gas supply
Library	Ensure job facility for higher educated unemployed	Each road paved		Expanding fisheries				Expanding fisheries	Library				Library	
	Scope to technical and vocational training													

Source: Field Survey, 2015

3.5 List of Participants

সোনাতলা পৌরসভার পি.আর.এ (PRA)
ওয়ার্ড নং- ৫, ৬, ৯ উপস্থিতির তালিকা

সময়: ২০.০০

ইন: সোনাতলা পৌরসভা-৬২০, তারিখ: ২০.০৬.১৫

ক্রম নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
০১						
০২						
০৩	মো: আব্দুল হামিদ	লিফটম্যান	০৫	চান্দা	০১৭৩৬৮৬৫৫০	
০৪	মো: আব্দুল হামিদ	কার্টিয়ামান	০৬	আব্দুল্লাহাউর	০১৭৩৬-১৬৬২৫৫	
০৫	মো: আব্দুল হামিদ		০৭	চান্দা	০১৭১৭৫৩৪৫৫৬	
০৬	মো: আব্দুল হামিদ	আব্দুল হামিদ	০৮	চান্দা	০১৭১৫ ৫৪০৩৭২	
০৭	মো: আব্দুল হামিদ	চান্দা	০৯	চান্দা	০১৭১০-৮৫৫১৮০	
০৮	মো: আব্দুল হামিদ	চান্দা	০৬	চান্দা	০১৭১৭-৩৬৭০৩৩	
০৯	মো: আব্দুল হামিদ	চান্দা	০৮	চান্দা	০১৭১০-৮৫৫১৮০	
১০	মো: আব্দুল হামিদ	চান্দা	০৬	চান্দা	০১৭১০-৮৫৫১৮০	

মডার্ন ইঞ্জিনিয়ার্স প্রানার্স এন্ড কনসাল্টেন্টস লিমিটেড

ক্রম নং	নাম	পেশা	ওয়ার্ড নং	গ্রাম	মোবাইল নং	স্বাক্ষর
১১	মো: আব্দুল হামিদ	চান্দা	০৬	চান্দা	০১৭১০-৮৫৫১৮০	
১২	মো: আব্দুল হামিদ	চান্দা	০৭	চান্দা	০১৭১০-৮৫৫১৮০	
১৩	মো: আব্দুল হামিদ	চান্দা	০৮	চান্দা	০১৭১০-৮৫৫১৮০	
১৪	মো: আব্দুল হামিদ	চান্দা	০৯	চান্দা	০১৭১০-৮৫৫১৮০	
১৫	মো: আব্দুল হামিদ	চান্দা	০৬	চান্দা	০১৭১০-৮৫৫১৮০	
১৬	মো: আব্দুল হামিদ	চান্দা	০৭	চান্দা	০১৭১০-৮৫৫১৮০	
১৭	মো: আব্দুল হামিদ	চান্দা	০৮	চান্দা	০১৭১০-৮৫৫১৮০	
১৮	মো: আব্দুল হামিদ	চান্দা	০৯	চান্দা	০১৭১০-৮৫৫১৮০	
১৯	মো: আব্দুল হামিদ	চান্দা	০৬	চান্দা	০১৭১০-৮৫৫১৮০	
২০	মো: আব্দুল হামিদ	চান্দা	০৭	চান্দা	০১৭১০-৮৫৫১৮০	
২১	মো: আব্দুল হামিদ	চান্দা	০৮	চান্দা	০১৭১০-৮৫৫১৮০	
২২	মো: আব্দুল হামিদ	চান্দা	০৯	চান্দা	০১৭১০-৮৫৫১৮০	
২৩	মো: আব্দুল হামিদ	চান্দা	০৬	চান্দা	০১৭১০-৮৫৫১৮০	
২৪						
২৫						

মডার্ন ইঞ্জিনিয়ার্স প্রানার্স এন্ড কনসাল্টেন্টস লিমিটেড

Source: Field Survey, 2015

Figure 3.5: List of Participants of Ward No- 5, 6, 9