

# Payra-Kuakata Comprehensive Plan Focusing on Eco-Tourism

## Patharghata Rural Area Plan: 2021-2031

### **Printed and Published by:**

Urban Development Directorate

82, Segun Bagicha, Dhaka,

Bangladesh.

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URBAN DEVELOPMENT DIRECTORATE

Ministry of Housing and Public Works

First Edition: June, 2023

Price: BDT 3000.00

রেজিস্টার্ড নং ডি এ-১

বাংলাদেশ



গেজেট

অতিরিক্ত সংখ্যা  
কর্তৃপক্ষ কর্তৃক প্রকাশিত

বৃহস্পতিবার, আগস্ট ২৯, ২০২৪

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
গৃহায়ন ও গণপূর্ত মন্ত্রণালয়  
পরিকল্পনা শাখা-৩

প্রজ্ঞাপন

তারিখ: ০৬ ভাদ্র ১৪৩১ বঙ্গাব্দ/ ২১ আগস্ট ২০২৪ খ্রিষ্টাব্দ

নং ২৫.০০.০০০০.০৩২.১৪.০১৬.১৫(অংশ-১)/৩৬৪—তদানিন্তন পূর্ব পাকিস্তান সরকারের ১৭ জুলাই ১৯৬৫ তারিখের ৪৬৪ নং স্মারকে গঠিত ‘Urban Development Directorate’ এর কার্যাবলির ২নং ক্রমিকে বর্ণিত “to prepare and co-ordinate regional plans, master plans and detailed layout and site plans for the existing as well as the new urban centres excluding the areas covered by the present town development authorities of Dhaka, Chittagong and Khulna” এর প্রদত্ত ক্ষমতাবলে গণপ্রজাতন্ত্রী বাংলাদেশ সরকার “পায়রা বন্দর নগরী ও কুয়াকাটা উপকূলীয় অঞ্চলের পরিবেশ পর্যটনভিত্তিক সমন্বিত পরিকল্পনা প্রণয়ন” শীর্ষক প্রকল্পের আওতায় মাস্টার প্ল্যান (১টি রিজিওনাল প্ল্যান, ০৭ টি স্ট্রাকচার প্ল্যান, ০৭টি রুরাল এরিয়া প্ল্যান, ০৬টি আরবান এরিয়া প্ল্যান এবং এ্যাকশন এরিয়া প্ল্যান ফর সোনার চর এক্সক্লুসিভ টুরিস্ট জোন) প্রণয়ন সম্পন্ন করিয়াছে।

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( ২৪৪৫১ )

মূল্য : টাকা ৪.০০

**বিশেষ দৃষ্টব্যঃ** অনুমোদিত প্ল্যানসমূহ নগর উন্নয়ন অধিদপ্তরের প্রধান কার্যালয়, বরিশাল আঞ্চলিক অফিস, বরগুনা ও পটুয়াখালী জেলার জেলা প্রশাসকের কার্যালয় এবং সংশ্লিষ্ট উপজেলা ও পৌরসভা কার্যালয়ে জনসাধারণের পরিদর্শনের সুবিধার্থে সংরক্ষিত থাকিবে।

রাষ্ট্রপতির আদেশক্রমে

মোহাম্মদ খাদেমুর রহমান  
সহকারী সচিব।

## **Executive Summary**

The development of the Rural Area Plan for Patharghata Upazila has been influenced by the policies, strategies, and planning standards outlined in the Structure Plan. Six unions of the Patharghata Upazila were taken into account when creating the rural area plan. The local government at the Upazila level has no prior experience putting such plans that integrate rural areas into action. There is no comparable expertise with carrying out physical designs at the rural level. This project's plan preparation will be their first opportunity to put physical plans into action at the Patharghata Upazila union level.

Rural Area Plan aims to guide the physical development of Patharghata Upazila including all the economic and social activities. Considering the local people demand from the PRA and based on the planning standards, about 91.74 acres of land has been proposed for educational facilities purpose, about 46.43 acres of land has been proposed for commercial activities purpose, about 3.01 acres of land has been proposed for health facilities purpose, about 16.22 acres of land has been proposed for open space and recreational facilities purpose, about 54.97 acres of land has been proposed for community facilities purpose, about 2763.96 acres of land has been proposed for Transportation and Communication purpose, about 17360.44 acres of land has been proposed for Rural Settlement purpose.

It should be remembered that this development plan serves as a methodical blueprint for growth development and management. Authorities, responsibilities, and the extent of planned development in each Upazila Parishad and Union Parishad region are specified by the current Local Government Acts. Legal obligations and opportunities for coordinating development within the Upazila exist for the Upazila Parishad.

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## **CHAPTER- 1: INTRODUCTION**

### **1.1 Introduction**

Rural Area Plan is prepared as per the Terms of Reference (TOR) of the project. The policies, strategies, and planning standards adopted in the Structure Plan have guided the process of preparing the Rural Area Plan for Patharghata Upazila.

### **1.2 Background of Rural Area Plan**

The process of raising the standard of living and economic security of rural residents is known as rural development. Rural Area Plan, which addresses the development of rural areas within the project area, offers a long-term strategy for 10 years. The People's Republic of Bangladesh's Prime Minister emphasizes the importance of providing all metropolitan amenities for rural residents in order to improve their quality of life. In order to realize the "Amar Gram-Amar Shohar" vision, the government must provide rural residents with access to urban amenities such as electricity, increased trade and business, development of all forms of communication, planned housing and sewage systems, clean drinking water, healthcare facilities, and internet and technology-based communication. This chapter discusses the current land use scenario, projected land requirements for the rural area plan, a list of the most pressing issues discovered during the rural sector PRA, and suggested facilities for the rural area.

### **1.3 Objectives of Rural Area Plan**

Rural Area Plan will be a statutory guide and control for development of the six unions of Patharghata Upazila. This plan is prepared on mauza map with sectoral development proposals. The Rural Area Plan is aimed to determine the present and future functional structure of the rural area, including land use and provide infrastructure proposals for improving and guiding development of rural area of Patharghata Upazila. The objectives of the plan will be attained through orderly location of rural land uses and location of different services and facilities.

### **1.4 Area Coverage under Rural Area Plan**

Patharghata Upazila is located at Barguna District in the southern part of the country. Patharghata became police station in 1925. It was upgraded to an upazila on the November, 1983. Nothing is definitely known about the origin of the name of this upazila. But there is a



popular hearsay that the famous saint Khawaja Khan Jahan Ali took rest at the river station (ghat) situated at the meeting place of the rivers. The upazila might have derived its name from the very words Pathar and Ghat. Baleshwar and Bishkhali while carrying stones (Pathar) from Chittagong to Bagerhat for constructing the Sat Gombuj Mosque.

The Patharghata Upazila consists of 7 Unions and one Pourashava with an area 318.38 sq.km (1804.34 acres).

*Table- 1: Union-wise Area of Patharghata Upazila*

<b>Union Name</b>	<b>Area (Acre)</b>	<b>Area (Sq. km)</b>
Char Duani	12874.94	52.10
Kakchira	7967.75	32.24
Kalmegha	10360.67	41.93
Kathaltali	10067.79	40.74
Nachna Para	5580.72	22.58
Pourashava	2195.61	8.89
Patharghata	23458.80	94.93
Raihanpur	6167.39	24.96
<b>Total</b>	<b>78673.67</b>	<b>318.38</b>



## CHAPTER- 2: EXISTING LANDUSE SCENERIO

### 2.1 Introduction

The current chapter of the report is about Rural Area Plan covering its development plan proposals. This chapter also describes the existing land use scenario; list of major problems compiled from rural PRA, functional hierarchy of different unions of rural area, future land requirement for different facilities, and proposed facilities for rural area of Patharghata Upazila.

### 2.2 Existing Land Use Pattern

Except for the core area of Pourashava, topographically, Patharghata Upazila is mainly rural in nature. Some Unions are mainly containing urban characteristics. But in recent years, communication development has already impacted the growth and expansion of activities within the paurashava. The existing land use of the Upazila shows that 56.55 percent of the land is used for agricultural activity, and other mentionable land-use area are: 17.51 percent rural settlement, 7.62 percent vacant land and 6.99 percent forest area. Table 18 illustrates existing landuse statistics in detail.

Table- 2: Existing Landuse of Patharghata Upazila

Landuse Category	Area	%
Administrative/Public Services	14.56	0.02
Agriculture	33323.88	56.55
Commercial	19.11	0.03
Community Service	50.08	0.08
Educational/Research Institute	110.71	0.19
Forest	4120.60	6.99
Growth Centre	86.71	0.15
Health Service	3.37	0.01
Manufacturing/Processing	55.96	0.09
Mixed Use	5.09	0.01
Open Space & Recreation	3.39	0.01
Rural Settlements	10318.41	17.51
Service Activity	18.77	0.03
Transportation & Communication	764.55	1.30
Urban Residential	580.68	0.99
Vacant Land	1455.62	2.47
Vegetation	4491.04	7.62
Waterbody	3502.72	5.94
<b>Total</b>	<b>58925.23</b>	<b>100.00</b>

Source: PKCP project, UDD, 2018

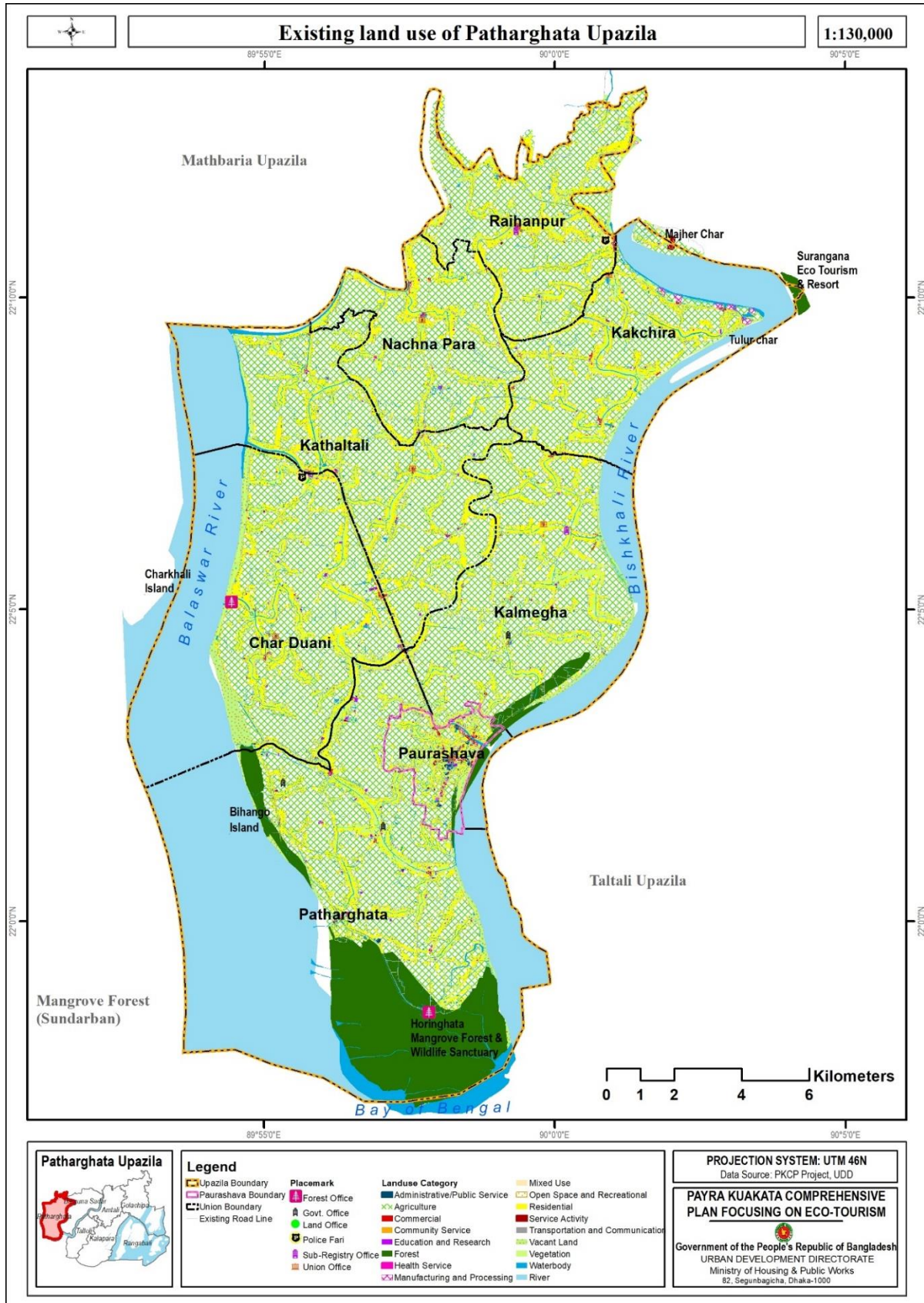


Figure 2: Existing land use

Source: PKCP project, UDD, 2018

## **CHAPTER- 3: TRANSPORTATION AND TRAFFIC MANAGEMENT GUIDELINES**

### **3.1 Introduction**

This section of the Rural Area Plan (RAP) intends to set out some guidelines for the transport sector development and its relevant institutional setup. The major areas of concern are network and infrastructure, traffic regulations, services, and institutional aspect. Also, different instructions are grouped under individual guidance notes on different topics.

The critical question here is how far the scenario of the future can be predicted with some level of accuracy. Specially, in a sector like transport that is heavily dependent upon technology, the underlying assumptions can shift quickly that can turn much of the decisions invalid.

### **3.2 Existing Conditions of Transportation Facilities**

A comprehensive transportation study is undertaken to investigate the existing transportation infrastructure, transportation modes and modal share scenario of Patharghata Upazila and to estimate the anticipated transportation needs of the town up to the year 2031. Accordingly, the transportation study is conducted to determine the present travel patterns and the characteristics of existing transportation facilities to forecast the future travel demand and develop a transportation guidelines. Traffic volume survey has been conducted to find out the scenario of average daily traffic, peak hour traffic and off-peak hour traffic. Origin-Destination survey has been carried out to know the pattern of traffic generation, traffic distribution, traffic modes and traffic costing, travel behavior etc. Growth center survey has been conducted at 19 points on Upazila to determine the traffic congestion factors and conditions. Stakeholder interview has been accomplished to understand the traffic conditions in this area and find out the potential decisions to solve traffic problems.

### **3.3 Existing Road Network**

From the transportation survey and public consultation in the PRA session, it is unveiled that congestion is caused by on-street parking, a narrow road network, and a lack of parking. Local people also emphasized how ferry crossings add a significant amount of time to travel. Land use, environmental quality, economic growth and viability and achieving lifestyle

objectives are obvious factors that must be considered in evolving a comprehensive plan. However, there are subtler factors that will have a bearing on the outcome of these comprehensive transportation studies. The condition of existing internal connecting roads is very bad. Traffic congestion occurs during the rainy season and flooding as roads go underwater and become muddy. None availability of parking facilities for vehicles, lack of public transport facilities, unplanned ghat and terminal design, insufficient numbers of ghats and terminals, lack of access to Rivers and Canals that are not properly dredged and narrow roads are major critical issues in the transport sector.

In Patharghata Upazila, considering road length, it is found that the majority of the roads are tertiary category (Table 4) which area mainly Katcha road with narrow road width and bumpy surface. Primary roads directly connect this Upazila with Mathbariya, Bamna and Barguna Sadar Upazila.

Table- 3: Road category of Patharghata Upazila

Category	Length (km)	Percentage (%)
Primary	63.25	5.091
Secondary	84.78	6.824
Tertiary	812.50	65.399
Path	281.84	22.686
<b>Total</b>	<b>1242.38</b>	<b>100</b>

Source: PKCP project, UDD, 2018

From Physical feature survey, it is found that around 53.4% of Roads are katcha in Patharghata upazila and also the total length of katcha roads are longer than others. In patharghata Upazila, only 28.39% of roads are pucca.

Table- 4: Road type based on construction material of roads

Road_Type	Length in m	Length in KM	%
HBB	171033.21	171.03	18.20
Katcha	501904.60	501.90	53.40
Pucca	266790.80	266.79	28.39
<b>Grand Total</b>	<b>939728.61</b>	<b>939.72</b>	<b>100</b>

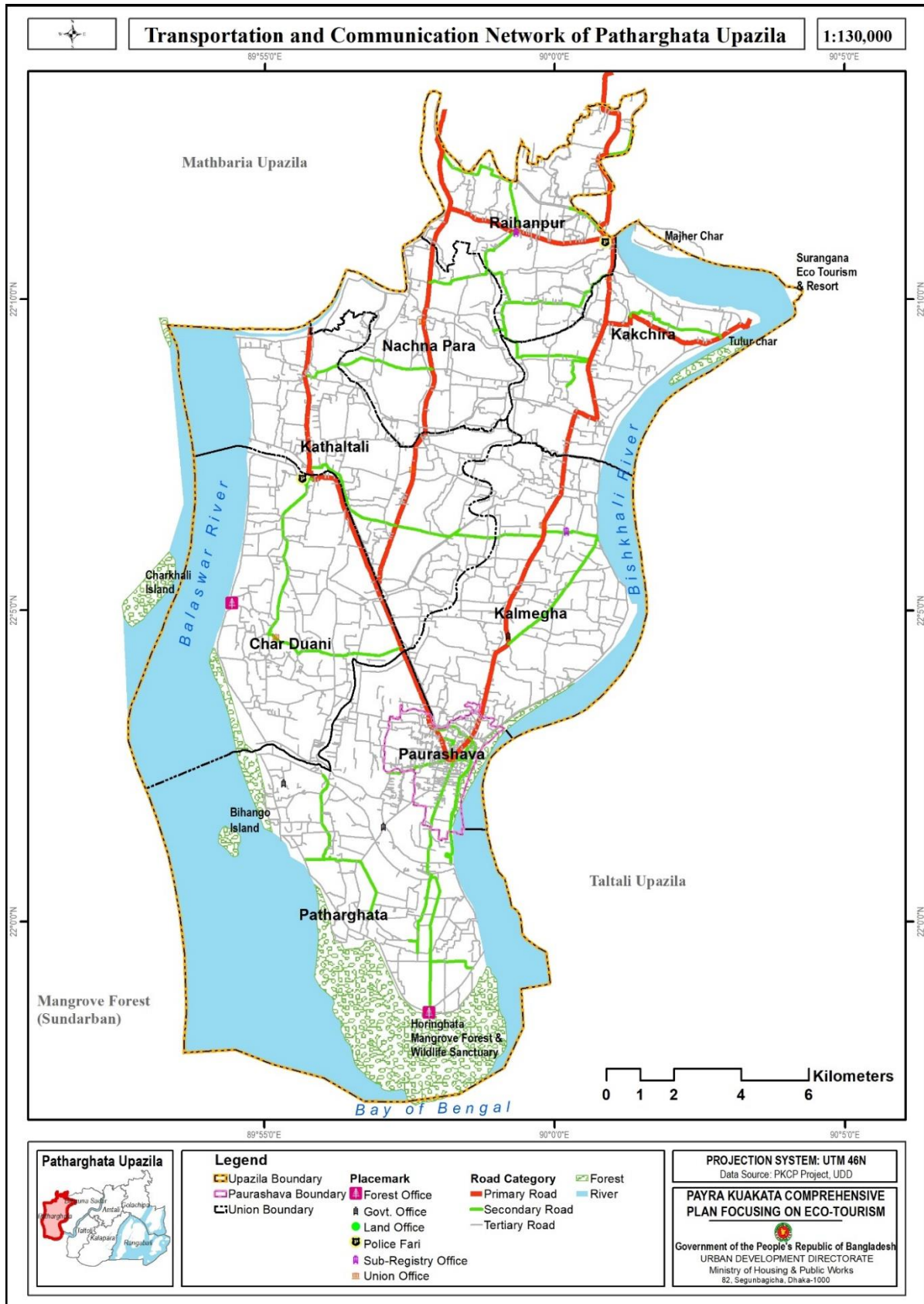


Figure 3: Transportation and communication network of Patharghata Upazila

Source: PKCP project, UDD, 2018

### **3.4 Existing Waterways**

Water transport network of Patharghata Upazila has significant importance in carrying both people and goods. Boat, trawler and launch are used for carrying both passenger and commodity frequently.

### **3.5 Others Transportation System**

At this stage there is no need to propose car way, rail way in this Pourashava.

### **3.6 Transportation Development Plan**

#### **3.6.1 Future Projections and Travel Demand Forecasting**

With the increase of population, demand on travel will be increase with the time. Estimating the demand for transportation facilities and services is one of the most important analysis tasks in transportation planning. The demand includes not only passenger travel but also the movement of goods. Whether conducting a regional transportation planning study or examining the impacts of transportation of a new development site, estimating expected travel demand at some future date is critical point of departure for transportation planning.

According to Transportation survey, The project area is enriched with the water network and people feel comfortable and reliable in water transport so people use water transport for travel even in long distance directly. Patharghata is fully segregated by water route from other upazila say Barguna Sadar or Galachipa so people mainly use water route to travel from these upazilas. From The survey, it is seen that most of the waterways trips around 39% are generated from Patharghata Pourashava to Barguna Upazila and 57% trips are generated from Kakchira Ghata to Barguna.

Vehicular trips are distributed within the upazila mainly in Patharghata and Kakchira which are two well established unions in this upazila. As this upazila is connected with other upazila by zila road and regional highway so trips are distributed to other upazilas and other external area; Barisal, Bhola, Patuakhali etc. From The survey, about 50% motorized trips are generated from Patharghata Bazar to Kakchira Union and 30 trips are generate from Patharghata Bazar to Char-Duani Union. So, it is necessary to improve this roads as planning decision.



### 3.6.2 Road Network Plan

Patharghata is a small town with a very low volume of internal and external traffic movement. Considering traffic volume and discussion with Paurashava authority and PRA, consultants have established a road hierarchy based on the functional area within the Paurashava as well as the internal and external linkage. Existing Access roads will be connected with Tertiary and Secondary roads for better mobility. Following table shows the standard of future development of road network.

Table- 5: Standard for Future Development of the Road Network of Patharghata Paurashava

Landuse Category	Road Classification	Right of Way (RoW)
Circulation Network	Primary Road	80-100 feet
	Secondary Road	60 feet
	Tertiary Road	40 feet
	Access Road	12-20 feet

Table- 6: Proposed Road Network

Road Category	Length (Km)	%
Primary Road	85.17	6.76
Secondary Road	121.31	9.63
Tertiary Road	455.53	36.16
Access Road	597.90	47.46
<b>Total</b>	<b>1259.91</b>	<b>100.00</b>

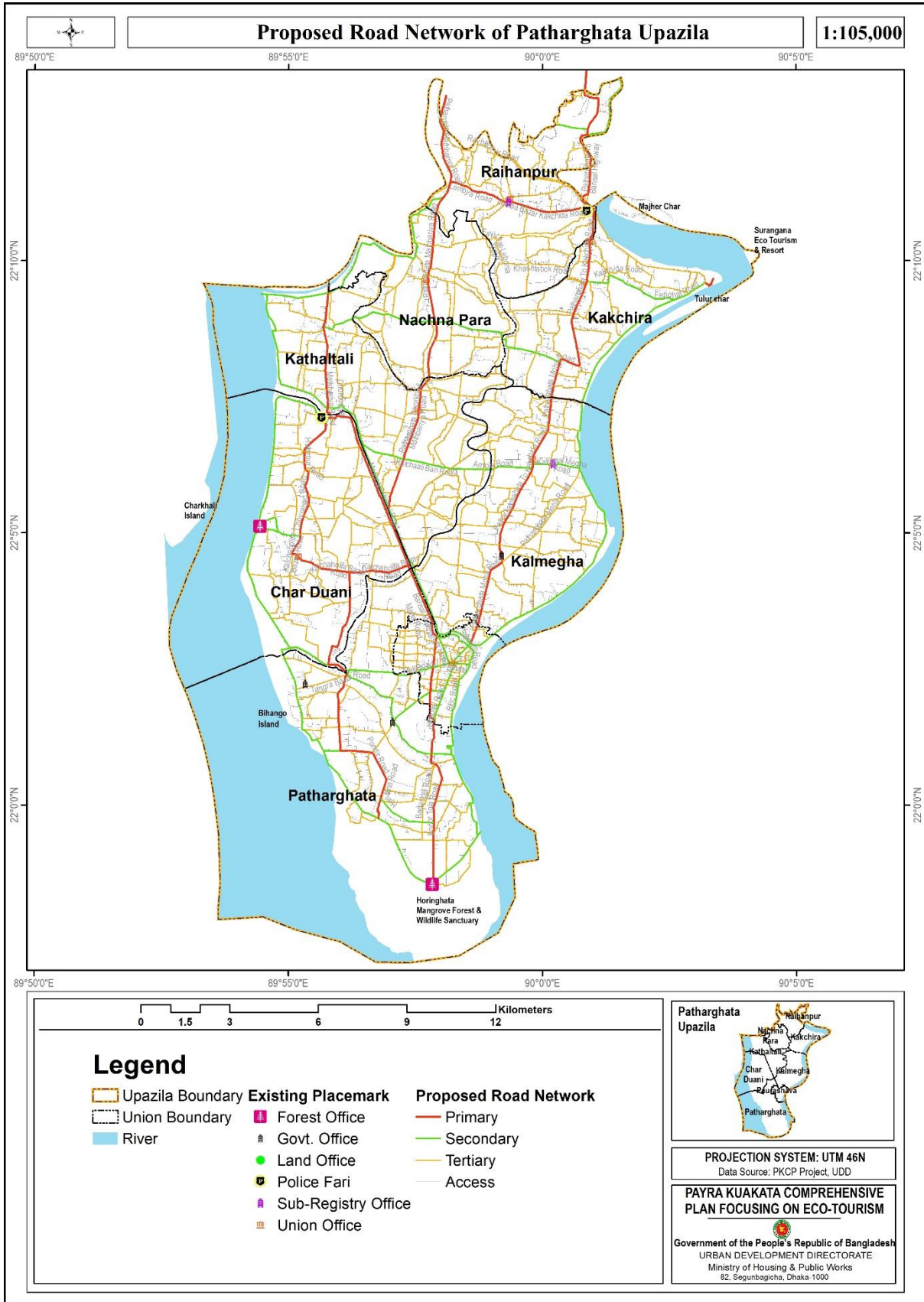


Figure 4: Proposed Road Network

## CHAPTER- 4: DRAINAGE AND ENVIRONMENTAL MANAGEMENT GUIDELINES

This chapter states about existing conditions, Sub-basin catchment area analysis and methodology of Drainage Development Plan. A brief inventory of the existing drainage system of Patharghata has been made. While assessing the drainage conditions, the serviceability, structural conditions, obstruction, siltation, blockages are taken into consideration. And finally describe the drainage and environmental management plan, and its implementation strategies.

### 4.1 Existing Drainage Network

#### 4.1.1 Man-Made Drainage Network

There has only 5.86 km of drainage network at Patharghata Paurashava area. There is no formal drainage network in rural area of this upazila.

#### 4.1.2 Natural Canal & River

Table 7 represents the present scenario of existing waterbody of patharghata Upazila. There is existence of canals, ditches, ponds, fish ponds, and river. Majority of water bodies of this upazila are canals which is 46.66% and Bishkhali is the major river flowing through this Upazila.

*Table- 7: Existing Waterbody of Patharghata Upazila*

<b>Waterbody_Type</b>	<b>Total Area (sqm)</b>	<b>%</b>
<b>Canal</b>	5169022.68	46.66
<b>Ditch</b>	402493.80	3.63
<b>Fish pond</b>	2960579.06	26.72
<b>Pond</b>	2197032.40	19.83

*Source: PKCP project, UDD, 2018*

There are linkages between natural and man-made drains. But how much effective and active the linkage is with the poorly maintained man-made drains is a question. Almost half of the depth of the man-made drain is filled with solid waste; as a result, the channel is not functioning properly.

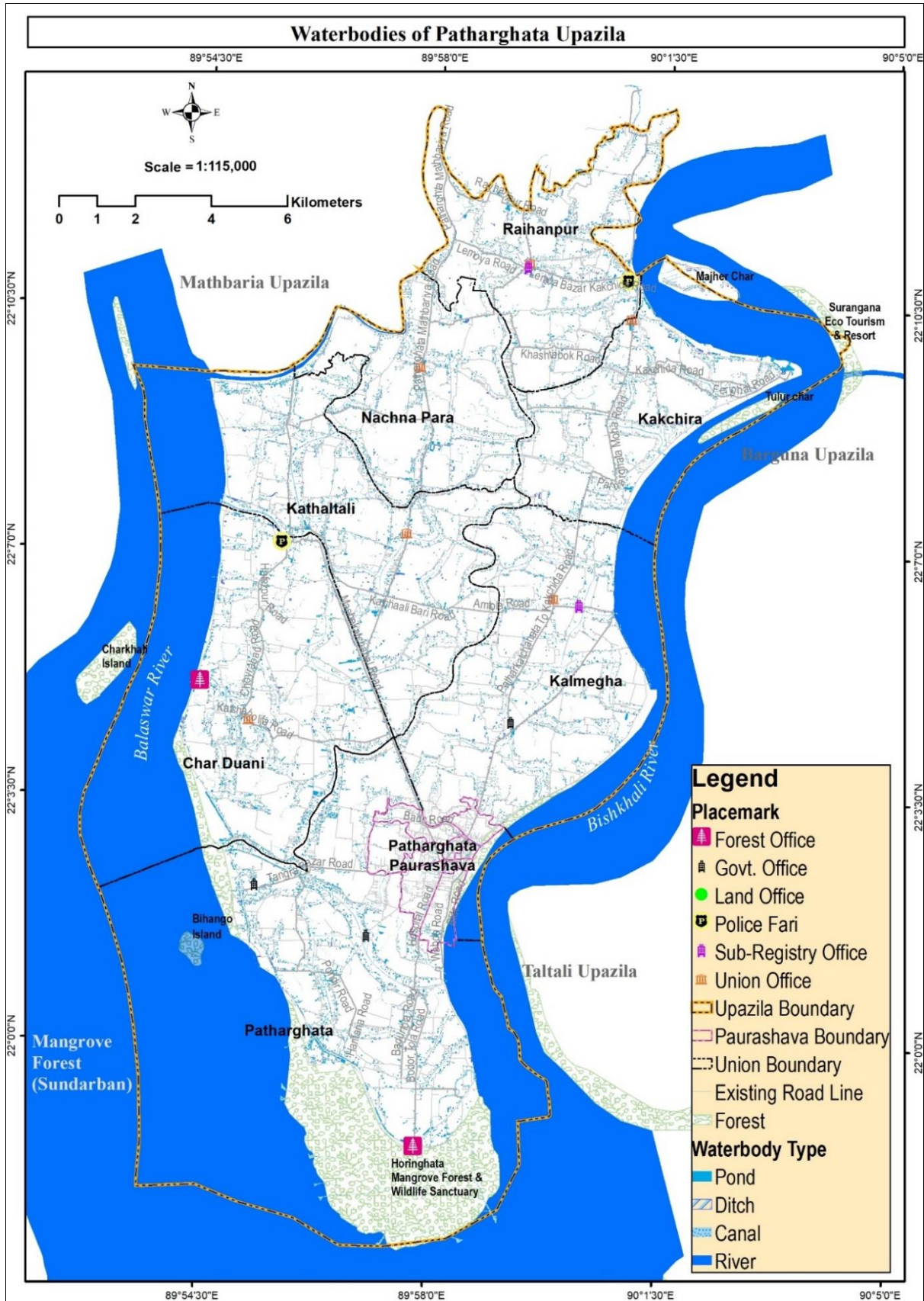


Figure 5: Existing Waterbody Type in the Upazila

## CHAPTER- 5: RURAL AREA PLAN

### 5.1 Introduction

This chapter contains Rural Area Plan of each individual Union. First, the issues prevailing in different Unions have been briefly described followed by description of Development Proposals in Rural Area Plan for each Union.

### 5.2 Background

The Rural Area Plans are prepared under the framework of Structure Plan and Regional Plan. The Rural Area Plans contain details of development proposals at Union level including the problems and opportunities existing therein and also include the proposals made in the upper level plan that is in the Rural Area Plan. The Rural Area Plans have been formulated for execution within a period of 10 years.

Rural Area Plan is a vital part of the current plan package as far as Strategic development and development control is concerned. Absence of Rural Area Plan not only hampers undertaking of development projects by planning authority, but also leads to uncontrolled and unwanted Strategic development in the private sector. Land use zoning is also provided in the Rural Area Plan to enable detailed view of proposed land use and development.

### 5.3 Land Use Categories in the Rural Area Plan

The Rural Area Plan (RAP) is prepared with a number of detailed land use categories to guide the implementation of the Rural Area Plan in a planned manner. Separate land use categories are considered for the rural area of Patharghata Upazila. The land use categories considered for the Rural Area Plan of Patharghata Upazila are provided in Table 8.

*Table- 8: Land Use Categories Considered for the Rural Area Plan of Patharghata Upazila*

Land Use Categories	Description of the Categories
Administrative	Administrative area covers all kinds of government and nongovernment offices in the project area.
Agricultural Area	Agricultural land (also agricultural area) denotes the land suitable for agricultural production, both crops and livestock. It includes land left temporarily fallow; land under permanent crops (e.g., fruit, plantations); areas for natural grasses and grazing of livestock.
Circulation Network	All types of roadways, walkways, railways.
Commercial Area	Commercial areas generally contain one or more of a wide

Land Use Categories	Description of the Categories
	variety of uses that includes business uses, offices, hotels, public houses, and limited forms of retailing. Mainly bazar, shopping agglomerations and areas suitable for commercial development have been placed under this category.
Community Facilities	This land use covers all categories of community facilities and establishments like mosque, temple, church, Eidgah, graveyard, community center etc.
Education and Research	Land belonging to educational use includes all categories of educational and training institutions. Educational institute like Medical College, University etc. have been included in this zone.
Forest Area	All kinds of agglomeration of trees and existing forest area
Industrial Area	Processing and manufacturing industries
Health Services	The health service zone includes all existing health service establishments and the areas proposed for health facilities
Mixed Use Area	Mixed Use area will allow residential structures together with commercial uses and other services and facilities
Open Space and Recreation	Open space covers the parks, play fields and the existing open space areas like, forest, park, etc.
Residential Area	Different categories of housing areas have been proposed in the development plan under the categories of residential use. These categories have been made for promotion of housing through private and public initiatives. The residential category includes all areas of future residential development, public housing, hotels and lodging and also the existing housing areas.
Transportation and Communication	Transport facilities like, bus and truck terminals have been included in this zone
Utility Services	Public utilities for various services like, fire service, post office, solid waste transfer station, solid waste disposal center, electric substation, filling station, etc. fall under this category
Water bodies	Khal, irrigation canal and river are treated as water bodies.
Miscellaneous	Miscellaneous

## 5.4 Rural Area Plan for Char Duani Union

### 5.4.1 Demography

Char Duani Union is situated on the western part of the Upazila and Kathaltali union is on the north, Patharghata on the south, Kalmegha union on the east and Baleshwar River on the west.

Present population of the union is 26,438 (2022) and it will 30,778 in the year 2031 and 32,712 in 2041. Density of population is 707 persons per acre and it will be 591 in the year 2031.

Table- 9: Population Statistics of Char Duani Union

Item	2011	2022	2031	2041
Area (sq. km)	52.10			
Population	24,563	26,438	30,778	32,712
Density	471	507	591	628

### 5.4.2 Review of Existing Land Use

Out of total 12874.94 acres of land of this union, more than 1558.96 acres of land i.e. 12.1% is used in residential. The agricultural use with 4789.83 acres, occupies 37.2% of total land, water bodies 41.57%, commercial use 0.54%, Forest 0.08% and Transportation and Communication 0.26%. Only 0.14% of land is used as education facilities.

Table- 10: Existing Landuse category in Char Duani Union

Landuse Category	Area (Acre)	%
Administrative/Public Service	0.87	0.007
Agriculture	4789.83	37.203
Commercial	6.93	0.054
Community Service	4.99	0.039
Education and Research	18.54	0.144
Forest	11.22	0.087
Health Service	0.03	0.000
Manufacturing and Processing	0.84	0.007
Residential	1558.96	12.108
Service Activity	1.66	0.013
Transportation and Communication	3.40	0.026
Vacant Land	491.53	3.818
Vegetation	633.68	4.922
Waterbody	5352.47	41.573
<b>Total</b>	<b>12874.94</b>	<b>100.000</b>

### 5.4.3 Rural Area Plan Proposals

#### 5.4.3.1 Proposed Land Use Zoning

The category wise proposals are presented here. Table 11 shows the amount of land uses in Char Duani Union. Map shows proposed land use of Char Duani Union.

Table- 11: Proposed Land Uses of Char Duani Union

Landuse Category	Area (Acre)	%
Administrative and Public Service	5.06	0.039
Agriculture	4033.43	31.328
Beach	-	0.000
Char	-	0.000
Commercial	7.98	0.062
Community Service	5.44	0.042
Costal Afforestation and Foreshore	508.25	3.948
Economic Region	-	0.000
Education and Research	17.65	0.137
Forest	269.65	2.094
Health Facilities	0.83	0.006
Manufacturing and Processing	0.71	0.006
Open Space and Recreation	4.82	0.037
Rural Settlement	2718.51	21.115
Transportation and Communication	435.42	3.382
Waterbody	4867.18	37.804
<b>Total</b>	<b>12874.94</b>	<b>100.000</b>

#### 5.4.3.2 Development Proposals for Char Duani Union

The consultant proposes some urban facilities in Char Duani Union. It includes Desalination Plant, Pond Sand Filter, Park, Public Toilet, Ho etc. The details of the proposal is given in the table below.

Table- 12: Development Proposals for Char Duani Union (Mouza Wise)

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
Char Duani	Administrative and Public Service	Desalination Plant	Char Duani	22	3, 4	2.09	956, 957, 1034, 1104, 1105, 1106
			Gabbaria	24	0	0.48	383, 386, 389
			Hoglapasa	20	2	0.78	372, 374, 408, 410, 413, 436, 437, 438, 439
			Matherkhal	25	1	0.44	26, 27, 28, 472



Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
		Pond Sand Filter	Hoglapasa	20	4	1.01	814, 816, 817, 818, 819
			Saherabad	39	2	0.31	571
	Community Service	Community Centre	Char Duani	22	2	0.42	802, 803, 810, 811
		Public Library	Char Duani	22	2	0.12	797, 811
		Public Toilet	Hoglapasa	20	2, 3	0.11	374, 439, 470, 624, 667
		Waste Dumping Site	Char Duani	22	2	0.49	829, 833, 884
			Hoglapasa	20	2	0.21	372, 433, 436
	Education and Research	School & Cyclone Shelter	Char Duani	22	5	0.68	1595, 1596, 1597, 1600, 1601
	Health Facilities	Hospital	Char Duani	22	2	0.90	636, 646, 647, 650, 651, 652, 656
	Open Space and Recreation	Park	Char Duani	22	2	3.70	627, 629, 630, 631, 632, 633, 634, 635, 636, 644, 646, 647, 768
			Kanthaltali	18	6	0.45	6838
		Playground	Char Duani	22	2	1.74	645, 648, 649, 653, 733, 739, 741, 742, 743, 745, 746, 750
	Transportation and Communication	Auto Stand	Char Duani	22	2	0.43	810, 811
		Rickshaw Stand	Matherkhal	25	1	0.06	25, 26

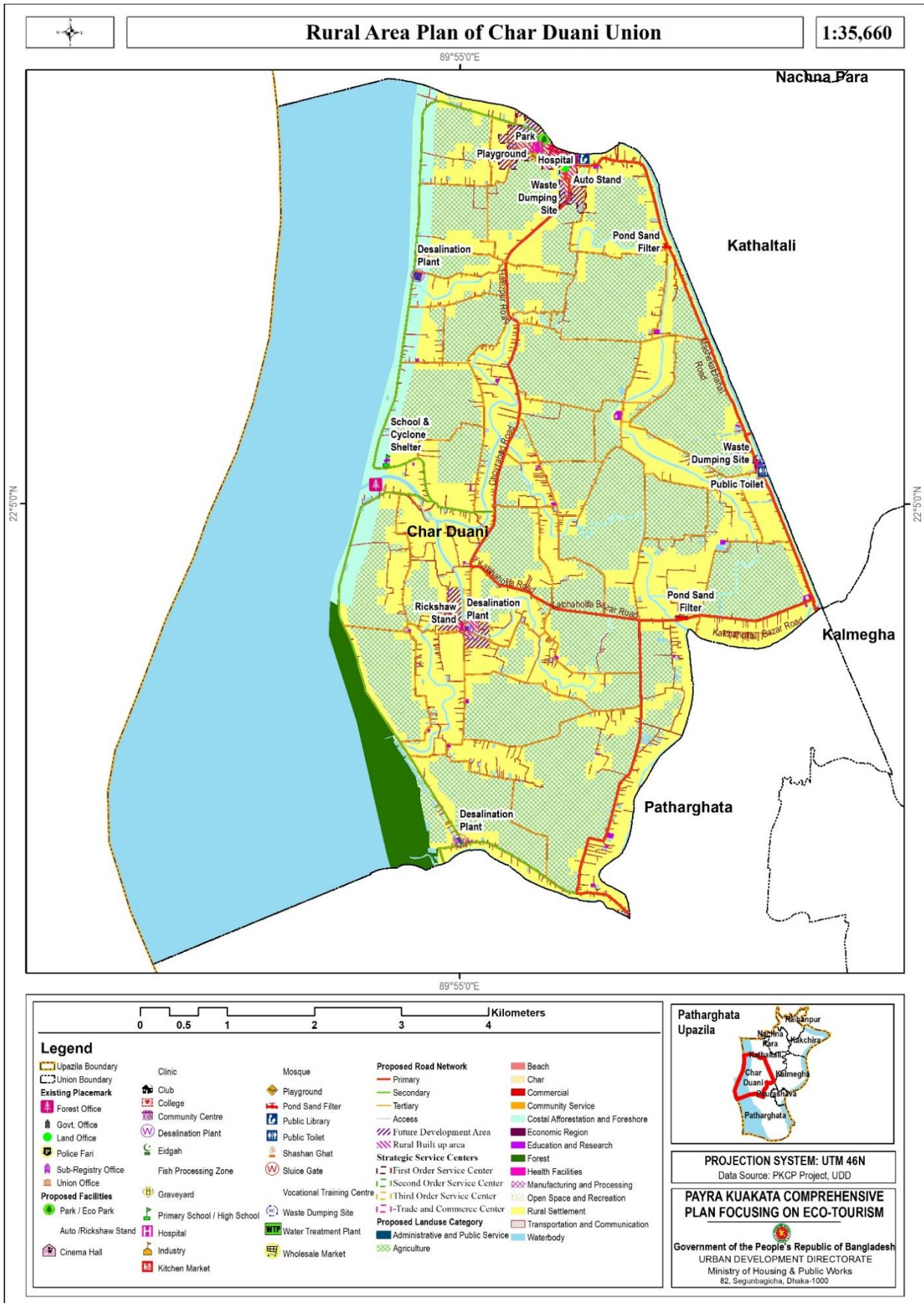


Figure 6: Rural Area Plan for Char Duani Union

## 5.5 Rural Area Plan for Kakchira Union

### 5.5.1 Demography

Kakchira Union is situated on the north-eastern part of the Upazila and Raihanpur union is on the north, Kalmegha Union on the south, Biskhali River on the east and Nachna Para union on the west.

Present population of the Union is 21,722 (2022) and it will 25,806 in the year 2031 and 27,359 in 2041. Density of population is 674 persons per acre and it will be 800 in the year 2031.

Table- 13: Population Statistics of Kakchira Union

Item	2011	2022	2031	2041
Area (Sq. km)	32.24			
Population	20,720	21,722	25,806	27,359
Density	643	674	800	848

### 5.5.2 Review of Existing Land Use

Out of total 7967.75 acres of land of this union, more than 1152.43 acres of land i.e. 14.46% is used in residential. The agricultural use with 3154.66 acres, occupies 39.59% of total land, water bodies 39.7%, commercial use 0.13%, Forest 0.344% and Transportation and Communication 0.018%. Only 0.002% of land is used as health facilities.

Table- 14: Existing Landuse category in Kakchira Union

Landuse Category	Area (Acre)	%
Administrative/Public Service	0.24	0.003
Agriculture	3154.66	39.593
Commercial	10.79	0.135
Community Service	4.39	0.055
Education and Research	8.61	0.108
Forest	27.40	0.344
Health Service	0.17	0.002
Manufacturing and Processing	24.35	0.306
Residential	1152.43	14.464
Service Activity	3.57	0.045
Transportation and Communication	1.42	0.018
Vacant Land	75.73	0.950
Vegetation	340.28	4.271
Waterbody	3163.70	39.706
<b>Total</b>	<b>7967.75</b>	<b>100.000</b>

### 5.5.3 Rural Area Plan Proposals

#### 5.5.3.1 Proposed Land Use Zoning

The category wise proposals are presented here. Table 15 shows the amount of land uses in Kakchira Union. Map shows proposed land use of Kakchira Union.

Table- 15: Proposed Land Uses of Kakchira Union

Landuse Category	Area (Acre)	%
Administrative and Public Service	1.06	0.013
Agriculture	2237.97	28.088
Beach	-	0.000
Char	241.79	3.035
Commercial	6.59	0.083
Community Service	14.95	0.188
Costal Afforestation and Foreshore	573.97	7.204
Economic Region	-	0.000
Education and Research	7.09	0.089
Forest	26.97	0.338
Health Facilities	0.16	0.002
Manufacturing and Processing	63.36	0.795
Open Space and Recreation	0.61	0.008
Rural Settlement	1834.38	23.023
Transportation and Communication	298.43	3.745
Waterbody	2660.42	33.390
<b>Total</b>	<b>7967.75</b>	<b>100.000</b>

#### 5.5.3.2 Development Proposals for Kakchira Union

The consultant proposes some urban facilities in Kakchira Union. It includes Desalination Plant, Cinema Hall, Club, Graveyard, College, Auto Stand etc. The details of the proposal is given in the table below.

Table- 16: Development Proposals for Kakchira Union (Mouza Wise)

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
Kakchira	Administrative and Public Service	Desalination Plant	Kagchira	5	2	0.38	1835
			Rupdon	7	1, 2 , 6	0.95	439, 440, 575, 960, 8064, 8135, 8138, 8139, 8646
	Community Service	Cinema Hall	Rupdon	7	5	0.40	6833, 6834, 6835, 6836, 6837
			Club	Kalipur (Part)	8	3	0.05

		Rupdon	7	6	0.06	8539	
	Community Centre	Rupdon	7	6	0.14	8422, 8424, 8741	
	Eidgah	Rupdon	7	5	0.35	6713, 6714, 6715	
	Graveyard	Bain Chutki	6	4	0.27	2103	
		Kalipur (Part)	8	1, 3	0.26	497, 2001, 2002	
		Rupdon	7	3, 5	0.09	1769, 1777, 2020, 6729, 6736, 6866, 6875	
	Mosque	Kagchira	5	1	0.12	114, 115, 757	
		Lemua (Part)	4	4	0.11	3558	
	Public Toilet	Kalipur (Part)	8	3	0.01	3872	
		Rupdon	7	1, 3, 5	0.18	310, 311, 1949, 1953, 1954, 6810, 6812, 6813, 6849	
	Water Treatment Plant	Kagchira	5	1	9.23	143, 149, 318, 319, 343, 344, 347, 348, 349, 350, 351, 352, 353, 354, 356, 357, 359, 363, 365, 424, 425, 426, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 442, 443, 444, 445, 447, 768	
	Education and Research	College	Kalipur (Part)	8	3	0.03	3872
		Rupdon		7	5	0.25	6846, 6849
	Health Facilities	Clinic	Rupdon	7	2	0.10	812, 815, 816, 817, 923
	Manufacturing and Processing	Industry	Kagchira	5	4, 5	64.07	3022, 3028, 3029, 3038, 3039, 3040, 3041, 3674, 3676, 3677, 3678, 3680, 3681, 3682, 3683, 3697, 3698, 3699,

							3700, 3701, 3704, 3705, 3706, 3707, 3708, 3709, 3710, 3711, 3712, 3713, 3714, 3715, 3716, 3717, 3718, 3719, 3720, 3721, 3722, 3724, 3728, 3784, 3785, 3786, 3787, 3788, 3789, 3790, 3791, 3792, 3793, 3794, 3795, 3796, 3797, 3798, 3799, 3800, 3801, 3804, 3805, 3806, 3822, 3823, 3824, 3825, 3826, 3827, 3828, 3829, 3830, 3831, 3832, 3835, 3836, 3837, 3838, 3839, 3840, 3841, 3842, 3843, 3844, 3845, 3846, 3847, 3848, 3849, 3850, 3851, 3852, 3853, 3854, 3855, 3856, 3857, 3858, 3859, 3860, 3861, 3862, 3863, 3864, 3865, 3866, 3867, 3868, 3869, 3870, 3871, 3872, 3873, 3874, 3875, 3878, 3879,
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							3880, 3881, 3902, 3903, 3904, 3905, 3906, 3928, 3929, 3939, 3940, 3941, 3942, 3943, 4114, 4117, 4134, 4149
	Open Space and Recreation	Park	Rupdon	7	5	0.61	6846, 6847, 6848
	Transportation and Communication	Auto Stand	Rupdon	7	3, 6	0.19	1948, 1949, 8111

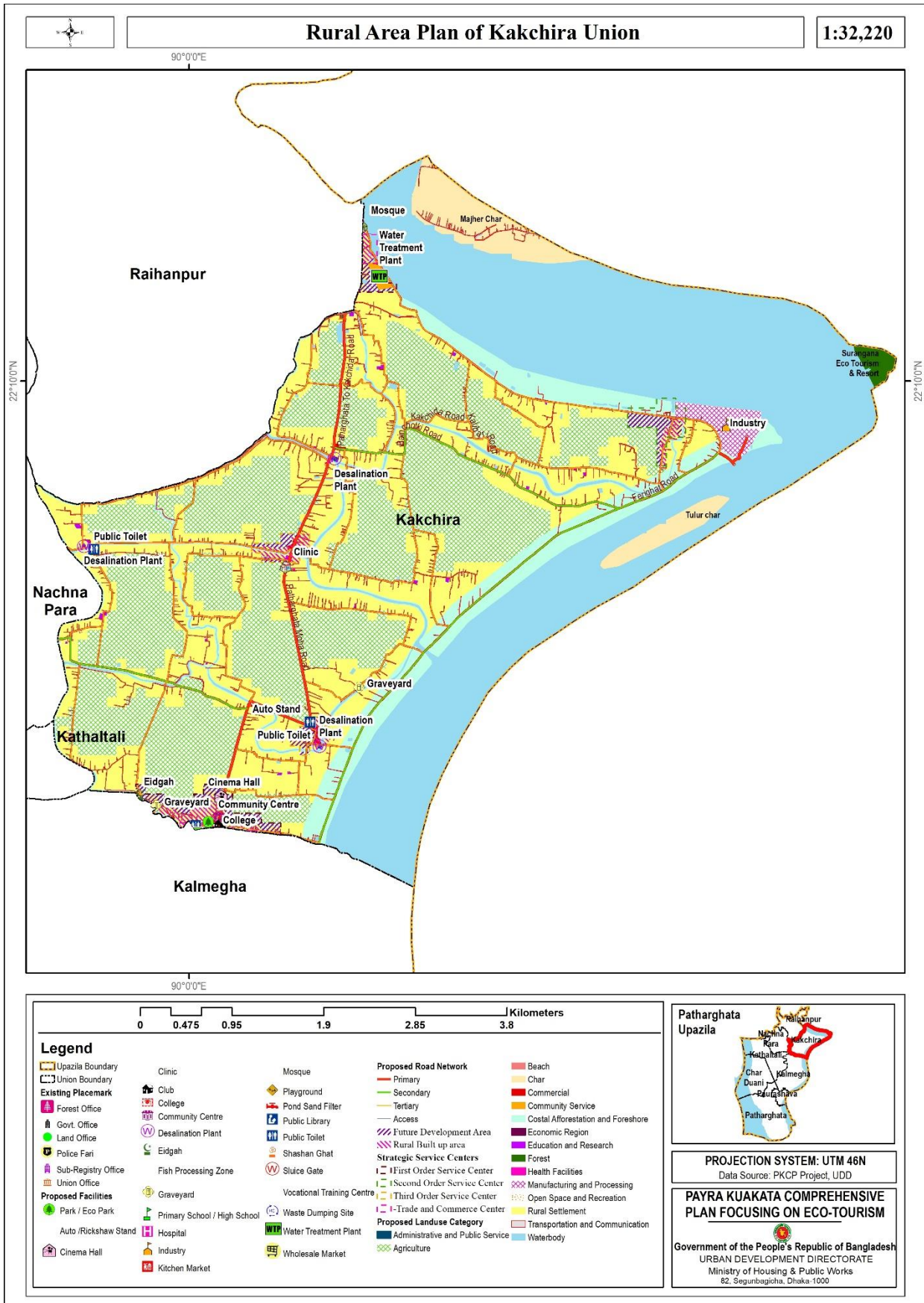


Figure 7: Rural Area Plan for Kakchira Union



## 5.6 Rural Area Plan for Kalmegha Union

### 5.6.1 Demography

Kalmegha Union is situated on the middle eastern part of the Upazila and Kakchira Union is on the north, Pourashava area on the south and Char Duani and Kathaltali Union is on west and Biskhali River is on the east. Present population of the Union is 28,785 (2022) and it will 32,357 in the year 2031 and 34,378 in 2041. Density of population is 687 persons per acre and it will be 772 in the year 2031.

Table- 17: Population Statistics of Kalmegha Union

Item	2011	2022	2031	2041
Area (Sq. km)	41.93			
Population	25,894	28,785	32,357	34,378
Density	618	687	772	820

### 5.6.2 Review of Existing Land Use

Out of total 10360.67 acres of land of this Union, more than 1301.27 acres of land i.e. 12.56% is used in residential. The agricultural use with 5331.81acres, occupies 51.46% of total land, water bodies 24.41%, commercial use 0.032%, Forest 2.95% and Transportation and Communication 0.02%. Only 0.002% of land is used as health facilities.

Table- 18: Existing Landuse category in Kalmegha Union

Landuse Category	Area (Acre)	%
Administrative/Public Service	0.18	0.002
Agriculture	5331.81	51.462
Commercial	3.36	0.032
Community Service	4.07	0.039
Education and Research	5.60	0.054
Forest	305.67	2.950
Health Service	0.20	0.002
Manufacturing and Processing	0.38	0.004
Residential	1301.27	12.560
Service Activity	0.62	0.006
Transportation and Communication	2.25	0.022
Vacant Land	139.92	1.350
Vegetation	736.59	7.110
Waterbody	2528.76	24.407
<b>Total</b>	<b>10360.67</b>	<b>100.000</b>

### 5.6.3 Rural Area Plan Proposals

#### 5.6.3.1 Proposed Land Use Zoning

The category wise proposals are presented here. Table 19 shows the amount of land uses in Kalmegha Union. Map shows proposed land use of Kalmegha Union.

Table- 19: Proposed Land Uses of Kalmegha Union

Landuse Category	Area (Acre)	%
Administrative and Public Service	3.69	0.036
Agriculture	4051.78	39.107
Beach	-	-
Char	-	-
Commercial	3.61	0.035
Community Service	6.26	0.060
Costal Afforestation and Foreshore	555.62	5.363
Economic Region	260.74	2.517
Education and Research	7.42	0.072
Forest	-	-
Health Facilities	1.08	0.010
Manufacturing and Processing	94.72	0.914
Open Space and Recreation	0.28	0.003
Rural Settlement	2994.43	28.902
Transportation and Communication	443.81	4.284
Waterbody	1937.24	18.698
<b>Total</b>	<b>10360.67</b>	<b>100.000</b>

#### 5.6.3.2 Development Proposals for Kalmegha Union

The consultant proposes some urban facilities in Kalmegha Union. It includes High School, Cyclone Shelter, Kitchen Market, Public Toilet, Waste Dumping Site etc. The details of the proposal is given in the table below.

Table- 20: Development Proposals for Kalmegha Union (Mouza Wise)

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
Kalmegha	Administrative and Public Service	Desalination Plant	Bara Patharghata	11	1	0.25	68, 69, 79
			Kalipur (Part)	8	2, 4	3.30	764, 792, 793, 794, 844, 845, 907, 909, 911, 914, 3208, 3209, 3210, 3211, 3212, 3213, 3278
	Commercial	Kitchen	Kalmegha	9	2	0.28	588, 642

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
	al	Market					
	Community Service	Cinema Hall	Kalipur (Part)	8	3	0.29	2072, 2073
		Public Library	Kalipur (Part)	8	3	0.27	2671, 2672, 2675
		Public Toilet	Chhanbania	10	3	0.05	1268, 1271
		Waste Dumping Site	Kalipur (Part)	8	3	0.29	2072, 2073, 2077
		Water Treatment Plant	Kalipur (Part)	8	3	1.86	2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2072, 2075, 2076, 3872
				Rupdon	7	5	0.06
		Education and Research	High School	Kalipur (Part)	8	3	0.74
	School & Cyclone Shelter		Chhanbania	10	3	1.64	1266, 1267, 1268, 1269, 1271
	Health Facilities	Clinic	Kalipur (Part)	8	3	0.21	2016, 2017, 2671
		Hospital	Kalipur (Part)	8	3	0.83	2222, 2223, 2224, 2225, 2226, 2230
	Manufacturing and Processing	Fish Processing Zone	Kalipur (Part)	8	3	0.58	2076, 2079, 2080, 2082, 3872
			Rupdon	7	5	0.11	6849
		Industry	Kalipur (Part)	8	4	95.88	3322, 3324, 3325, 3335, 3337, 3338, 3339, 3340, 3351, 3352, 3353, 3354, 3357, 3358, 3359, 3364, 3365, 3366, 3367, 3412, 3413, 3414, 3415, 3416, 3417, 3418, 3419, 3420, 3421, 3422, 3423, 3424, 3425, 3426, 3427, 3428,

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
							3429, 3430, 3431, 3432, 3433, 3434, 3435, 3436, 3437, 3438, 3439, 3440, 3441, 3442, 3443, 3444, 3445, 3446, 3450, 3451, 3452, 3453, 3454, 3455, 3456, 3457, 3458, 3459, 3460, 3461, 3462, 3463, 3464, 3465, 3471, 3472, 3473, 3474, 3475, 3476, 3477, 3478, 3479, 3480, 3481, 3482, 3483, 3484, 3485, 3486, 3487, 3488, 3489, 3490, 3491, 3492, 3493, 3494, 3495, 3496, 3497, 3498, 3499, 3500, 3501, 3502, 3503, 3504, 3505, 3506, 3516, 3517, 3518, 3519, 3520, 3521, 3522, 3523, 3524, 3525, 3526, 3528, 3529, 3530, 3531, 3532, 3563, 3564, 3565, 3566, 3567, 3568, 3569, 3570, 3571, 3572, 3580, 3703, 3747, 3748
	Open Space and Recreation	Amusement Park	Kalipur (Part)	8	3	0.35	2676
	Transportation and Communication	Auto Stand	Kalipur (Part)	8	3	0.06	2087, 2088
		Rickshaw Stand	Chhanbania	10	3	0.19	1266, 1267
		Sluice Gate	Baraitala	28	2	0.12	449, 450, 451, 452, 654, 669
			Ghutabachha	12	4	0.09	2467

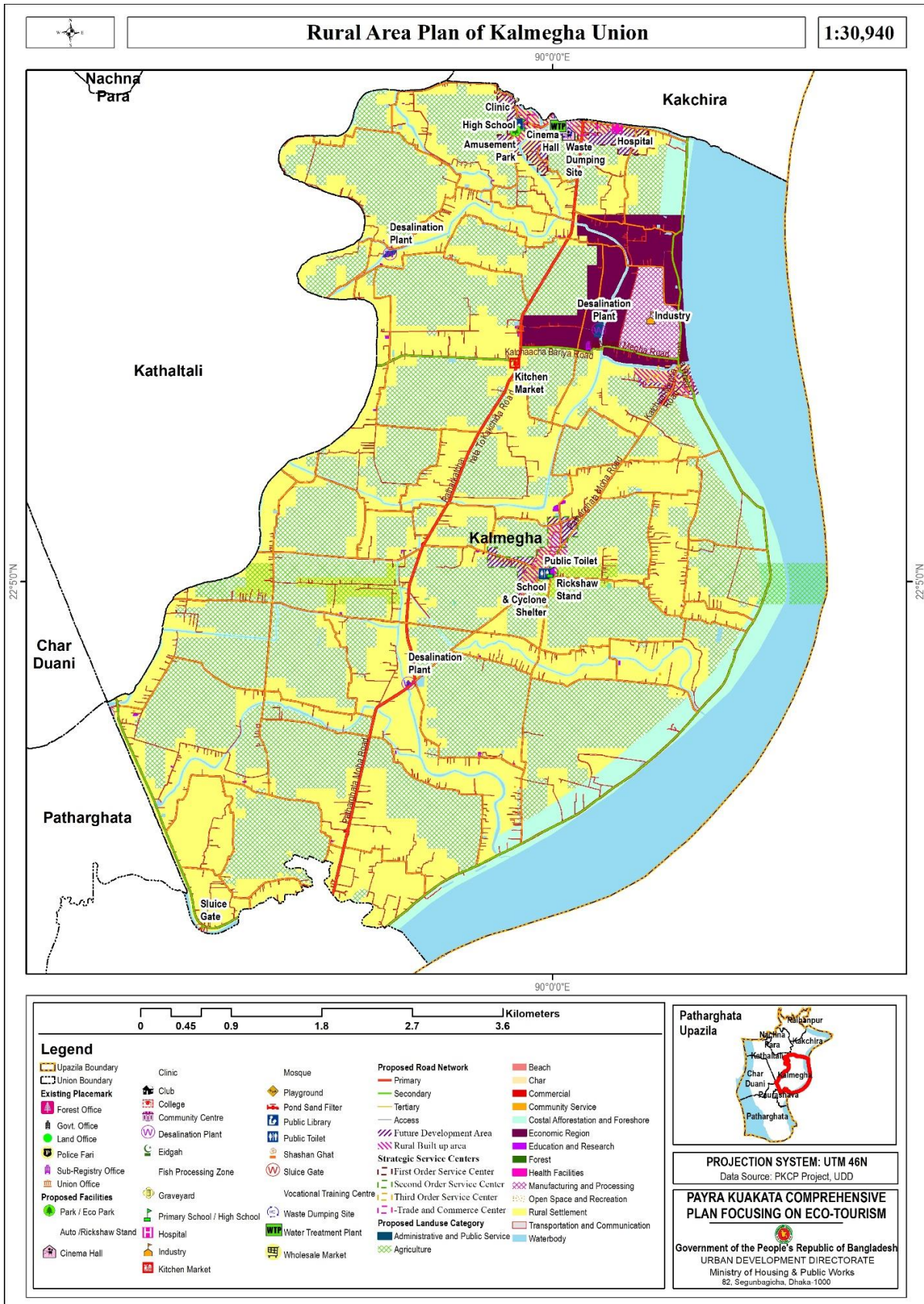


Figure 8: Rural Area Plan for Kalmegha Union

## 5.7 Rural Area Plan for Kathaltali Union

### 5.7.1 Demography

Kathaltali Union is situated on the Middle Western part of the Upazila and Nachna Para Union is on the north, Char Duani Union on the south, Kalmegha Union is on the east and Baleshwar River is on the west. Present population of the Union is 21,078 (2022) and it will be 24,696 in the year 2031 and 26,173 in 2041. Density of population is 517 persons per acre and it will be 606 in the year 2031.

Table- 21: Population Statistics of Kathaltali Union

Item	2011	2022	2031	2041
Area (Sq. km)	40.74			
Population	19,788	21,078	24,696	26,173
Density	486	517	606	642

### 5.7.2 Review of Existing Land Use

Out of total 10051.49 acres of land of this union, more than 1546.31 acres of land i.e. 15.38% is used in residential. The agricultural use with 5187.10 acres, occupies 51.60% of total land, water bodies 25.38%, commercial use 0.036%, community services 0.054% and Transportation and Communication 0.059%. Only 0.12% of land is used as education facilities.

Table- 22: Existing Landuse category in Kathaltali Union

Landuse Category	Area (Acre)	%
Administrative/Public Service	0.39	0.004
Agriculture	5187.10	51.605
Commercial	3.63	0.036
Community Service	5.42	0.054
Education and Research	12.79	0.127
Forest	-	0.000
Health Service	0.13	0.001
Manufacturing and Processing	0.88	0.009
Residential	1546.31	15.384
Service Activity	0.54	0.005
Transportation and Communication	5.92	0.059
Vacant Land	102.54	1.020
Vegetation	634.31	6.311
Waterbody	2551.53	25.385
<b>Total</b>	<b>10051.49</b>	<b>100.000</b>

### 5.7.3 Rural Area Plan Proposals

#### 5.7.3.1 Proposed Land Use Zoning

The category wise proposals are presented here. Table 23 shows the amount of land uses in Kathaltali Union. Map shows proposed land use of Kathaltali Union.

Table- 23: Proposed Land Uses of Kathaltali Union

Landuse Category	Area (Acre)	%
Administrative and Public Service	0.91	0.009
Agriculture	4323.76	43.016
Beach	-	0.000
Char	48.04	0.478
Commercial	3.19	0.032
Community Service	8.38	0.083
Costal Afforestation and Foreshore	390.78	3.888
Economic Region	-	0.000
Education and Research	12.90	0.128
Forest	-	0.000
Health Facilities	0.22	0.002
Manufacturing and Processing	0.73	0.007
Open Space and Recreation	0.96	0.010
Rural Settlement	2959.07	29.439
Transportation and Communication	460.53	4.582
Waterbody	1842.02	18.326
<b>Total</b>	<b>10051.49</b>	<b>100.000</b>

#### 5.7.3.2 Development Proposals for Kathaltali Union

The consultant proposes some urban facilities in Kathaltali Union. It includes Poura Market, Rickshaw Stand, Water Reservoir, Administrative Office, Playground etc. The details of the proposal is given in the table below.

Table- 24: Development Proposals for Kathaltali Union (Mouza Wise)

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
Kathaltali	Administrative and Public Service	Desalinati on Plant	Kalibari (Part)	13	6	0.25	2053, 2054, 2057
			Kanthaltali	18	2	0.46	744, 745, 746, 747
	Community Service	Club	Kiranpur	14	1	0.09	65, 77
			Public Library	Kiranpur	14	1	0.23

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
		Waste Dumping Site	Kiranpur	14	1	1.45	5, 6, 170, 171, 198
		Water Treatment Plant	Jhan Para	15	4	0.43	2342
			Kiranpur	14	1	3.13	43, 44, 57, 58, 77, 176, 177, 178, 189
	Education and Research	College	Kiranpur	14	1	1.68	60, 61, 68, 69, 70, 71
	Health Facilities	Clinic	Kiranpur	14	1	0.11	56, 179, 180
	Open Space and Recreation	Playground	Kiranpur	14	1	0.60	1
	Transportation and Communication	Auto Stand	Kanthaltali	18	2	0.18	739, 809, 1306, 1307, 1314
			Kiranpur	14	1	0.57	43, 56, 57, 179, 189
		Sluice Gate	Kanthaltali	18	2, 3	0.10	809, 1302, 1304



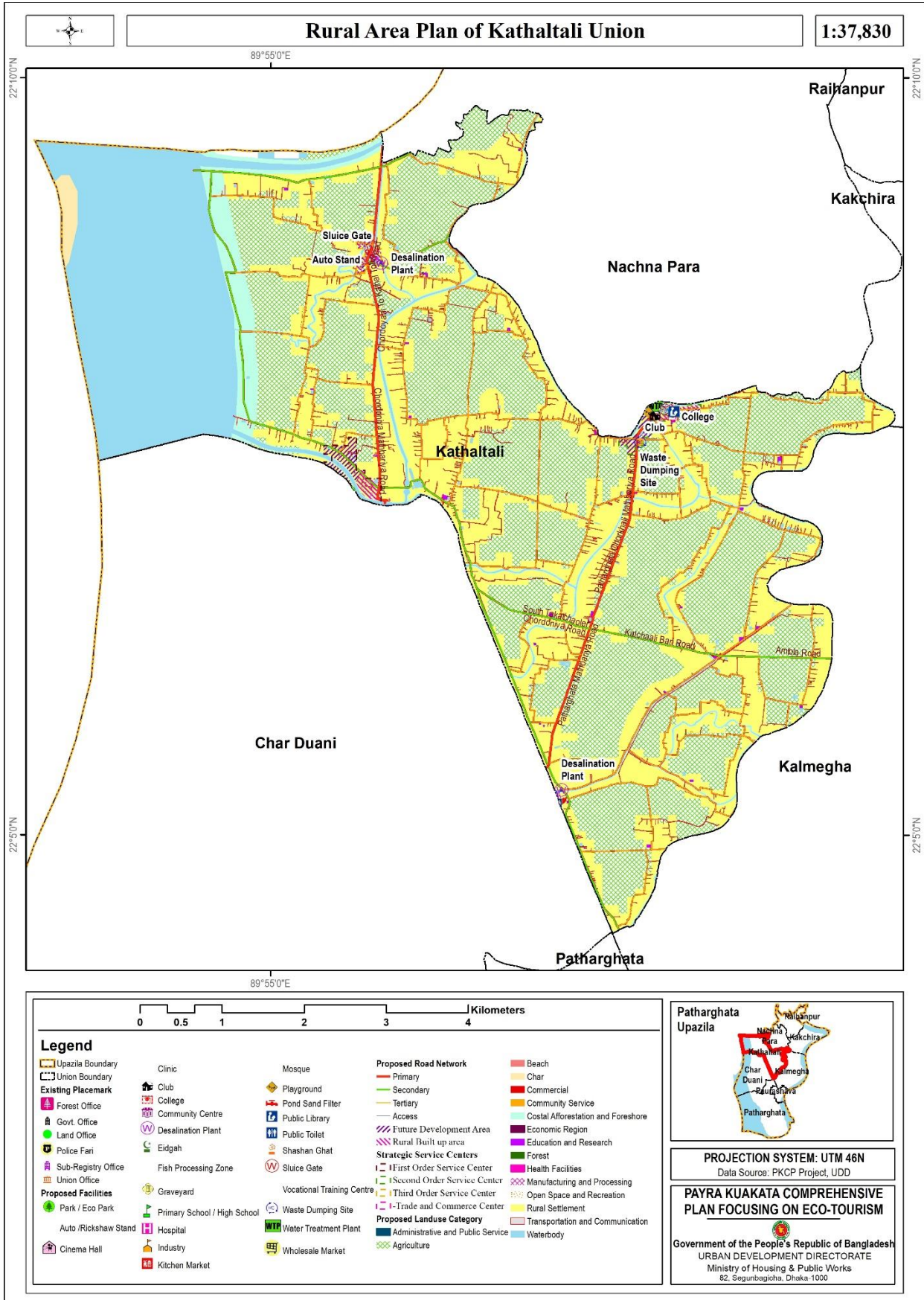


Figure 9: Rural Area Plan for Kathaltali Union

## 5.8 Rural Area Plan for Nachna Para Union

### 5.8.1 Demography

Nachna Para Union is situated on the northwestern part of the Upazila and Raihanpur Union is on the north, Kathaltali Union is on the south and Kakchira Union is on the east. Present population of the Union is 12,329 (2022) and it will 15,685 in the year 2031 and 16,621 in 2041. Density of population is 546 persons per acre and it will be 695 in the year 2031.

Table- 25: Population Statistics of Union No. 05

Item	2011	2022	2031	2041
Area (Sq. km)	22.58			
Population	12,484	12,329	15,685	16,621
Density	553	546	695	736

### 5.8.2 Review of Existing Land Use

Out of total 5565.92 acres of land of this Union, more than 994.95 acres of land i.e. 17.87% is used in residential. The agricultural use with 3638.14 acres, occupies 65.36% of total land, water bodies 10.94%, commercial use 0.07%, Forest 0.01% and Transportation and Communication 0.02%. Only 0.19% of land is used as education facilities.

Table- 26: Existing Landuse category in Nachna Para Union

Landuse Category	Area (Acre)	%
Administrative/Public Service	0.20	0.004
Agriculture	3638.14	65.365
Commercial	4.42	0.079
Community Service	4.40	0.079
Education and Research	10.64	0.191
Forest	0.79	0.014
Health Service	0.16	0.003
Manufacturing and Processing	0.33	0.006
Residential	994.95	17.876
Service Activity	0.25	0.005
Transportation and Communication	1.22	0.022
Vacant Land	6.19	0.111
Vegetation	295.65	5.312
Waterbody	608.55	10.934
<b>Total</b>	<b>5565.92</b>	<b>100.000</b>

### 5.8.3 Rural Area Plan Proposals

#### 5.8.3.1 Proposed Land Use Zoning

The category wise proposals are presented here. Table 27 shows the amount of land uses in Nachna Para Union. Map shows proposed land use of Nachna Para Union.

Table- 27: Proposed Land Uses of Nachna Para Union

Landuse Category	Area (Acre)	%
Administrative and Public Service	0.42	0.008
Agriculture	3282.66	58.978
Beach	-	0.000
Char	-	0.000
Commercial	4.18	0.075
Community Service	5.70	0.102
Costal Afforestation and Foreshore	179.44	3.224
Economic Region	-	0.000
Education and Research	13.34	0.240
Forest	0.79	0.014
Health Facilities	0.16	0.003
Manufacturing and Processing	0.30	0.005
Open Space and Recreation	2.84	0.051
Rural Settlement	1648.28	29.614
Transportation and Communication	274.12	4.925
Waterbody	153.69	2.761
<b>Total</b>	<b>5565.92</b>	<b>100.000</b>

#### 5.8.3.2 Development Proposals for Nachna Para Union

The consultant proposes some urban facilities in Nachna Para Union. It includes Desalination Plant, Waste Dumping Site, and School & Cyclone Shelter etc. The details of the proposal is given in the table below.

Table- 28: Development Proposals for Nachna Para Union (Mouza Wise)

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
Nachna Para	Administrative and Public Service	Desalination Plant	Jnanpara	15	3	0.24	1779
		Pond Sand Filter	Manikkhali	17	3	0.12	1369, 1370, 1418, 1433
	Community Service	Public Toilet	Nachna Para	16	4	0.05	2015, 2076, 2107
		Shashan Ghat	Manikkhali	17	2	0.40	718, 719, 722,

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
							723
		Waste Dumping Site	Nachna Para	16	4, 1	0.30	2027, 2028, 2366, 366, 372, 373
			Jhan Para	15	5	1.47	3722
	Education and Research	School & Cyclone Shelter	Manikkhali	17	4	2.57	1884, 1885, 1889, 1890, 1894, 1895, 1899, 1900, 1901, 1951, 1956, 1957, 1958, 2068, 2069, 2085
			Nachna Para	16	4	0.71	2017, 2019, 2020, 2023
	Open Space and Recreation	Park	Jhan Para	15	4	3.12	2320, 2321, 2322, 2323, 2342
	Transportation and Communication	Auto Stand	Nachna Para	16	4, 1	0.26	2087, 2089, 2100, 2101, 2103, 2107, 2109, 2110, 2368

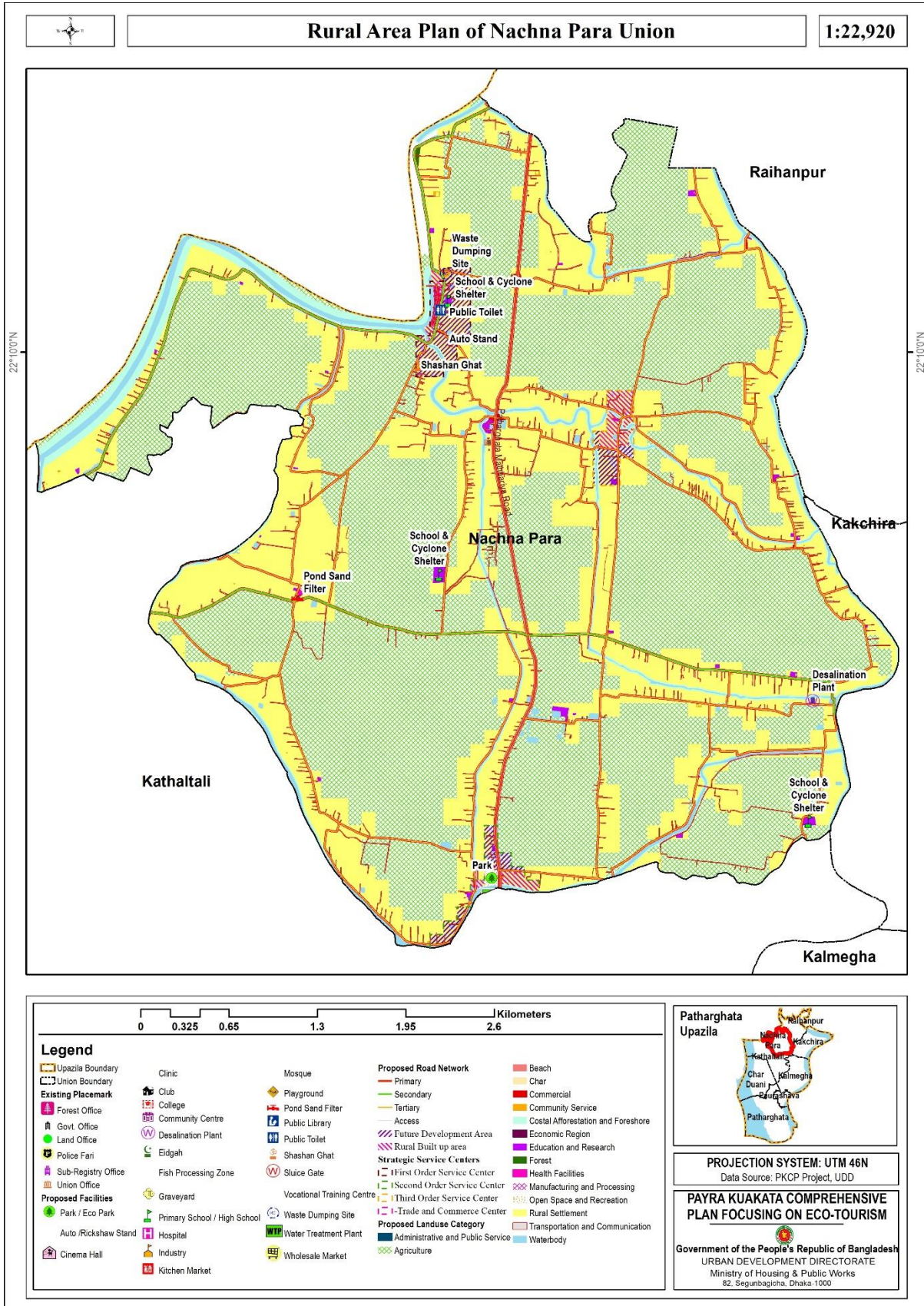


Figure 10: Rural Area Plan for Nachna Para Union

## 5.9 Rural Area Plan for Patharghata Union

### 5.9.1 Demography

Patharghata Union is situated on the southern part of the Upazila. Pourashava and Char Duani Union are on the north, Bay of Bengal is on the south and Bishkhali River is on the east and Baleshwar River is on the West. Present population of the Union is 30,692 (2022) and it will be 35,581 in the year 2031 and 37,880 in 2041. Density of population is 323 persons per acre and it will be 375 in the year 2031.

Table- 29: Population Statistics of Patharghata Union

Item	2011	2022	2031	2041
Area (Sq. km)	94.93			
Population	28,491	30,692	35,581	37,880
Density	300	323	375	399

### 5.9.2 Review of Existing Land Use

Out of total 23459.03 acres of land of this Union, more than 1456.74 acres of land i.e. 6.21% is used in residential. The agricultural use with 5095.37 acres, occupies 21.72% of total land, water bodies 48.96%, commercial use 0.026%, forest 18.71% and Transportation and Communication 0.035%. Only 0.1% of land is used as education facilities.

Table- 30: Existing Landuse category in Patharghata Union

Landuse Category	Area (Acre)	%
Administrative/Public Service	1.40	0.006
Agriculture	5095.37	21.720
Commercial	6.17	0.026
Community Service	9.60	0.041
Education and Research	24.35	0.104
Forest	4389.42	18.711
Health Service	0.42	0.002
Manufacturing and Processing	1.35	0.006
Residential	1456.74	6.210
Service Activity	1.08	0.005
Transportation and Communication	8.15	0.035
Vacant Land	190.91	0.814
Vegetation	787.56	3.357
Waterbody	11486.50	48.964
<b>Total</b>	<b>23459.03</b>	<b>100.000</b>

### 5.9.3 Rural Area Plan Proposals

#### 5.9.3.1 Proposed Land Use Zoning

The category wise proposals are presented here. Table 31 shows the amount of land uses in Patharghata Union. Map shows proposed land use of Patharghata Union.

Table- 31: Proposed Land Uses of Patharghata Union

Landuse Category	Area (Acre)	%
Administrative and Public Service	1.75	0.007
Agriculture	4033.21	17.193
Beach	70.32	0.300
Char	94.96	0.405
Commercial	11.88	0.051
Community Service	8.21	0.035
Costal Afforestation and Foreshore	401.13	1.710
Economic Region	78.22	0.333
Education and Research	21.42	0.091
Forest	4504.23	19.200
Health Facilities	0.42	0.002
Manufacturing and Processing	0.94	0.004
Open Space and Recreation	1.15	0.005
Rural Settlement	3184.44	13.574
Transportation and Communication	498.56	2.125
Waterbody	10548.21	44.964
<b>Total</b>	<b>23459.03</b>	<b>100.000</b>

#### 5.9.3.2 Development Proposals for Patharghata Union

The consultant proposes some urban facilities in Patharghata Union. It includes ICT, School, Clinic, Kitchen Market, Waste Transfer Station, and Administrative Office etc. The details of the proposal is given in the table below.

Table- 32: Development Proposals for Patharghata Union (Mouza Wise)

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
Patharghata	Administrative and Public Service	Desalinati on Plant	Badurtala	37	3	0.19	601, 603, 694
			Char Lathimara	38	4	0.44	2705, 2710, 2712, 2716
			Gaharpur	35	3	0.04	
			Ghutabachha	12	4	0.05	2001
			Hatempur	27	2	0.66	360, 369, 574, 585, 586

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
		Pond Sand Filter	Nij Lathimara	29	2	0.11	640, 642
	Community Service	Public Toilet	Badurtala	37	3	0.00	601
			Char Lathimara	38	4	0.13	2646, 2691, 2692, 2694
			Gaharpur	35	3	0.01	
	Open Space and Recreation	Playground	Nij Lathimara	29	1	1.26	11, 15
	Transportation and Communication	Auto Stand	Ghutabachha	12	4	0.08	2001
			Hatempur	27	2	0.48	369, 372, 574, 585, 586
			Nij Lathimara	29	2	0.14	637, 638, 639, 640, 642, 740
		Rickshaw Stand	Char Lathimara	38	4	1.89	2646, 2684, 2694, 2695, 2696, 2697, 2702, 2703



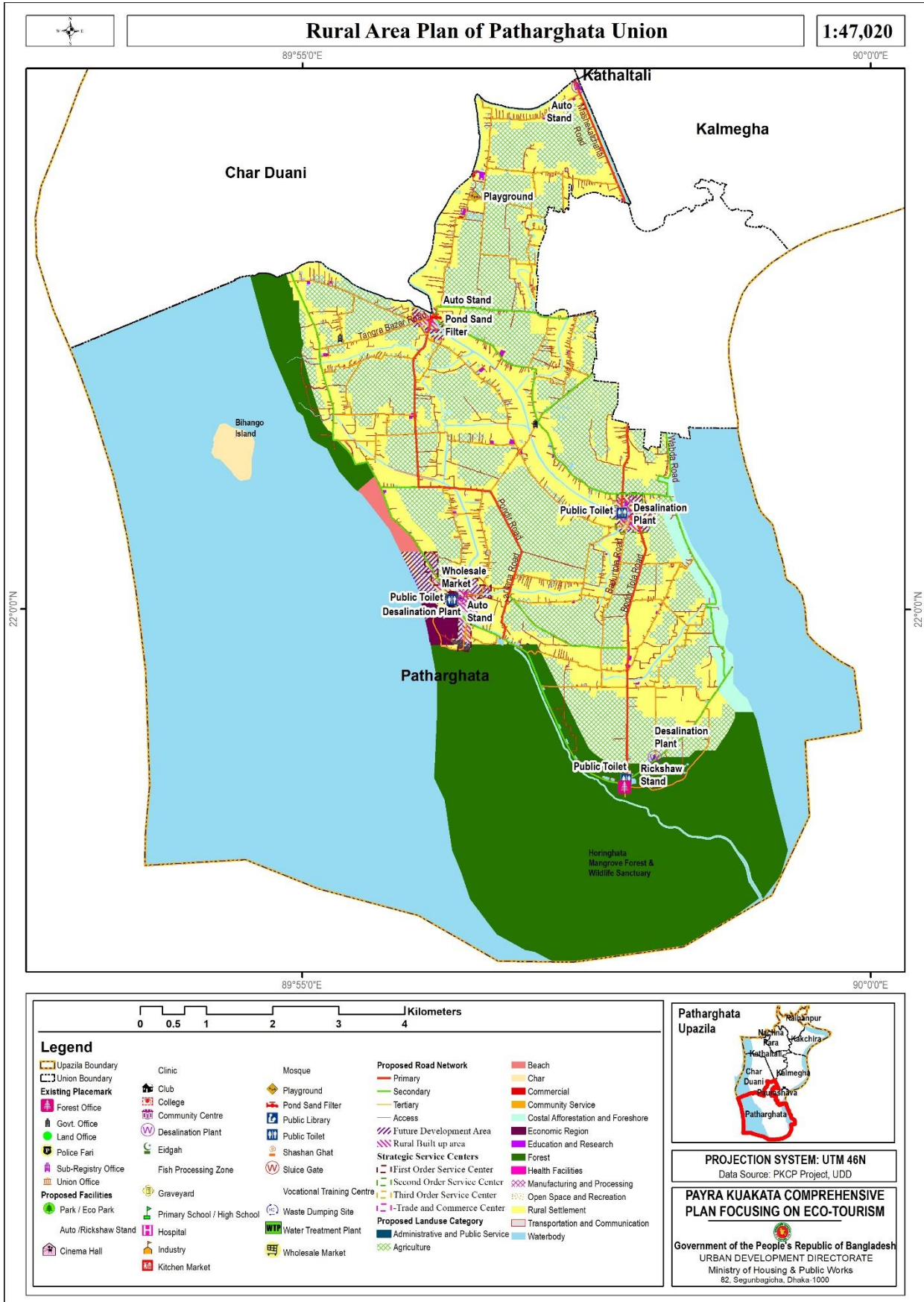


Figure 11: Rural Area Plan for Patharghata Union

## 5.10 Rural Area Plan for Raihanpur Union

### 5.10.1 Demography

Raihanpur Union is situated on the northern part of the Upazila. Kakchira and Nachna Para Union are on the south, Biskhali River on the east. Present population of the Union is 15,674 (2022) and it will 18,785 in the year 2031 and 20,011 in 2041. Density of population is 628 persons per acre and it will be 753 in the year 2031.

Table- 33: Population Statistics of Raihanpur Union

Item	2011	2022	2031	2041
Area (Sq. km)	24.96			
Population	14,810	15,674	18,785	20,011
Density	593	628	753	802

### 5.10.2 Review of Existing Land Use

Out of total 5909.83 acres of land of this Union, more than 1292.58 acres of land i.e. 21.87% is used in residential. The agricultural use with 3562.48 acres, occupies 60.28% of total land, water bodies 11.38%, commercial use 0.16%, Community Service 0.49% and Transportation and Communication 0.002%. Only 0.12% of land is used as education facilities.

Table- 34: Existing Landuse category in Raihanpur Union

Landuse Category	Area (Acre)	%
Administrative/Public Service	0.43	0.007
Agriculture	3562.48	60.281
Commercial	9.45	0.160
Community Service	2.89	0.049
Education and Research	7.30	0.124
Forest		0.000
Health Service	0.28	0.005
Manufacturing and Processing	0.35	0.006
Residential	1292.58	21.872
Service Activity	0.48	0.008
Transportation and Communication	0.10	0.002
Vacant Land	76.45	1.294
Vegetation	284.31	4.811
Waterbody	672.73	11.383
<b>Total</b>	<b>5909.83</b>	<b>100.000</b>

### 5.10.3 Rural Area Plan Proposals

#### 5.10.3.1 Proposed Land Use Zoning

The category wise proposals are presented here. Table 35 shows the amount of land uses in Raihanpur Union. Map shows proposed land use of Raihanpur Union.

Table- 35: Proposed Land Uses of Raihanpur Union

Landuse Category	Area (Acre)	%
Administrative and Public Service	2.67	0.045
Agriculture	2870.71	48.575
Beach		0.000
Char		0.000
Commercial	9.01	0.152
Community Service	6.02	0.102
Costal Afforestation and Foreshore	113.72	1.924
Economic Region	382.21	6.467
Education and Research	11.93	0.202
Forest		0.000
Health Facilities	0.13	0.002
Manufacturing and Processing	0.33	0.006
Open Space and Recreation	5.55	0.094
Rural Settlement	2021.32	34.203
Transportation and Communication	353.10	5.975
Waterbody	133.14	2.253
<b>Total</b>	<b>5909.83</b>	<b>100.000</b>

#### 5.10.3.2 Development Proposals for Raihanpur Union

The consultant proposes some urban facilities in Raihanpur Union. It includes Desalination Plant, Club, Public Toilet and Graveyard etc. The details of the proposal is given in the table below.

Table- 36: Development Proposals for Raihanpur Union (Mouza Wise)

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
Raihanpur	Administrative and Public Service	Desalination Plant	Betmor	1	3	1.29	852, 853, 947, 948, 952, 953, 1176
			Lemua (Part)	4	2	1.06	984, 985, 1046, 1052, 1054, 3134, 3142
			Raihanpur	2	1	0.26	145, 146, 147, 148

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
		Pond Sand Filter	Lemua (Part)	4	1	0.00	
			Raihanpur	2	2	0.28	72, 719, 720, 721
	Community Service	Club	Lemua (Part)	4	4	0.09	3014, 3166, 3537
		Community Centre	Lemua (Part)	4	1	0.36	171, 472, 473, 512
		Eidgah	Lemua (Part)	4	4	0.91	3135, 3136, 3137, 3138, 3167, 3212
		Graveyard	Lemua (Part)	4	4	0.36	3135, 3138, 3139, 3140, 3141, 3167, 3210, 3212
		Public Library	Lemua (Part)	4	4	0.09	3489
		Public Toilet	Lemua (Part)	4	1, 4	0.07	142, 3164, 3166
		Waste Dumping Site	Lemua (Part)	4	4	2.25	3167, 3212, 3213, 3214, 3215
	Education and Research	Vocational Training Centre	Madartali	3	1	6.69	170, 299, 305, 306, 307, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 334, 349, 369, 370, 371, 372, 416, 417, 418, 419
	Open Space and Recreation	Amusement Park	Lemua (Part)	4	1	1.03	143, 177, 179, 180, 181, 182, 183, 185, 189, 190, 191, 192, 193, 194, 195
		Park	Lemua (Part)	4	4	2.48	3121, 3122, 3131, 3132, 3134
		Playground	Lemua (Part)	4	1, 4	2.67	171, 473, 478, 480, 512, 3044,

Union Name	Proposed Landuse	Proposals Name	Mouza Name	JL No	Sheet No	Area (Acre)	Plot No
							3066, 3067, 3078, 3079, 3081
	Transportation and Communication	Auto Stand	Lemua (Part)	4	4	0.11	3166, 3167, 3168, 3169, 3170
		Sluice Gate	Betmor	1	4	0.02	1381
			Lemua (Part)	4	1, 4	0.08	72, 3001, 3014

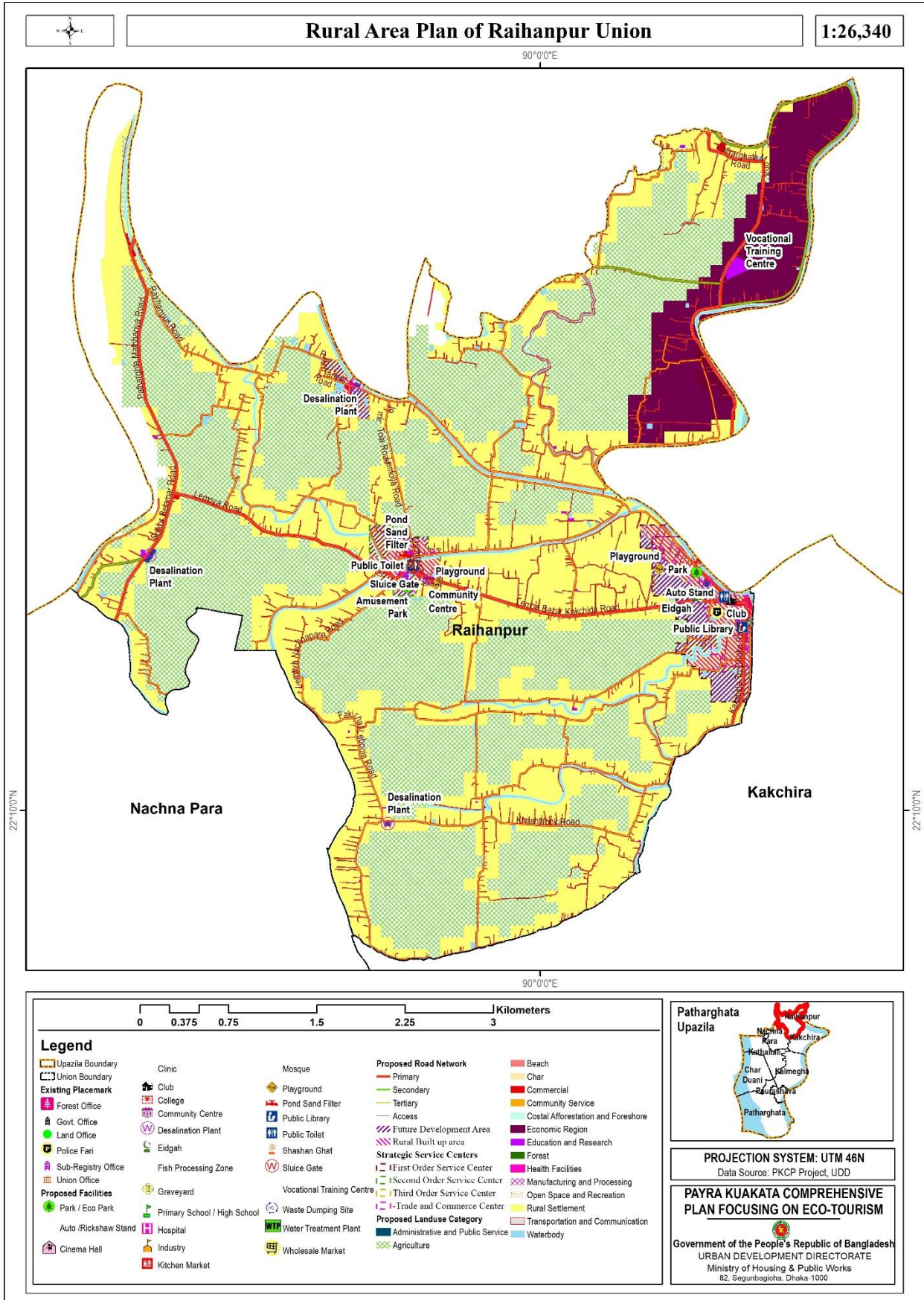


Figure 12: Rural Area Plan for Raihanpur Union

## **CHAPTER- 6: CONCLUSION**

### **6.1 Conclusion**

The Rural Area Plan of Patharghata Upazila consists of the plans for Union level as identified in the Structure Plan for the Upazila. Since the Rural Area Plan is mainly indicative further measures should be taken during implementation.

In the development process of the Upazila, coordination among all local authorities within Patharghata Upazila will be necessary for integrated development encompassing the potentials of both urban and rural areas. There is scope for local government authorities for cooperation and collaboration among themselves for local development in a comprehensive manner. It is expected that the Rural Area Plans prepared under the current project will provide essential tools for integrated development at Patharghata Upazila.