

Payra-Kuakata Comprehensive Plan Focusing on Eco-Tourism

Barguna Rural Area Plan: 2021-2031

Printed and Published by:

Urban Development Directorate

82, Segun Bagicha, Dhaka,

Bangladesh.

Copyright:

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।

অতএব, সরকার অত্র প্রজ্ঞাপন দ্বারা বরগুনা জেলার ০৪টি উপজেলা (বরগুনা সদর, পাথরঘাটা, আমতলী, তালতলী) এবং পটুয়াখালী জেলার ০৩টি উপজেলা (কলাপাড়া, গলাচিপা ও রাঙ্গাবালী) সহ মোট ০৭টি উপজেলার জন্য ১ (এক) টি রিজিওনাল প্ল্যান, ০৭ (সাত) টি স্ট্রাকচার প্ল্যান ও ০৭ (সাত) টি রুরাল এরিয়া প্ল্যান এবং বরগুনা সদর, আমতলী, পাথরঘাটা, গলাচিপা, কলাপাড়া পৌরসভা এবং কুয়াকাটা পৌরসভা ও পার্শ্ববর্তী এলাকা নিয়ে গঠিত কুয়াকাটা টুরিজম সেন্টার মাস্টার প্ল্যানসহ ০৬ (ছয়) টি আরবান এরিয়া প্ল্যান এবং সোনার চরকে কেন্দ্র করে আশেপাশের আরও ০৬ (ছয়) টি চর (সোনার চর, চর মন্ডাজ, চর হেয়ার/কলাগাছিয়া, আন্ডার চর, চর-তাপসী ও টাইগার দ্বীপ) নিয়ে “এ্যাকশন এরিয়া প্ল্যান ফর সোনার চর এক্সক্লুসিভ টুরিস্ট জোন” অনুমোদনের বিষয়টি সংশ্লিষ্ট সকলের অবগতির জন্য প্রকাশ করিল।

(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।

Table of Contents

TABLE OF CONTENTS	I
LIST OF TABLES.....	II
LIST OF MAPS	III
ABBREVIATION AND ACRONYMS.....	IV
GLOSSARY	V
ABSTRACT	VI
CHAPTER 1: BACKGROUND OF THE REPORT.....	1
1.1 INTRODUCTION	1
1.2 PURPOSE OF RURAL AREA PLAN.....	1
1.3 LINKAGE WITH UPPER TIRE PLANS:	2
1.4 OBJECTIVES OF RURAL AREA PLAN:	2
1.4.1 Development Promotion Objectives:	2
1.4.2 Development Control Objectives:.....	3
1.5 LOCATION OF BARGUNA SADAR UPAZILA:	3
1.6 AREA COVERAGE UNDER RURAL AREA PLAN:	3
CHAPTER 2: CRITICAL PLANNING ISSUES.....	5
2.1 CRITICAL PLANNING ISSUES	5
CHAPTER 3: RURAL AREA PLAN	8
3.1 INTRODUCTORY WORDS:	8
3.2 DESCRIPTION OF LAND USE CATEGORIES IN THE RURAL AREA PLAN	8
3.3 EXISTING LAND USE:	9
3.3.1 Union-Wise Land Use Analysis:	9
3.4 STANDARDS OF LAND USE PLANNING AND INFRASTRUCTURE.....	17
3.5 FUTURE LAND DEVELOPMENT PROPOSAL	18
3.6 UNION-WISE LAND USE PROPOSAL	23
3.6.1 Ayla Patakata Union.....	23
3.6.2 Badarkhali Union:	26
3.6.3 Barguna Union:	28
3.6.4 Burir Char:	30
3.6.5 Dhalua Union:	32
3.6.6 Gaurichanna Union:.....	34
3.6.7 Keorabunia Union	37
3.6.8 M. Baliatali Union:.....	39
3.6.9 Naltona Union:	41
3.6.10 Phuljhury Union:	43
3.7 STREAM LINE WATER FLOW OF BAZAR AREAS.....	46
CHAPTER 4: TRAFFIC & TRANSPORTATION.....	48
4.1 MAJOR ROAD PROPOSALS:.....	48
4.2 HIERARCHY OF ROADS.....	53
4.2.1 Primary Roads:.....	53

4.2.2 Secondary Roads:	53
CHAPTER 5: ECOLOGICALLY SENSITIVE AREA (ESA) AND NATURAL DRAINAGE.....	56
5.1 ECOLOGICALLY SENSITIVE AREA (ESA) AND NATURAL DRAINAGE PRESERVATION.....	56
CHAPTER 6: DEVELOPMENT CONTROL	58
6.1 INTRODUCTORY WORDS	58
6.2 DEVELOPMENT CONTROL IN RURAL AREA	58
6.2.1 Agricultural Area.....	58
6.2.2 Potential Economic Zone.....	59
6.2.3 Conservation Zone.....	60
6.2.4 Waterbody.....	61
CHAPTER 7: CONCLUSION	63
ANNEXURE I: INDUSTRIAL CLASSIFICATION OF DEPARTMENT OF ENVIRONMENT (DOE)	64

List of Tables

Table 1-1: Area Coverage.....	3
Table 3-1: Land Use Categories Considered for the Rural Area Plan of Taltali Upazila	8
Table 3-2: Existing Land use of Ayla Patakata Union.....	9
Table 3-3: Existing Land use of Badarkhali Union	10
Table 3-4: Existing Land use of Barguna Union	11
Table 3-5: Existing Land use of Burir Char Union.....	11
Table 3-6: Existing Land use of Dhalua Union	12
Table 3-7:Existing Land use of Gaurichanna Union	12
Table 3-8:Existing Land use of Keorabunia Union	13
Table 3-9: Existing Land use of M. Baliatali Union.....	14
Table 3-10:Existing Land use of Naltona Union	14
Table 3-11: Existing Land use of Phuljhury Union	15
Table 3-13: Recommended Planning Standards of Land Use and Infrastructure	17
Table 3-14: Recommended/Permitted Facilities/uses for Future Development Area.....	19
Table 3-15: Land Use Proposal at Ayla Patakata Union	24
Table 3-16: Land Use Proposal at Badarkhali Union	26
Table 3-17: Land Use Proposal at Barguna Union	28
Table 3-18: Land Use Proposal at Burir Char Union.....	30
Table 3-19: Land Use Proposal at Dhalua Union	32
Table 3-20: Land Use Proposal at Gaurichanna Union	34
Table 3-21: Land Use Proposal at Keorabunia Union	37
Table 3-22: Land Use Proposal at M. Baliatali Union.....	39
Table 3-23: Land Use Proposal at Naltona Union	41
Table 3-24: Land Use Proposal at Phuljhury Union	43
Table 4-1: Transportation Proposal (Major Road) for Barguna Sadar Upazila	49
Table 6-9: Permitted Land Use for General Industrial Zone	60
Table 6-11: Permitted Land Use for Conservation Zone	61

List of Maps

Map 3-1: Existing Land Use of Barguna Sadar Upazila Rural Area	17
Map 3-2: Proposed Land Use for Ayla Patakata Union.....	25
Map 3-3: Proposed Landuse for Badarkhali Union	27
Map 3-4: Proposed Land Use for Barguna Union	29
Map 3-5: Proposed Land Use for Burir Char Union.....	31
Map 3-6: Proposed Land Use for Dhalua Union	33
Map 3-7: Proposed Land Use for Gaurichanna Union	36
Map 3-8: Proposed Land Use for Keorabunia Union	38
Map 3-9: Proposed Land Use for M. Baliatali Union	40
Map 3-10: Proposed Land Use for Naltona Union	42
Map 3-11: Proposed Land Use for Phuljhury Union	45
Map 4-1: Major Road Proposals	54
Map 4-2: Proposed Hierarchy of Roads	55
Map 5-1: Ecologically Sensitive Areas (ESA)	57

ABBREVIATION AND ACRONYMS

AC/ac	Acre
PKDA	Payra Kuakata Development Authority
CBD	Central Business District
DMDP	Dhaka Metropolitan Development Plan
EPZ	Export Processing Zone
GC	Growth Centre
GIS	Geographic Information System
GoB	Government of Bangladesh
WDB	Water Development Board
MISP	Multi-Sector Investment Plan
R&HD	Roads and Highway Department
DC	Deputy Commissioner
ROW	Right of Way
ToR	Terms of Reference
Nos	Numbers
PWD	Public Works Department
UDD	Urban Development Directorate

GLOSSARY

Bustee	: Dense slum community, territorially defined by the influence of a leader, with poor environmental and living conditions
Khas	: State owned land not specifically allocated to any government agency
Paurashava	: Municipality
Kucha	: Impermanent structure/building materials
Pucca	: Permanent Construction/Structure using bricks, cement etc
Shahar	: Smaller urbanized area/secondary town
Slum	: General term, also used to designate urban poor renting private land
Squatter	: Unauthorized inhabitant of public/hovernment land
Mouza	: Definite area demarcated and identified by the revenue department with a jurisdiction list number. It may be populated or de populated
Village	: Smallest geographic area of rural area. A village may be same as mouza or there may be more than one village in a mouza. It is always populated
Ward	: Smallest local administrative (local govt. unit) unit of urban area. For the operational convenience municipalities area divided into three or more wards. The ward boundaries are specified by gazette. A ward has a ward parishad (council)
Mahollah	: Smallest identifiable area with settlements of homogeneous group of people.
Para	Smallest identifiable area with settlements of indigenous group of people.
Union	: Smallest local administrative unit (local govt. unit) of rural area which is composed of mouzas and villages. A union has a union parishad
Upazila/Thana	: Sub-district Administrative Area
Zila/District	: District Administrative Area
Dighi	: Larger ponds/ tanks mostly excavated in the past by influential personnel and rulers

Abstract

The Barguna Sadar Upazila Rural Area Plan represents a comprehensive and strategic framework designed to steer the growth, development, and sustainability of the rural landscape within Barguna Sadar Upazila. This plan encompasses a harmonious blend of development promotion and control objectives, aimed at cultivating economic vitality while preserving the unique rural character of the region. The plan accentuates economic diversification through the identification of novel industries, tourism prospects, and agri-business initiatives. Infrastructure enhancement and connectivity improvements are prioritized to uplift the quality of life for residents and bolster economic activities. Preservation of the region's natural, cultural, and historical heritage is paramount, with measures in place to protect environmentally sensitive areas and promote sustainable land use practices.

Simultaneously, the plan sets forth stringent development control objectives to ensure responsible growth. Precise land use regulations delineate appropriate zones for diverse activities, thereby averting incompatible land uses. Environmental protection strategies are implemented to safeguard delicate ecosystems and conserve agricultural land. The plan mandates the preservation of cultural heritage sites and advocates for sustainable design practices, emphasizing energy efficiency and resource conservation. Furthermore, density and growth management directives curb uncontrolled urban sprawl, safeguarding the open spaces that define Barguna Sadar's rural charm.

Incorporating disaster resilience and infrastructure planning, the plan fosters development in harmony with natural rhythms and potential risks. By intertwining these development promotion and control objectives, the Barguna Sadar Upazila Rural Area Plan aspires to cultivate a flourishing rural community—a community where progress is achieved while retaining the distinctive rural essence that defines Barguna Sadar Upazila's unique identity.

CHAPTER 1: BACKGROUND OF THE REPORT

1.1 Introduction

The formulation of the Rural Area Plan aligns closely with the project's designated Terms of Reference (TOR). Drawing guidance from the policies, strategies, and planning benchmarks set forth in the Structure Plan, the development of the Rural Area Plan for Barguna Sadar Upazila has been effectively steered. This comprehensive endeavour typically involves a collaborative engagement encompassing a diverse array of stakeholders, ranging from government representatives and planners to architects, developers, community leaders, and residents. This inclusive process ensures the formulation of a well-rounded Rural area plan, amenable to periodic revisions that accommodate evolving goals, needs, and transformations within the social, economic, and physical fabric of the Rural area.

Sustainable development and prudent preservation of the rural milieu stand as paramount principles within the framework of the Rural Area Plan. The plan demonstrates foresight by encompassing projects that have received development approval but are yet to be realized, as well as ongoing developmental initiatives, when delineating the boundaries of the metropolitan area. Encompassing areas in need of economic, physical, and social rejuvenation, as well as those poised for significant development in the plan's timeframe, the Rural Area Plan unfolds across various dimensions.

Divided into four integral sections, the Rural Area Plan is underscored by the Land Use Plan. Governed by statutory regulations and planning guidelines, land usage is meticulously regulated. Guided by land use policies, including Local Plans, the plan delves into multifaceted aspects such as development density, road infrastructure, provision of essential utilities, and service accessibility. The intricate web of legal instruments, comprising pertinent Acts and Master Plans of the cities, propels the execution of planning controls and standards. The interplay between existing and proposed land uses emerges as a linchpin, influencing the trajectory of Barguna Rural Area's future land utilization.

At its essence, the Rural Area Plan embodies a comprehensive blueprint, steering the sustainable growth and progression of not only a city but an entire rural expanse. Striking a harmonious balance between economic advancement, social welfare, and environmental preservation, the plan pledges to safeguard the vibrancy, livability, and competitive edge of the rural realm across the passage of time.

1.2 Purpose of Rural Area Plan

Rural planning serves a vital purpose in shaping the development of countryside areas. Its role encompasses fostering balanced growth, preserving the inherent charm of rural landscapes, and ensuring essential infrastructure and services reach these communities. By meticulously orchestrating development, rural planning safeguards the environment through sustainable practices, while nurturing agriculture and food security. This strategic approach also diversifies local economies, boosts housing availability, and empowers communities by involving them in decisions. Moreover, rural planning readies these regions against risks and disasters, fostering resilience. Ultimately, the core objective of rural planning is to elevate the quality of life for rural residents, anchoring progress in harmony with nature and community values.

1.3 Linkage with upper tier plans:

The linkage between rural area plans, regional plans, and structure plans is a crucial aspect of comprehensive and integrated planning. These different tiers of planning work together to ensure coordinated development and sustainable growth across various scales. Here's how these plans are connected:

Regional plans provide a broader framework for development across a larger geographic area, which could include multiple rural areas. These plans outline regional goals, strategies, and policies that guide development, transportation networks, economic activities, and environmental protection. The rural area plan should align with the regional plan's overarching goals and strategies. This ensures that the specific development needs, characteristics, and resources of each rural area are considered within the context of the larger region. For example, the rural area plan might detail how local agriculture, tourism, and natural resources contribute to the regional economy and align with the regional economic development strategy.

Structure plans provide a more detailed and specific perspective on development within defined sub-areas, often focusing on urban centers, towns, or corridors. The rural area plan should be consistent with the structure plan's guidelines and principles, especially if there are areas within the rural zone designated for specific uses like commercial centers or tourism hubs. Coordinating the rural area plan with the structure plan ensures that development within the rural area is well-connected to adjacent urban or semi-urban areas, transportation networks, and service hubs. It also prevents conflicting land uses that could arise due to incompatible planning across different areas.

Effective coordination and integration between these different planning tiers are essential. Rural area plans should be informed by the goals and strategies outlined in both the regional plan and the structure plan. This means that policies, land use designations, infrastructure requirements, and environmental protections detailed in higher-tier plans should guide the corresponding elements within the rural area plan. In turn, the rural area plan contributes to the realization of the broader objectives set by regional and structure plans.

The linkage between rural area plans, regional plans, and structure plans creates a cohesive planning framework that acknowledges the interconnectedness of development at various scales. It enables efficient resource allocation, minimizes conflicts, optimizes infrastructure investments, and ensures a more holistic approach to sustainable and balanced development. Regular communication and collaboration between planning authorities responsible for these different tiers are vital for maintaining this cohesive planning process.

1.4 Objectives of Rural area Plan:

The Rural Area Plan typically encompasses both development promotion and development control objectives to strike a balance between fostering growth and maintaining the rural character and sustainability of the area. In essence, the development promotion objectives focus on driving positive change and growth, while the development control objectives emphasize responsible and sustainable management to preserve the essence and resilience of the rural area. Here's a breakdown of these two sets of objectives:

1.4.1 Development Promotion Objectives:

1. **Economic Diversification:** Encourage the diversification of the local economy by identifying opportunities for new industries, agri-businesses, tourism, and other income-generating activities that can provide employment and boost the rural economy.
2. **Infrastructure Enhancement:** Promote the development of necessary infrastructure such as roads, utilities, and communication networks to support economic activities, improve connectivity, and enhance the overall quality of life for residents.

3. **Tourism and Recreation:** Identify and develop tourism and recreational assets that highlight the natural beauty, cultural heritage, and unique features of the rural area, attracting visitors and providing additional economic opportunities.
4. **Agricultural Support:** Facilitate the sustainable growth of agriculture by identifying suitable areas for farming, providing support for modern agricultural practices, and ensuring the availability of markets and resources for farmers.
5. **Small-Scale Enterprises:** Encourage the establishment of small-scale enterprises and local businesses, contributing to job creation, community vitality, and a diverse economic landscape.
6. **Affordable Housing:** Promote the availability of affordable housing options for residents, including strategies for low-cost housing developments that cater to the needs of the local population.

1.4.2 Development Control Objectives:

1. **Land Use Regulation:** Define specific land use zones and designations within the rural area to guide where different types of development can occur, ensuring that development is compatible with the rural context and avoids conflicting land uses.
2. **Environmental Protection:** Implement measures to protect environmentally sensitive areas, such as wetlands, forests, and water bodies, from inappropriate development that could lead to habitat destruction or ecological imbalances.
3. **Conservation of Agricultural Land:** Safeguard agricultural land by designating areas for farming and preventing the conversion of productive agricultural land into non-agricultural uses.
4. **Heritage Preservation:** Preserve cultural and historical heritage sites by identifying and protecting areas of cultural significance, ensuring that development respects the region's historical identity.
5. **Density and Growth Management:** Regulate the density of development to prevent urban sprawl, maintain open spaces, and preserve the rural aesthetic while allowing controlled growth in designated areas.
6. **Disaster Resilience:** Incorporate measures to reduce vulnerability to natural disasters, including guidelines for building in safe areas and avoiding flood-prone zones.

1.5 Location of Barguna Sadar Upazila:

Barguna Sadar Upazila is located in the southern part of Bangladesh. It is situated within the Barguna District, which is part of the Barisal Division. Barguna Sadar Upazila is bordered by the Bay of Bengal to the west, Patharghata Upazila to the north, Amtali Upazila to the east, and the Bay of Bengal to the south. The geographic coordinates of Barguna Sadar Upazila are approximately 22.1588°N latitude and 90.1177°E longitude. It is characterized by its coastal location, with the Bay of Bengal forming its southern boundary. The area is known for its riverine landscapes, agricultural activities, and coastal features.

1.6 Area Coverage under Rural Area Plan:

Table 1-1: Area Coverage

Union Name	Area (Acre)
Ayla Patakata	7,972
Badarkhali	8,322
Barguna	5,400
Burir Char	9,930
Dhalua	9,881

Gaurichanna	5,793
Keorabunia	5,753
M.Baliatali	16,841
Naltona	11,289
Phuljhury	5,179
Total	86360

CHAPTER 2: CRITICAL PLANNING ISSUES

2.1 Critical Planning Issues

There are several critical planning issues that need to be addressed in the Barguna Sadar Upazila Rural Area Plan. These issues are:

1. **Regional connectivity and Transport Mobility:** Barguna Sadar Upazila is surrounded by Payra and Bishkhali River. Barguna Sadar is separated from Patharghata by Bishkhali River and from Amtali by Payra River. The Upazila's economy is highly linked with surrounding region. Therefore, transport connectivity is highly important. Currently, the only way to cross those rivers are through Ferry. Bridge connecting Patharghata and Barguna on Bishkhali River and Amtali and Barguna on Payra River would strengthen the regional connectivity.
2. **Housing:** Affordable and adequate housing is a significant issue in urban areas of the upazila. The plan needs to identify strategies to address the housing shortage, promote affordable housing options, and improve the quality of housing for urban residents.
3. **Environmental Degradation and Canal encroachment:** The Barguna Sadar Upazila is located in a coastal area and is vulnerable to environmental degradation caused by natural disasters such as cyclones, floods, and erosion. The plan needs to address the challenges of environmental protection, sustainable land use, and climate change adaptation. Canals encroachment is also a serious issue in the upazila.
4. **Infrastructure Deficiencies:** The upazila suffers from deficiencies in basic infrastructure, such as roads, water supply, and drainage systems. These deficiencies hinder economic growth and development, and the plan needs to prioritize the development of infrastructure to support growth and improve the quality of life for residents. The upazila is facing challenges related to the inadequate and insufficient urban infrastructure, including water supply, sanitation, and solid waste management. The plan needs to address these issues by identifying strategies to improve the urban infrastructure and services and promote sustainable and efficient urban development.
5. **Limited Access to Health and Education:** The upazila has limited access to quality healthcare and education, particularly in rural areas. The plan needs to address this issue by identifying strategies to improve access to health and education services and facilities.
6. **Poverty and Inequality:** The upazila suffers from high poverty rates and income inequality. The plan needs to identify strategies to reduce poverty and promote inclusive growth, particularly for marginalized and vulnerable groups.
7. **Absence of Land use Zoning:** The upazila faces challenges related to land use and zoning, particularly in urban areas. The plan needs to develop a comprehensive land use and zoning plan that balances economic development with environmental protection and community needs.
8. **Economic Development:** The upazila needs to diversify its economy and create employment opportunities to support sustainable economic growth. The plan needs to identify sectors with growth potential and promote entrepreneurship and innovation.
9. **Limited Access to Finance:** The upazila faces challenges related to limited access to finance for businesses and individuals. The plan needs to identify strategies to increase access to finance and promote financial inclusion.
10. **Disaster Risk Management:** The Barguna Sadar Upazila is located in a region that is prone to natural disasters, such as cyclones, floods, and earthquakes. The plan needs to identify and address the risks associated with such disasters and develop strategies to manage and mitigate their impact on the local communities.

11. **Urbanization:** The upazila is experiencing rapid urbanization, which is putting pressure on urban infrastructure, such as housing, transportation, and utilities. The plan needs to address this issue by developing a comprehensive urban plan that supports sustainable and equitable urban development.
12. **Governance and Institutional Capacity:** The upazila faces challenges related to governance and institutional capacity, including the lack of effective public service delivery, weak institutional frameworks, and limited public participation in decision-making. The plan needs to address these issues by identifying strategies to strengthen governance and institutional capacity and promote participatory planning and decision-making.
13. **Natural Resource Management:** The upazila has significant natural resources, including forests, wetlands, and fisheries, which provide important ecosystem services and support local livelihoods. The plan needs to identify strategies to manage these resources sustainably and promote their conservation and restoration.
14. **Social and Cultural Heritage along with ethnic community:** The upazila has a rich cultural and social heritage, which is an important asset for sustainable development. The plan needs to identify strategies to promote the preservation and promotion of this heritage and support cultural and social activities that contribute to community development and well-being. The Rakhine community lives in Baliyatli union of Barguna sadar upazila which is in the southern part of the Barguna district. Bengali culture has a mixture of Rakhine culture with the culture of this region. Rakhine have their own production system, including diverse industries, agricultural works, pigs, and animals. At the same time, social programs include Jajal Krira, Fanus Chodra, Pitha festival etc.
15. **Tourism & Eco-tourism:** The Barguna Sadar Upazila has a significant potential for tourism development, particularly due to its coastal location, natural beauty, and cultural heritage. The plan needs to identify strategies to develop the tourism sector sustainably, while preserving natural and cultural resources, and providing economic opportunities for local communities.
16. **Agriculture and Fisheries:** Agriculture and fisheries are important sectors in the upazila, providing employment and income for many households. The plan needs to identify strategies to support these sectors, promote sustainable and efficient practices, and enhance value chains to increase income and productivity.
17. **Informal Settlements:** Informal settlements are prevalent in urban areas of the upazila, leading to overcrowding, poor living conditions, and social exclusion. The plan needs to address informal settlements by identifying strategies to promote formalization, provide adequate housing, basic services and infrastructure, and ensure social inclusion.
18. **Public Space and Recreation:** Access to public space and recreational facilities is essential for the well-being and social cohesion of urban residents. The plan needs to identify strategies to promote the creation of public spaces, recreational facilities, and green areas, and ensure equitable access for all.
19. **Economic Informality:** The urban economy in the upazila is characterized by significant informality, which leads to economic exclusion and insecurity. The plan needs to identify strategies to promote formalization, support micro, small, and medium-sized enterprises (MSMEs), and create employment opportunities.
20. **Technology and Innovation:** Technology and innovation can drive urban development, promote economic growth, and enhance the quality of life for urban residents. The plan needs to identify strategies to promote technology and innovation, support digital transformation, and ensure equitable access to technology.
21. **Water Supply and Sanitation:** Access to safe drinking water and sanitation facilities is essential for the health and well-being of urban residents. The plan needs to identify strategies to promote adequate water supply and sanitation facilities, including infrastructure development, water resource management, and hygiene promotion.
22. **Waste Management:** Urban areas generate significant amounts of solid waste, which pose environmental and health risks. The plan needs to identify strategies to promote proper waste management, including

waste reduction, recycling, and disposal, and ensure the participation of the informal sector in waste management.

23. **Resilience and Adaptation:** Urban areas of the upazila are vulnerable to various shocks and stresses, including natural disasters, climate change, and economic shocks. The plan needs to identify strategies to promote resilience and adaptation, including risk reduction, early warning systems, and social safety nets.
24. **Salinity:** The salinity levels in Barguna Sadar Upazila vary depending on the time of year and the location within the upazila. During the dry season (November to April), when there is less rainfall and freshwater flowing into the area, salinity levels tend to be higher. Conversely, during the monsoon season (June to September), when there is more rainfall and freshwater, salinity levels tend to be lower. Therefore, fresh water source is limited. Surface water treatment and rainwater harvesting can be the best option.
25. **Sea Level rise:** According to various studies and reports, the sea level in Bangladesh has been rising at a rate of around 7 millimetres per year, which is higher than the global average. This rise in sea level has significant impacts on the coastal communities of Barguna Sadar Upazila and the surrounding areas, including increased coastal erosion, inundation of low-lying areas, and saltwater intrusion into freshwater sources. The impacts of sea level rise are particularly severe during cyclones and storm surges, which are becoming more frequent and intense due to climate change.

CHAPTER 3: RURAL AREA PLAN

3.1 *Introductory Words:*

A Rural Area Plan serves as a strategic blueprint, purposefully designed to govern the development, conservation, and overall enhancement of rural regions. By offering tailored guidance for these distinct locales, the plan seeks to harmonize growth while safeguarding the intrinsic character and heritage of rural landscapes. Striking an equilibrium between expansion and preservation, the plan designates zones suitable for diverse uses, from agricultural pursuits to habitat protection, preventing unchecked sprawl. Focused on long-term sustainability, the plan advocates for responsible land use practices, addressing concerns such as soil erosion, water management, and ecological preservation.

Incorporating a holistic approach, the plan tackles not only physical development but also the provisioning of essential services and infrastructure, ensuring that rural residents have access to vital amenities without compromising their quality of life. Moreover, it identifies avenues for economic diversification, acknowledging the need to bolster rural economies beyond traditional industries. Community engagement lies at the heart of the plan, involving residents, stakeholders, and businesses to foster a collective vision that resonates with local aspirations and values.

Encompassing environmental stewardship, the plan outlines strategies to safeguard precious ecosystems, wildlife habitats, and scenic vistas, curtailing the impact of development on nature. It also factors in disaster preparedness and mitigation, steering clear of vulnerable zones and fortifying infrastructure to withstand potential hazards. By providing a legal framework and regulatory structure, the plan guides land use decisions, shapes zoning regulations, and informs building codes, ultimately shaping the fabric of rural development in a cohesive and sustainable manner. In essence, a Rural Area Plan encapsulates a commitment to nurturing resilient and thriving rural communities while preserving their authentic essence.

3.2 *Description of Land Use Categories in the Rural Area Plan*

The Rural Area Plan 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 Barguna Sadar Upazila. The land use categories considered for the Rural Area Plan of Barguna Sadar Upazila are provided in the following table.

Table 3-1: Land Use Categories Considered for the Rural Area Plan of Taltali 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.
Commercial Area	Commercial areas generally contain one or more of a wide 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

Land Use Categories	Description of the Categories
	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	All types of roadways, walkways, railways. 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.

3.3 Existing Land Use:

Nestled within a rural setting, Barguna Sadar Upazila encompasses a tapestry of land use activities that collectively contribute to the intricate socio-economic framework of the region. This part of the report undertakes a comprehensive exploration of the current land use scenario across the diverse unions within Barguna Sadar Upazila. The primary objective is to present a comprehensive overview detailing the distribution and proportional representation of various land use categories, shedding light on the spatial dynamics that shape this rural landscape.

3.3.1 Union-Wise Land Use Analysis:

3.3.1.1 Ayla Patakata Union:

Agriculture takes center stage in Ayla Patakata Union, commanding a considerable 49.97% of the total land area. This robust agricultural foundation underscores the region's agrarian heritage. Residential enclaves follow suit, constituting 21.85% of the landscape and marking a notable presence of settlements. Water bodies, encompassing 16.77% of the area, imbue the region with riverine and aquatic features. While commercial, educational, and transportation land uses contribute smaller percentages, they diversify the land utilization pattern.

Table 3-2: Existing Land use of Ayla Patakata Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	1.11	0.02%

Agriculture	3527.93	49.97%
Commercial	14.08	0.20%
Community Service	5.77	0.08%
Education & Research	20.4	0.29%
Health Service	0.26	0.00%
Manufacturing & Processing	0.33	0.00%
Residential	1542.75	21.85%
Service Activity	0.97	0.01%
Transportation & Communication	96.53	1.37%
Vacant Land	384.6	5.45%
Vegetation	281.79	3.99%
Waterbody	1183.74	16.77%
Total	7060.26	100.00%

3.3.1.2 Badarkhali Union:

In Badarkhali Union, agriculture maintains its centrality, covering a significant 51.96% of the total area. This agricultural expanse supports the local population's livelihoods. Residential zones, occupying 17.11% of the landscape, portray a harmonious coexistence of habitation and cultivation. The presence of water bodies, constituting 10.94% of the area, hints at the region's aquatic resources, while forested areas contribute to the preservation of the natural environment.

Table 3-3: Existing Land use of Badarkhali Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	0.65	0.01%
Agriculture	4159.46	51.96%
Commercial	11.56	0.14%
Community Service	12.76	0.16%
Education & Research	25.47	0.32%
Forest	169.75	2.12%
Health Service	0.55	0.01%
Manufacturing & Processing	24.33	0.30%
Residential	1369.52	17.11%
Service Activity	0.81	0.01%
Transportation & Communication	128.25	1.60%
Vacant Land	163.68	2.04%
Vegetation	1062.77	13.28%
Waterbody	876.13	10.94%
Total	8005.7	100.00%

3.3.1.3 Barguna Union:

Barguna Union's landscape echoes with the hum of agricultural activities, with 63.92% of the area dedicated to this pursuit. This dominance of agriculture underscores the importance of farming in the local economy. A significant 18.56% is allotted to residential spaces, reflecting the cohabitation of people and crops. This union also accommodates commercial and community service endeavors, and the intertwining of forests and water bodies accentuates its environmental diversity.

Table 3-4: Existing Land use of Barguna Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	10.55	0.17%
Agriculture	4043.74	63.92%
Commercial	7.49	0.12%
Community Service	9.65	0.15%
Education & Research	14.36	0.23%
Health Service	0.17	0.00%
Manufacturing & Processing	0.87	0.01%
Open Space & Recreational	0.52	0.01%
Residential	1174.25	18.56%
Service Activity	0.37	0.01%
Transportation & Communication	103.71	1.64%
Vacant Land	71.87	1.14%
Vegetation	585.7	9.26%
Waterbody	303.33	4.79%
Total	6326.58	100.00%

3.3.1.4 Burir Char Union:

Burir Char Union encapsulates a landscape where agriculture is a substantial land use, encompassing 57.67% of the total area. Amid this agrarian canvas, residential areas are interwoven, making up 16.96% of the region. Water bodies, covering 12.02% of the area, underscore the significance of aquatic features, while the presence of vegetation and forested expanses sustains the ecological equilibrium.

Table 3-5: Existing Land use of Burir Char Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	0.47	0.00%
Agriculture	5833.69	57.67%
Commercial	14.69	0.15%
Community Service	13.91	0.14%
Education & Research	28.03	0.28%
Forest	15.17	0.15%
Health Service	0.69	0.01%
Manufacturing & Processing	2.15	0.02%
Residential	1715.66	16.96%

Service Activity	0.33	0.00%
Transportation & Communication	146.41	1.45%
Vacant Land	411.04	4.06%
Vegetation	718.17	7.10%
Waterbody	1215.99	12.02%
Total	10116.39	100.00%

3.3.1.5 Dhalua Union:

Dhalua Union follows a familiar pattern, with agriculture occupying 58.23% of the landscape, firmly anchoring the union's economic framework. Residential clusters, covering 22.35%, define human settlements within the area. Natural elements, like water bodies and vegetation, further enrich the landscape, and the presence of educational and healthcare facilities augments the social infrastructure.

Table 3-6: Existing Land use of Dhalua Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	0.24	0.00%
Agriculture	4908.27	58.23%
Commercial	10.21	0.12%
Community Service	6.05	0.07%
Education & Research	17.87	0.21%
Forest	58.88	0.70%
Health Service	0.42	0.00%
Manufacturing & Processing	5.08	0.06%
Residential	1884.14	22.35%
Service Activity	2.12	0.03%
Transportation & Communication	197.7	2.35%
Vacant Land	208.29	2.47%
Vegetation	373.09	4.43%
Waterbody	757.05	8.98%
Total	8429.41	100.00%

3.3.1.6 Gaurichanna Union:

Gaurichanna Union showcases a landscape where agriculture, at 57.51%, remains the bedrock of local sustenance. Residential regions thrive, constituting 25.48% of the total area and emphasizing the harmonious coexistence of habitation and agriculture. Water bodies and verdant vegetation foster ecological diversity, while mixed-use spaces cater to a range of local activities.

Table 3-7: Existing Land use of Gaurichanna Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	3.63	0.06%
Agriculture	3709.59	57.51%

Commercial	18.14	0.28%
Community Service	8.98	0.14%
Education & Research	15.24	0.24%
Health Service	0.12	0.00%
Manufacturing & Processing	15.75	0.24%
Mixed Use	1.3	0.02%
Open Space & Recreational	3.46	0.05%
Residential	1643.68	25.48%
Service Activity	1.36	0.02%
Transportation & Communication	116.34	1.80%
Vacant Land	146.54	2.27%
Vegetation	409.45	6.35%
Waterbody	357.17	5.54%
Total	6450.77	100.00%

3.3.1.7 Keorabunia Union:

Keorabunia Union's landscape is defined by agriculture, spanning 58.01% of the total area and reinforcing the region's agrarian identity. Residential precincts, encompassing 28.20%, underscore a balance between habitation and cultivation. Natural elements, including water bodies and vegetation, contribute to the union's environmental aesthetics. Additionally, educational, transportation, and healthcare facilities are integral parts of the land use mosaic.

Table 3-8: Existing Land use of Keorabunia Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	0.24	0.00%
Agriculture	3466.48	58.01%
Commercial	13.97	0.23%
Community Service	4.97	0.08%
Education & Research	11.41	0.19%
Health Service	0.3	0.01%
Manufacturing & Processing	0.36	0.01%
Residential	1685.05	28.20%
Service Activity	0.21	0.00%
Transportation & Communication	82.84	1.39%
Vacant Land	162.3	2.72%
Vegetation	301.09	5.04%
Waterbody	246.59	4.13%
Total	5975.82	100.00%

3.3.1.8 M. Baliatali Union:

M. Baliatali Union is characterized by agriculture's influence, covering 58.13% of the landscape and underlining the union's agrarian heritage. Residential spaces, constituting 17.86%, provide a settlement framework amidst cultivation. Water bodies and natural vegetation contribute to ecological balance, while educational and healthcare facilities fortify the social infrastructure.

Table 3-9: Existing Land use of M. Baliatali Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	0.51	0.00%
Agriculture	7842.96	58.13%
Commercial	14.36	0.11%
Community Service	9.15	0.07%
Education & Research	18.32	0.14%
Forest	220.11	1.63%
Health Service	0.69	0.01%
Manufacturing & Processing	1.61	0.01%
Residential	2410.19	17.86%
Service Activity	4.7	0.03%
Transportation & Communication	280.67	2.08%
Vacant Land	489.89	3.63%
Vegetation	542.61	4.02%
Waterbody	1656.94	12.28%
Total	13492.71	100.00%

3.3.1.9 Naltona Union:

Naltona Union's land use pattern embraces agriculture, occupying 46.23% of the area, and reflects the region's agrarian essence. Forested realms constitute 20.46%, enhancing the environmental landscape. Residential zones, coalescing with water bodies, encapsulate the union's physical identity, while educational and healthcare provisions cater to the community's needs.

Table 3-10: Existing Land use of Naltona Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	0.91	0.01%
Agriculture	4395.87	46.23%
Commercial	12.87	0.14%
Community Service	5.77	0.06%
Education & Research	10.5	0.11%
Forest	1946.11	20.46%
Health Service	0.35	0.00%
Manufacturing & Processing	0.6	0.01%
Residential	1259.73	13.25%
Service Activity	1.62	0.02%

Transportation & Communication	137.09	1.44%
Vacant Land	230.21	2.42%
Vegetation	263.81	2.77%
Waterbody	1244.03	13.08%
Total	9509.48	100.00%

3.3.1.10 Phuljhury Union:

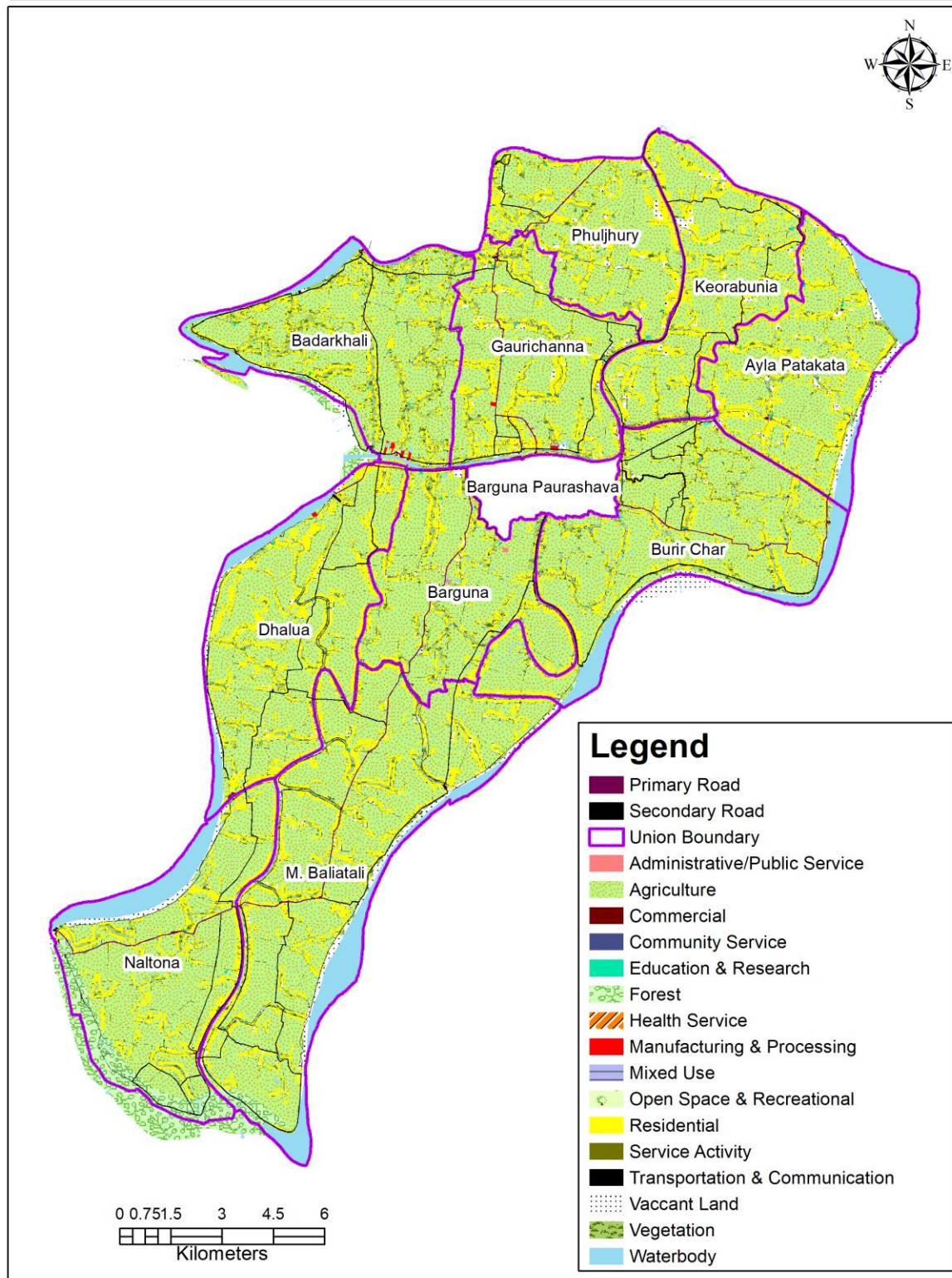
Phuljhury Union's terrain is dominated by agriculture, spanning 60.83% of the total land, and mirrors the reliance on farming activities. Residential zones occupy 23.04%, marking the presence of communities. Natural features, such as water bodies and vegetation, augment the region's scenic beauty. Additionally, educational, transportation, and commercial zones foster local development.

Table 3-11: Existing Land use of Phuljhury Union

Existing Land Use	Area in Acre	Percentage
Administrative/Public Service	0.28	0.01%
Agriculture	3195.8	60.83%
Commercial	7.76	0.15%
Community Service	3.64	0.07%
Education & Research	13.95	0.27%
Health Service	0.2	0.00%
Manufacturing & Processing	0.34	0.01%
Residential	1210.53	23.04%
Service Activity	0.04	0.00%
Transportation & Communication	66.86	1.27%
Vacant Land	124.21	2.36%
Vegetation	440.53	8.39%
Waterbody	189.21	3.60%
Total	5253.35	100.00%

Barguna Sadar Upazila unveils a captivating panorama, where diverse land uses converge to create a dynamic and intricate tapestry. The palpable presence of agriculture, harmoniously entwined with settlements, natural endowments, and economic activities, serves as the cornerstone of the local socio-economic identity. This existing land use scenario forms a resilient foundation for the forthcoming comprehensive rural area plan, one that is poised to address both immediate and long-term communal necessities while safeguarding the region's ecological integrity.

Existing Land Use of Barguna Sadar Upazila Rural Area



3.4 Standards of Land Use Planning and Infrastructure

The Barguna Rural Area Plan adheres to a set of Planning Standards that serve as guiding principles for planners and decision-makers in the allocation of necessary space for various purposes. Within this framework, the Current Development Plan seeks to establish development guidelines and provide a roadmap for future land use over the entire plan period. The central aim of this plan is not a universal allocation of space for all types of services in all areas. Instead, the focus lies on the strategic inclusion of services with immediate requirements and regional and local significance as identified by the planning team.

Given the absence of a universally accepted national planning standard, the potential for debates and differences of opinion naturally exists. However, it's important to approach the proposed standard with a certain degree of flexibility. In this regard, the suggested standard within the Barguna Rural Area Plan stands as a valuable reference. These standards have been culled from a comprehensive study conducted by the UDD, which meticulously examined the space standards of numerous planning projects across Bangladesh. Planning standards of the land use planning and infrastructure are shown in the following table.

Table 3-12: Recommended Planning Standards of Land Use and Infrastructure

Land Use Components	Recommended Standard Provision	Remarks
Residential		
General Residential	1 acre/100-150 pop.	
Real Estate- Public/ Private	1 acre/200 pop.	
Government Services		
Union Parishad Office	3-5 acres/Union Parishad	
Police station/Police box	3-5 acres/Paurashava	
Post office	0.50 acre/20,000 pop.	
Fire service	1 acre/20,000 pop.	
Telephone exchange	0.25 acre/20,000 pop.	
Commercial		
Wholesale market	3-5 acres/Paurashava	
Retail sale market	0.5 acre/10,000 pop.	
Neighborhood market	1 acre/Neighborhood market	
Cattle Market/Hat	1-1.5 acre/Paurashava	
Industrial		
General/Agro/Cottage Industry	2-5 acre/10,000 pop.	
Educational and Research		
Nursery	0.40 acres/Nursery; 1 Nursery/5000 pop.	
Primary school	1 acre/primary school; 1 primary school/2000 pop.	
Secondary school	2 acres/Secondary School; 1 secondary school/8000 pop.	
College	4 acres/1 college, 1 college/20,000 pop.	
Vocational training center	5-10 acres/Upazila	1 per Upazila
Others	3 acres/20,000 pop.	
Health Facilities		
Upazila health complex	10-20 acres/Upazila HQ	1 per Upazila
General Hospital	5 acres/50 bed hospital/Paurashava	
Specialized Hospital	1 acre/Paurashava	

Land Use Components	Recommended Standard Provision	Remarks
Community/Maternity clinic	0.60 acre/5000 pop., within 2 km. distance of residents.	
Open Space and Recreation Facilities		
Stadium/Sports complex	5-10 acres/Upazila	1 per Upazila
Central Park	5-10 acres/Upazila	1 per Upazila
Community/Neighborhood Park	1 acre/10,000 pop.	
Playground	3 acres/20,000 pop.	
Cinema hall	1 acre/20,000 pop.	
Community and Social Services		
Eidgah	0.5 acre/20,000 pop.	
Graveyard/Cremation Ground	1 acre/20,000 pop.	
Religious (mosque/temple/ church)	0.5 acre/20,000 pop.	
Community center	0.50 acre/20,000 pop.	
Club/Gymnasium	0.10 acre	Optional
Utility Facilities		
Water Supply Treatment Plant	1 acre/20,000 pop.	
Solid Waste Disposal Site	4-10 acres/Upazila	
Sewerage Treatment Plant	As per local requirement	
Waste Transfer Station	0.25 acre/station	
Electric Sub-station	0.50 acre/20,000 pop.	
Transportation Facilities		
Bus terminal	1 acre/Paurashava	1 per Upazila
Bus Stand	0.50 acre/Paurashava	
Truck Terminal	1 acre/Paurashava	1 per Upazila
Launch Ghat	1 acre/Paurashava	
Railway Station	4 acres/station	
CNG/Tempo Stand	0.25 acres/stand	

3.5 Future Land Development Proposal

The Barguna Rural Area Plan envisions a sustainable path forward through its forward-looking Land Development Proposal. This visionary plan places a strong emphasis on harnessing the potential of state-of-the-art technologies, championing the cause of environmental preservation, and fostering a dynamic and all-encompassing community. Embedded within this proposal are pivotal elements that shape its core, encompassing sustainable infrastructural enhancements, a sensible blend of land-use zoning, the integration of verdant spaces and measures for biodiversity conservation, seamless technological integration, robust community participation for social welfare, establishment of eco-friendly transportation systems, and avenues for economic growth.

Central to this proposal is the pivotal concept of sustainable infrastructure. It envisions the integration of renewable energy sources and the implementation of smart grid systems that streamline energy consumption while reducing wastage. Furthermore, an innovative water management scheme finds prominence in the proposal, aiming to optimize water utilization in an ecologically responsible manner.

One of the hallmarks of this developmental endeavor is the implementation of mixed-use zoning strategies. By creating a mosaic of residential, commercial, and recreational areas, the plan aspires to foster a vibrant and cohesive community, placing special emphasis on walkability and the proliferation of green spaces. The preservation and enrichment of the area's natural habitats are also of paramount importance. This is reflected in the proposal's

commitment to establishing extensive green zones, reintroducing native plant species, and designating wildlife corridors to nurture biodiversity and bolster local ecosystems.

Notably, technology plays a pivotal role in this visionary Rural Area Plan. The infusion of smart technologies and the provision of high-speed internet connectivity throughout the region promise to unlock a realm of possibilities. This digital infrastructure empowers data-driven decision-making, augments resource management, enhances transportation networks, and significantly uplifts the overall quality of life for the community. The Barguna Rural Area Plan ingeniously encapsulates a blueprint for sustainable growth, one that harmonizes technological innovation, ecological mindfulness, and societal inclusivity in a symphony of progress.

Table 3-13: Recommended/Permitted Facilities/uses for Future Development Area

	Strategic Service Center	Sector	Recommended/Permitted Facilities/Uses
1.	Trade and Commerce Center	Commerce and Shopping	<ul style="list-style-type: none"> • GO & NGO Office • Commerce & Trade center • Wholesale market • Retail sale/Kitchen • E-commerce center • Cold storage • Industrial market/ Market place for miscellaneous products • Cattle Market (Hat) • Bank/Agent banking service • Market/Food Centre/Restaurant • Cinema • Entertainment • Foreign Trade • Mission/Chancery • Convention/Exhibition Centre • Cooperative office • Public toilet
		Open Space and Recreation	<ul style="list-style-type: none"> • Open space to take shelter in disaster event or fire hazard or earthquake. • Park • Play-grounds (stadium, Play field etc.) • Natural and underdeveloped resources areas (critical habitat areas, areas with natural beauty such as riverbank or char, heritage sites etc.) • Coastal Afforestation • Swamp Area • Natural Open Space
		Miscellaneous	As per community requirement, local authority and elected public representative will discuss, sort-out and take decision. With both parties consent the community requirement will be implemented
		Utilities	<ul style="list-style-type: none"> • Electricity supply • Electric substation

	Strategic Service Center	Sector	Recommended/Permitted Facilities/Uses
			<ul style="list-style-type: none"> • Primary solid waste collection station • Overhead water tank/water purification plant/piped supplied water
		Transportation	<ul style="list-style-type: none"> • Bus/truck terminal • Rickshaw/tempo/ bike stand • Rent a car. • Boat Ghat • Fuel Station
2	First order service center	Community Facilities	<ul style="list-style-type: none"> • Eidgha • Graveyard/ cremation ground • community center • religious places/
		Government Services	<p>Services provided by the government to people such as</p> <ul style="list-style-type: none"> • Prison • Police station • health care • armed forces • ambulances • paramedics • fire brigade • public broadcasting etc.
		Health	<ul style="list-style-type: none"> • Hospital/clinic/satellite clinic • Health services provided by NGO/other organization
		Education	<ul style="list-style-type: none"> • Kindergarten • Primary School • Secondary School • College • Institute of Technical Education • Polytechnic • Religious School/Institute • Foreign System School • Special Education School (e.g. School for the Disabled • public library • research institute • skill training center
		Residential	Planner residential
		services market	The services market includes marketing centers operating in rural areas where favorable marketing infrastructure may not be present.
		Utilities	<ul style="list-style-type: none"> • Electricity supply • Primary/secondary solid waste collection station

	Strategic Service Center	Sector	Recommended/Permitted Facilities/Uses
			<ul style="list-style-type: none"> • Overhead water tank/water purification plant/piped supplied water. • Drug Rehabilitation Centre/Halfway House • Community Institutions • Association premises • Community Centre/Club • Community Hall • Welfare Home • Child Care Centre • Home for the aged • Home for the disabled • Workers' Dormitory • Cultural Institutions • Television/Filming Studio Complex • Museum
3	Second order service center	Community Facilities	<ul style="list-style-type: none"> • Graveyard/ cremation ground • community center • religious places
		Health	<ul style="list-style-type: none"> • clinic/satellite clinic • Health services provided by NGO/other organization
		Education	<ul style="list-style-type: none"> • Kindergarten • Primary School • Secondary School • Institute of Technical Education • Polytechnic • Religious School/Institute • Special Education School (e.g., School for the Disabled • skill training center
		Transportation	<ul style="list-style-type: none"> • Rickshaw/tempo/ bike stand • Launch/boat/steamer terminals • Fuel Station
		Open Space and Recreation	<ul style="list-style-type: none"> • Open space to take shelter in disaster event or fire hazard or earth quake • Park • Play-grounds (mini stadium, Play field etc.) • Natural and underdeveloped resources areas (critical habitat areas, areas with natural beauty such as riverbank or char, heritage sites etc.) • Coastal Afforestation • Swamp Area • Natural Open Space
		Residential	Spontaneous/Planned residential

	Strategic Service Center	Sector	Recommended/Permitted Facilities/Uses
		Miscellaneous	As per community requirement, local authority and elected public representative will discuss, sort-out and take decision. With both parties consent the community requirement will be implemented
		Utilities	<ul style="list-style-type: none"> • Electricity supply • Primary/secondary solid waste collection station • Overhead water tank/ pipe supplied water/rainwater harvest facility. • Drug Rehabilitation • Community Institutions • Community Centre/Club • Community Hall • Welfare Home • Child Care Centre • Home for the Aged • Home for the Disabled • Workers' Dormitory
4	Third order service center	Health	<ul style="list-style-type: none"> • satellite clinic • Health services provided by NGO/other organization
		Education	<ul style="list-style-type: none"> • Kindergarten • Primary School
		Community Facilities	religious places
		Transportation	Rickshaw/tempo/ bike stand
		Open Space and Recreation	Mainly recreation facilities
		Residential	Spontaneous development
		Miscellaneous	As per community requirement, local authority and elected public representative will discuss, sort-out and take decision. With both party consent the community requirement will be implemented
		Utilities	<ul style="list-style-type: none"> • Electricity supply • Secondary/tertiary solid waste collection station • Overhead water tank/ piped supplied water/rainwater harvest facility • Welfare Home • Child Care Centre
5	Economic Region	communication	<ul style="list-style-type: none"> • Telephone lines • mobile networks • Internet connectivity, and • Broadcasting networks.
		Transportation	<ul style="list-style-type: none"> • Roads, • Inland waterways.
		Utilities	<ul style="list-style-type: none"> • water supply and distribution system,

	Strategic Service Center	Sector	Recommended/Permitted Facilities/Uses
			<ul style="list-style-type: none"> sanitation drainage system, pollution control devices,
		energy	Light and power station
		health care	private clinic
		financial services	<ul style="list-style-type: none"> Banking services such as savings accounts, checking accounts, and loans. Investment services such as stock trading and investment management. Insurance services such as life insurance and health insurance.
		public administration	<ul style="list-style-type: none"> Police station health care/ ambulances armed forces fire brigade
		Miscellaneous	Any services to support growth and development within the capacity of nation/regional/ local authority

3.6 Union-Wise Land Use Proposal

3.6.1 Ayla Patakata Union

The land use scenario of Ayla Patakata Union, situated within Barguna Sadar Upazila, is characterized by a diverse distribution of land areas across various categories, each serving distinct purposes that contribute to the overall development of the region. The total land area under consideration is 29,916.92 acres. Agriculture occupies a substantial portion, covering 2,655.84 acres. This category encompasses fields and farmlands that play a vital role in the local economy, serving as the backbone of agricultural activities and crop cultivation. The Circulation Network, spanning 1,720.30 acres, consists of roads, pathways, and transportation infrastructure that facilitate efficient movement of people and goods within the union and its surrounding areas. This category is pivotal for ensuring connectivity and accessibility. Foreshore and Coastal Afforestation, extending over 1,933.17 acres, emphasizes the importance of preserving coastal areas and promoting afforestation. This plays a significant role in protecting the environment and enhancing the ecological balance of the coastal ecosystem. The Rural Settlement category encompasses 3,529.32 acres, reflecting the distribution of residential areas within the union. These settlements are the foundation of the local community, providing housing and habitation spaces for the population. Strategic Service Centers are divided into three orders based on their roles. The 1st Order Centers, covering 2,135.14 acres, serve as primary hubs for essential services. The 2nd Order Centers, spread across 8.02 acres, contribute to secondary services and amenities. Lastly, the 3rd Order Centers, encompassing 4,358.99 acres, play a crucial role in offering tertiary services, contributing to comprehensive development. Trade and Commerce Centers, occupying 4.63 acres, are dedicated spaces for economic activities and transactions. They foster business growth and commercial exchanges within the union. With a vast expanse of 13,571.50 acres, the Waterbody category includes rivers, ponds, and other water sources. These waterbodies are integral to the local ecology and have a profound influence on both livelihoods and natural processes.

3.6.1.1 Major Proposals:

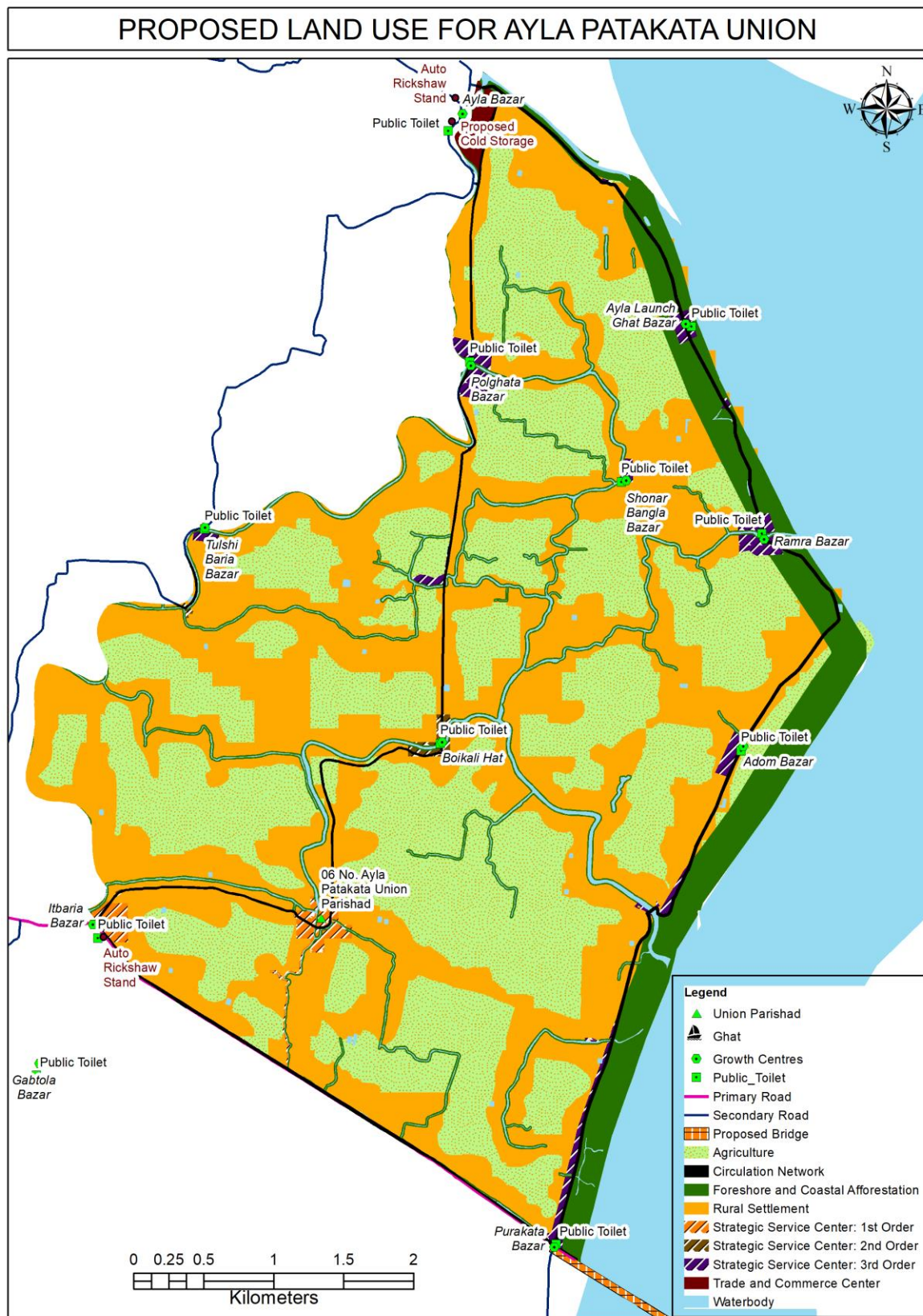
- Cold Storage Facility at Ayla Bazar
- Auto Rickshaw Stand at Alya Bazar & Itbaria Bazar.

- Strategic Service Center: 1st Order
- Strategic Service Center: 2nd Order
- Strategic Service Center: 3rd Order
- Trade and Commerce Center

3.6.1.2 Land Use Proposal:

Table 3-14: Land Use Proposal at Ayla Patakata Union

Land Use	Area in Acre
Agriculture	2655.84
Circulation Network	1720.30
Foreshore and Coastal Afforestation	1933.17
Rural Settlement	3529.32
Strategic Service Center: 1st Order	2135.14
Strategic Service Center: 2nd Order	8.02
Strategic Service Center: 3rd Order	4358.99
Trade and Commerce Center	4.63
Waterbody	13571.50
Total	29916.92



Map 3-2: Proposed Land Use for Ayla Patakata Union

3.6.2 Badarkhali Union:

The land use scenario within Badarkhali Union, situated in Barguna Sadar Upazila, unfolds as a diverse and purpose-driven landscape, encompassing a total area of 8,152.60 acres. This comprehensive analysis outlines the strategic allocation of land across various categories, each contributing to the multifaceted development of the region. Agriculture dominates a substantial portion, spanning 2,749.44 acres, reflecting the economic significance of agrarian activities as a backbone of local livelihoods. The Circulation Network, covering 136.12 acres, intricately weaves roadways and pathways, ensuring seamless connectivity and movement within and around the union. In line with ecological consciousness, a Conservation Zone occupies 145.95 acres, exemplifying the commitment to preserving the environment and fostering biodiversity. Foreshore and Coastal Afforestation extend over 860.35 acres, reflecting the vital role of coastal preservation and afforestation in environmental protection. In pursuit of sustainable energy sources, a Renewable Energy Plant claims 60.71 acres, marking the endeavor towards innovative and eco-friendly energy solutions. The tapestry of the union is further enriched by Rural Settlements spanning 3,110.75 acres, serving as the bedrock of community life. Strategic development is exemplified through Service Centers, organized into three orders: 1st Order Centers (11.99 acres) catering to essential services, 2nd Order Centers (2.26 acres) contributing to secondary amenities, and 3rd Order Centers (82.59 acres) enriching development with tertiary services. Tourism potential is recognized through Tourism Services occupying 223.94 acres, acknowledging the appeal of the region's natural and cultural attractions. Finally, Waterbodies spanning 768.50 acres, encompassing rivers and ponds, underscore their pivotal role in local ecology and livelihoods.

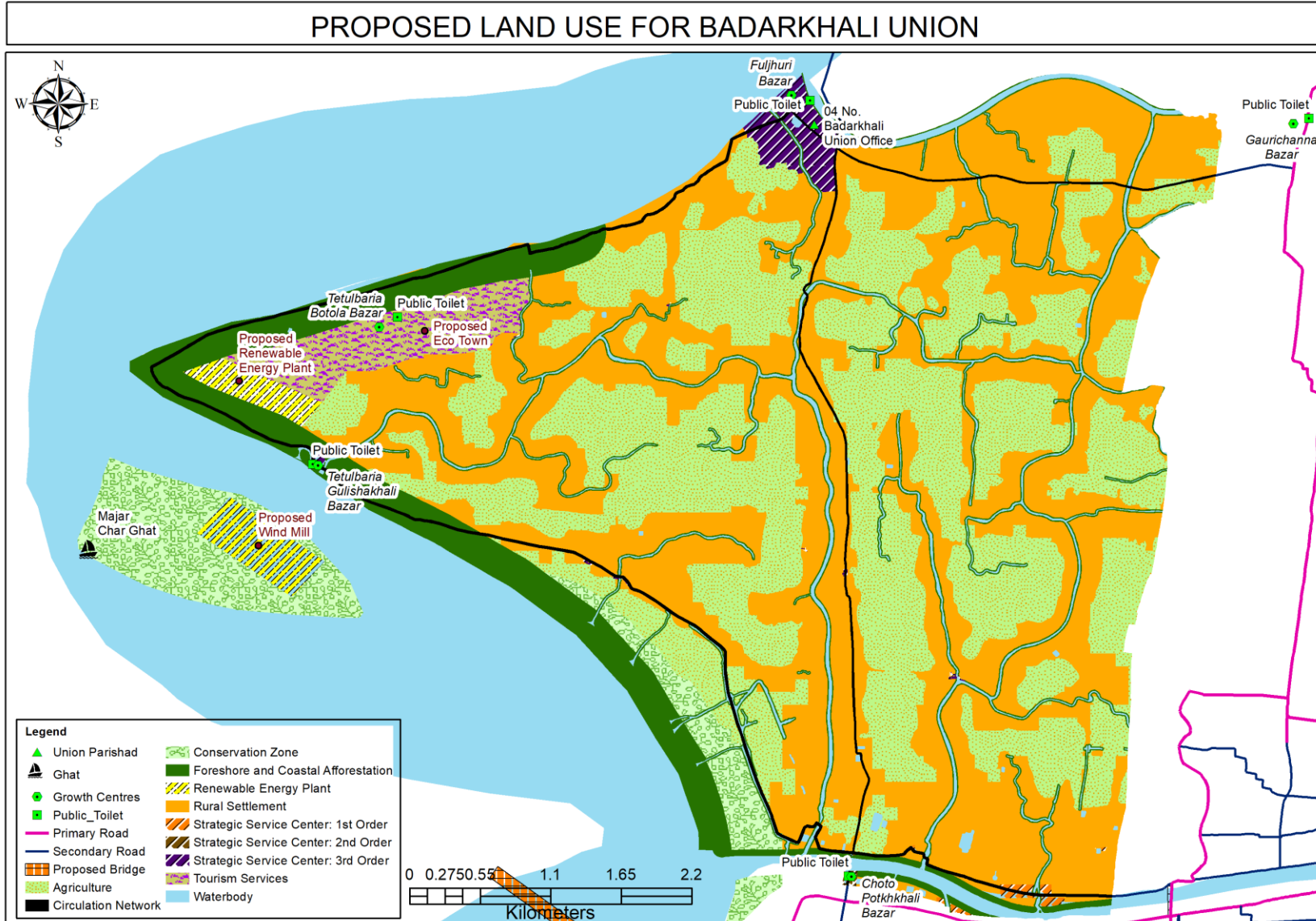
3.6.2.1 Major Proposals:

- Proposed Eco Town
- Proposed Renewable Energy Site
- Strategic Service Center: 1st Order, 2nd Order, and 3rd Order.

3.6.2.2 Land Use Proposal:

Table 3-15: Land Use Proposal at Badarkhali Union

Land Use	Area in Acre	Percentage
Agriculture	2749.44	33.72
Circulation Network	136.12	1.67
Conservation Zone	145.95	1.79
Foreshore and Coastal Afforestation	860.35	10.55
Renewable Energy Plant	60.71	0.74
Rural Settlement	3110.75	38.16
Strategic Service Center: 1st Order	11.99	0.15
Strategic Service Center: 2nd Order	2.26	0.03
Strategic Service Center: 3rd Order	82.59	1.01
Tourism Services	223.94	2.75
Waterbody	768.5	9.43
Total	8152.6	100



Map 3-3: Proposed Landuse for Badarkhali Union

3.6.3 Barguna Union:

The land use configuration within Barguna Union, nestled in Barguna Sadar Upazila, offers an intricate tapestry of allocation across diverse categories, collectively spanning an expansive 30,613.81 acres. This comprehensive analysis unveils the strategic utilization of land to foster multifaceted development across the region. Agriculture, spanning 2,922.63 acres, stands as a testament to the agrarian heritage, where fertile landscapes form the backbone of sustenance and economic prosperity. The sprawling network of Circulation, covering 20,731.62 acres, intricately weaves roads and pathways, forming the vital threads of connectivity that facilitate fluid movement of people and goods. In recognition of economic ambitions, an area of 517.18 acres is designated as an Economic Region, signifying the intent to optimize land for economic activities. The category of Foreshore and Coastal Afforestation, spanning 1,351.35 acres, underscores the commitment to preserving coastal ecosystems and nurturing afforestation. Anticipating future growth, Potential Urban Area spreads over 713.61 acres, carving out space for urban expansion to cater to evolving needs. The domain of Rural Settlement encompasses 3,200.97 acres, forming the nurturing cradle for community life and livelihoods. The landscape is enriched by strategically placed Service Centers, distinguished into three orders: 1st Order Centers (4.60 acres), serving as primary service hubs; 2nd Order Centers (10.32 acres), offering secondary amenities; and 3rd Order Centers (405.67 acres), providing tertiary services for comprehensive development. Finally, Waterbodies span 755.85 acres, encompassing rivers, ponds, and water sources that serve as life-enabling elements of the local ecosystem and livelihoods.

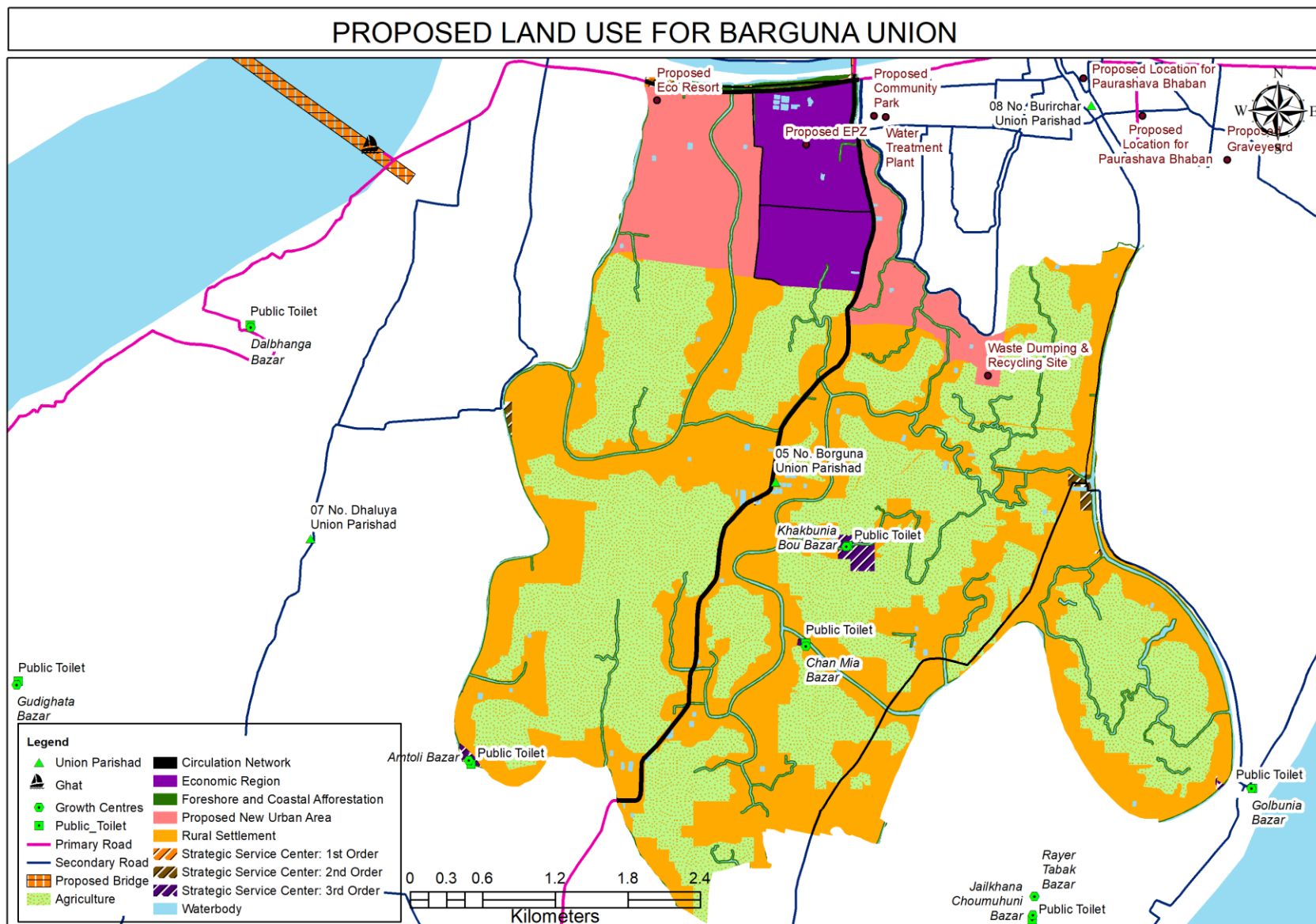
3.6.3.1 Major Proposals:

- Proposed EPZ
- New Urban Area
- Strategic Service Center: 1st Order, 2nd Order and 3rd Order.

3.6.3.2 Land Use Proposal:

Table 3-16: Land Use Proposal at Barguna Union

Land Use	Area in Acre	Percentage
Agriculture	2922.63	9.55
Circulation Network	20731.62	67.72
Economic Region	517.18	1.69
Foreshore and Coastal Afforestation	1351.35	4.41
Potential Urban Area	713.61	2.33
Rural Settlement	3200.97	10.46
Strategic Service Center: 1st Order	4.6	0.02
Strategic Service Center: 2nd Order	10.32	0.03
Strategic Service Center: 3rd Order	405.67	1.33
Waterbody	755.85	2.47
Total	30613.81	100



Map 3-4: Proposed Land Use for Barguna Union

3.6.4 Burir Char:

The intricate land use composition of Burir Char Union, nestled within Barguna Sadar Upazila, unfolds as a mosaic of purpose-driven categories, spanning a total area of 32,314.51 acres. This comprehensive analysis highlights the strategic allocation of land to foster multifaceted development in the region. Agriculture, spanning 5,239.05 acres, signifies the region's agrarian essence, with cultivated fields embodying sustenance and economic vitality. An expansive Circulation Network, covering 1,742.31 acres, intricately weaves roads and pathways, forming vital conduits that facilitate fluid movement of people and goods. The category of Foreshore and Coastal Afforestation, sprawling over 2,995.88 acres, underscores the significance of preserving coastal ecosystems and nurturing afforestation. Rural Settlements, spanning 4,142.41 acres, lay the foundation for community life and livelihoods, nurturing local identity. Strategic planning comes to fruition through Service Centers, classified into three tiers: 1st Order Centers (463.56 acres) as primary service hubs, 2nd Order Centers (572.62 acres) offering secondary amenities, and 3rd Order Centers (3,365.29 acres) providing tertiary services for comprehensive development. With an area of 48.86 acres dedicated to Tourism Services, the union recognizes the potential for tourism-driven growth, highlighting the natural allure and cultural vibrancy of the region. Finally, Waterbodies, encompassing a vast 13,744.54 acres, encompass rivers, ponds, and water sources, serving as life-sustaining elements within the local ecosystem.

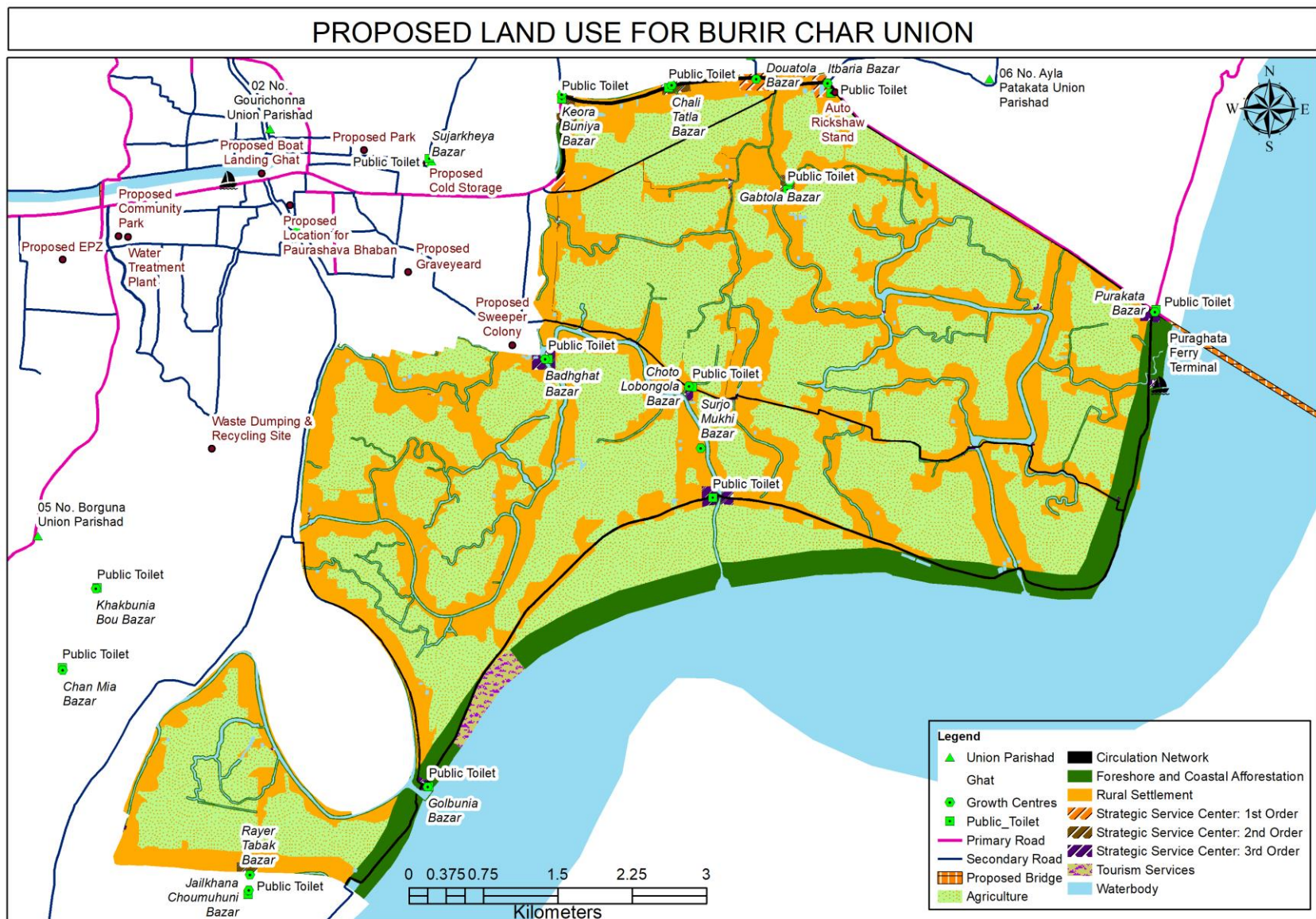
3.6.4.1 Major Proposals:

- Proposed Bridge connecting Amtali and Barguna on Payra River.
- Strategic Service Center: 1st Order
- Strategic Service Center: 2nd Order
- Strategic Service Center: 3rd Order
- Tourism Sites

3.6.4.2 Land Use Proposal:

Table 3-17: Land Use Proposal at Burir Char Union

Land Use	Area in Acre	Percentage
Agriculture	5239.05	16.21
Circulation Network	1742.31	5.39
Foreshore and Coastal Afforestation	2995.88	9.27
Rural Settlement	4142.41	12.82
Strategic Service Center: 1st Order	463.56	1.43
Strategic Service Center: 2nd Order	572.62	1.77
Strategic Service Center: 3rd Order	3365.29	10.41
Tourism Services	48.86	0.15
Waterbody	13744.54	42.53
Total	32314.51	100.00



Map 3-5: Proposed Land Use for Burir Char Union

3.6.5 Dhalua Union:

The land use configuration within Dhalua Union, nestled within Barguna Sadar Upazila, unveils a purposeful tapestry of allocation across various categories, collectively spanning an area of 8,488.75 acres. This comprehensive analysis sheds light on the strategic utilization of land to foster multifaceted development across the region. Agriculture, covering 3,829.32 acres, reflects the region's agricultural heritage, with cultivated expanses forming the backbone of sustenance and economic vitality. The network of Circulation, spanning 175.87 acres, intricately interweaves roadways and pathways, facilitating the fluid movement of goods and people, crucial for seamless connectivity. The allocation of 25.63 acres as a Conservation Zone underscores the commitment to environmental stewardship and sustainability, contributing to the region's ecological equilibrium and biodiversity. Foreshore and Coastal Afforestation, extending over 884.96 acres, underscores the significance of preserving coastal ecosystems and nurturing afforestation. Anticipating future needs, a minute area of 0.16 acres is designated as a Potential Urban Area, signifying the region's forward-looking approach to urban expansion. Rural Settlements, spanning 2,847.61 acres, are the cradle of community life, nurturing local identity and livelihoods. Strategic planning is evident through the Service Centers stratified into three orders: 1st Order Centers (1.04 acres), serving as primary service hubs; 2nd Order Centers (10.23 acres), offering secondary services; and 3rd Order Centers (55.88 acres), providing tertiary services for comprehensive development. With an area of 58.03 acres dedicated to Tourism Services, the union acknowledges the potential for tourism-driven growth, drawing attention to the region's natural allure and cultural richness. Finally, the vast expanse of Waterbodies encompassing 600.00 acres includes rivers, ponds, and water sources, fundamental to the local ecosystem and livelihoods.

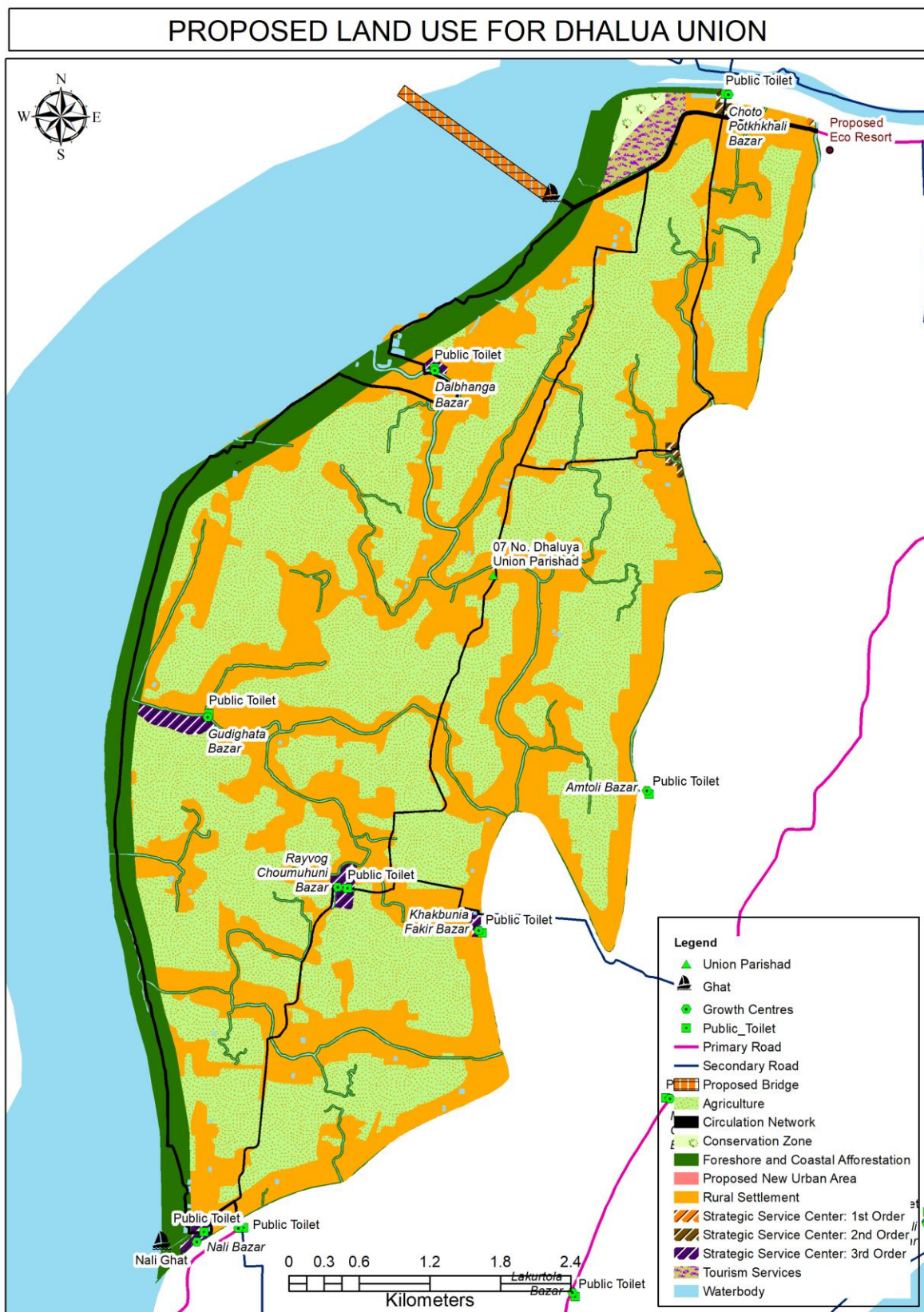
3.6.5.1 Major Proposals:

- Proposed Bridge connecting Patharghata and Barguna on Bishkhali River
- Tourism Site
- New Urban Area
- Strategic Service Center: 1st Order, 2nd Order, and 3rd Order.

3.6.5.2 Land Use Proposal:

Table 3-18: Land Use Proposal at Dhalua Union

Land Use	Area in Acre	Percentage
Agriculture	3829.32	45.11
Circulation Network	175.87	2.07
Conservation Zone	25.63	0.3
Foreshore and Coastal Afforestation	884.96	10.43
New Urban Area	0.16	0
Rural Settlement	2847.61	33.55
Strategic Service Center: 1st Order	1.04	0.01
Strategic Service Center: 2nd Order	10.23	0.12
Strategic Service Center: 3rd Order	55.88	0.66
Tourism Services	58.03	0.68
Waterbody	600	7.07
Total	8488.75	100



Map 3-6: Proposed Land Use for Dhalua Union

3.6.6 Gaurichanna Union:

The land use dynamics within Gaurichanna Union, nestled in Barguna Sadar Upazila, are presented in this comprehensive report, showcasing the allocation of land across diverse categories, collectively spanning an area of 6,591.81 acres. This analysis offers insights into how each category contributes to the region's holistic development. Agriculture, covering 2,774.54 acres, underscores the importance of agrarian pursuits, with cultivated fields sustaining local livelihoods and economic progress. The network of Circulation, spanning 190.98 acres, intricately links roads and pathways, enabling seamless movement of people and goods, vital for connectivity. An area of 129.86 acres is designated as an Economic Region, highlighting the strategic land allocation for economic activities, enriching the region's economic fabric. The category of Foreshore and Coastal Afforestation, extending over 374.56 acres, underscores the commitment to coastal preservation and afforestation, contributing to environmental conservation. Anticipating future urban needs, an area of 805.67 acres is earmarked as a Potential Urban Area, demonstrating a proactive approach to urban expansion. Rural Settlements, spanning 1,912.23 acres, are the cradle of community life, fostering local identity and livelihoods. The strategic allocation is evident through Service Centers, divided into two orders: 1st Order Centers (28.01 acres) serving as primary hubs for essential services and 2nd Order Centers (11.55 acres) contributing to secondary amenities. The significance of water is emphasized with a Waterbody category spanning 364.41 acres, encompassing rivers, ponds, and water sources vital for local ecosystems and livelihoods.

3.6.6.1 Major Proposals:

- Proposed University
- New Urban Area
- Proposed Park
- Proposed River Side Activity Zone
- Proposed EPZ (Part)

3.6.6.2 Proposed Land Use:

Table 3-19: Land Use Proposal at Gaurichanna Union

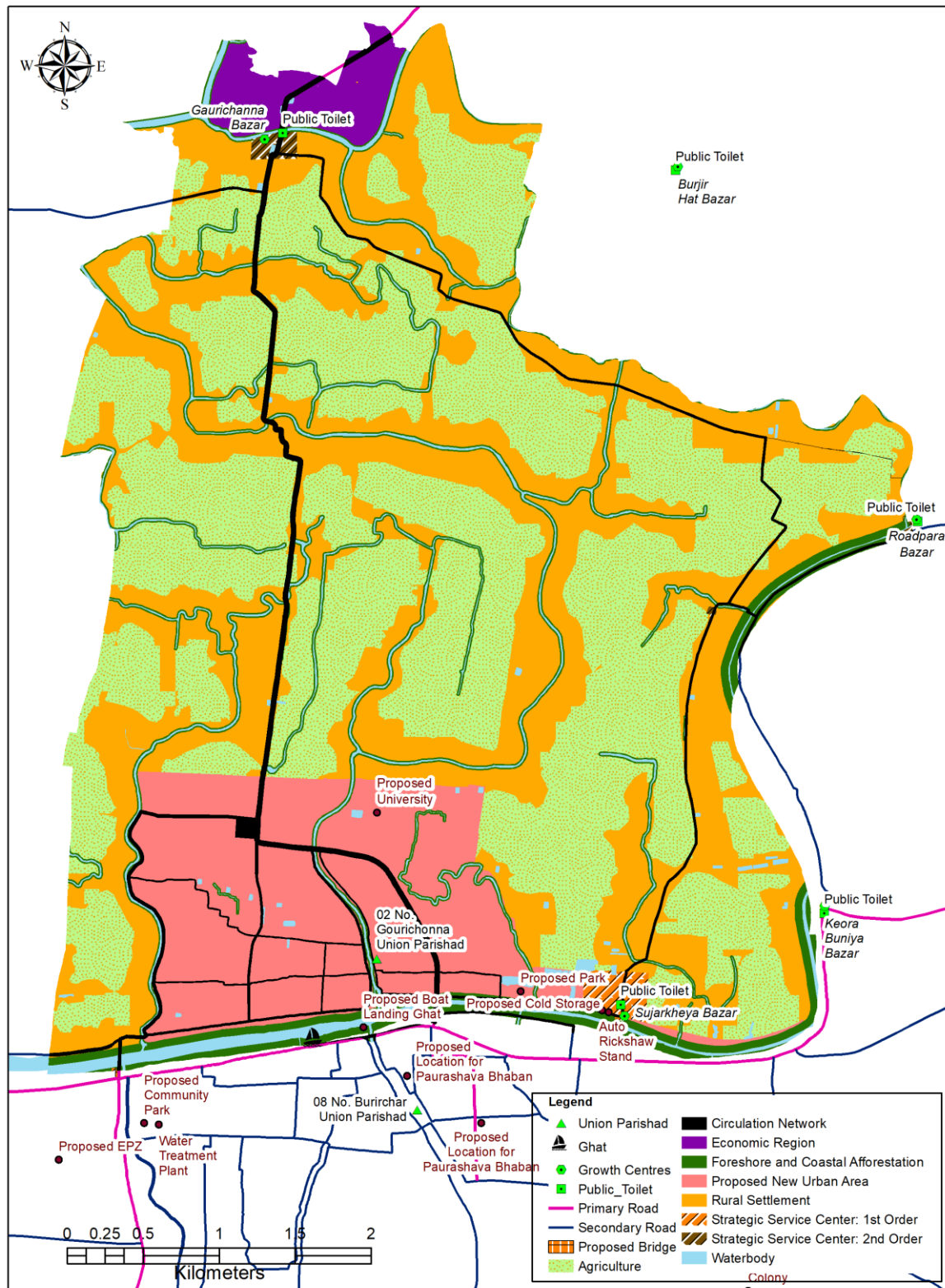
Land Use	Area in Acre	Percentage
Agriculture	2774.54	42.09
Circulation Network	190.98	2.90
Economic Region	129.86	1.97
Foreshore and Coastal Afforestation	374.56	5.68
Potential Urban Area	805.67	12.22
Rural Settlement	1912.23	29.01
Strategic Service Center: 1st Order	28.01	0.42
Strategic Service Center: 2nd Order	11.55	0.18
Waterbody	364.41	5.53

Total

6591.81

100.00

PROPOSED LAND USE FOR GAURICHANNA UNION



Map 3-7: Proposed Land Use for Gaurichanna Union

3.6.7 Keorabunia Union

The intricate land use composition within Keorabunia Union, nestled within Barguna Sadar Upazila, unfolds as a carefully orchestrated allocation across diverse categories, collectively spanning an area of 6,174.56 acres. This comprehensive analysis offers insights into the strategic utilization of land, each category playing a distinct role in contributing to the region's holistic development. Agriculture, covering 2,169.93 acres, signifies the region's commitment to its agrarian heritage, with cultivated fields forming the cornerstone of sustenance and economic vitality. The network of Circulation, spanning 98.99 acres, intricately weaves roadways and pathways, facilitating the seamless movement of goods and people, vital for the union's connectivity. The significance of coastal preservation and afforestation is evident in Foreshore and Coastal Afforestation, extending over 334.30 acres. This category underscores the commitment to environmental conservation, particularly in the coastal areas. Rural Settlements, spanning 3,343.22 acres, serve as the heart of community life, nurturing local identity and livelihoods. The strategic distribution is manifest through Service Centers, classified into three tiers: 1st Order Centers (12.77 acres), serving as primary service hubs; 2nd Order Centers (27.26 acres), contributing to secondary services; and 3rd Order Centers (16.05 acres), providing tertiary services for comprehensive development. An area of 44.38 acres is designated for Trade and Commerce Center, emphasizing the role of dedicated spaces for economic activities and commercial exchanges within the union. Finally, Waterbodies encompassing 127.66 acres include rivers, ponds, and water sources that are fundamental to the local ecosystem and livelihoods.

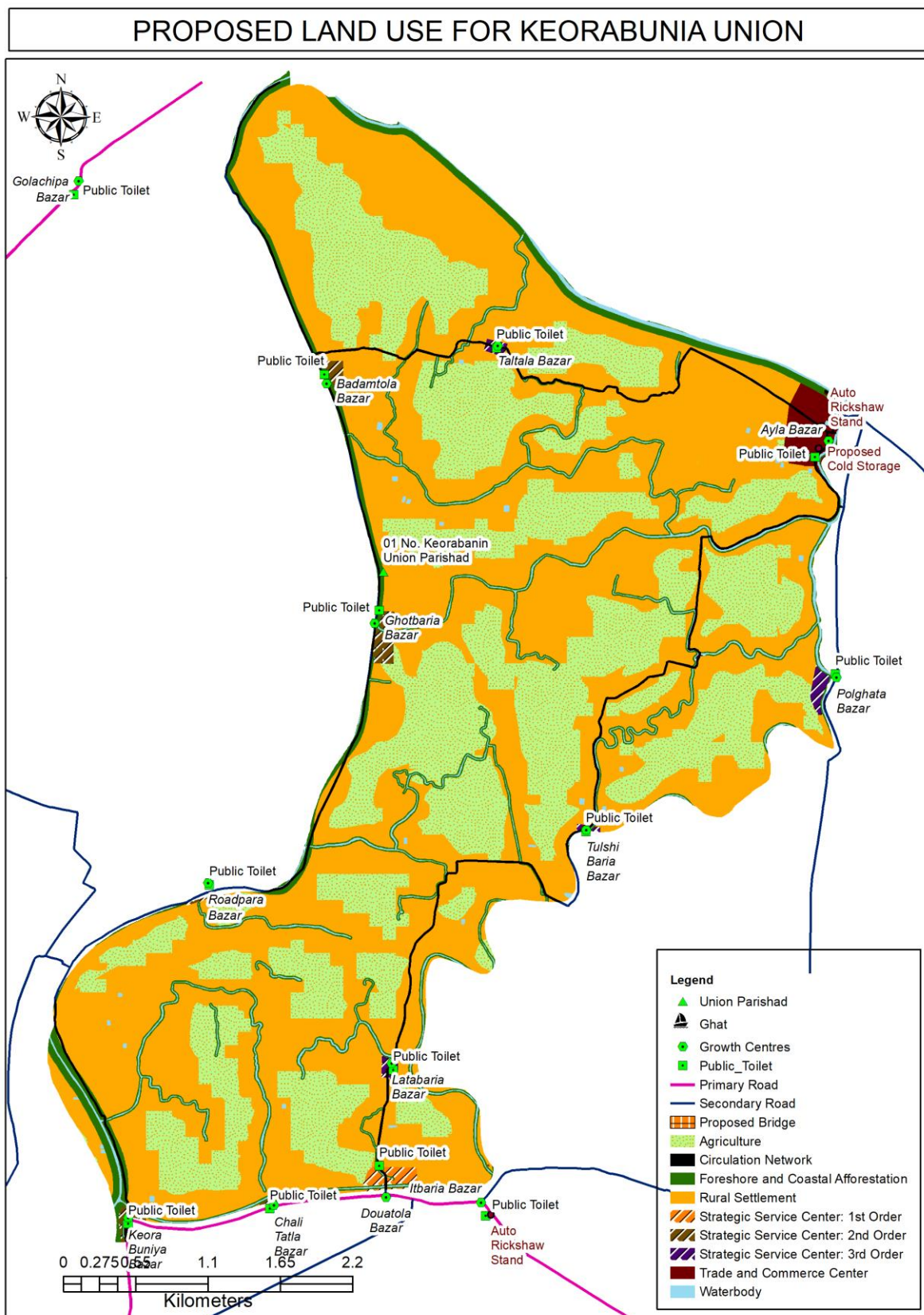
3.6.7.1 Major Proposals:

- Strategic Service Center: 1st Order
- Strategic Service Center: 2nd Order
- Strategic Service Center: 3rd Order
- Road Widening

3.6.7.2 Proposed Land Use:

Table 3-20: Land Use Proposal at Keorabunia Union

Land Use	Area in Acre	Percentage
Agriculture	2169.93	35.14
Circulation Network	98.99	1.60
Foreshore and Coastal Afforestation	334.30	5.41
Rural Settlement	3343.22	54.15
Strategic Service Center: 1st Order	12.77	0.21
Strategic Service Center: 2nd Order	27.26	0.44
Strategic Service Center: 3rd Order	16.05	0.26
Trade and Commerce Center	44.38	0.72
Waterbody	127.66	2.07
Total	6174.56	100.00



Map 3-8: Proposed Land Use for Keorabunia Union

3.6.8 M. Baliatali Union:

Within M. Baliatali Union of Barguna Sadar Upazila, a meticulously planned allocation of land has been proposed across various categories, collectively spanning an expansive 13,512.80 acres. The analysis offers a window into the strategic utilization of land, with each category contributing distinctively to the holistic development of the region. Agriculture, sprawling over 6,638.25 acres, stands as a testament to the union's agricultural heritage, emphasizing the importance of cultivated expanses as the backbone of sustenance and economic growth. The intricate web of Circulation Network, spanning 283.18 acres, forms the backbone of connectivity, enabling the smooth flow of goods and people. An area of 19.19 acres is dedicated to a Conservation Zone, underlining the commitment to preserving the environment and promoting sustainable practices. Foreshore and Coastal Afforestation, spanning 1,358.66 acres, signifies the emphasis on coastal preservation and afforestation, contributing to the well-being of the coastal ecosystem. Rural Settlements, encompassing 3,761.55 acres, foster the essence of community life, offering spaces for habitation and livelihoods. Strategic Service Centers are strategically categorized into two tiers: 2nd Order Centers (49.31 acres) augmenting secondary services and 3rd Order Centers (11.64 acres) enhancing tertiary services for comprehensive development. A designated area of 92.30 acres is allocated for Trade and Commerce Center, emphasizing dedicated spaces for economic activities and commercial transactions within the union. Lastly, Waterbodies spanning 1,298.71 acres encompass rivers, ponds, and water sources essential for the local ecosystem and livelihoods.

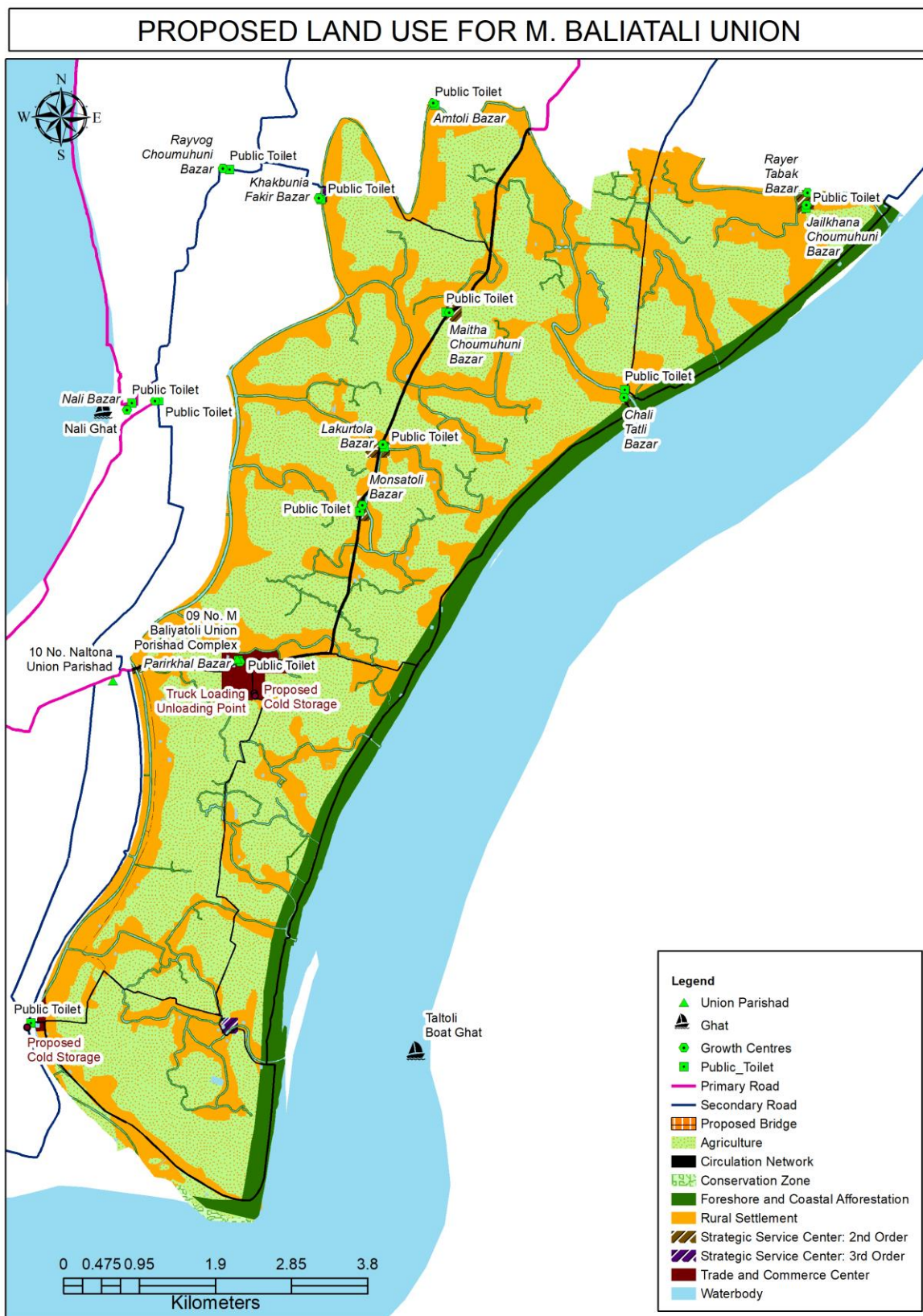
3.6.8.1 Major Proposals:

- Truck Landing Point in Parirkhal Bazar
- Cold Storage in Parirkhal Bazar
- Strategic Service Center: 2nd Order
- Strategic Service Center: 3rd Order
- Trade and Commerce Center

3.6.8.2 Proposed Land Use:

Table 3-21: Land Use Proposal at M. Baliatali Union

Land Use	Area in Acre	Percentage
Agriculture	6638.25	49.13
Circulation Network	283.18	2.10
Conservation Zone	19.19	0.14
Foreshore and Coastal Afforestation	1358.66	10.05
Rural Settlement	3761.55	27.84
Strategic Service Center: 2nd Order	49.31	0.36
Strategic Service Center: 3rd Order	11.64	0.09
Trade and Commerce Center	92.30	0.68
Waterbody	1298.71	9.61
Total	13512.80	100.00



Map 3-9: Proposed Land Use for M. Baliatali Union

3.6.9 Naltona Union:

The intricate land use composition of Naltona Union within Barguna Sadar Upazila is unveiled in this comprehensive report, showcasing a well-thought-out allocation across diverse categories, collectively spanning an area of 9,631.85 acres. This analysis provides valuable insights into the strategic utilization of land, with each category playing a distinct role in contributing to the comprehensive development of the region. Agriculture, extending over 4,040.77 acres, stands as a testament to the union's agrarian significance, underscoring the pivotal role of cultivated fields as the bedrock of sustenance and economic prosperity. The network of Circulation Network, spanning 225.36 acres, intricately connects roadways and pathways, facilitating the smooth flow of goods and people, vital for seamless connectivity. An area of 1,107.13 acres is designated as a Conservation Zone, highlighting the commitment to environmental preservation and sustainable practices, contributing to the ecological equilibrium and biodiversity. Foreshore and Coastal Afforestation, spanning 689.63 acres, emphasizes the importance of coastal preservation and afforestation, playing a crucial role in enhancing the health of the coastal ecosystem. Signifying economic diversification, Industrial and Manufacturing activities occupy 171.50 acres, showcasing the union's strategic approach to economic growth. Rural Settlements, spanning 2,213.35 acres, serve as the nucleus of community life, nurturing local identity and offering spaces for livelihoods. The strategic approach continues with Service Centers, categorized into two orders: 2nd Order Centers (12.31 acres), enriching secondary services, and 3rd Order Centers (13.62 acres), augmenting tertiary services for comprehensive development. A designated area of 35.99 acres is reserved for Tourism Services, recognizing the potential for tourism-driven growth and the region's natural and cultural allure. Lastly, Trade and Commerce Center occupies 46.27 acres, emphasizing dedicated spaces for economic activities and commercial exchanges within the union. The importance of water resources is emphasized through a Waterbody category spanning 1,075.90 acres, encompassing rivers, ponds, and water sources crucial to the local ecology and livelihoods.

3.6.9.1 Major Proposals:

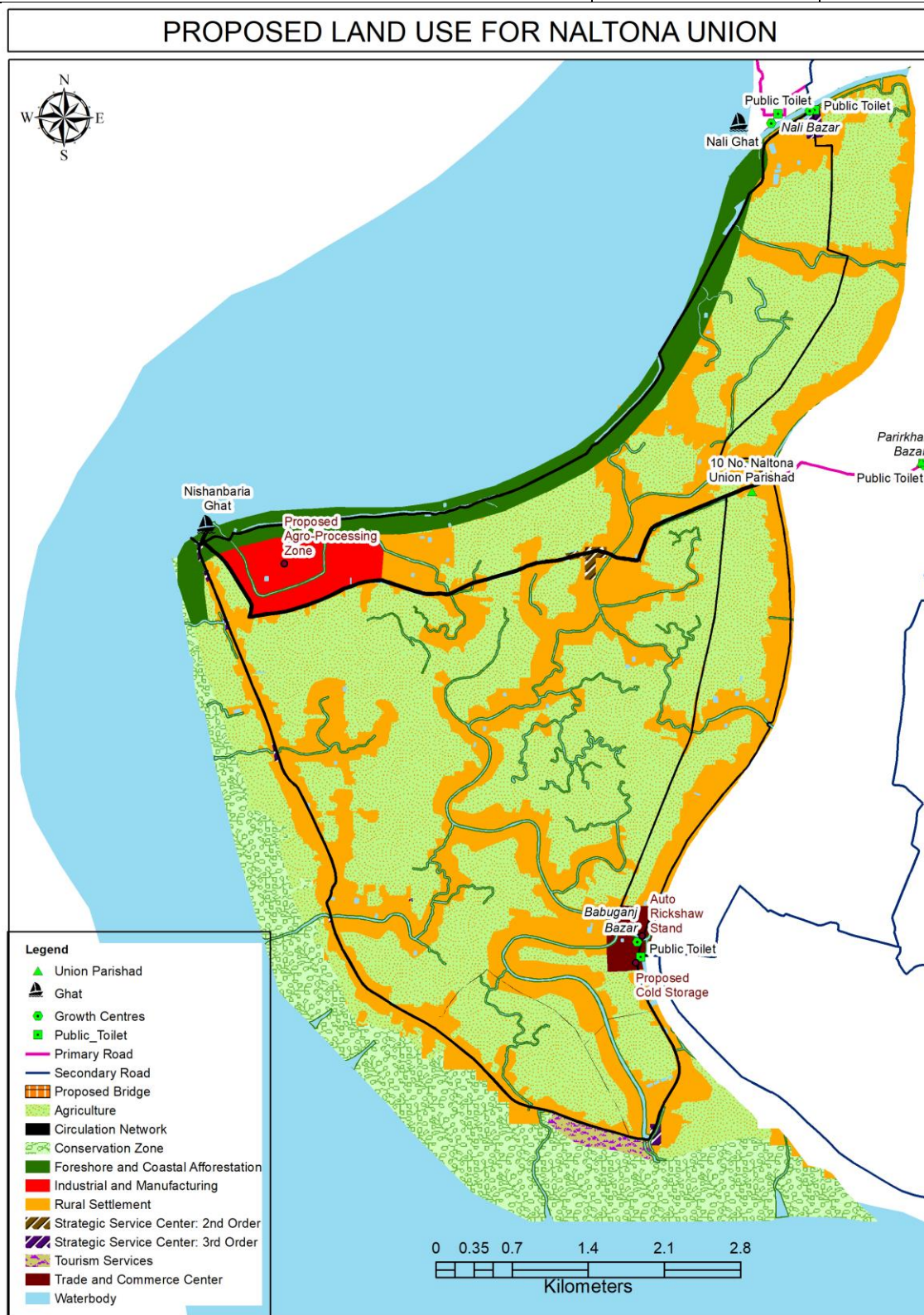
- Agro Processing Zone
- Cold Storage facility and Auto Rickshaw stand in Babuganj Bazar
- Strategic Service Center: 2nd Order & 3rd Order.
- Tourism Site

3.6.9.2 Proposed Land Use:

Table 3-22: Land Use Proposal at Naltona Union

Land Use	Area in Acre	Percentage
Agriculture	4040.77	41.95
Circulation Network	225.36	2.34
Conservation Zone	1107.13	11.49
Foreshore and Coastal Afforestation	689.63	7.16
Industrial and Manufacturing	171.50	1.78
Rural Settlement	2213.35	22.98
Strategic Service Center: 2nd Order	12.31	0.13
Strategic Service Center: 3rd Order	13.62	0.14
Tourism Services	35.99	0.37
Trade and Commerce Center	46.27	0.48
Waterbody	1075.90	11.17

Total	9631.85	100.00
-------	---------	--------



Map 3-10: Proposed Land Use for Naltona Union

3.6.10 Phuljhury Union:

This comprehensive report delves into the intricate land use scenarios within Phuljhury Union, located in Barguna Sadar Upazila. The distribution of land across various categories is meticulously analyzed, offering valuable insights into their roles in contributing to the holistic development of the region. The Agriculture sector, covering 2,429.97 acres (46.15% of the total area), stands as a testament to the union's agricultural prominence. These cultivated lands serve as the foundation of sustenance and economic vitality, reflecting the region's agrarian heritage. The intricate network of Circulation Network, spanning 53.84 acres (1.02%), forms the essential backbone for seamless movement, weaving roadways and pathways that facilitate the efficient flow of goods and people, crucial for maintaining connectivity within the union. An area of 588.84 acres (11.18%) is designated as the Economic Region, illustrating the forward-looking allocation of land for economic pursuits. This category underscores the union's commitment to fostering economic growth and diversification. The importance of coastal preservation and afforestation is evident in the Foreshore and Coastal Afforestation category, extending over 273.74 acres (5.20%). This emphasis on environmental conservation contributes significantly to maintaining the ecological balance of the coastal ecosystem. Rural Settlements, spanning 1,755.28 acres (33.34%), form the vibrant core of community life, nurturing local identity and offering spaces for livelihoods. Strategic Service Centers, including 2nd Order Centers (8.74 acres) and 3rd Order Centers (19.36 acres), further enhance the quality of life by providing secondary and tertiary services. The role of designated spaces for economic activities is evident through the allocation of 135.23 acres (2.57%) for Waterbodies. These encompass rivers, ponds, and water sources essential to the local ecology and livelihoods.

3.6.10.1 Major Proposals:

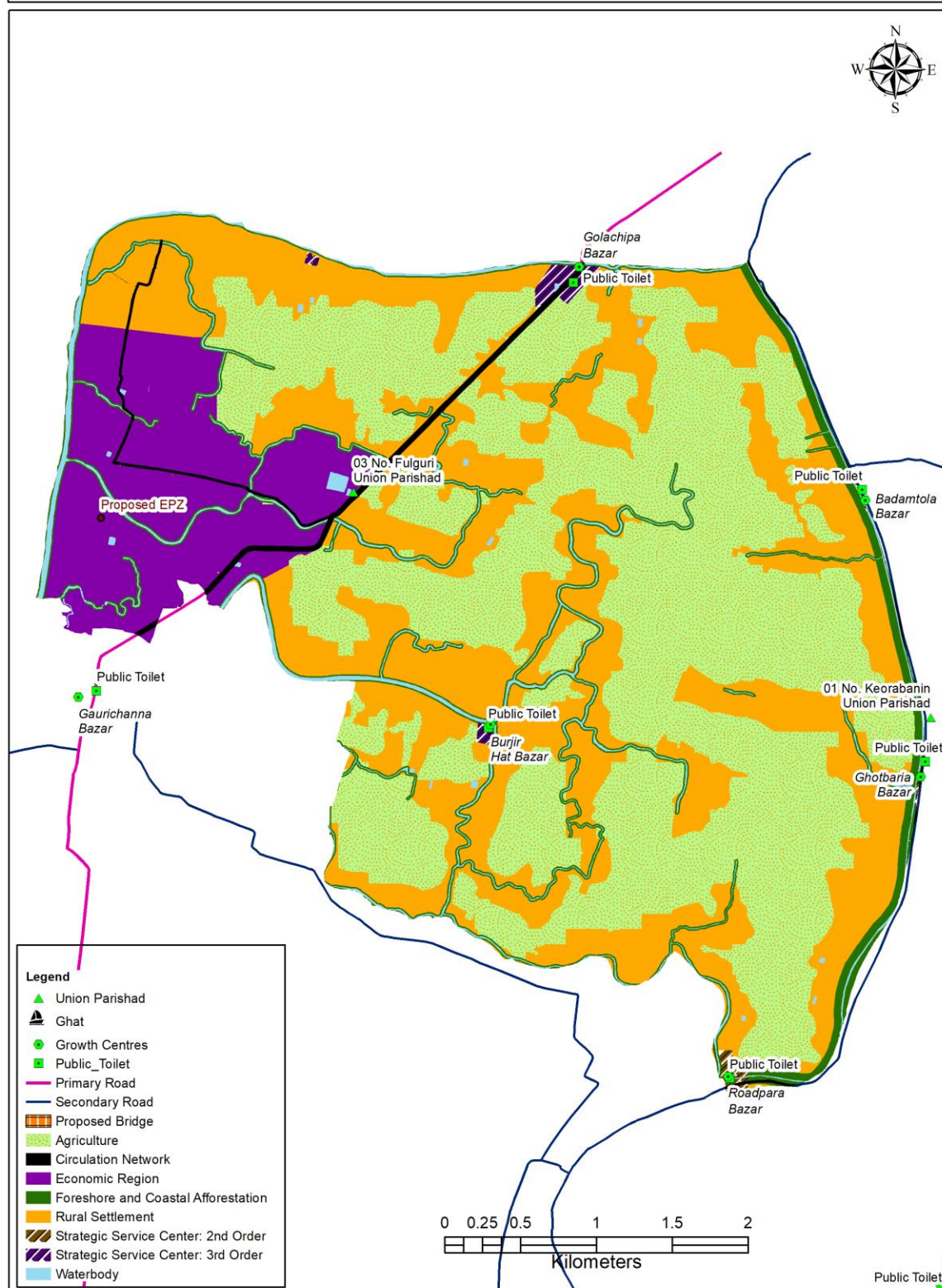
- Proposed EPZ (588.84 acres)
- Strategic Service Center: 2nd Order
- Strategic Service Center: 3rd Order

3.6.10.2 Proposed Land Use:

Table 3-23: Land Use Proposal at Phuljhury Union

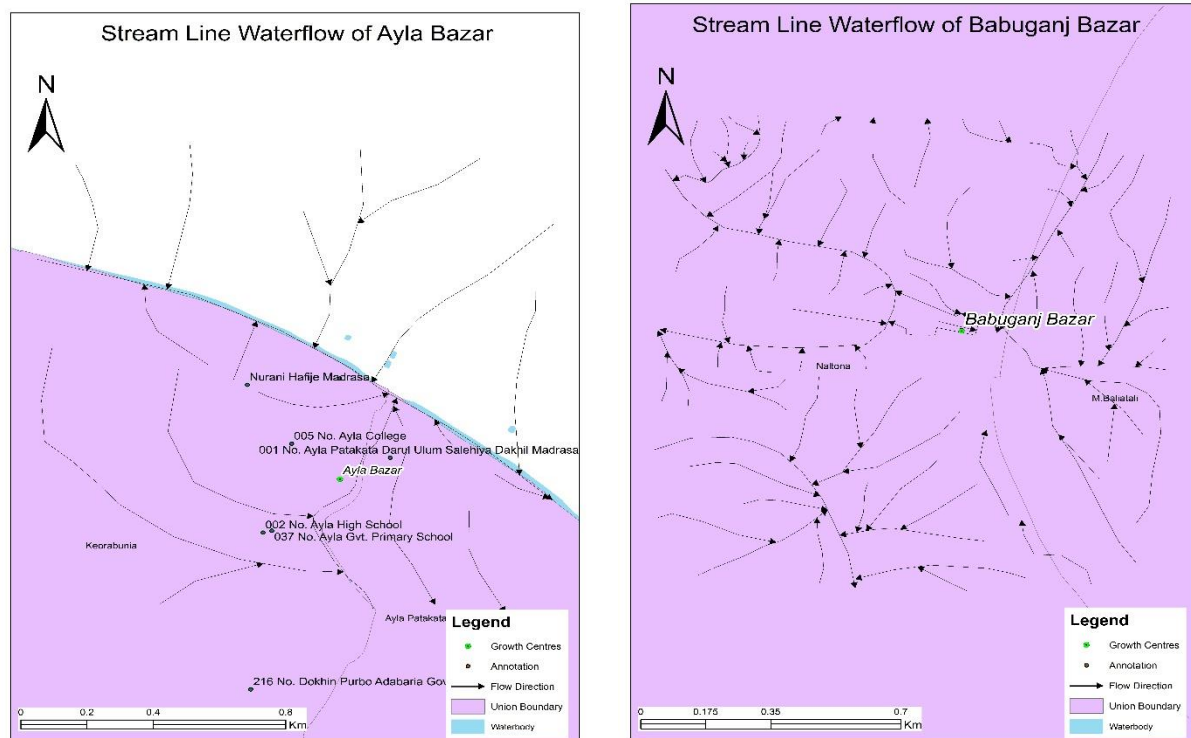
Land Use	Area in Acre	Percentage
Agriculture	2429.97	46.15
Circulation Network	53.84	1.02
Economic Region	588.84	11.18
Foreshore and Coastal Afforestation	273.74	5.20
Rural Settlement	1755.28	33.34
Strategic Service Center: 2nd Order	8.74	0.17
Strategic Service Center: 3rd Order	19.36	0.37
Waterbody	135.23	2.57
Total	5265.00	100.00

PROPOSED LAND USE FOR NALTONA UNION

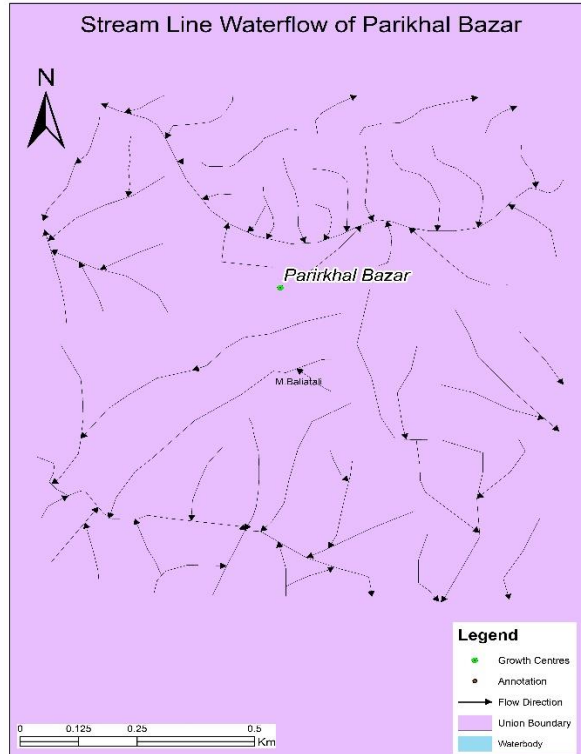
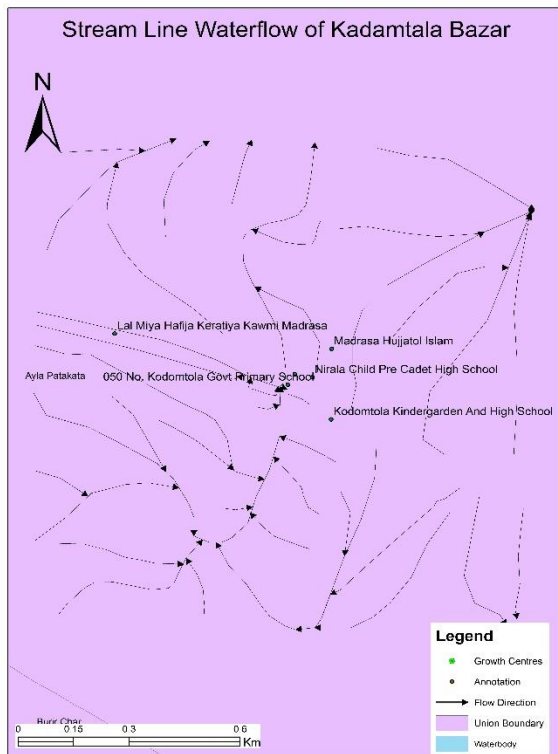
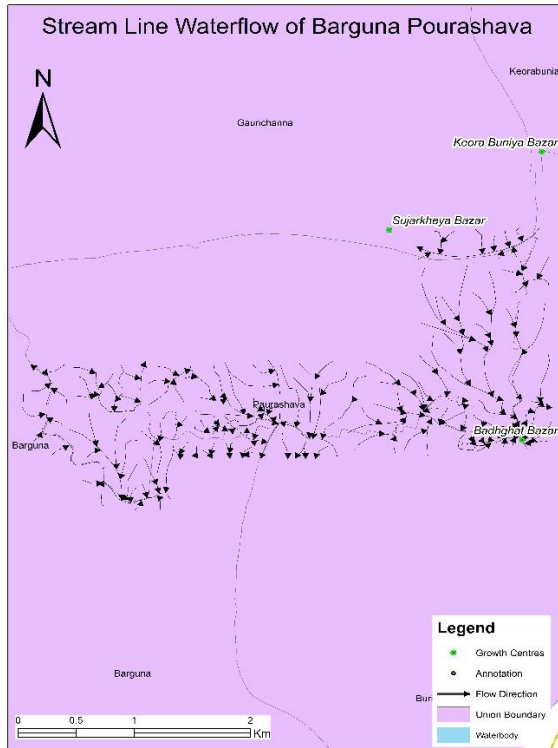


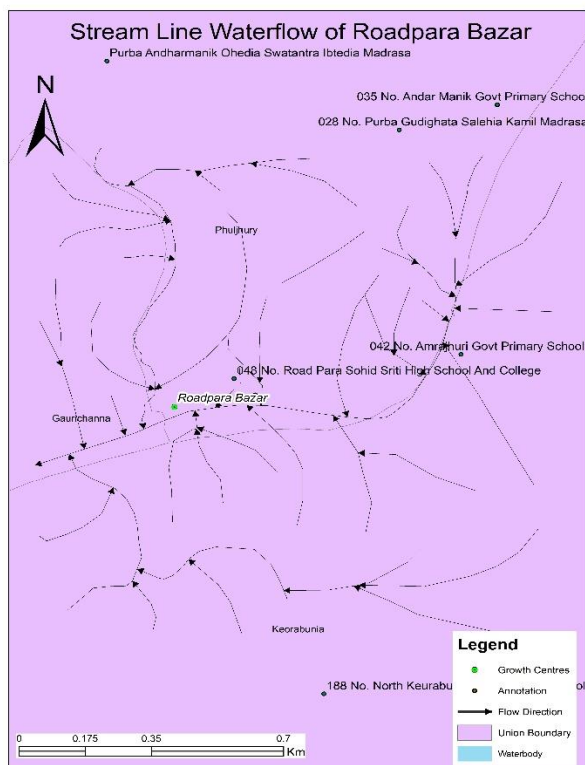
Map 3-11: Proposed Land Use for Phuljhury Union

3.7 Stream Line Water flow of Bazar Areas



Map 3-12:Stream Line Water flow of Bazar Areas





Map 3-13: Stream Line Water flow of Bazar Areas

CHAPTER 4: TRAFFIC & TRANSPORTATION

4.1 Major Road Proposals:

The Barguna Sadar Upazila Rural Plan outlines a comprehensive strategy for the expansion and enhancement of the existing road network within the region. The plan encompasses a detailed proposal for road widening, considering various parameters such as road classification, proposal type, present width, proposed width, and road length. This endeavor is set to significantly improve transportation infrastructure and alleviate traffic congestion. Notable road widening proposals include the Barishal Barguna Highway, Barguna Road Part 02, Ferighat Road, Nishan Bariya Road, and others, with widths set to increase from their current measurements to a standardized 60 feet or 80 feet. These enhancements are anticipated to cover varying lengths, ranging from short segments to more extensive routes, collectively spanning a considerable 218.6 kilometers.

Among the various road widening proposals, the "Proposed Bypass Road" stands out as a pivotal project with profound significance. This road, classified as a primary road, is intended to divert excessive traffic away from the central Paurashava area. With a proposed width of 80 feet and a length of 2.92 kilometers, this bypass road will substantially reduce traffic congestion within the urban core. This strategic intervention is poised to streamline vehicular movement, enhance road safety, and create a more conducive environment for pedestrians and commuters alike.

The proposed widening entails transforming roads of varying widths into uniform 60-feet or 80-feet-wide corridors. This upgrade aims to accommodate the increasing vehicular volume and promote efficient transportation flow. Notably, the lengths of the proposed widening projects range from short segments like the 0.19-kilometer Sultan Ali

Road to more extensive stretches like the 88.80-kilometer Proposed Embankment Road, catering to diverse travel needs across the Upazila.

Barguna Sadar Upazila Rural Plan's Road network proposal reflects a data-driven approach to tackle traffic challenges and foster sustainable urban development. The focus on the "Proposed Bypass Road" underscores the commitment to enhancing both connectivity and quality of life by mitigating congestion and improving transportation access. The planned road widening initiatives, executed with meticulous consideration of road classification, width, and length, hold the promise of reshaping the region's transportation landscape for the better.

Table 4-1: Transportation Proposal (Major Road) for Barguna Sadar Upazila

Road ID	Road Name	Proposed Classification	Proposal Type	Present Width	Proposed Width	Length in KM
1	Barishal Barguna Highway	Primary Road	Road Widening Proposal	20 Feet	120 Feet	12.62
2	Barguna Road Part 02	Primary Road	Road Widening Proposal	40 Feet	120 Feet	4.91
3	Ferighat Road	Primary Road	Road Widening Proposal	14 Feet	120 Feet	10.22
4	Nishan Bariya Road	Primary Road	Road Widening Proposal	16 Feet	120 Feet	22.82
5	Proposed Embankment Road	Secondary Road	Road Widening Proposal	20 Feet	80 Feet	88.80
6	Barguna Road Part 01	Primary Road	Road Widening Proposal	40 Feet	80 Feet	1.48
7	Sultan Ali Road	Secondary Road	Road Widening Proposal	16 Feet	80 Feet	0.19
8	Jailkhana Road	Secondary Road	Road Widening Proposal	18 Feet	80 Feet	0.82
9	Proposed Bypass Road	Primary Road	Road Widening Proposal	18 Feet	80 Feet	2.92
10	DC Office Road Part 02	Secondary Road	Road Widening Proposal	19 Feet	80 Feet	0.27
11	Connecting Road to Barguna-Barisal Highway	Secondary Road	Road Widening Proposal	18 Feet	60 Feet	1.21
12	Lakur Tola Road	Secondary Road	Road Widening Proposal	9 Feet	60 Feet	2.62
13	Lakurtala to Gaurichanna Bazar Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	8.40
14	College School Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	1.19

15	Pithaya Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	1.73
16	Thana Para Road	Secondary Road	Road Widening Proposal	16 Feet	60 Feet	0.12
17	South Monsi Tola Road	Secondary Road	Road Widening Proposal	13 Feet	60 Feet	1.69
18	Hospital Road	Secondary Road	Road Widening Proposal	18 Feet	60 Feet	0.43
19	Thana Road	Secondary Road	Road Widening Proposal	14 Feet	60 Feet	0.47
20	Zilla School Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	1.10
21	Staff Quater Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	0.84
22	Shahid Smriti	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	0.45
23	Sona Khali Road	Secondary Road	Road Widening Proposal	14 Feet	60 Feet	10.83
24	Bodor Khali Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	4.12
25	Choto Patakata to Phuljhuri Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	6.58
26	Shialiyar Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	1.29
27	M Baliatoli Road	Secondary Road	Road Widening Proposal	14 Feet	60 Feet	5.10
28	M Baliatali Union Parishad Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	1.18
29	G.C.C.R Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	4.50
30	Babuganj Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	1.25
31	Gorjon Boniya Babuganj Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	1.82
32	babugonj Bazar Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	0.36

33	Tulsi Bariya to Alya Bazar Road	Secondary Road	Road Widening Proposal	15 Feet	60 Feet	4.87
34	Lota Bariya Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	4.49
35	Phuljhuri Union Parishad Road	Secondary Road	Road Widening Proposal	8 Feet	60 Feet	3.21
36	Ayla Ada Bariya Road	Secondary Road	Road Widening Proposal	14 Feet	60 Feet	4.81
37	Gazi Bair Road	Secondary Road	Road Widening Proposal	15 Feet	60 Feet	4.38
38	Chalita Tola Road	Secondary Road	Road Widening Proposal	14 Feet	60 Feet	6.98
39	khakboniya Road	Secondary Road	Road Widening Proposal	8 Feet	60 Feet	3.48
40	Hazar Biga Road	Secondary Road	Road Widening Proposal	8 Feet	60 Feet	0.04
41	Wabda Road	Secondary Road	Road Widening Proposal	18 Feet	60 Feet	0.11
42	Baliya toli Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	4.02
43	Naltona to Dhalua Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	15.36
44	East South Boro Lobon Gola Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	3.08
45	Chordopti Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	0.22
46	Khejur Tola Road	Secondary Road	Road Widening Proposal	11 Feet	60 Feet	0.00
47	Itbaria to Boikali Hat Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	4.01
48	Ayla Bazar to Boikali Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	4.77
49	Ayla Bazar Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	0.36
50	Chorok gachiya Road	Secondary Road	Road Widening Proposal	8 Feet	60 Feet	2.72

51	Patuakhali Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	0.23
52	Shere Bangla Road	Secondary Road	Road Widening Proposal	16 Feet	60 Feet	0.29
53	Char Colony Road	Secondary Road	Road Widening Proposal	12 Feet	60 Feet	1.13
54	DC Office Road Part 01	Secondary Road	Road Widening Proposal	19 Feet	60 Feet	0.23
55	Kurok Molich Road	Secondary Road	Road Widening Proposal	15 Feet	60 Feet	4.21
56	West Shingraboniya Road	Secondary Road	Road Widening Proposal	10 Feet	60 Feet	10.57
57	College Road	Secondary Road	Road Widening Proposal	14 Feet	60 Feet	0.95
58	College Brach Road	Secondary Road	Road Widening Proposal	14 Feet	60 Feet	0.55
59	Polic Line Road	Secondary Road	Road Widening Proposal	18 Feet	60 Feet	0.67
60	Abdul Kader Road	Secondary Road	Road Widening Proposal	13 Feet	40 Feet	1.20
61	D.K.P Road	Secondary Road	Road Widening Proposal	14 Feet	40 Feet	1.30
62	Madrasa Road	Secondary Road	Road Widening Proposal	14 Feet	40 Feet	0.71
63	Bash Boniya Road	Secondary Road	Road Widening Proposal	12 Feet	40 Feet	1.96
64	Thana Road to Townhall Bridge Connecting Road	Secondary Road	Road Widening Proposal	15 Feet	40 Feet	0.53
65	Connecting Road to Barishal Barguna Highway and Co	Secondary Road	Road Widening Proposal	16 Feet	40 Feet	0.75
66	Madina Musjid Road	Secondary Road	Road Widening Proposal	9 Feet	40 Feet	1.82
67	Sonali Para Road	Secondary Road	Road Widening Proposal	8 Feet	40 Feet	0.46
68	Banani Road	Secondary Road	Road Widening Proposal	8 Feet	40 Feet	1.44

69	South Mon Satli Road	Secondary Road	Road Widening Proposal	9 Feet	40 Feet	2.07
70	Dholoya Road	Secondary Road	Road Widening Proposal	10 Feet	40 Feet	1.81
71	Proposed EPZ Road	Secondary Road	New Road Proposal	0 Feet	40 Feet	0.93
72	Dhansiri Road	Secondary Road	Road Widening Proposal	9 Feet	40 Feet	2.05

4.2 *Hierarchy of Roads*

The Barguna Sadar Upazila Rural Area Plan is characterized by a discerning road hierarchy, classifying roads into two pivotal categories: Primary Roads and Secondary Roads. This classification provides a strategic framework for efficient traffic management and enhanced connectivity within the region.

4.2.1 **Primary Roads:**

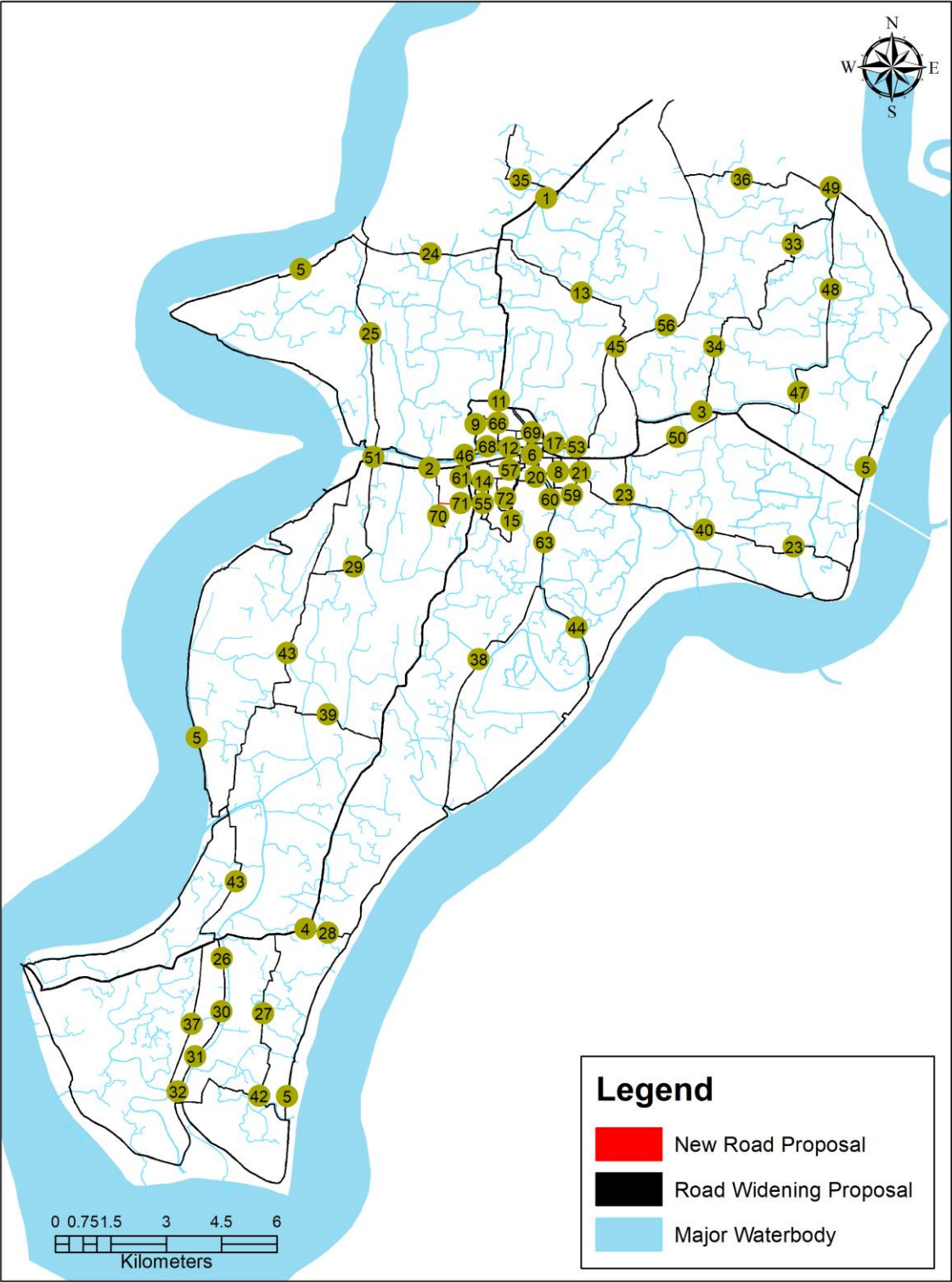
Primary roads, characterized by their proposed 120-foot width, represent the core arteries of the road network. These roads serve as vital lifelines for extensive travel, connecting key areas and facilitating substantial traffic flow over significant distances. Notable examples, such as the Barishal Barguna Highway, exemplify the essential role of primary roads in enabling regional connectivity and long-haul transportation. The inclusion of the Proposed Embankment Road and the strategic Proposed Bypass Road further underscores their importance in streamlining traffic flow and addressing congestion challenges.

4.2.2 **Secondary Roads:**

Secondary roads, standardized at a proposed width of 60 feet, complement the primary network by providing localized connectivity. These roads serve as connectors within neighborhoods, granting access to educational institutions, local businesses, and residential zones. With varying lengths, secondary roads facilitate intra-community movement and contribute to the overall accessibility of the upazila.

It's noteworthy that the Barguna Sadar Upazila Rural Area Plan exclusively emphasizes the upgrading of primary and secondary roads, excluding tertiary and local roads from the scope of this proposal. The deliberate exclusion of these categories indicates that these roads will remain unchanged. This strategic decision aligns with the primary objective of the plan, which is to ensure robust regional connectivity and establish links to pivotal growth centers and tourism hotspots. In contrast to urban area plans, which often encompass a broader spectrum of road classifications, this particular plan's focal point is primarily directed toward enhancing the infrastructure and functionality of primary and secondary roads. This approach underscores a targeted effort to bolster the region's accessibility, stimulate economic development, and cater to the specific mobility requirements of Barguna Sadar Upazila's rural landscape.

Major Road Proposals at Barguna Rural Area



Map 4-1: Major Road Proposals

Proposed Hierarchy of Major Roads at Barguna Rural Area



Map 4-2: Proposed Hierarchy of Roads

CHAPTER 5: ECOLOGICALLY SENSITIVE AREA (ESA) AND NATURAL DRAINAGE

5.1 Ecologically Sensitive Area (ESA) And Natural Drainage Preservation

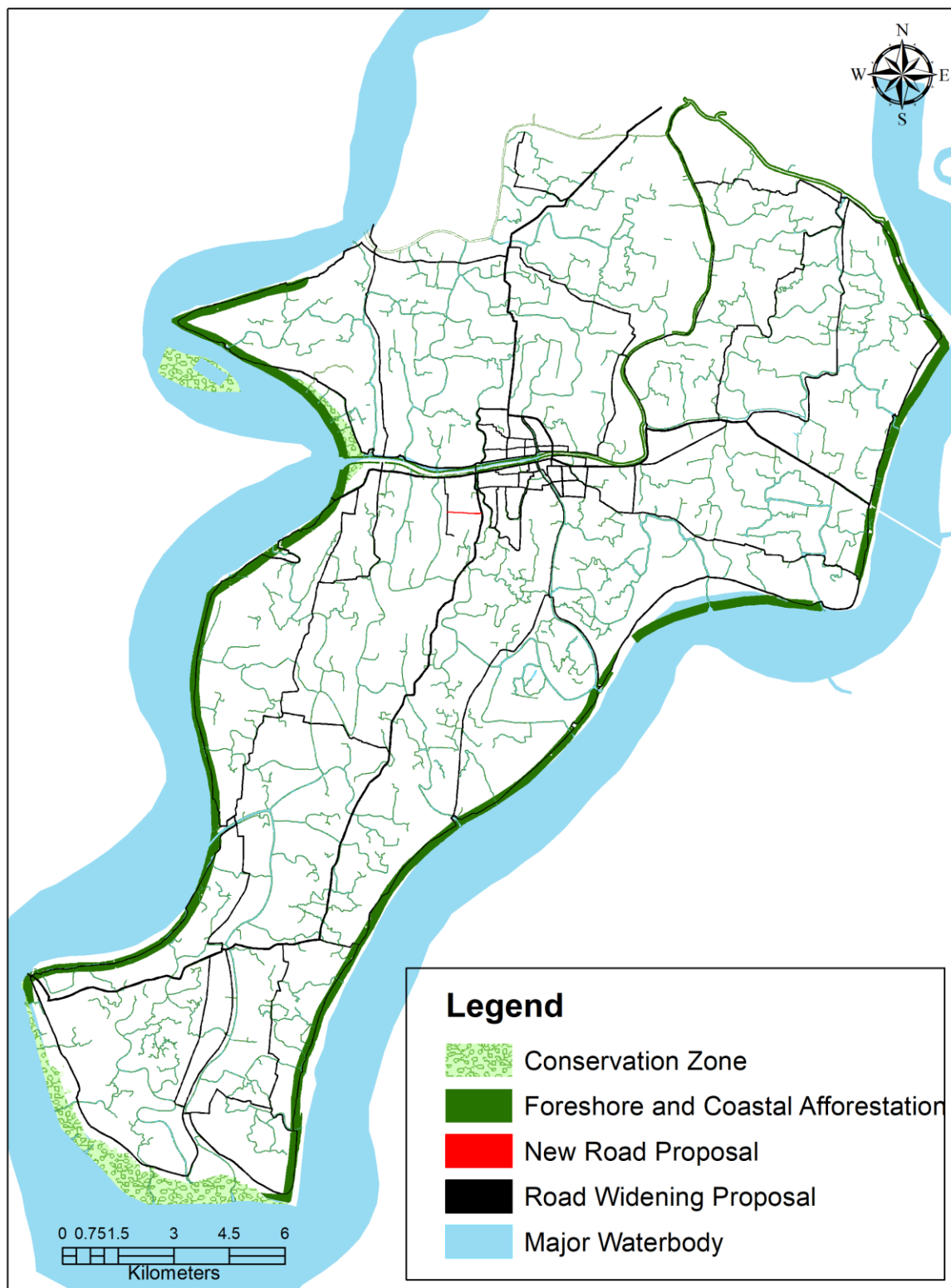
A comprehensive strategy has been incorporated within The Barguna Sadar Upazila's Rural Area Plan to effectively manage the challenges caused by flooding due to heavy rainfall, river overflow, and drainage system issues. This strategy is intended to mitigate human-induced factors that contribute to flooding while simultaneously preserving the delicate balance of the local environment. A prominent part of this strategy focuses on the restoration of natural water pathways, including canals. This involves clearing obstacles within these pathways to restore their original flow capacity and enhance their capability to manage excess water during periods of intense rainfall.

To safeguard the banks of canals and their surroundings, a dedicated ecologically sensitive zone spanning 20 feet from the canal bank has been designated. This zone is intended to remain untouched by construction or modifications that could intensify the risks of flooding. The strategy also addresses the issue of unauthorized cultivation near the canals, which can obstruct water flow and worsen flooding. By discouraging these practices, the plan aims to prevent blockages and mitigate flooding risks. Strict regulations are being introduced to prohibit the construction of drainage systems within natural water pathways. This measure is crucial to maintaining unobstructed flow capacity and enhancing the drainage efficiency of these pathways.

The strategy highlights the importance of constructing roads in a manner that does not impede water flow or disrupt aquatic ecosystems. This approach ensures effective drainage while safeguarding aquatic life. Preserving large ponds (Protected Ponds) as vital flood retention resources is also highlighted in the plan. Preventing their conversion for other purposes can help alleviate flooding and maintain the ecological equilibrium of the region. Efforts to manage waste disposal into drainage channels are emphasized to prevent siltation and water pollution, safeguarding channel capacity and the well-being of local communities and aquatic ecosystems. Central components of the strategy include community engagement and awareness-building. Through seminars and events, stakeholders need to be educated about the adverse consequences of encroachment, fostering a commitment to adhering to encroachment laws and promoting responsible flood control practices.

Lastly, the plan underscores the importance of preserving and strictly enforcing the right of way along rivers and natural water pathways. This approach ensures unimpeded flow and optimal drainage functions of these vital waterways. By integrating these measures into The Barguna Sadar Upazila's Rural Area Plan, the overarching goal is to effectively mitigate the risks associated with flooding, promote sustainable water management practices, and harmonize human activities with the local environment to secure the well-being of both present and future generations.

Ecologically Sensitive Area (ESA) at Barguna Rural Area



Map 5-1: Ecologically Sensitive Areas (ESA)

CHAPTER 6: DEVELOPMENT CONTROL

6.1 *Introductory words*

In the ongoing chapter, the comprehensive delineation comprises the general definitions, along with both permitted and conditionally permitted applications within each Land Use Zone, all meticulously itemized. Any utilization types that might not be mentioned within these categories shall automatically assume the classification of Restricted Use within the designated land zone category. Naturally, these applications will remain prohibited, unless a ruling is issued by the Planning Authority, specifically in accordance with the Barguna Sadar Upazila Rural Area Plan. Under such circumstances, the proposed utilization will necessitate approval within the domain of original applications.

6.2 *Development Control in Rural Area*

In the context of the Barguna Sadar Upazila Rural Area Plan, the management of development stands as a pivotal aspect within the broader developmental framework. This involves adhering to specific protocols for the endorsement of designs spanning a spectrum of structure types, establishments, and land applications. The intricate web of development control is woven with distinct tasks, each with its significance. Foremost among these is the imperative to secure a land use permit, aligned with the parameters set forth by the sanctioned zoning plan in accordance with the Barguna Sadar Upazila Rural Area Plan. This permit serves as the cornerstone, with the subsequent green light hinging upon the endorsement of the blueprint for the proposed edifice or structure.

At its core, the issuance of a Land Use permit is rooted in the predefined Land Uses, which serves as the foundational bedrock, dictating the entire development control process. This process operates within the purview of various governmental Acts and Rules, prominently including the Building Construction Rules of 1996, mandated by the Building Construction Act of 1952. Additional benchmarks include the Bangladesh National Building Code of 1993, as well as its updated iteration, the Bangladesh National Building Code of 2020. Complementary to these, the legal framework extends to encompass legislations such as the Waterbody Act and other pertinent laws that collectively govern the sphere of development control within the jurisdiction of the Barguna Sadar Upazila Rural Area Plan.

6.2.1 **Agricultural Area**

The Agriculture Zone, as defined within the Barguna Sadar Upazila Rural Area Plan, is designated as the realm of 'food production,' prioritizing the cultivation of agricultural products. This zone is exclusively devoted to various forms of agricultural endeavors, including crop cultivation and aquaculture, with a primary emphasis on ensuring food security. The Agricultural Zone operates with the pivotal aim of averting haphazard conversion of arable land into settlements, thus preserving the integrity of farming spaces.

6.2.1.1 **Objectives**

- To safeguard and fortify food security by preventing unchecked conversion of agricultural land under the guise of development.
- To foster and facilitate farming activities, particularly in areas optimally suited for such purposes.
- To uphold the conservation of agricultural lands within urban contexts, fostering sustained agricultural operations and bolstering the overarching agricultural industry. The Barguna Sadar Upazila Rural Area Plan encapsulates these objectives within the Agricultural Zone's ambit to ensure the longevity and vitality of farming practices and their auxiliary sectors.

6.2.1.2 Guideline for Agricultural Land

This parcel of land is very vital as far as food security is concern. These valuable land needs to be protected through proper guideline & development control mechanism. The Permitted land use could be;

Dairy Farm	Horticulture	Pasture/Grazing Land
Farm Land	Nursery	Poultry Farm
Farm Office	Orchards	Crop Production
Fisheries	Irrigation	Research (Agricultural)
Flower Cultivation	Other Farm	Other Agricultural Use

Control guidelines

1. Agricultural land must be protected; no physical development at triple crop land
2. Uses doesn't associated with agriculture/food production is not permitted

6.2.2 Potential Economic Zone

To foster the growth of industrial sectors as focal points for various activities such as manufacturing, repairs, warehousing, distribution, open-storage, waste materials treatment, recovery, and transport operational centers, an industrial zone has been designated. This zone is purposefully allocated to prevent the emergence of unsuitable combinations of activities, such as office-based industry and retail operations.

The overarching objective is to ensure that newly constructed buildings within primarily industrial zones are typically single-story structures featuring lofty ceilings. This design approach serves to maximize versatility and adaptability, facilitating the accommodation of a wide spectrum of machinery, equipment, and delivery vehicles over their entire lifespan.

Additionally, the following objectives are outlined:

- To adequately address the anticipated demand for parking spaces and facilities for delivery vehicles within the confines of the site.
- To uphold the highest benchmarks in design quality, encompassing both hard and soft landscaping elements.
- To establish provisions for pedestrian access, ensuring safe and convenient movement within the industrial zone.
- To incorporate provisions for public transportation to facilitate ease of movement for employees and visitors.

The intent is to cultivate an industrial environment that is optimized for functionality, accessibility, and design excellence within the parameters of the Barguna Sadar Upazila Rural Area Plan.

6.2.2.1 Purpose

The principal objective of the designated industrial zone is to cater to specific industrial activities that, due to their operational nature, are incongruent with residential, social, medical, and commercial surroundings. Consequently, the establishment of such zones is restricted to geographical areas that are strategically distanced from the

aforementioned environments. Moreover, the operations of these uses are subjected to rigorous performance standards to ensure harmonious coexistence and environmental compatibility.

Key Points:

- ❖ The core purpose and intention behind establishing an industrial zone is to offer appropriate spaces where a range of light and heavy industrial activities can transpire without posing risks to neighboring land uses. These zones are meticulously planned areas characterized by cohesive architectural and landscaping themes across the entire parcel.
- ❖ These areas are specifically designed to accommodate diverse industrial establishments that meet high environmental quality standards, can be integrated into larger development frameworks, and exert minimal influence on adjacent uses.
- ❖ The fundamental objective of the General Industrial Zone is to provide well-situated spaces for specific types of light manufacturing, processing, fabrication, and warehousing activities that involve non-objectionable products. These operations are chosen based on their limited use of materials, processes, or machinery, thereby minimizing the potential for undesirable effects on nearby residential or commercial properties.
- ❖ The General Industrial Zone is purposed to host Green, Orange A, Orange B categories of industries as defined by the Department of Environment (DOE), along with light and general industries designated by Urban Area Plans, and new types as well. In this zone, industries will refrain from being noxious and heavy, ensuring a harmonious coexistence with the surrounding environment as outlined by the Barguna Sadar Upazila Rural Area Plan.

6.2.2.2 Permitted Land Use

The following uses in the tables are proposed to be applicable for this zone only.

Table 6-1: Permitted Land Use for General Industrial Zone

Allowable industries:

Sl. No.	Type
1.	Green Category Industry
2.	ORANGE-A Category Industry
3.	ORANGE-B Category Industry

**Note: Industrial Classification of Department of Environment (DoE) is given in the Annexure 02*

Restrictions:

Red Category Industries are prohibited.

6.2.2.3 Restricted Uses

All use except permitted uses.

6.2.3 Conservation Zone

The principal functions within these designated areas encompass playgrounds, parks, and open spaces tailored for outdoor activities. Additionally, the zone accommodates sports centers, sports pitches, outdoor recreational zones, and carefully landscaped areas. A paramount consideration within this zone is maintaining elevated standards of accessibility.

The accessibility criteria are intricately tied to the specific purpose of each open space. For instance, local amenity areas and playgrounds prioritize accessibility for pedestrians and cyclists. In contrast, sports centers catering to a broader catchment necessitate accessibility options for public transport and car commuters alike. The intention is to ensure that these spaces seamlessly accommodate the diverse needs of the community while adhering to the guidelines set forth by the Barguna Sadar Upazila Rural Area Plan.

6.2.3.1 Purpose

The primary goal of this zoning category is to address both the active and passive recreational requirements of the community while safeguarding its abundant natural resources. Concurrently, the zone aims to ensure the preservation of the area's innate natural and aesthetic attributes, promoting the collective well-being of the populace. The objectives of this zone encompass:

- To establish, safeguard, and enhance the availability, visual appeal, ease of access, and amenity quotient of public open spaces and amenity areas.
- To ensure the establishment, safeguarding, and enhancement of public open spaces that cater to recreational or amenity purposes. Development within this zone is exclusively permissible if it either directly contributes to or complements the utilization of open spaces, amenity zones, or recreational facilities.
- To uphold the preservation of open spaces and recreational amenities. The zoning directive is structured to allocate resources for recreation and amenity purposes, benefiting both urban and rural populations. Such provisions are, however, subject to stringent development regulations. The Planning Authority is exclusively focused on endorsing community facilities and other recreational uses, fostering a harmonious environment in line with the stipulations of the Barguna Sadar Upazila Rural Area Plan.

6.2.3.2 Permitted Land Use

The following uses in the tables are proposed to be applicable for this zone only.

Table 6-2: Permitted Land Use for Conservation Zone

Permitted Open Space Uses	Permitted Open Space Uses
Botanical Garden & Arboretum	Playing Field
Bus Passenger Shelter	Social Forestry
Carnivals and Fairs	Special Function Tent
Circus	Tennis Club
Landscape and Horticultural Services	Transmission Lines
Memorial Structure	Urban-Nature Reserve
Open Theater	Utility Lines
Park and Recreation Facilities (General)	Woodlot
Pipelines and Utility Lines	Zoo
Plantation (Except Narcotic Plant)	

Source: Compiled by the PKCP Project Team

6.2.3.3 Restricted Uses

All use except permitted uses.

6.2.4 Waterbody

Waterbody serves the natural flow of water along their alignment.

6.2.4.1 Purpose

The central focus of this zone is the preservation of consistent water flow and levels throughout all seasons, while also safeguarding the natural course of water bodies. The Upazila area is interlaced with a network of natural water bodies such as rivers, canals, and ponds. Recognizing the significance of ensuring environmentally safe and sustainable living conditions for both current and future generations, the preservation of water bodies assumes immense importance.

This endeavor extends beyond environmental considerations, encompassing the creation of a secure and harmonious habitat for the local populace. The retention and safeguarding of water bodies holds dual significance, not solely for environmental preservation, but also for the facilitation of active and passive recreational activities. The objective is to establish a balanced equilibrium that respects the ecological integrity of the region while simultaneously nurturing opportunities for community engagement and leisure pursuits. This approach aligns closely with the holistic vision outlined by the Barguna Sadar Upazila Rural Area Plan.

6.2.4.2 Planning Guideline for Waterbody:

- Ponds which are larger than 1 Bigha (0.33 acre approx.) are declared as Protected Ponds.
- Restore the original state of Canal according to Mouza Plot.
- Re-establish the missing connection of canals to river.
- Maintain no development zone within 50-feet buffer zone from the river stream and a 15-feet buffer zone from the canal stream.

CHAPTER 7: CONCLUSION

The Barguna Sadar Upazila Rural Area Plan embodies a comprehensive and forward-thinking framework that harmonizes development and preservation imperatives to chart a sustainable course for the region's future. This intricate blueprint delineates various zoning classifications, each meticulously crafted to address the multifaceted needs of the community, while simultaneously safeguarding the environment and paving the way for the prosperity of forthcoming generations.

At the core of this plan lies the recognition of the diverse and evolving needs of the Upazila's inhabitants. The carefully delineated zones serve as the canvas upon which the community's present and future are woven together. Whether designating areas for industrial growth, providing spaces for recreational activities, preserving water bodies, or nurturing rural settlements, each classification encapsulates a specific purpose that seamlessly aligns with the region's overall trajectory.

The industrial zone stands as a testament to the Upazila's economic ambitions. By creating an environment conducive to manufacturing, warehousing, and distribution, this zone not only fosters growth but also ensures that these activities are seamlessly integrated without impinging on residential, commercial, or other sensitive zones. Striking this balance between economic progress and environmental harmony is the cornerstone of sustainable development.

Similarly, the emphasis on preserving water bodies echoes the Upazila's commitment to safeguarding its natural resources. The network of rivers, canals, and ponds that crisscross the area plays a vital role in maintaining ecological balance, supporting biodiversity, and regulating water flow. Beyond these ecological benefits, the preservation of water bodies also serves as a hub for recreation and community engagement, underscoring the holistic approach of this plan.

Furthermore, the Rural Settlement Zones act as a bridge between tradition and modernity. By safeguarding the integrity of isolated clusters of rural homesteads, this classification ensures that the Upazila's agrarian heritage is preserved amidst the waves of progress. The retention of open lands, plantations, and farmlands not only contributes to clean air, water, and wildlife habitat but also holds economic importance, underscoring the interconnectedness of environmental and economic stability.

As the plan emphasizes, urbanization needs to be strategic, embracing both the advantages of compact development and the preservation of open spaces. With the provision of public open spaces and recreational areas, the plan acknowledges the community's need for spaces to unwind, interact, and bond. This commitment to a balanced rural-urban environment underscores the Upazila's vision for holistic and harmonious progress.

In conclusion, the Barguna Sadar Upazila Rural Area Plan stands as a testament to thoughtful planning that takes into account the unique blend of cultural, economic, and environmental aspects of the region. By fostering responsible growth while preserving its heritage, natural resources, and community well-being, this plan sets a promising trajectory for the Upazila's future. It encapsulates the philosophy that development and preservation are not opposing forces but rather symbiotic partners in shaping a vibrant and sustainable community for generations to come.

Annexure I: Industrial Classification of Department of Environment (DoE)

List of General industries

1. Green and Orange A Industries:

GREEN Category

1. Assembling and manufacturing of TV, Radio, etc.
2. Assembling and manufacturing of clocks and watches.
3. Assembling of telephones.
4. Assembling and manufacturing of toys (plastic made items excluded).
5. Bookbinding.
6. Rope and mats (made of cotton, jute and artificial fibers).
7. Photography (movie and x-ray excluded).
8. Production of artificial leather goods.
9. Assembling of motorcycles, bicycles and toy cycles.
10. Assembling of scientific and mathematical instruments (excluding manufacturing).
11. Musical instruments.
12. Sports goods (excluding plastic made items).
13. Tea packing (excluding processing).
14. Re-packing of milk powder (excluding production).
15. Bamboo and cane goods.
16. Artificial flower (excluding plastic made items).
17. Pen and ball-pen.
18. Gold ornaments (excluding production) (shops only).
19. Candle.
20. Medical and surgical instrument (excluding production).
21. Factory for production of cork items (excluding metallic items).
22. Laundry (excluding washing).

ORANGE-A Category

1. Dairy Farm, 10 (ten) cattle heads or below in urban areas and 25 cattle heads or below in rural areas.
2. Poultry (up to 250 in urban areas and up to 1000 in rural areas).
3. Grinding/husking of wheat, rice, turmeric, pepper, pulses (up to 20 Horse Power).
4. Weaving and handloom.
5. Production of shoes and leather goods (capital up to 5 hundred thousand Taka).
6. Sawmill/wood sawing.
7. Furniture of wood/iron, aluminum, etc., (capital up to 5 hundred thousand Taka).
8. Printing Press.
9. Plastic & rubber goods (excluding PVC).
10. Restaurant.
11. Cartoon/box manufacturing/printing packaging.

12. Cinema Hall
13. Dry-cleaning.
14. Production of artificial leather goods (capital up to 5 hundred thousand Taka).
15. Sports goods.
16. Production of salt (capital up to 10 hundred thousand Taka).
17. Agricultural machinery and equipment.
18. Industrial machinery and equipment.
19. Production of gold ornaments.
20. Pin, U Pin.
21. Frames of spectacles.
22. Comb.
23. Production of utensils and souvenirs of brass and bronze.
24. Factory for production of biscuit and bread (capital up to 5 hundred thousand Taka).
25. Factory for production of chocolate and lozenge. (capital up to 5 hundred thousand Taka).
26. Manufacturing of wooden water vessels.

2. Modified list of orange B

ORANGE-B Category

1. PVC items.
2. Artificial fiber (raw material).
3. Glass factory.
4. Life saving drug (applicable to formulation only).
5. Edible oil.
6. Jute mill.
7. Hotel, multi-storied commercial & apartment building.
8. Casting.
9. Aluminum products.
10. Glue (excluding animal glue).
11. Bricks/tiles.
12. Lime.
13. Plastic products.
14. Processing and bottling of drinking water and carbonated drinks.
15. Galvanizing.
16. Perfumes, cosmetics.
17. Flour (large)
18. Stone grinding, cutting, polishing.
19. Processing fish, meat, and food.
20. Printing and writing ink.
21. Animal feed.
22. Ice-cream.
23. Clinic and pathological lab.
24. Utensils made of clay and china clay/sanitary wares (ceramics).
25. Processing of prawns & shrimps.

26. Water purification plant.
27. Metal utensils/spoons etc.
28. Sodium silicate.
29. Matches.
30. Starch and glucose.
31. Animal feed.
32. Automatic rice mill.
33. Automatic rice mill.
34. Assembling of motor vehicles.
35. Manufacturing of wooden vessel.
36. Photography (activities related to production of films for movie and x-ray).
37. Tea processing.
38. Production of powder milk/condensed milk/dairy.
39. Wood treatment.
40. Soap.
41. Repairing of refrigerators.
42. Repairing of metal vessel.
43. Engineering works (up to 10 hundred thousand Taka capital.)
44. Spinning mill.
45. Electric cable.
46. Cold storage.
47. Tire re-treading.
48. Motor vehicles repairing works (up to 10 hundred thousand Taka capital).
49. Cattle farm: above 10 (ten) numbers in urban area, and above 25 (twenty five) numbers in rural area.
50. Poultry: Number of birds above 250 (two hundred fifty) in urban area and above 1000 (one thousand) in rural area.
51. Grinding/husking wheat, rice, turmeric, chilly, pulses - machine above 20 Horse Power.
52. Production of shoes and leather goods, above 5(five) hundred thousand Taka capital.
53. Furniture of wood/iron, aluminum, etc., above 5 (five) hundred thousand Taka capital.
54. Production of artificial leather goods, above 5(five) hundred thousand Taka capital.
55. Salt production, above 10(ten) hundred thousand Taka capital.
56. Biscuit and bread factory, above 5 (five) hundred thousand Taka capital.
57. Factory for production of chocolate and lozenge, above 5(five) hundred thousand Taka capital.
58. Garments and sweater production.
59. Fabric washing.
60. Power loom.
61. Construction, re-construction, and extension of road (feeder road, local road).
62. Construction, re-construction, and extension of bridge (length below 100 meters).
63. Public toilet.
64. Ship-breaking.

3. Red Category Industries (modified list of DOE)

1. Tannery.
2. Formaldehyde.
3. Urea fertilizer.
4. T.S.P. Fertilizer.
5. Chemical dyes, polish, varnish, enamel.
6. Power plant.
7. All mining projects (coal, limestone, hard rock, natural gas, mineral oil, etc.)
8. Cement.
9. Fuel oil refinery.
10. Artificial rubber.
11. Paper and pulp.
12. Sugar.
13. Distillery.
14. Fabric dying and chemical processing.
15. Caustic soda, potash.
16. Other alkalis.
17. Production of iron and steel.
18. Raw materials of medicines and basic drugs.
19. Electroplating.
20. Photo films, photo papers and photo chemicals.
21. Various products made from petroleum and coal.
22. Explosives.
23. Acids and their salts (organic or inorganic).
24. Nitrogen compounds (Cyanide, Cyanamid etc.).
25. Production of plastic raw materials (PVC, PP/Iron, Polyesterin etc.)
26. Asbestos.
27. Fiberglass.
28. Pesticides, fungicides, and herbicides.
29. Phosphorus and its compounds/derivatives.
30. Chlorine, fluorine, bromine, iodine, and their compounds/derivatives.
31. Industry (excluding nitrogen, oxygen, and carbon dioxide).
32. Waste incinerator.
33. Other chemicals.
34. Ordnance.
35. Nuclear power.
36. Wine.
37. Non-metallic chemicals not listed elsewhere.
38. Non-metals not listed elsewhere.
39. Industrial estate.
40. Basic industrial chemicals.
41. Non-iron basic metals.
42. Detergent.
43. Landfilling by industrial, household and commercial wastes.
44. Sewage treatment plant.

45. Life saving drugs.
46. Animal glue.
47. Rodenticide.
48. Refractory's.
49. Industrial gas (Oxygen, Nitrogen & Carbon-dioxide).
50. Battery.
51. Hospital.
52. Ship manufacturing.
53. Tobacco (processing/cigarette/Bin-making).
54. Metallic boat manufacturing.
55. Wooden boat manufacturing.
56. Refrigerator/air-conditioner/air-cooler manufacturing.
57. Tire and tubes
58. Board mills
59. Carpets.
60. Engineering works.
61. Repairing of motor vehicles
62. Water treatment plant.
63. Sewerage pipeline laying/relaying/extension.
64. Water, power, and gas distribution line laying/relaying/extension.
65. Exploration/extraction/distribution of mineral resources.
66. Construction/reconstruction/expansion of flood control embankment, polder, dike, etc.
67. Construction/reconstruction/expansion of road (regional, national & international).
68. Construction/reconstruction/expansion of bridge (length 100 meter and above).
69. Mureate of Potash (manufacturing).
70. Alcatraz.
71. Carbon rod.
72. Re-rolling