



Government of the People's Republic of Bangladesh

**Ministry of Housing and Public Works
Urban Development Directorate (UDD)**

**“Preparation of Development Plan
for Fourteen Upazilas”
Package 05-Ramu Upazila, Cox's Bazar**

1

CONSULTANT

**Joint Venture of
HOUSE OF CONSULTANTS LIMITED (HCL)
DISASTER MANAGEMENT WATCH (dm.Watch)**

Welcome to The Presentation on

Draft Planning Phase of Sub-Regional Plan and Structure Plan of Ramu Upazila

13 March, 2017

Presented By

Dr. M. MAKSUDUR RAHMAN

Team Leader, Package - 05

Preparation of Development Plan for Fourteen Upazilas

Presentation Outline

- Sub-Regional Plan
- Structure Plan
- Urban Area Plan
- Rural Area Plan
- Action Area Plan

Sub-Regional Plan

- Sub-regional plan that define the roles of regional and sub-regional centres and main towns widely in relation to their economic, social, cultural, environmental and transport roles, with policies for infrastructure to support different spatial strategies.
- Sub-Regional Plan mainly focus on settlement strategy defining settlement types and the opportunities for urban extensions.

Nature of Sub-Regional Plan

► Strategic Plan at Sub-Regional Level

Strategic plan determines a long-term vision for the development of an area

► Regional Structure Zoning Category

Zoning is an important tool for guiding the private development and proper utilization of land.

► Conservation Plan

A conservation plan can be a vision for the future ecological health of an area as well as for the natural resources.

Objectives of Sub-Regional Plan

- Control unauthorized development throughout the city.
- Providing suitable economic base for future growth of the city.
- To provide a rational land use pattern in order to protect and conserve agricultural land and other unproductive land as well as the water bodies.
- To develop selected areas with infrastructural facilities.
- Ensuring sustainability without violating the environmental concerns.

Ramu Upazila for Sub-Regional Plan

7 Connectivity

- East of the Ramu Upazila is Naikhongchori upazila of Bandorban (Hill tract), Ukhia upazila on south, Cox's Bazar Sadar upazila on west and Chokoria upazila on north. Ramu is situated 15 km far away from district sadar.
- Railway junction has been proposed for Ramu Upazila in Railway Master Plan.

Natural Resources

- Ramu is heavily endowed by nature such as the soil/land, bamboo, tree, rivers, canals, birds, animals, fishes and sea fish etc.
- There is 39% forest out of total land.

Land and its usage

- The Ramu upazila covers in total, 65330 acres of land. Out of which 20111 acres of land is engaged in farming.

Financial Activities and Profession

- Job Holder: around
- Business Man (micro enterprise)
- Works in the agricultural sector (farming crops, betel leaf, salt and shrimp)
- Day Laborer, Van and Rickshaw Puller
- Fishermen
- Barber, Washer men and Carpenter

Social Development

Land

- Land is the most prominent factor in urban development. Without access to available land development cannot take place.

Employment Generation

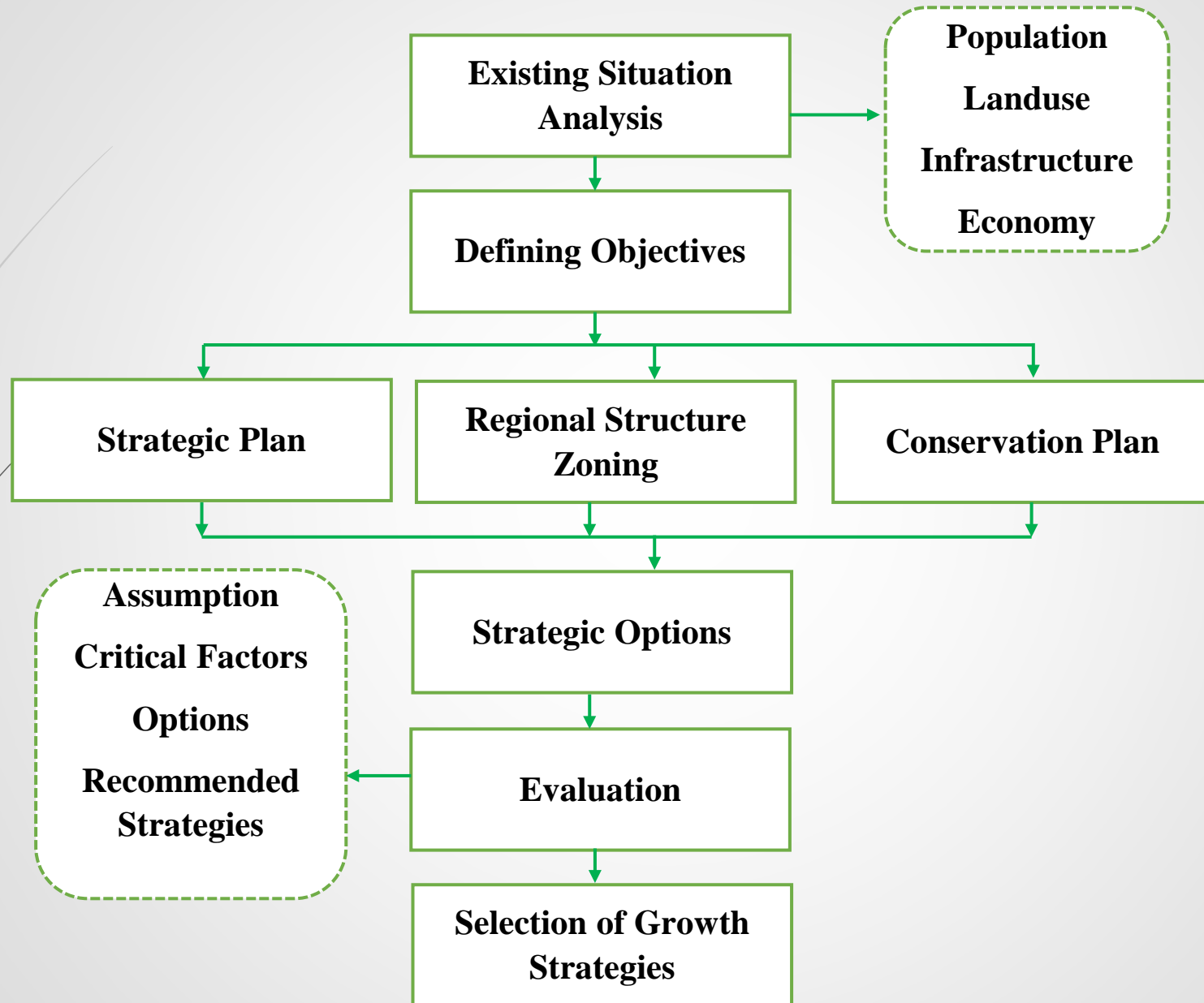
- Public-private co-operation is highly considered to generate employment.

Natural Calamities

- For the geographical location Ramu is vulnerable to different kind of natural calamities.

Strategic Planning Process

9



Structure Plan

Structure plan typically shows how broad scale development or change in a Geographical area will be physical organized on the ground. It provides long term statutory framework to guide the development and redevelopment of land which contains a development concept and policies by establishing the general pattern for landuse, densities, major roads and utilities with the goal of ensuring that subdivision or development occur in an orderly, economic and efficient manner.

The structure plan aims to optimize utilization of available land resources. It is broad based, indicative, open ended plan providing policy frame work for action plans and development.

Nature of Structure Plan

Structure plan is flexible and the flexibility of structure plan make capable to adopt strategies in future uncertainties.

It provides long term statutory framework to guide the development and redevelopment of land which contains a development concept and policies by establishing the general pattern for landuse, densities, major roads and utilities with the goal of ensuring that subdivision or development occur in an orderly, economic and efficient manner.

Structure plan provides:

- Current plan/approach
- Focusing Physical/spatial/socio-economic aspects
- Flexible/zoning change possible where realities become visible
- Highly Practicable

Objectives of Structure Plan

12

- The main objective of Structure Plan is to demarcate the future growth areas and set a strategy for future development of Ramu Upazila.
- To identify the urban areas and different rural centres of the upazila; and determine the planning requirements for the urban area, rural centers and rural area.
- Description of the upazila's administrative, economic, social, physical environmental growth, functional linkage and hierarchy in the national and regional context
- Discussion of relevant policies to analyze and find out potential scopes for the use in the present exercise of Ramu upazila
- Formulation and Integration of different sectoral strategies for the Upazila.
- To discuss implement issues regarding institutional capacity building and strengthening of upazila, resource mobilization etc.

Ramu Upazila for Structure Plan

Structure Plan for Ramu Upazila would be prepared for 20 years which would cover up to 2033 with the content and meaning of the development policy of Planning Commission and guidelines laid in the Poverty Reduction Strategy Paper (PRSP), National Water Management Plan (NWMP), Disaster Management Plan, Wetland Protection Act, Environmental Laws, etc. This will bridge the gap between National level policy and local level plan.

This plan sets the policies related to spatial aspects of upazila and provides a framework for future development covering a period of next 20 years. The policies are stipulated in a report and visually supported by a number of maps.

Contents of Structure Plan

Structure Plan contains policies on the following sectors:

- Optimum use of land Resources
- Development of New Area
- Areas for conservation and protection
- Housing
- Economy and Employment
- Physical Infrastructure and Municipal Services
- Transportation
- Tourism and Recreation
- Drainage and Hydrology
- Flood and Erosion Control
- Rural Agricultural Areas
- Environment
- Disaster Management

Policy Recommendations for Structure Plan Zone

Main Flood Flow Zone

Land development for residential, commercial and industrial development, including raising the land level of land, via land filling, will be strictly prohibited.

Permitted uses, provided that they cause no adverse hydraulic effect will be:

- Agriculture
- Dry season recreation facilities
- Ferry terminals and
- Excavation of mineral deposits, including dry season brick works

Sub Flood Flow Zone

Development compatible with the rural nature of these mainly rice growing areas, will be permitted on condition that the:

- Structures are built on silts, or on land raised above design flood water level
- Alignment of structures and raised land to be designed so as not to disturb flood flow.

Rural Settlement Zone

- Rural settlement should be incorporated during the subsequent phases of detailed area planning.
- For developing rural settlement financial support is very essential as well as real estate intervention.

Industrial Hazard Zone

Industrial zone is categorized into two areas. Which are: General industry and heavy industry.

General Industry(Category by DoE)

Green

Orange A

Heavy Industry(Category by DoE)

Red

Orange B

Water Supply Protection Zone

A Drinking Water Protection Area is an area that contributes water to municipal water supply wells. The water we drink comes from beneath the ground in each protection area.

Water Protection Initiatives at Region

Groundwater monitoring: Water level and water quality monitoring in both Region supply wells and specially-designed monitoring wells.

Rural Water Quality Program: A program that provides financial assistance to farmers for implementation of best management practices.

Business Water Quality Program: Businesses who introduce spill prevention and management projects are eligible for financial assistance through this program.

Community participation and education: Increase awareness of residents about water protection issues through presentations, festivals, events and other initiatives.

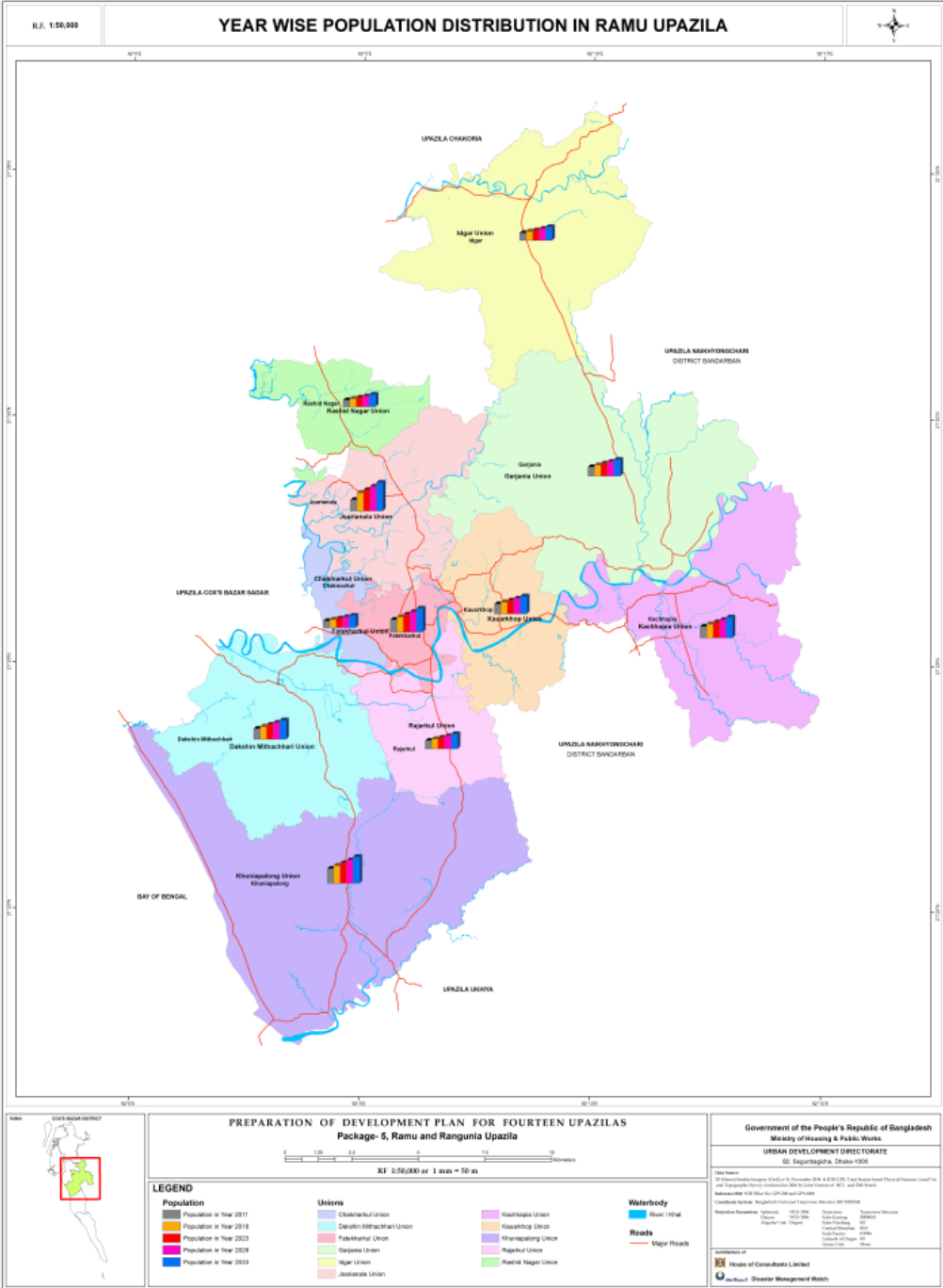
Restricted Special

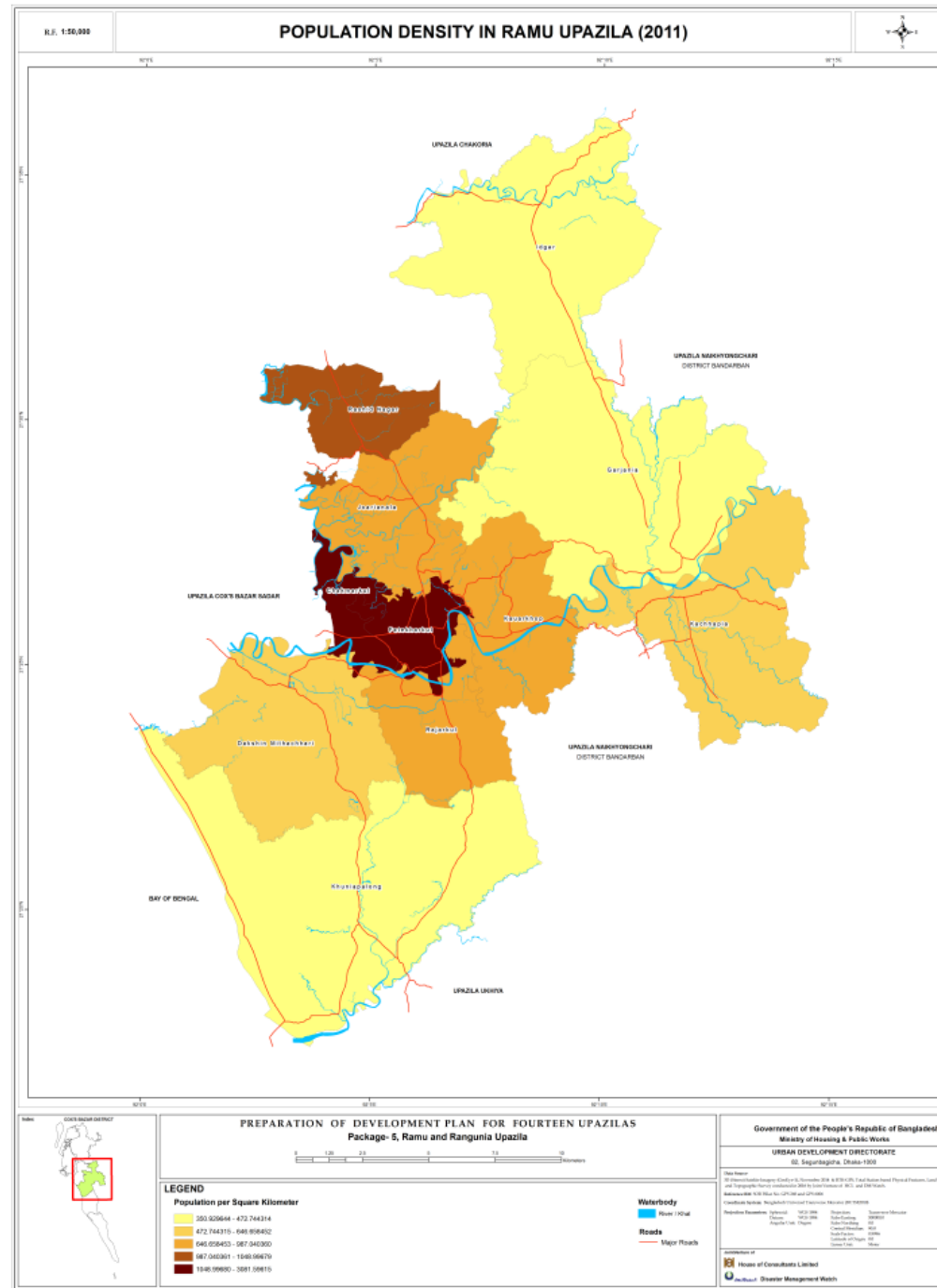
Policy RS/6- Special Areas

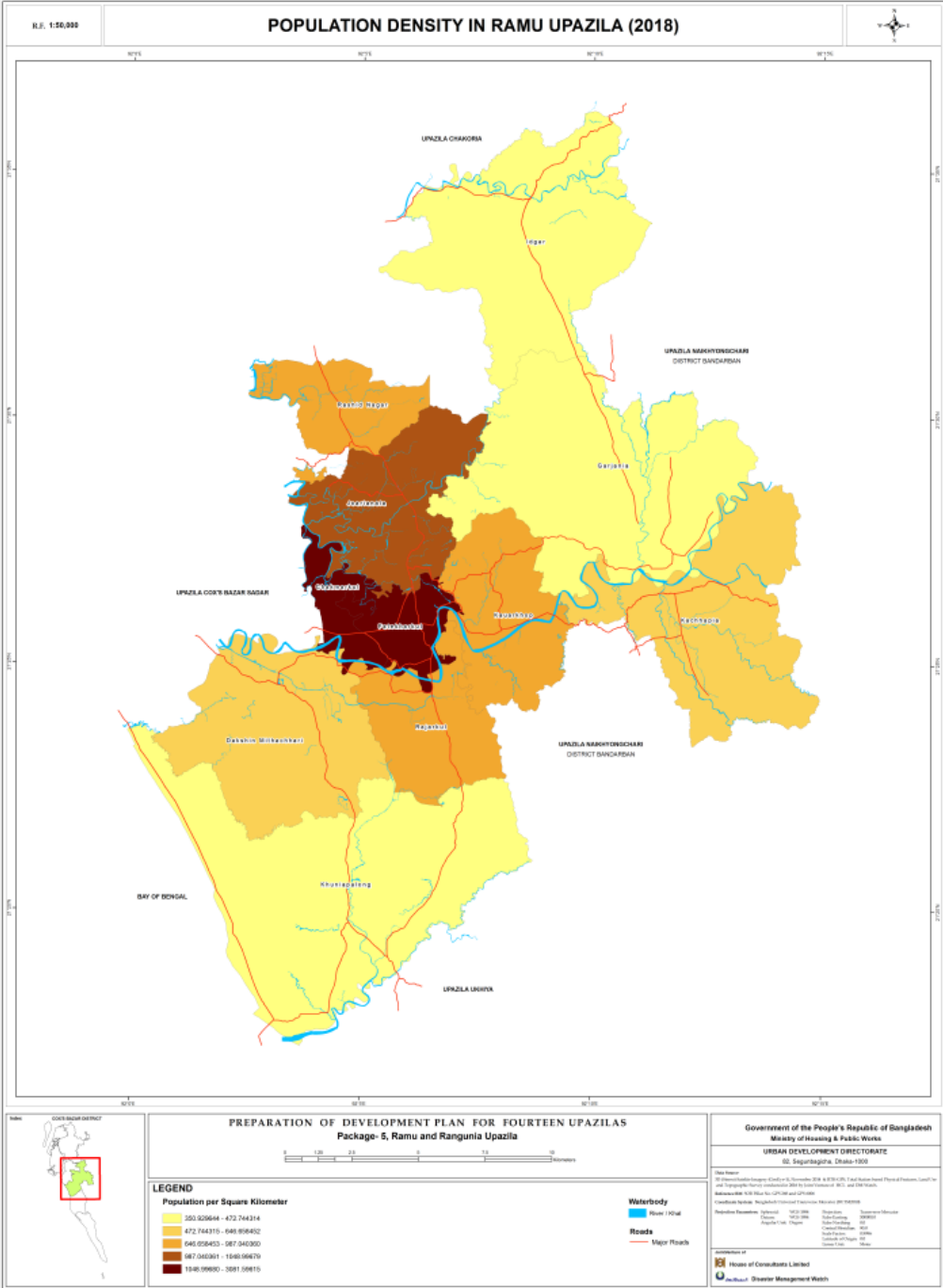
Integrity of the functions of the special area designations and maintain the land areas of their respective domain free from urban incursions.

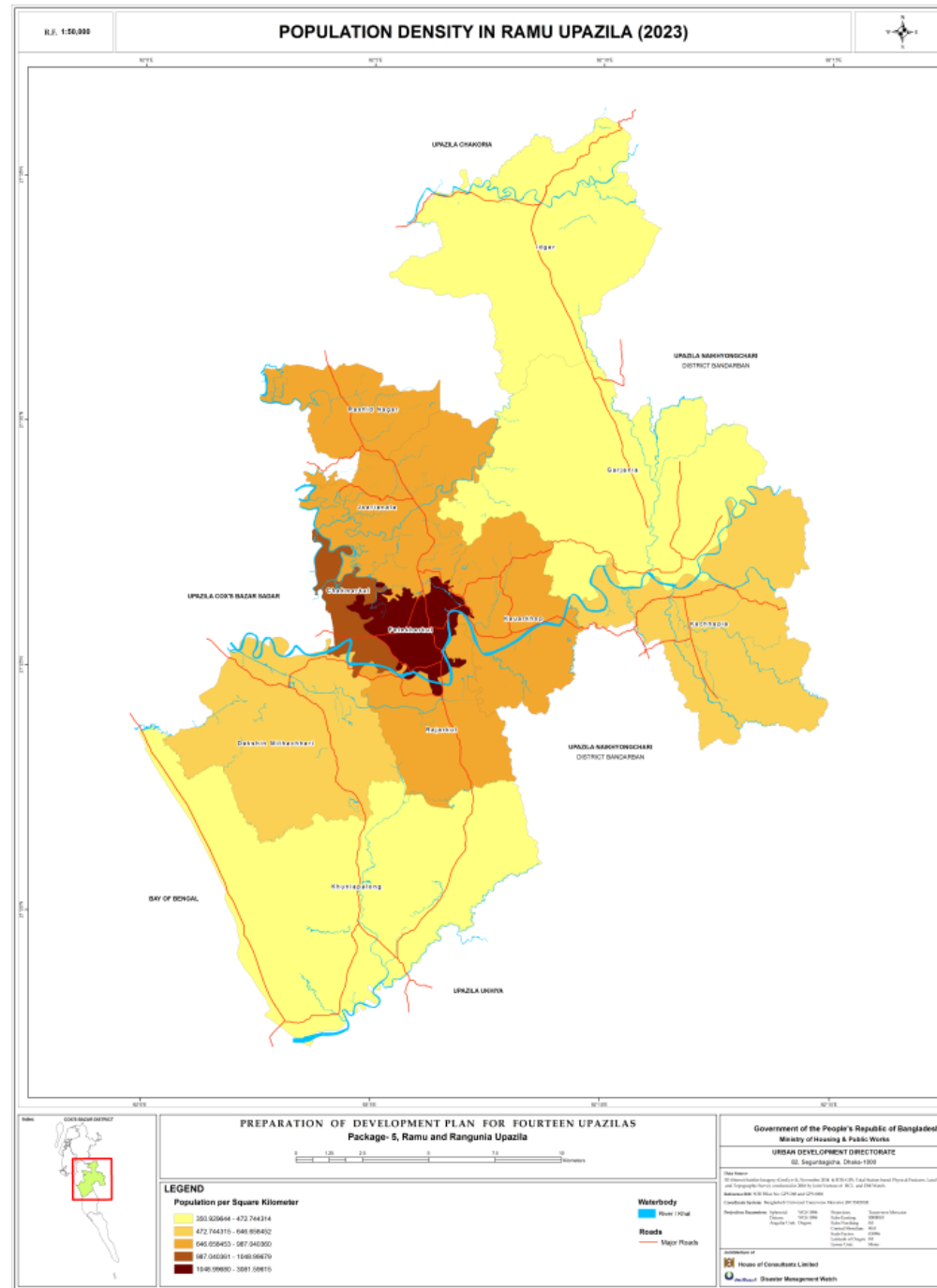
Policy RS/1- Areas of High Agricultural Value

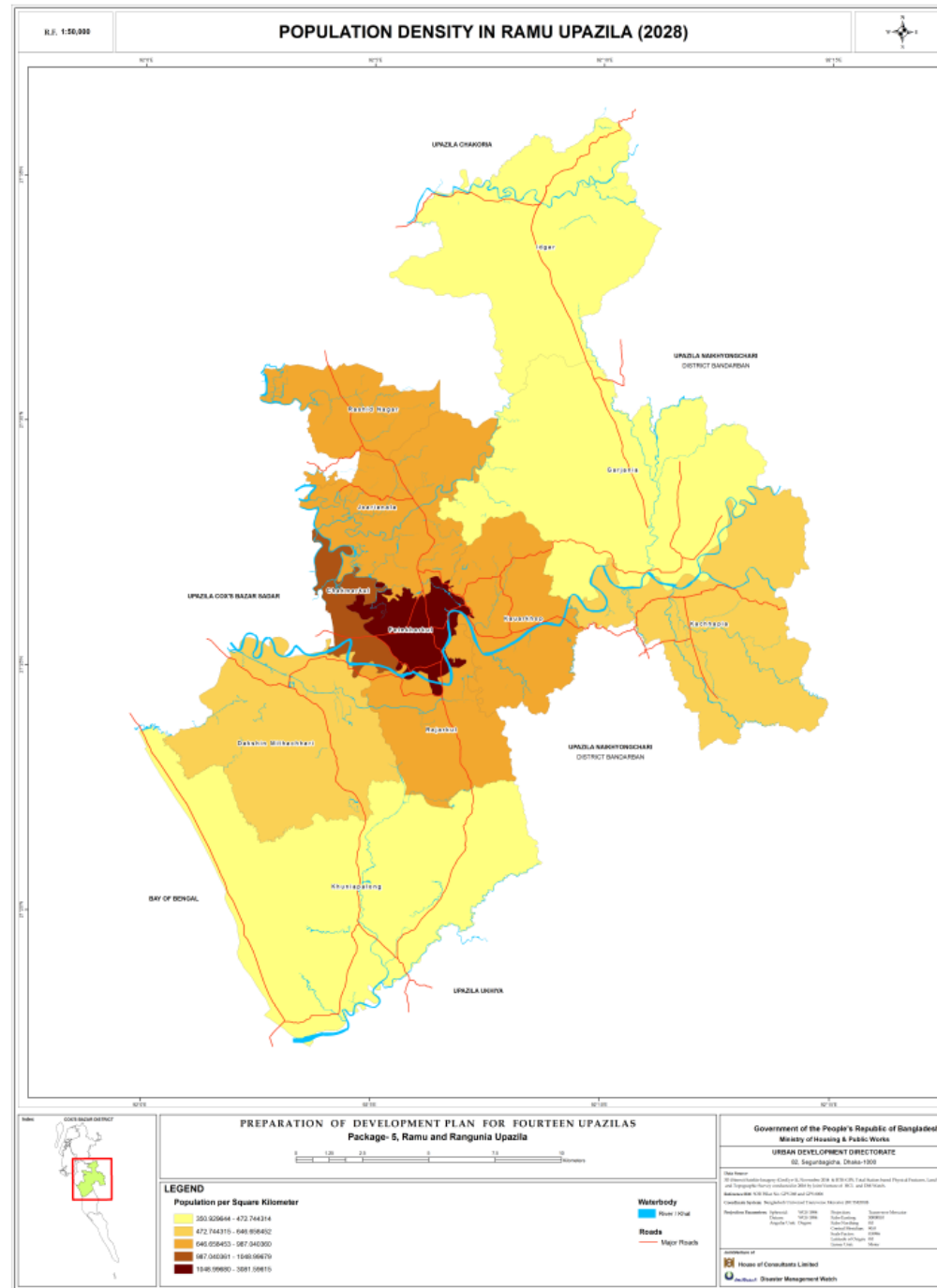
Three areas of high quality agricultural land within the market catchment area of Dhaka will be conserved and promoted of high intensity food production. (DMDP)

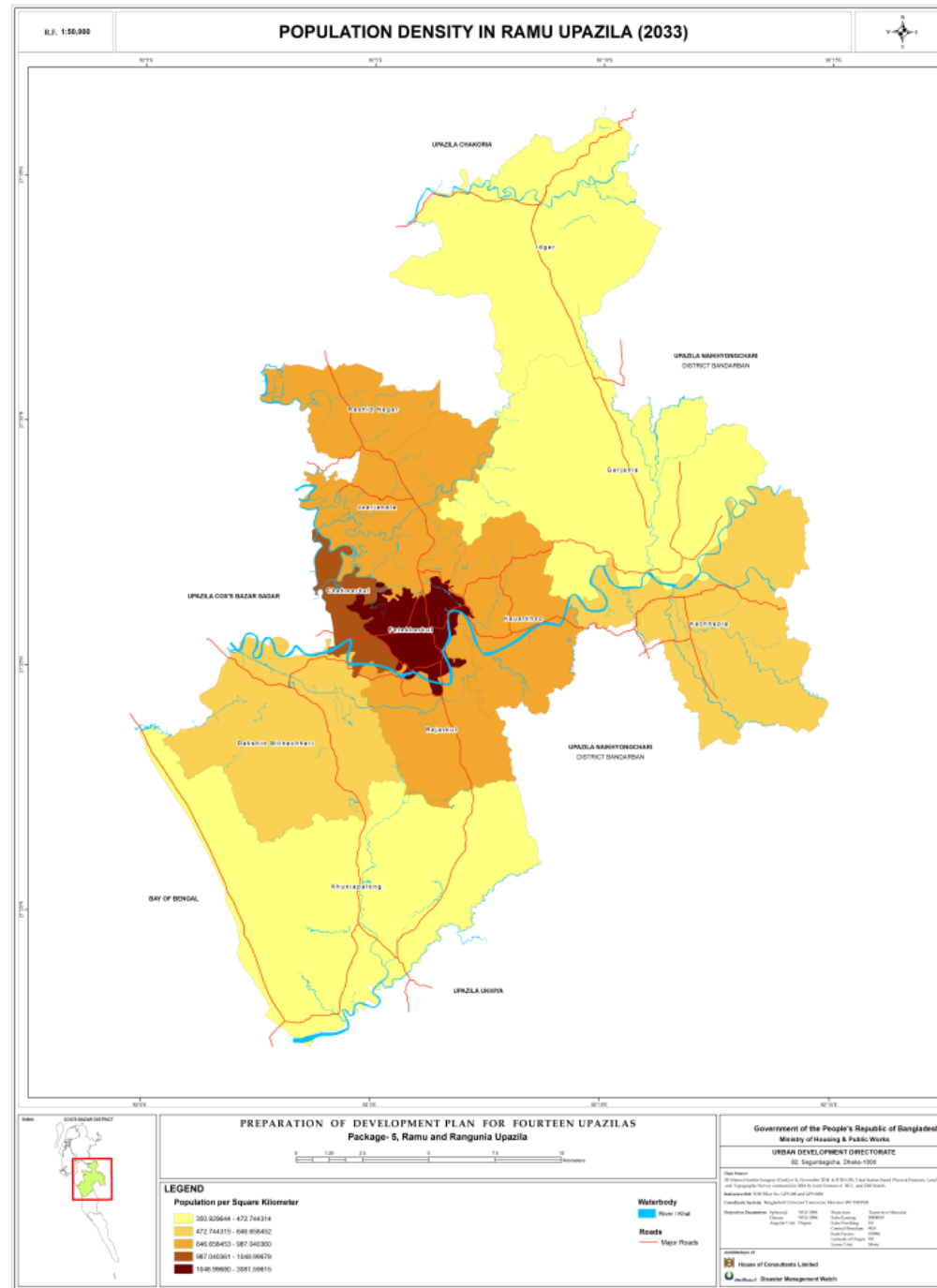


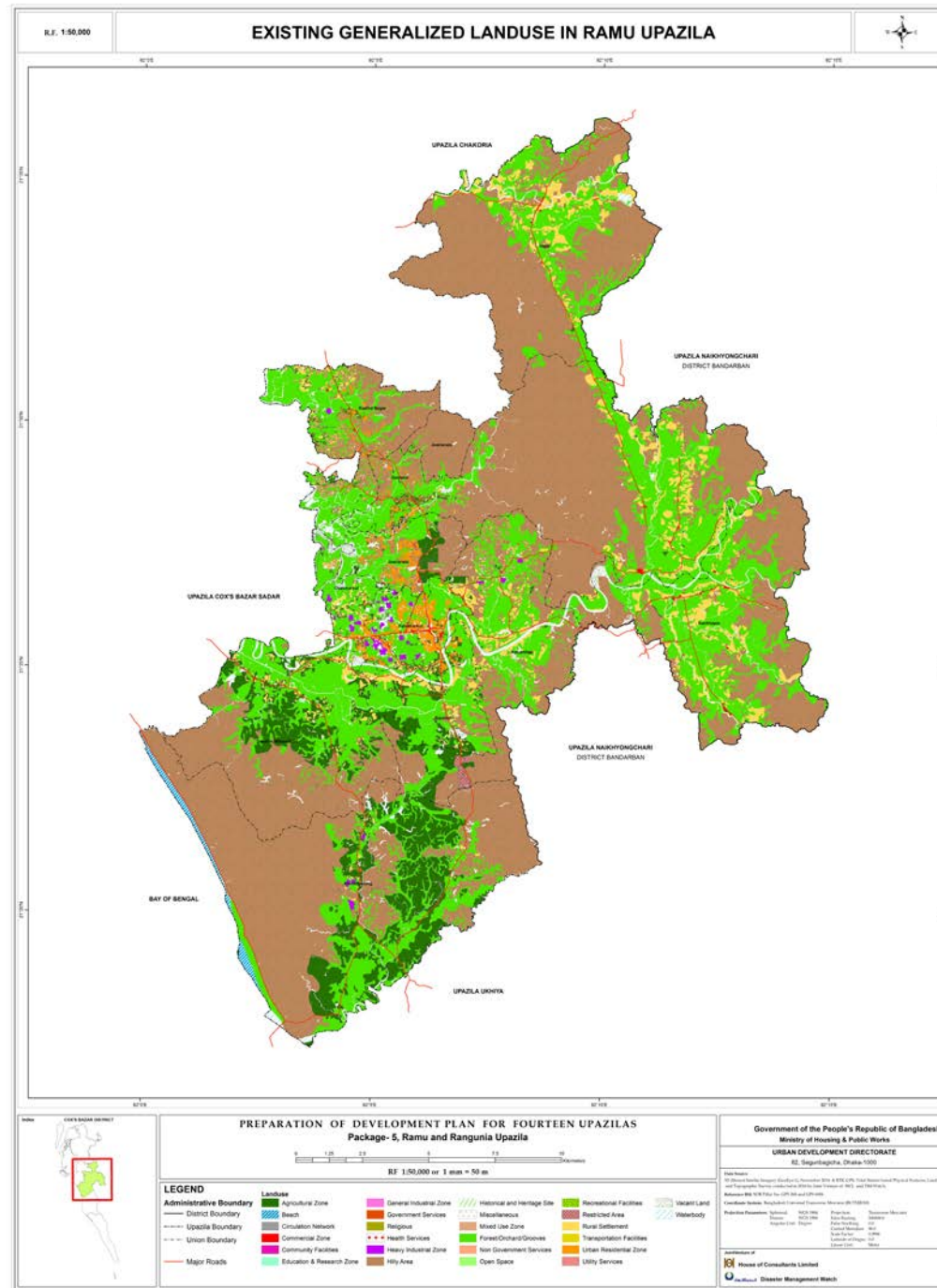


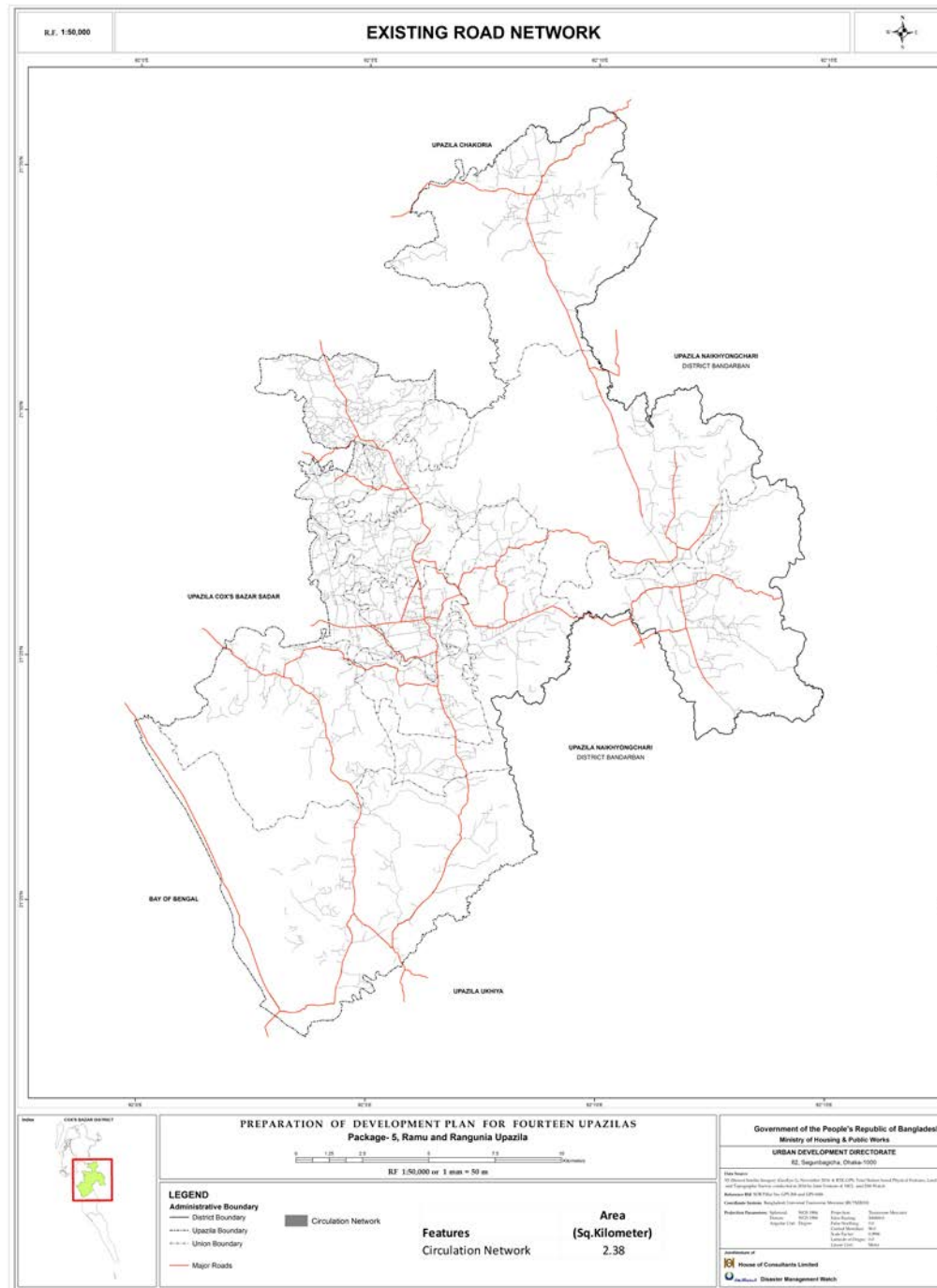


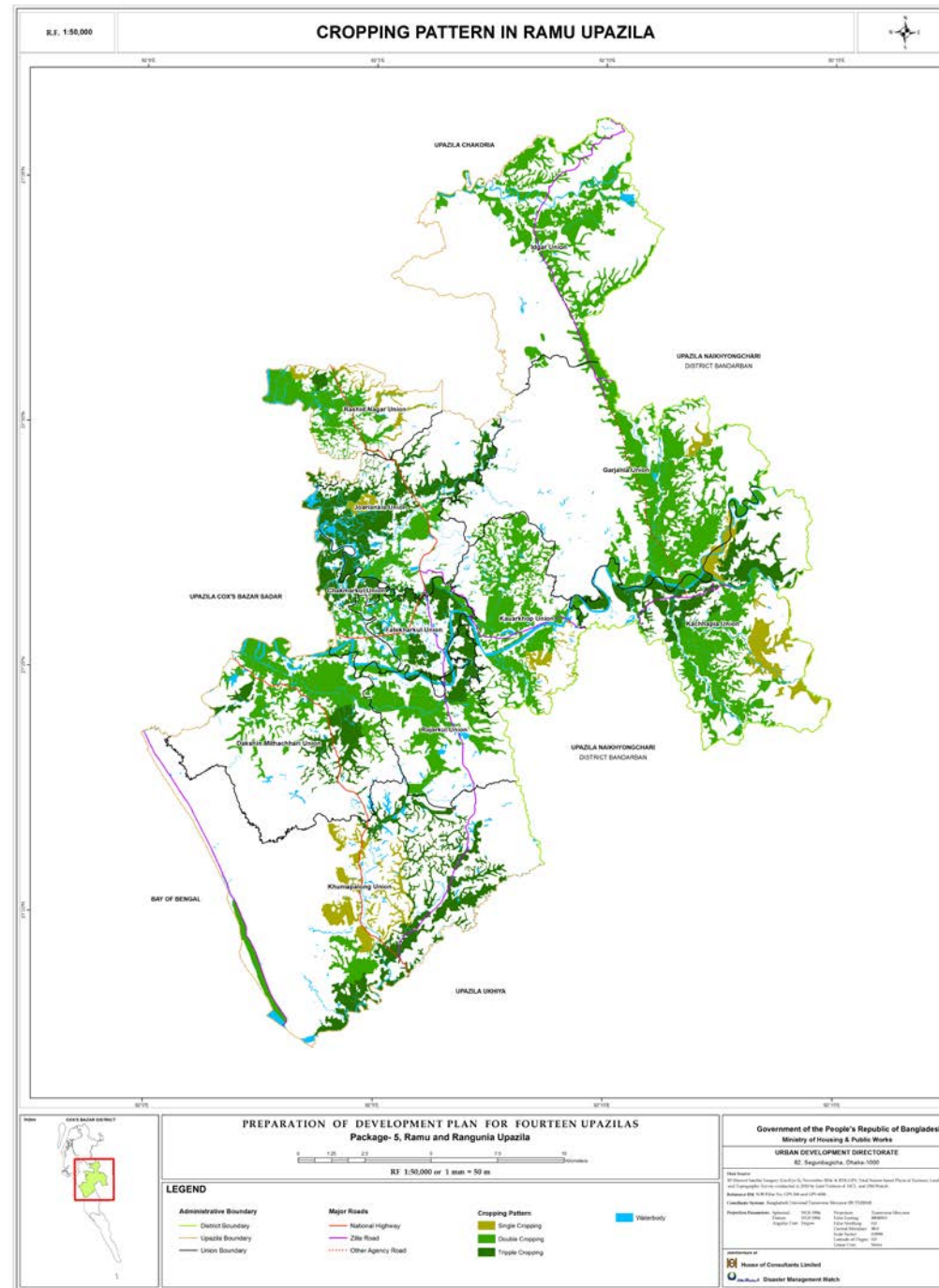


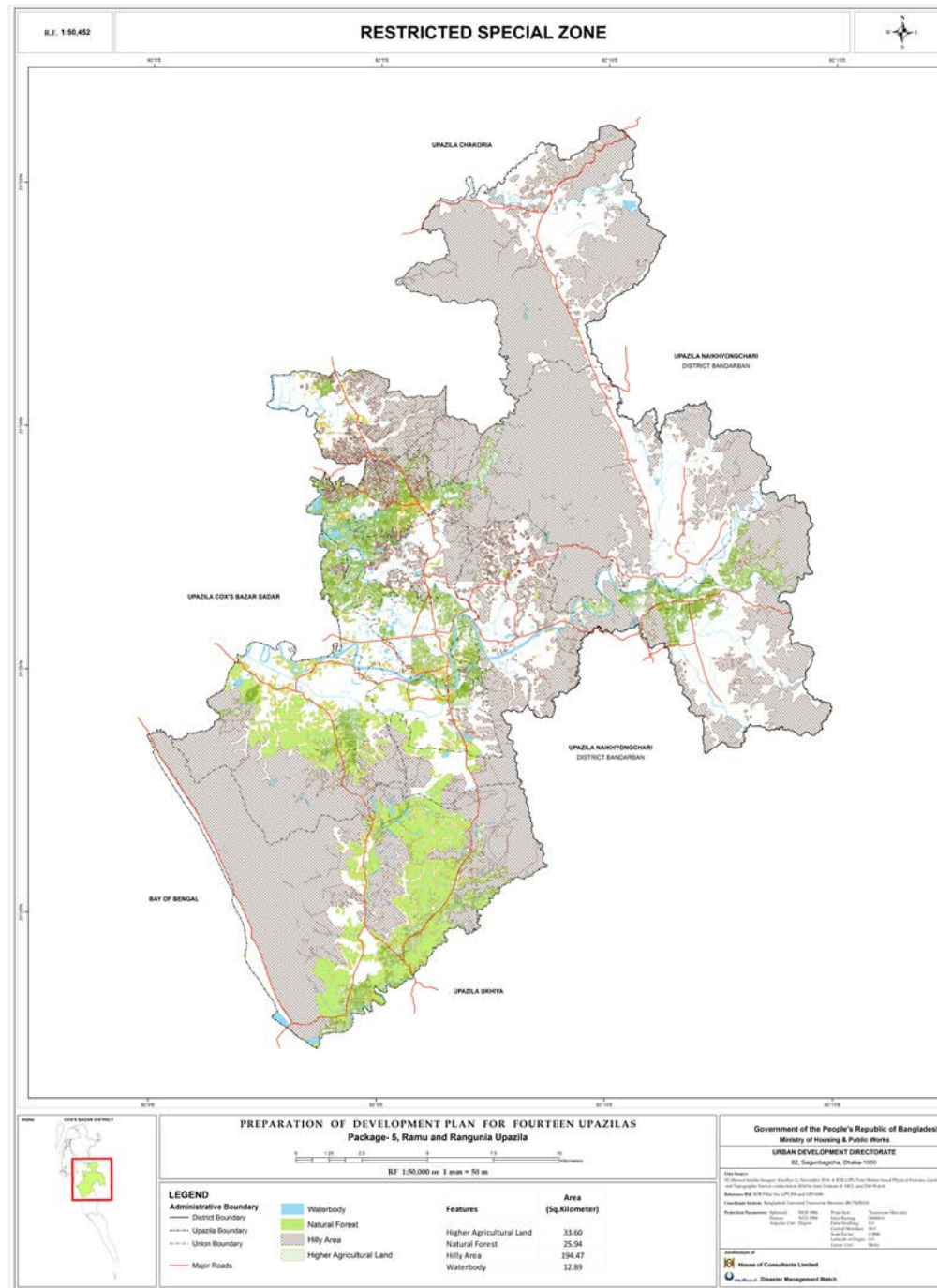


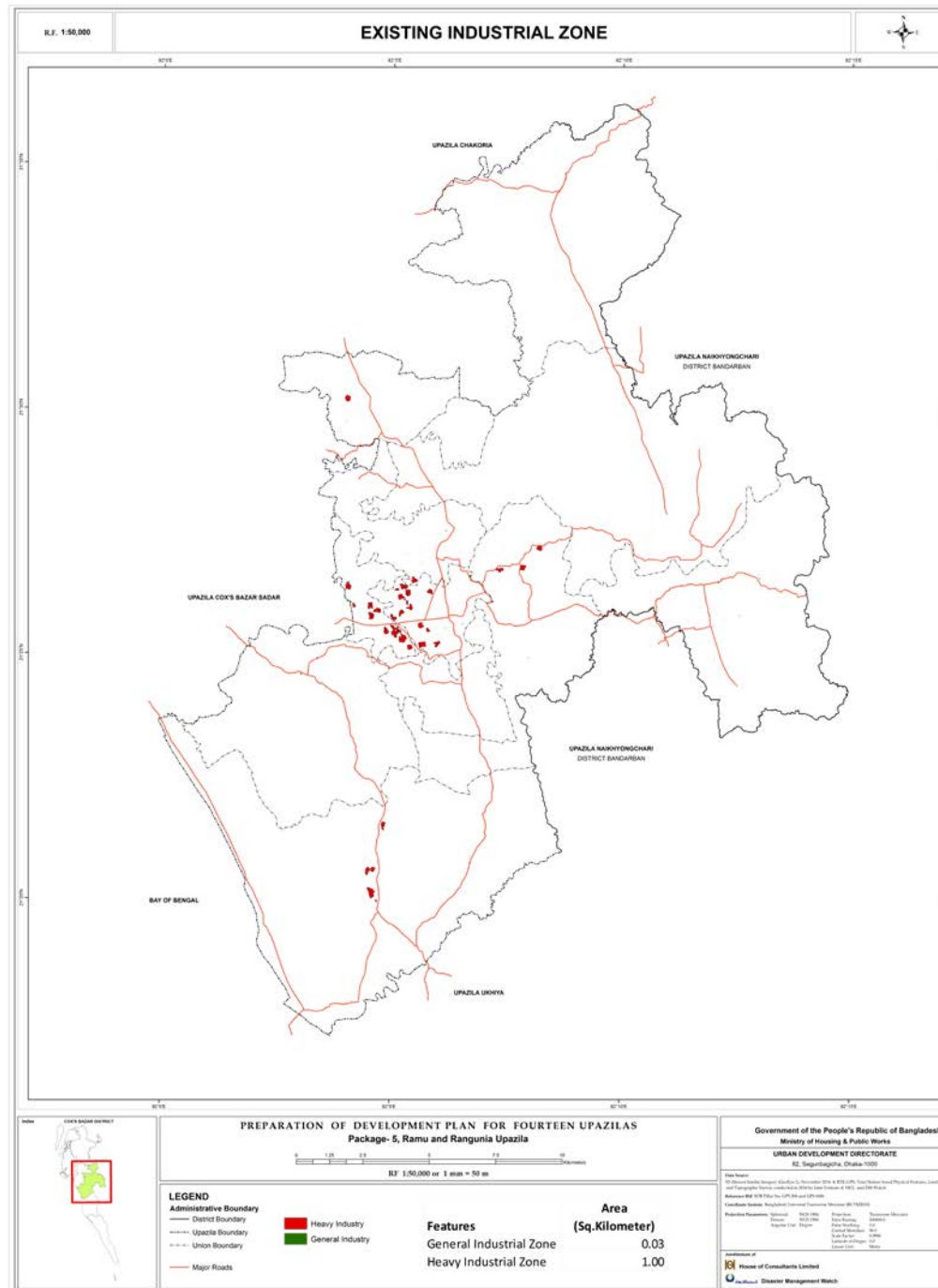


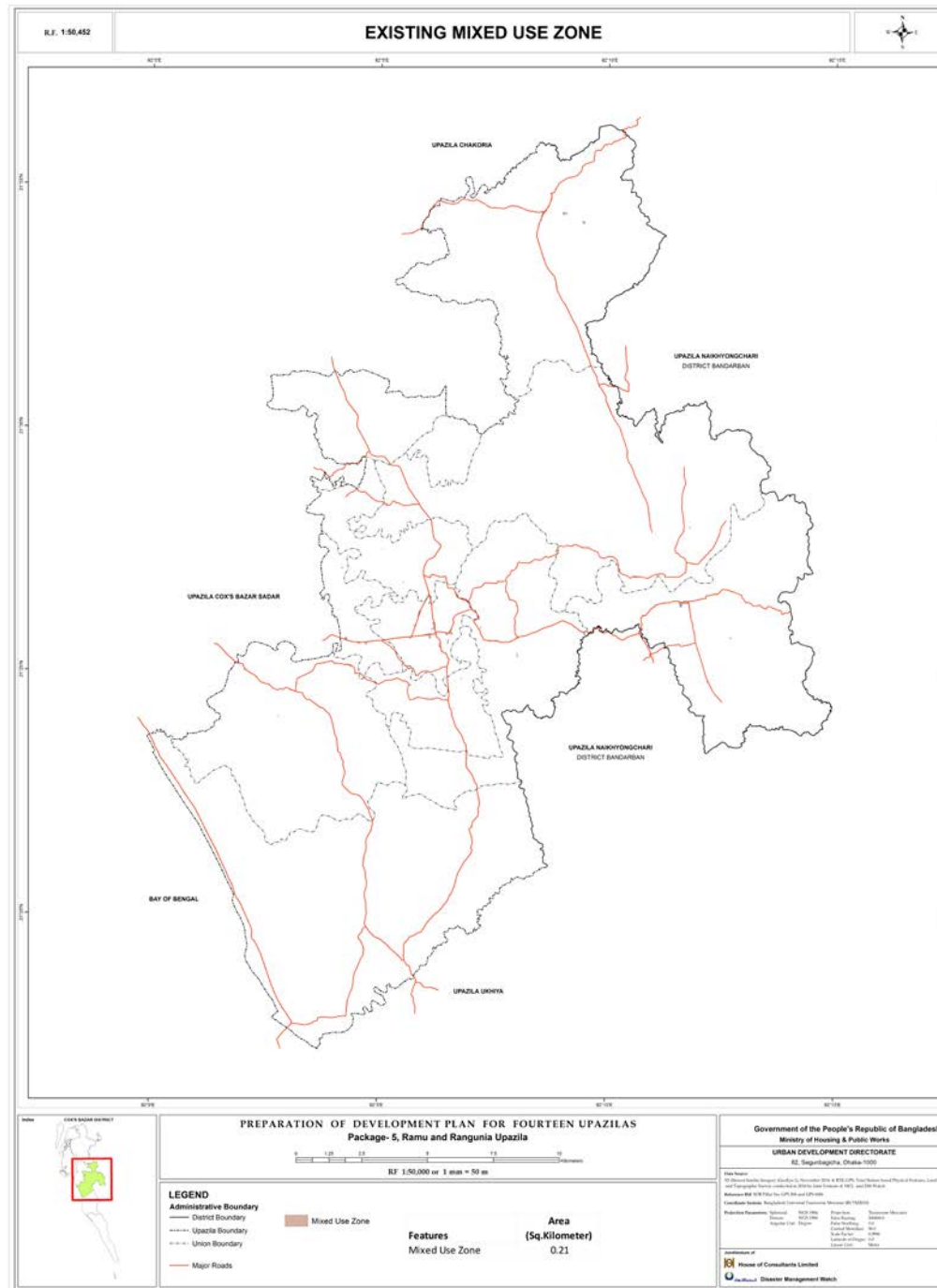


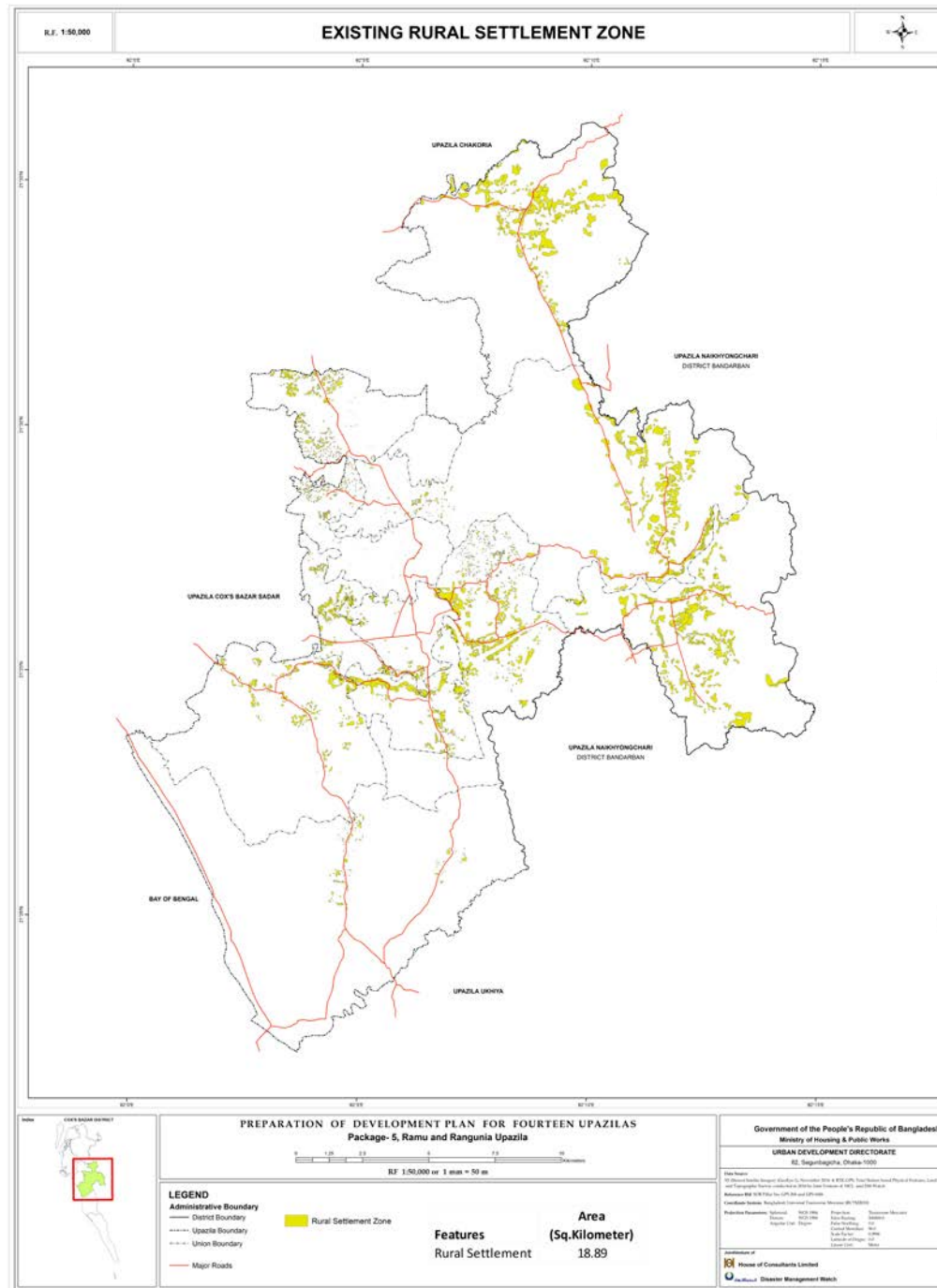


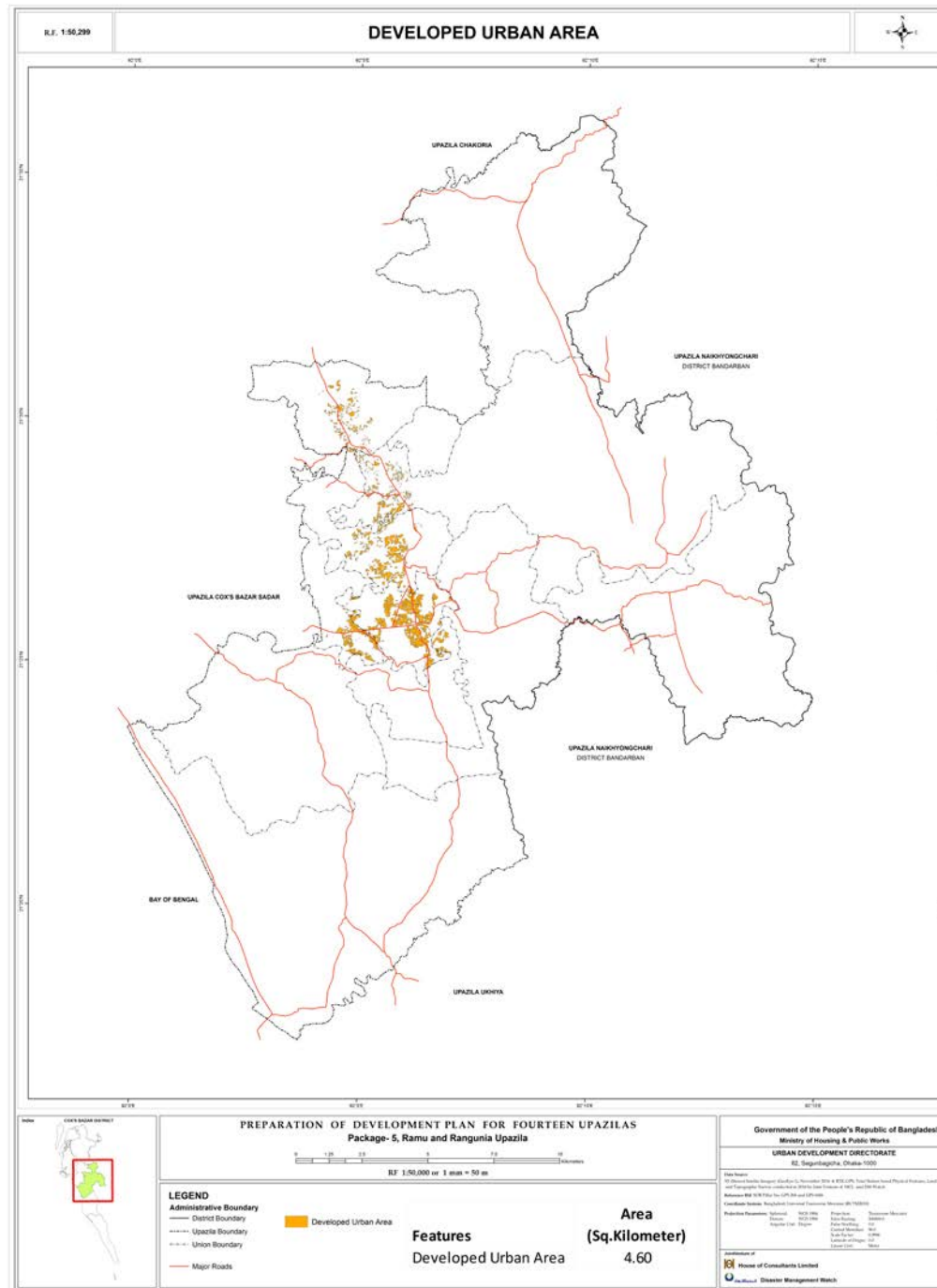


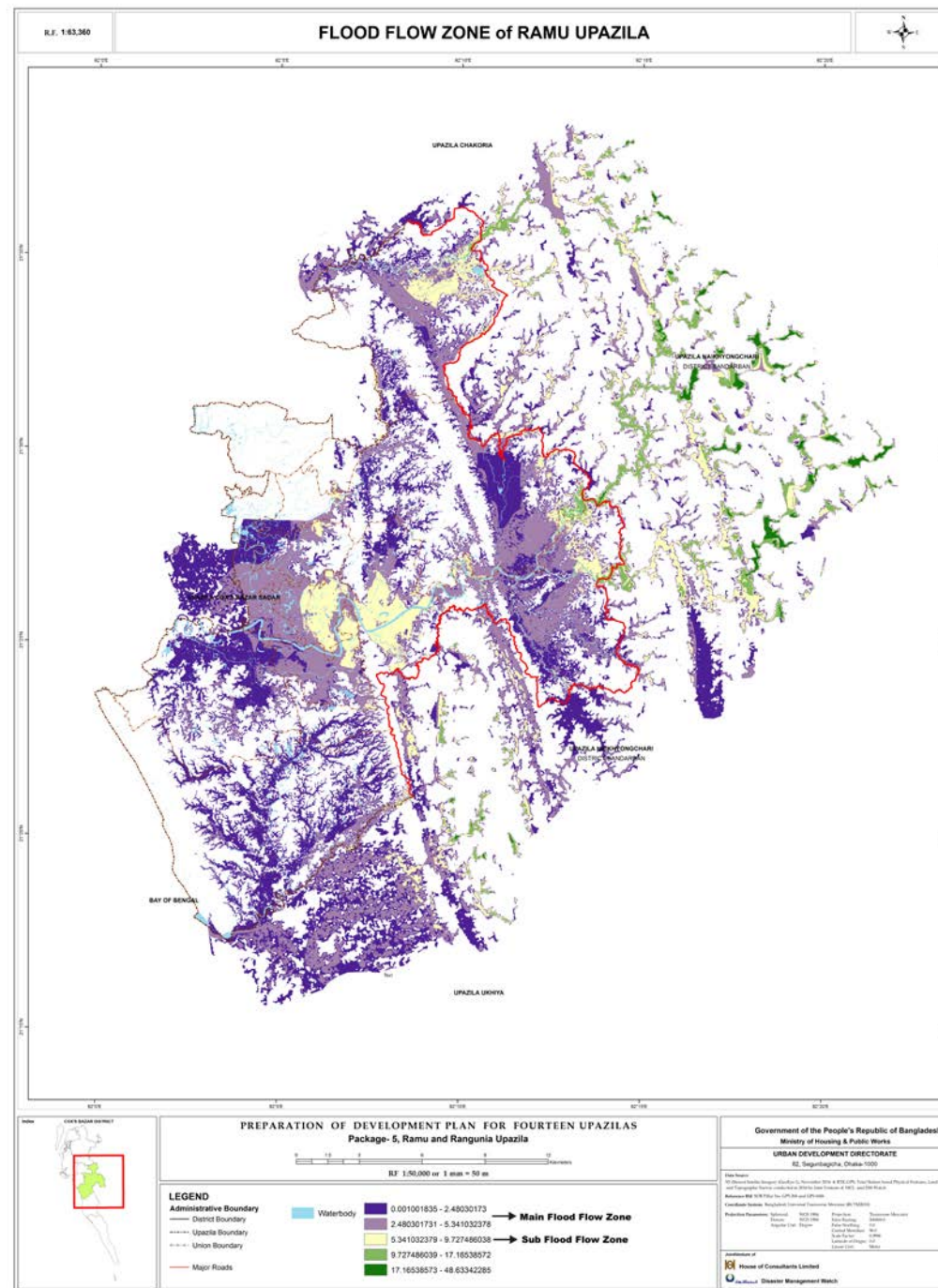


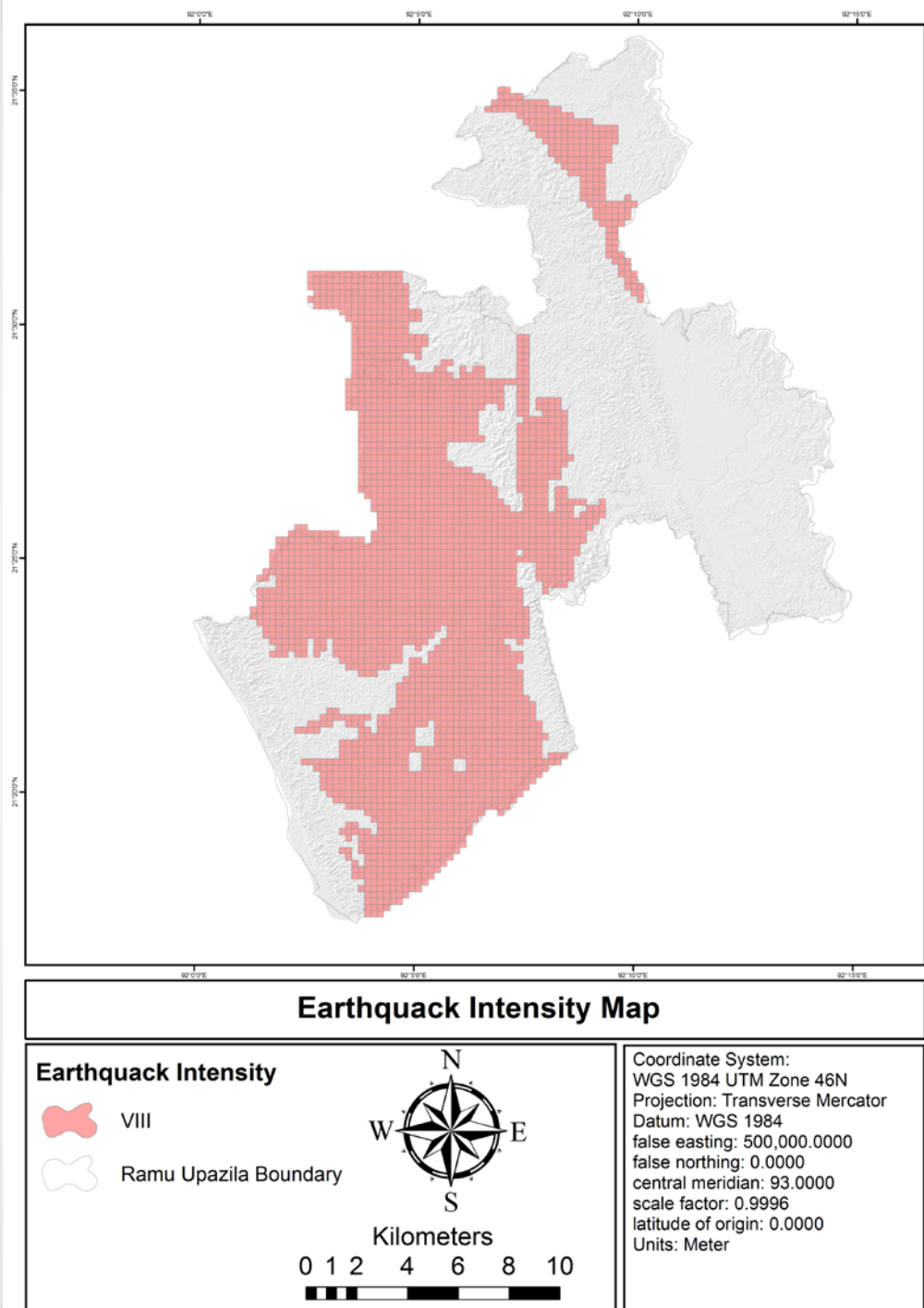


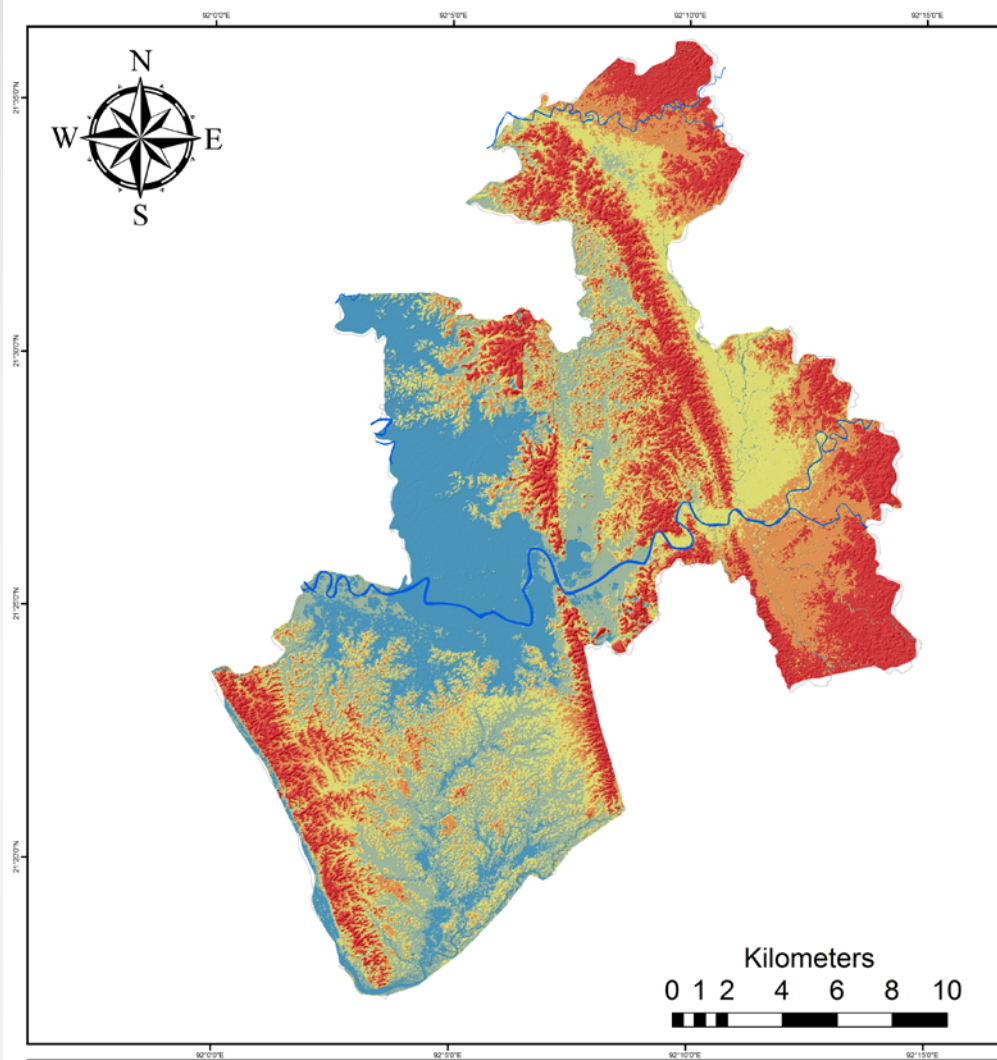

















Topographic map of Ramu

Elevation (m)

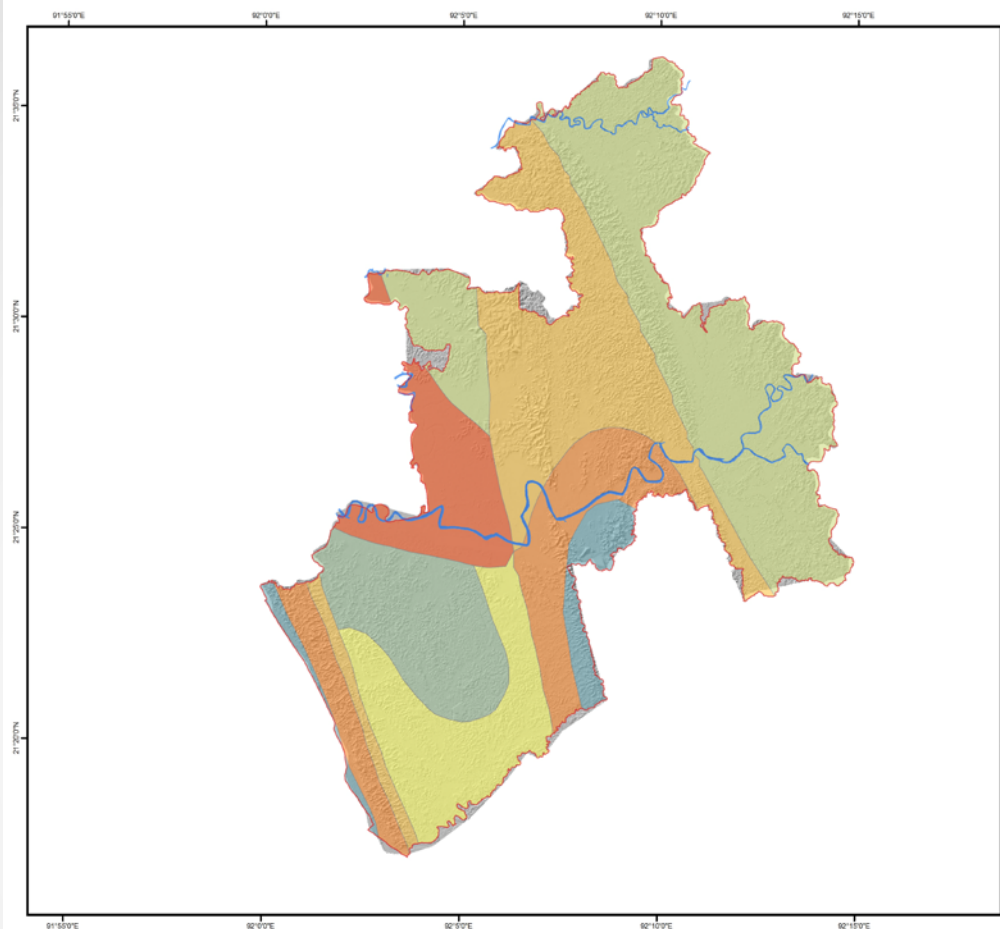
-  -2.00 - 6.33
-  6.34 - 12.5
-  12.6 - 17.2
-  17.3 - 24.8
-  24.9 - 90.0

 Major Waterbody

 Ramu Upazila Boundary






This map was produced from DEM (Digital Elevation Model). Elevations are calculated from MSL.

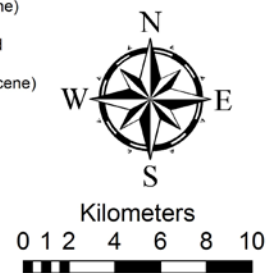
Coordinate System:
WGS 1984 UTM Zone 46N
Projection: Transverse Mercator
Datum: WGS 1984
false easting: 500,000.0000
false northing: 0.0000
central meridian: 93.0000
scale factor: 0.9996
latitude of origin: 0.0000
Units: Meter



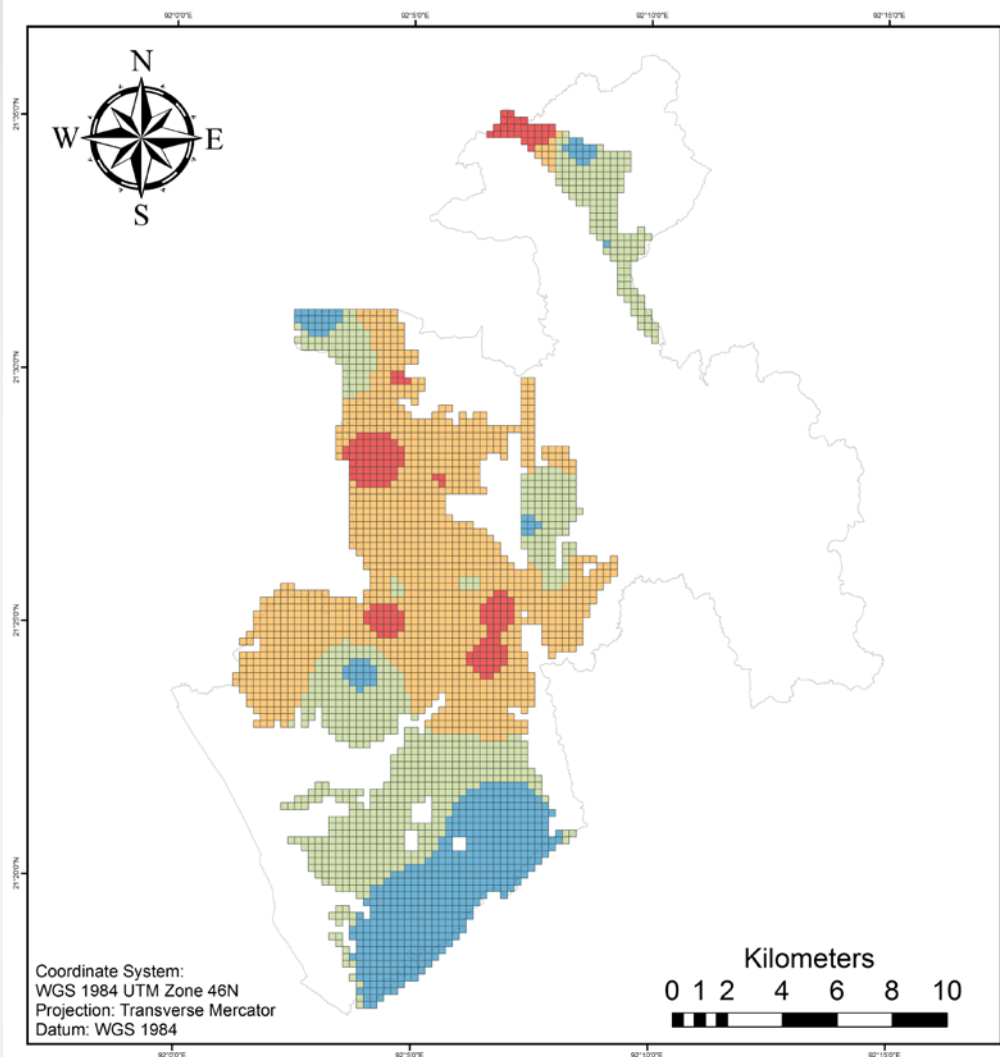
Surface Geology of Ramu

Lithological Units

-  Beach and dune sand
-  Boka Bil Formation (Neogene)
-  Dihing Formation (Pleistocene and Pliocene)
-  Dihing and Dupi Tila Formations undivided
-  Dupi Tila Formation (Pleistocene and Pliocene)
-  Girujan Clay (Pleistocene and Neogene)
-  Tipam Sandstone (Neogene)
-  Valley alluvium and colluvium
-  Waterbody
-  Ramu Upazila Boundary



Coordinate System:
 WGS 1984 UTM Zone 46N
 Projection: Transverse Mercator
 Datum: WGS 1984
 false easting: 500,000.0000
 false northing: 0.0000
 central meridian: 93.0000
 scale factor: 0.9996
 latitude of origin: 0.0000
 Units: Meter



Soil Type According to Avarage Seismic Velocity (upto30m)

Soil type	
	D3 - Medium Stiff to Stiff / Medium Dense to Dense Soil
	D4 - Medium Stiff / Medium Dense Soil
	D5 - Soft / Loose to Medium Stiff / Medium dense
	E - Very Soft to Soft / Very Loose to Loose Soil
	Ramu Upazila Boundary

A. HARD ROCK
Eastern United States only

B. ROCK
VERY DENSE SOIL AND SOFT ROCK
Horizontal shear strength $\geq 200 \text{ kPa}$ (4.5 tons/ft²)
100 kPa or ≥ 10 tons/ft²

C. STEEP SLOPE
SOFT SOIL with undrained shear strength $\geq 100 \text{ kPa}$ (2.1 tons/ft²)
7.5 - 100 kPa (1.6 - 21 tons/ft²)

D. SOFT SOIL
Profile with C_{u0} less than 100 kPa (2.1 tons/ft²) and clay content $\geq 40\%$ and undrained shear strength $\geq 100 \text{ kPa}$ (2.1 tons/ft²)
SOILS REQUIRING SITE SPECIFIC EVALUATIONS

E. SOILS REQUIRING GENERAL EVALUATION OR OUTLIER UNDER SPECIAL TESTING
a. Inorganic silty, sandy and highly sensitive clay, silty clay, organic silty clay, etc.
b. Flow and/or highly organic clay
c. Very high plasticity clay
d. Clay (fine or better) with plasticity index ≥ 10
e. Very thick soft medium stiff clay
(1000 ft (300 m) or thicker layer)

Minimum
1500
750
300
100
100

Maximum
1500
750
700
300
100

This map was produced by interpolating velocity of the soil layer in Different Bore hole. afterward it was classified by their velocity range but as most of the seismic velocity of rock is within 120-250m/s the classification was modified as follows.

Ground Class	V_{50}	Soil Type
C	360 - 760 m/sec	Very Dense/ Hard Soil and Soil rock
D1	300 - 360 m/sec	Stiff / Dense to very dense/Hard Soil
D2	250 - 300 m/sec	Stiff / Dense Soil
D3	220 - 250 m/sec	Medium Stiff to Stiff / Medium Dense to Dense Soil
D4	200 - 220 m/sec	Medium Stiff / Medium Dense Soil
D5	180 - 200 m/sec	Soft/ Loose to Medium Stiff / Medium Dense Soil
E	< 180 m/sec	Very Soft to Soft / Very Loose to Loose Soil

Urban Area Plan

Urban Area Plan is concerned with the planned sustainable development of the urban area of a town or settlement and the protection of its environs. In establishing the limits of the urban area, this Plan is complacent of existing development, projects approved for development but not yet built, and of development in progress.

Nature of Urban Area Plan

Urban Area Plan (UAP) provides an interim mid-term strategy for 10 years and covers for the development of urban areas within the project area.

The coverage of the Urban Area Plan is the existing urban areas and their immediate surroundings with the purpose of providing development guidance in these areas where most of the urban development activities are expected to take place over the next 10 years.

It contains more details about specific programs and policies that require to be implemented over the medium term.

Generally, UAP contains an explanatory report, resource maps, interim management report, planning rules, urban area plan and a multi-sectoral investment program.

Objectives of Urban Area Plan

- To provide infrastructure for easy movement and comfortable living.
- To create spatial land use zoning for environmental sanctity and enhance property value.
- Development mechanism for improving and guiding urban development.

Contents of Urban Area Plan

42

- Existing Land Use Survey
- Survey of Development Activities
- Population Survey
- Traffic Survey
- Road Surveys
- Industrial Surveys
- Recreational and Open Space
- Water Supply Data
- Power Supply
- Telephone Service
- Growth of the Town
- Health Facilities
- Educational Facilities
- Shopping
- Municipal Budget
- Municipal Achievements
- Disposal Services
- Physical Feature Surveys

Rural Area Plan

Rural Area Plan enables planning policies in rural areas that are below the strategic level of Development Plan and are more local in nature. It also includes those rural areas which require economic, physical and social renewal and for areas likely to be subject to large scale development over the lifetime of the plan.

Nature of Rural Area Plan

Rural Area Plan enables planning policies in rural areas that are below the strategic level of Development Plan and are more local in nature. It also includes those rural areas which require economic, physical and social renewal and for areas likely to be subject to large scale development over the lifetime of the plan.

Objectives of Rural Area Plan

- Identification of existing rural area based on analysis of patterns and trends of development,
- Development mechanism for improving and guiding rural development.

Contents of Rural Area Plan

45

- Existing Land Use Survey
- Survey of Development Activities
- Population Survey
- Traffic Survey
- Road Surveys
- Industrial Surveys
- Agricultural
- Sources of Potable Water
- Power Supply
- Growth of the village
- Health Facilities
- Educational Facilities
- Hats/Bazars/Shopping
- Sanitation Facilities
- Graveyard/Cremation Facilities
- Physical Feature Surveys

Action Area Plan

Action Area Plan is not a statutory plan and it provides detail consideration of areas that are required consolidated planning in order to ensure a coordinated approach in development. Action Plan assists to clarify what resources are required to achieve the goal, formulate a timeline for when specific tasks need to be completed and delineate what resources are required.

Nature of Action Area Plan

Action Area Plan is not a statutory plan and it provides detail consideration of areas that are required consolidated planning in order to ensure a coordinated approach in development.

It is prepared on 5 years' interval. The preparation of Action Area Plan (AAP) will be formulated through participatory approach involving the local people.

Action Area Plan will provide prioritized projects consisting location of project, goal & objectives, activities, tasks, actors, resources, cost and assumptions/constraints.

The action plan consists of three parts:

- a summary of resources available,
- project selection and
- project evaluation.

Objectives of Action Area Plan

- Provide basic micro level infrastructure and services in the study area through systematic planning, under the framework of Structure Plan.
- Create congenial environment to promote economic activities.
- Create service centers to promote urban growth.

So, to evaluate these, which should be implemented during the first five years' life of the structure plan.



Thanks for kind attention.