CHAPTER ONE: INTRODUCTION

1.1 General

This Inception Report is being submitted as partial fulfillment of the requirement of Terms of Reference for the "Preparation of Development Plan for Fourteen *Upazilas"*. This report is prepared in compliance to an agreement signed between the clients, Urban Development Directorate (UDD) and a joint venture of the Consultants (Sheltech Consultants Pvt. Ltd. and Arc Bangladesh Ltd.) on January 05, 2015.

1.2 Background of the Project

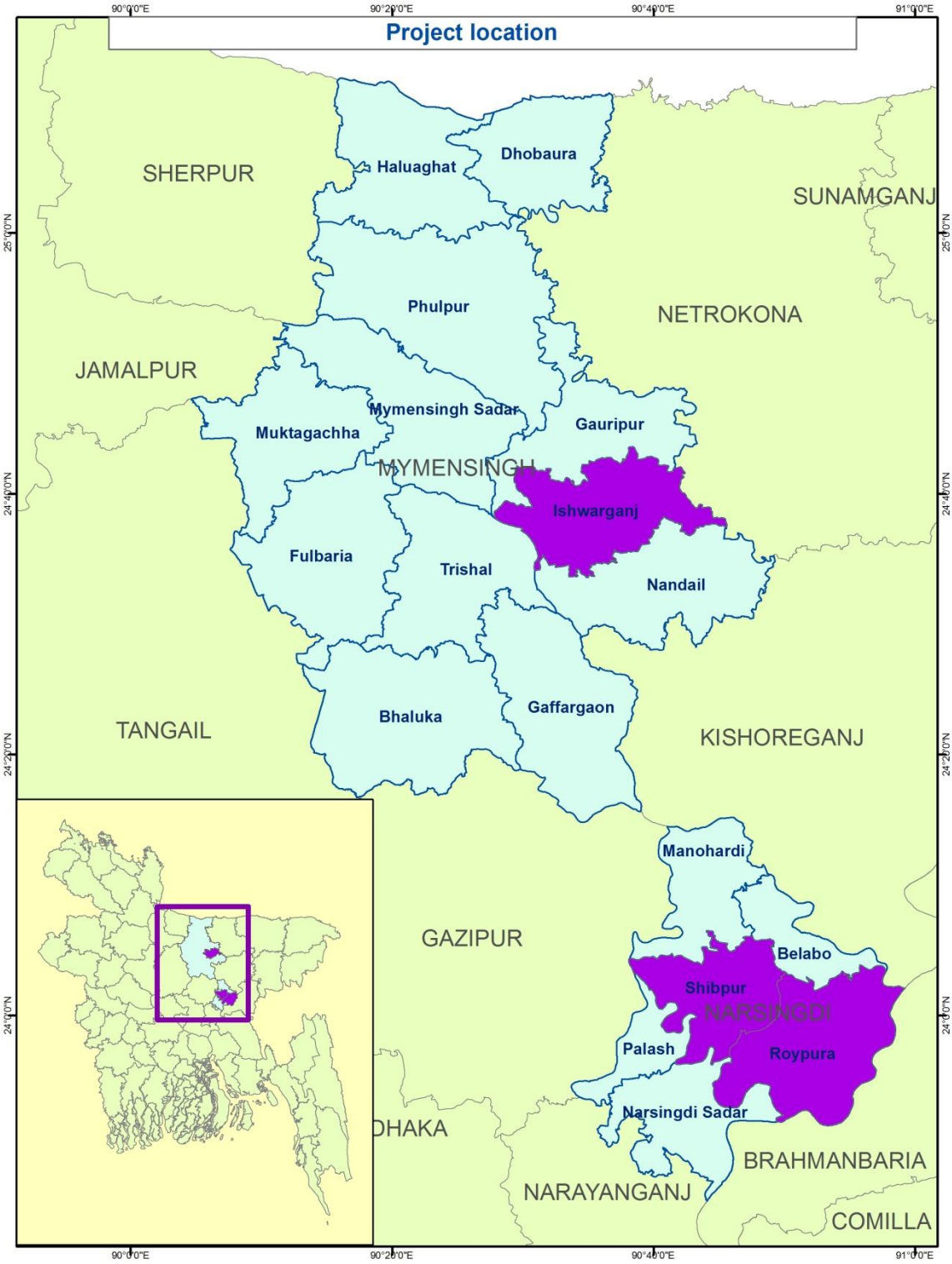
Bangladesh has been showing rapid growth of urban population since the partition of India in 1947, especially since the independence of Bangladesh in 1971. The average growth rate of urban population has been fluctuating in different census decades. Between 1961 and 1980, the growth rates marked roughly 8 percent. Between 1991 and 2001, the rate has been declined to 3.5 percent. At present (2011) about 28.40 percent of the total population of Bangladesh lived in urban areas. This in fact indicates that Bangladesh is a low urbanized country, even if compared with even the Asian Context (50% urban). In absolute terms however the country has a huge number of urban populations. In 1971, the urban population of Bangladesh was 5.5 million while in 2001 the size of urban population rose to about 30 million. This simple statistics represent the clear picture of urban population growth. With the increasing of urban population, cities' physical limits are expanding; many sub-urban and rural areas are becoming urban. With such expansion, urban built environment is increasing. But in context of Bangladesh, such expansions are not being taken place in a planned way. Haphazard and unplanned development are seen everywhere which cost the inhabitants to much in social and economic terms.

Due to lack of practicing effective urban and regional planning, these secondary towns have been failed to put in order especially the most valuable resource i.e., the land in view of the citizens' socio economic and cultural needs. The land is used most haphazardly. As such, the developments are taking place in unplanned and unregulated manner resulting in low living standard of the people living in the cities and towns. This situation depressingly influences the investment patterns in the secondary towns resulting not creating employment opportunities for the urban dwellers and generating funds for development and better maintenance of urban infrastructure such as roads, water supply, drainage, waste disposal and sanitation, electricity, etc. within their boundaries. Thus, the role of the secondary towns in the overall socio-economic development both at the local and the national levels are not much noteworthy. Further, it is to be agreed that the issues concerning urbanization and practicing urban planning at the secondary town level have not been duly addressed as far as the national policies and strategies are concerned.

In this regard a comprehensive development plan is required to address the required land use transformation which will not allow any unauthorized and unplanned-development, either in urban area or in rural area. Due to lack of such plan, it is generally found that most of the *upazilas* in Bangladesh have developed with least coordinated manner possessing very little development control. Measures for the adequate provision of infrastructure, service, utility and modern amenities for maintaining a minimum standard of life, considering environment and sustainability has to be taken. Moreover, in preparing such plan, development constraints and local development potentials are to be identified clearly, and plans should be formulated addressing' such development constraints and potentials of the area to make the plan practicable.

Considering this situation the project on "Preparation of Development Plan for Fourteen Upazilas" has been initiated with a view to prepare (or update existing Master Plans) for a period of next 20 years. The project aims at preparing several plans such as Sub-regional Plan, Structure Plan, Master Plan, Urban Area Plan, Rural Area Plan and Action Area Plan. This new concept of structure planning

gradually replaces old styled Master Plan concept. The Structure Plan provides a longer time guideline for the growth of the entire city, while the Action Plan is an immediately implementable short term plans for implementation in each ward/growth centres. The Action plans cover specific areas of a town where prioritized actions are needed. However, we still keeping the Master Plan concept in our city planning due to its greater familiarity among the Paurashava/*Upazila* level.



Map 1.1: Locational Map of Project Area

1.3 Understanding of the Objectives

Bangladesh is generally considered to be a poor country. The country is poor as the various regions of the country have not yet been developed equally. Some of the regions are lagging behind, while some others are going much ahead of the others. Dhaka is the most developed region in the country; while other upazilas are the poorest. However, in terms of resources this area is rich. Theses upazilas need proper utilization of its resources through planned manner. That is the vision for development, being one of the richest in terms of agro economic, can also be one of the richest in terms of regional development. Its land, resources, people and nature should be utilized rationally for its development in a sustainable manner. Thus, in the present context, upazila town and its surrounding areas to be developed in such a manner that it can provide better living condition for its people and those are coming from the outside. The development should be sustainable futuristic so that the future generation can be benefited from the efforts taken now.
Human settlements have been developed over a long period of time. Settlements that are developed according to a Development Plan based upon a future oriented planning can retain their appeal or effectiveness for a long time. The objectives of present Plan 'preparation' for upazilas (cities and rural area) of Bangladesh can be set out as following:

- Find out the development issues and development potentials of the *upazila* and making a 20-year development vision for the upazila to prepare a Development Plan in line with the vision for the development;
- Plan for the people of the upazila to develop and improve update provisions for better transport network, housing, infrastructures for roads, markets, bus terminals, sanitation, water supply, drainage, solid waste management, electricity, education, leisure and such other infrastructure facilities for meeting the social and community needs of the poor and the disadvantaged groups for a better quality of life;
- Prepare a multi-sector short and long term investment plan through participatory process for better living standards by identifying area based priority-Drainage Development plan, transportation and traffic management plan, other need specific plan as per requirement in accordance with the principle of sustainability;
- Provide control provisions for private sector development, clarity and security with regard to future development;
- Provide guide-line for development considering the opportunity and constrains of future development of *Upazila* Town;
- Prepare a 20-year Development Plan to be used as a tool to ensure and promote growth of the city in line with the guiding principles of the Development Plan and control any unplanned growth by any private and public organization

1.4 Scope of Services

The consultancy services are designed to provide multi-disciplinary activities including collection and collation of available data and information, review of policy and planning concepts, assessment of survey requirement, carrying out detailed survey covering landuse, topographic, socio-economic, traffic and environmental, institutional aspects, data management, stakeholder consultation and formulation of Sub-Regional Plan, Structure Plan, Urban Area Plan, Rural Area Plan and Action Area Plan for Shibpur, Raipura and Ishwarganj Upazila. All necessary works mentioned in the ToR would be done during the planning period based on the methodology of the work, technology available and detailing needed for phasing out plans.

- Determination of study area (approximately 810.90 sq. km) based on suitable physical boundary.

- Explanation of the plan (report) indicating population, density, livelihood and its future plan.
- Collection of socio-economic and demographic information and data both from primary and secondary sources in the study context and to forecast future population, requirement of different services, physical and social infrastructure facilities, employment generation,
- Identifying the exiting natural and man-made drains in the town and investigating the mechanisms of the drainage and local river system to assess the extent and frequency of flood damage and determine areas where flooding or poor drainage is most severe.
- Preparing a conceptual report on the various alternative solutions to the present storm water problems and selecting the most appropriate and economical alternatives.
- Preparing Development Plan of the storm water drainage & sewerage system (with treatment plant) for all areas in the town, which will include discharge calculations for the catchments areas, design of main and secondary drains/sewerage including their sizes, types and gradients and retention areas with preliminary cost estimates for the proposed drainage/sewerage system.
- Preparing a conceptual plan to show the phase-wise implementation schedule in an affordable and practical manner considering the technical, environmental, institutional, economic and social feasibility of the proposed works.
- Conducting on the existing drainage maintenance procedures and budgets, if any including solid waste collection and design and estimate costs for a planned maintenance system to ensure that the drains are kept free from blockages and physical damage.
- Recommending planning, institutional and legal mechanisms to ensure provision of adequate land for rights of way for storm water drainage, which will also determine Demarcation of encroachment areas.
- Assessing additional data requirements, critical additional data not currently available should be collected through reconnaissance and traffic surveys which should estimate present traffic volume and forecast the future traffic growth and identify travels patterns, areas of traffic conflicts and their underlying causes.
- Study the viability of different solutions and develop a practical short term traffic management scheme of implementation, including one way systems, restricted access for large vehicles, improved signal system traffic islands, roundabout, pedestrian crossings, deceleration lanes for turning traffic, suitable turning radius, parking policies and separation of pedestrians and rickshaws.
- Assessing the current land use with regard to transportation, bus and truck terminals, stations, railway stations etc. and recommend actions to optimize this land use.
- Preparing a Long Term traffic and Transportation Plan.
- Surveying and evaluating the urban land capability considering factors such as flood basin, topography, fertility etc.
- Development Plan Package shall indicate/outline possible frameworks/strategy for management and development control, institutional arrangement ensuring people participation etc. for effective implementation of the plan.
- Facilitating Authority and Union Parishads about the publicity of Development Plan, its preparation strategy, function and their role through making, leaflet, newspapers, cable line, FGD etc.
- Allocating zones for as high, middle, low density (including the disadvantaged group), mixed residential and blocks for residential apartment where it is necessary.

- Preparing guidelines for control/promote industries at different locations according to their nature such as heavy industrial, light industrial and service industries including waste disposal/ treatment plants .
- Emphasizing on an implementable disaster management plan
- Preparing guidelines for controlling/guiding location of commercial uses.
- Preparing and submit Development Plan and Report with required standards as specified in the ToR.

1.5 Scope of Work in the Inception Period

Planned development of settlement areas is a prerequisite for proper utilization of natural resources. Bangladesh being a densely populated area with limited land and natural resources needs to value conservation of resources and guided use of them for infrastructure development as technological and financial capability restricts the country to adopt expensive plans. On the other hand, dependence on foreign assistance limits the scope of development to a great extent. The scope of work under this inception report will cover all methodology of survey techniques of all aspects related to the preparation of development plan of Shibpur, Raipura and Ishwarganj Upazila. An assessment of the actual provision of inputs in relation to the expected outputs. Analysis and findings from reconnaissance survey including problems and possible solutions to the survey activities and prospects of development. This also include results of tea stall meeting, courtyard meeting and focus group discussion (FGD) in the project area. Review of all relevant reports, documents and other materials, which items are already acquired and those requiring official assistance for acquisition. An assessment of all additional data collected and survey works to be carried out for completion of the database. Development of methodology for each component of the structure plan. The above mention subjects are the scope of work in this inception report.

1.6 Description of the Project Area

1.6.1 Shibpur Upazila

The upazila occupies an area of 217.71 sq. km (BBS 2011) including 1.09 sq. km river area. It is located between $23^0$56' and $24^0$07' north latitudes and between $90^0$38' and $90^0$50' east longitudes. The upazila is bounded on the north by Monohardi upazila on the east by Shibpur and Belabo upazila on the south by Narsingdi Sadar upazila and on the west by Palash upazila and Kapasia and Kaliganj upazila of Gazipur zila.

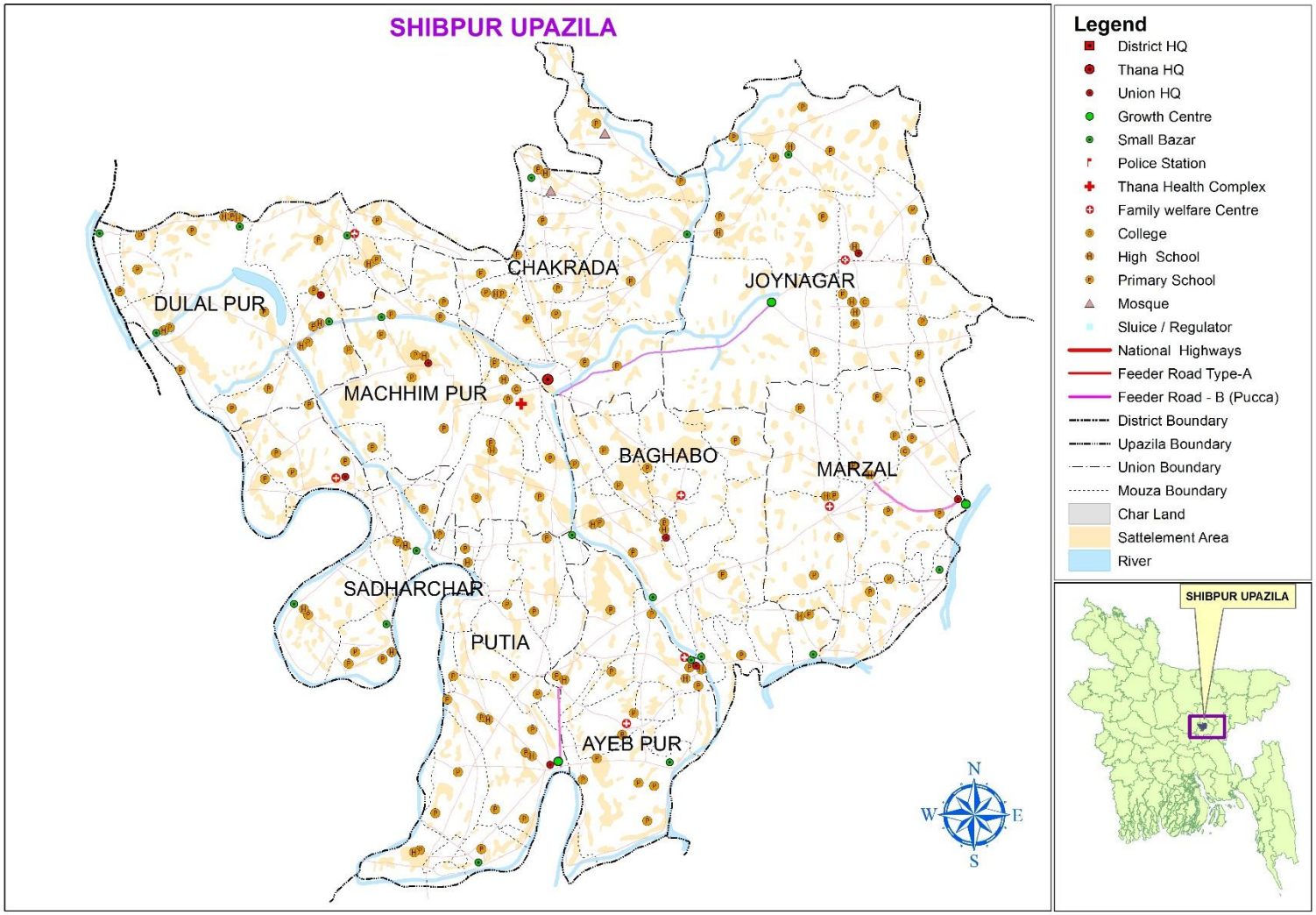
Shibpur came into existence on the 12th January 1918, with nine unions. Presently, added a 'C' class paurashava in this upazila. The upazila came under the influence of the rule of the Kharog dynasty from the middle of the 6th and 7th century A.D. There was five kings in Kharog dynasty namely king Kharogaddam, Maharaj Jatkharag, Maharaj Dev Kharag, Raja Rajvratra and Raja Balvratra. From this dynasty three Raja were Buddhist and after that two Raja were Shaiba Hindu. Nothing is definitely known about the origin of name of the upazila. It is generally believed that in the long past it was a centre for worship of shib. The upazila might have derived its name as Shibpur after the name of Shib a hero of Hindu Mythology. Shibpur has historical glory for long time which can be easily understood by the presence of rich heritage sites. There are many heritage sites stands in Shibpur. Among them Naimuri Pahar, Ashrafpur Gayevi Jame Mosque, Graveyard of Shahid Asad, Jamidar Mohoni Mohon Shaha's home, Lakhpur Jamindar home, Dhupirtech Bauddh Paddn Mandir, Jankhartech Purakriti, Tungirtech Pratattik Nidarshan and Kumardi Shaha Mansur's Masque and Dargah is mentionable.

Shibpur has a population of 303813. Males constitute 48.85% of the population, and females 51.15%. Shibpur has an average literacy rate of 55.7% (7+ years), and the national average of 51.77% literate. (Source: BBS 2011)**.**

The economy of the project area is agro based dominated by trading of various agro-products. Rice, potato, maize are major cash crop of the area. Potato is cultivated throughout the region and has become very popular as a cash crop. Though other vegetables is taking over potato cultivation, in areas like Shibpur upazila and around vegetables is the major crop. On the other hand paddy and wheat are major cereal crops. In recent times cultivation of maize is becoming popular which generally fetches good income for the cultivators. In the rural settlements of the upazila, brinjal, green Chile and Heap are a common picture. The area has potential for production of oil seed like mustard. The main sources of income of this area are Agriculture, Small Business, Wage, Livestock and Poultry, Fisheries, Cottage Industry and Service. Agriculture is the predominant source of income of Shibpur upazila. Most of the people depend on agriculture for their livelihood.

The city of Raipura is served by several highways. The main road transport is Dhaka-Sylhet highway. Mainly three types of roads such as pucca, HBB/ brick soling and kutcha roads connect different parts of the Upazilla. It has 1024.50 km of pucca road, 1350 km of HBB/Soling and 497 km of kutcha road. There are 15 pucca bridges and 1037 culverts and 5 Bailey bridge within the Upazilla. (Source: Banglapedia)

Map 1.2: Map of Shibpur Upazila



Source: JV of SCPL and ABL, 2015

N.B: Based on SOB, Map

1.6.2 Raipura Upazila

The upazila occupies an area of 312.76 sq. km (BBS 2011). It is located between $23^0 52'$ and $24^0 04'$ north latitudes and between $90^0 44'$ and $90^0 59'$ east longitudes. The upazila is bounded on the north by Belabo upazilas on the east by Nabinagar and Brahmanbaria on the south by Narsingdi sadar upazila, Nabinagar and Bancharampur upazilas and on the west by Shibpur and Narsingdi sadar upazila. Raipura distance from Dhaka-79 km and from Narsingdi district - 22 Km.

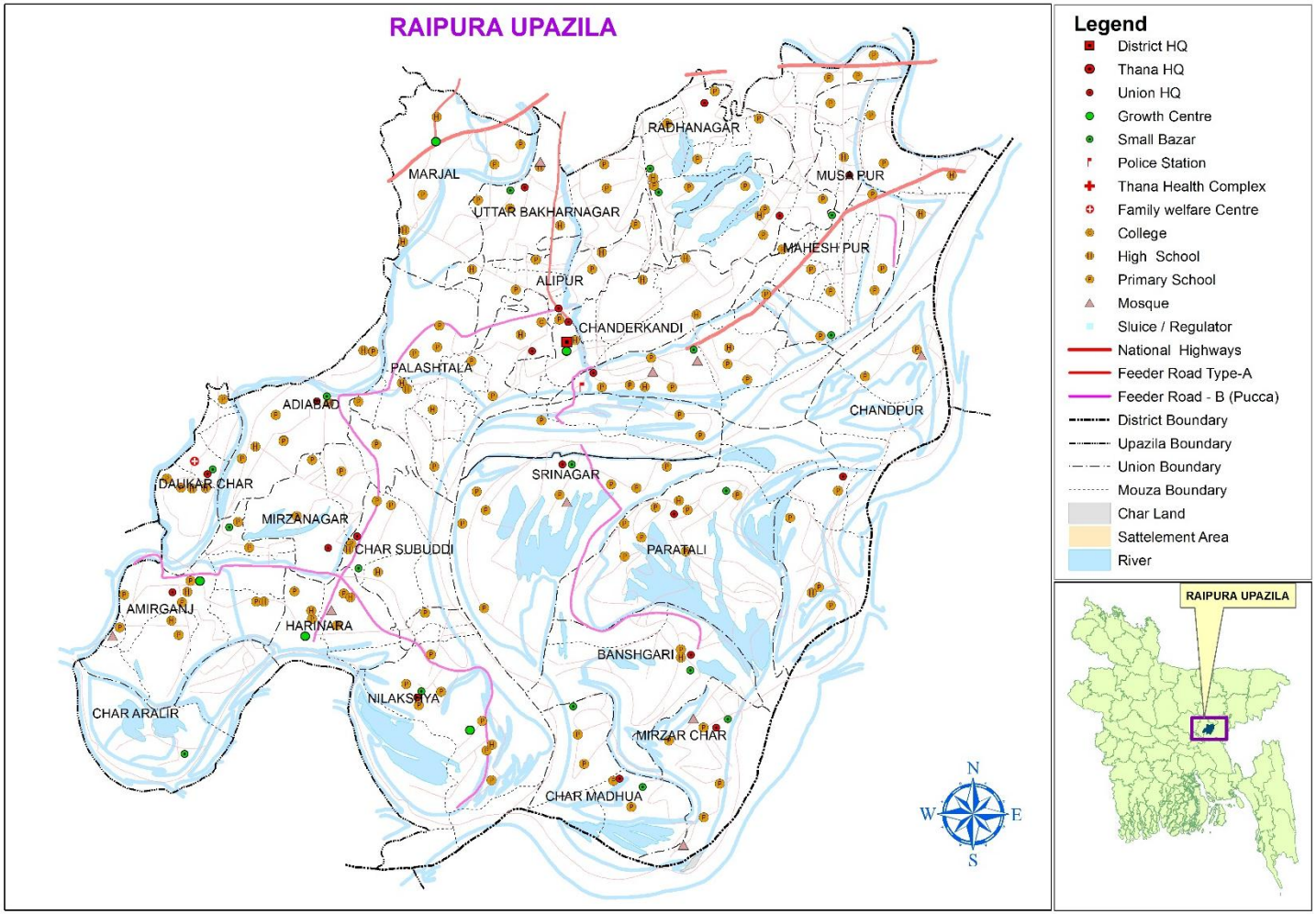
Raipura came into existence in the middle of the nineteenth century. Nothing is definitely known about the origin of the name of the upazila. There is a general belief that in the past this area was under an influential Zamindar of Roy family. The upazila might have been named as Raipura after the name of the Zamindar family. Raipura has historical glory for long time which can be easily understood by the presence of rich heritage sites. There are many heritage sites stands in Raipura upazila. One of the most important heritage site is Panthosala. It is situated near Meghna River which is main attraction of tourist. Another main historical site is Birsestro Shahid Flight Lieutenant Matiur Rahman Home and Kabi Samsur Rahman Home. There is worldwide Red Food in Radhanagar union under Raipura Upazila.

Raipura is the second largest upazila in Bangladesh. It has a population of 535796. Males constituted 48.34% of the population, and females 51.66%. Raipura had an average literacy rate of 40.5% (7+ years), against the national average of 51.77%. (Source: BBS 2011).

The economy of the project area is agro based dominated by trading of various agro-products. Rice, potato, maize are major cash crop of the area. Potato is cultivated throughout the region and has become very popular as a cash crop. Though other vegetables is taking over potato cultivation, in areas like Raipura upazila and around vegetables is the major crop. On the other hand paddy and wheat are major cereal crops. In recent times cultivation of maize is becoming popular which generally fetches good income for the cultivators. In the rural settlements of the city, groves of bamboo and betel nut trees are a common picture. The area has potential for production of bamboo materials

The city of Raipura is served by several highways. The main road transport is Dhaka-Sylhet highway and there is also rail transport with the capital city, Dhaka. Mainly three types of roads such as pucca, HBB/ brick soling and kutcha roads connect different parts of the Upazilla. It has 171.44 km of pucca road, semi-pucca road 123 km, mud road 230 km; waterway 28 nautical miles. But among them the Railway is dominated communication system in Raipura. Daily train service connecting Dhaka is by a pair of trains. Raipura is served by Dhaka-Sylhet section of meter gauge line. There are 24.81km railway line and six railway stations in Raipura upazila.

Map 1.3: Map of Raipura Upazila



Source: JV of SCPL and ABL, 2015
N.B: Based on SOB, Map

1.6.3 Ishwarganj Upazila

The upazila occupies an area of 280.43 sq. km (BBS 2011). It is located between 24º33' and 24º44' north latitudes and between 90º28' and 90º46' east longitudes. The upazila is bounded on the north by Gauripur upazila, on the east by Kendua upazila of Netrokona zila, on the south by Nandail upazila and on the west by Trishal and Mymensingh sadar upazilas. The distance of Ishwarganj is from Dhaka-142 km and from Mymensingh 22 Km.

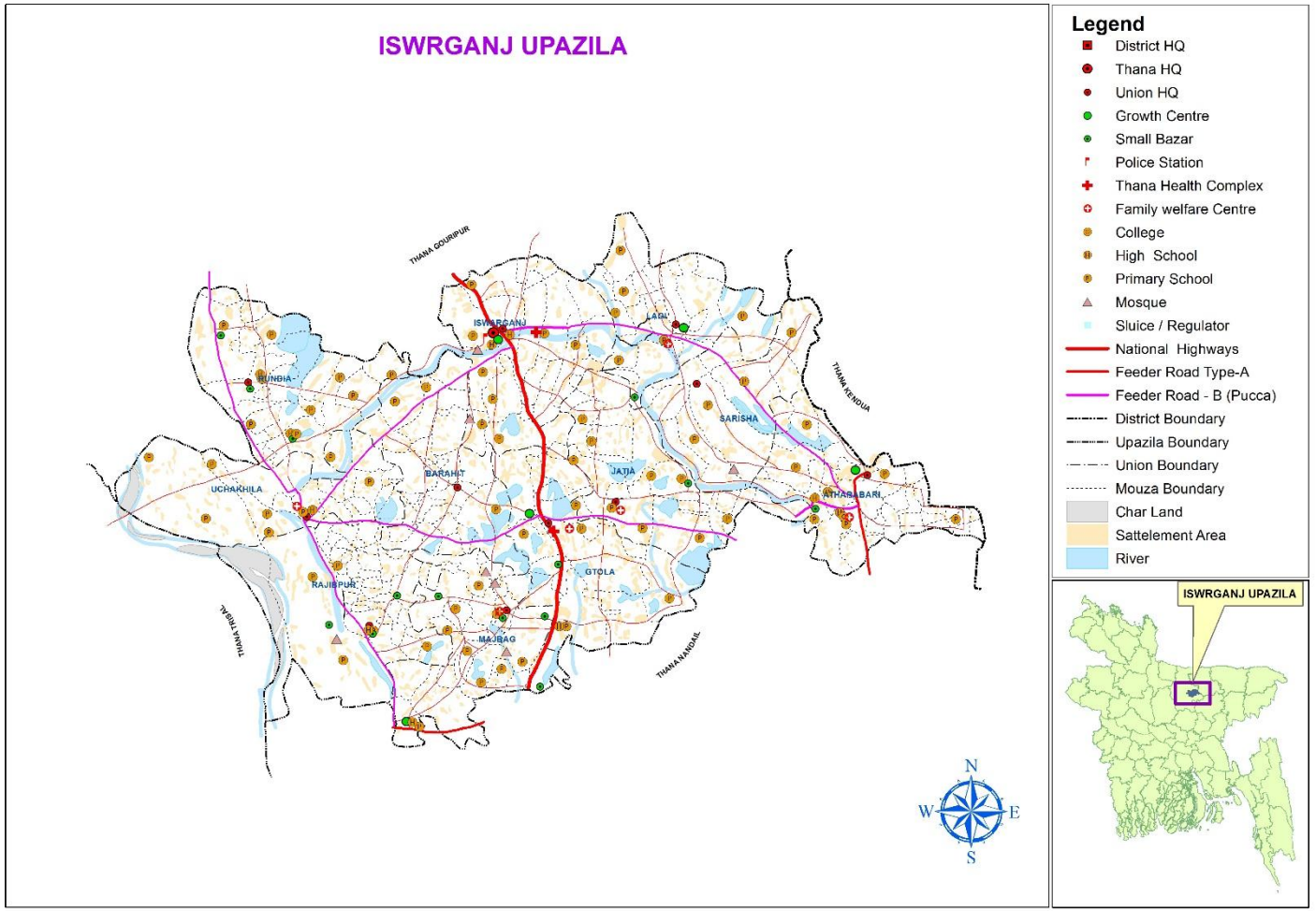
Ishwarganj upazila came into existence as a Thana in 1936 and was upgraded to upazila in 1983. Nothing is definitely known about the origin of the upazila name. It is said that in the long past, there lived an influential man named Ishwar patni at the present place of the upazila. A local bazar was named as Ishwarganj after his name. It is generally believed that the upazila might have derived its name after the name of the bazar where the upazila Head Quarters is located. Atharo Bari is the rich full area in Ishwarganj Upazila under Mymensingh district. From the British period this area is advance of business and communication. Historical glory of abandoned Jamindar Promoth Chandra Ray's home is situated in this upazila which is most heritage sites in this area. It is stands for two hundred and fifty years. Other historical sites in this upazila are Telowari Jame Mosque and Ishwarganj Kali Mandir.

Ishwarganj has a population of 376348. Males constitute 49.74% of the population, and females 50.26%. It has 376293 units of household. Ishwarganj has an average literacy rate of 41.0% (7+ years), and the national average of 51.77% literate. Table 3.1.C. provides ward/union based population and number of households of the project area as found in the 2011 census report. (Source: BBS 2011).

The economy of the project area is agro based dominated by trading of various agro-products. Rice, potato, maize are major cash crop of the area. Potato is cultivated throughout the region and has become very popular as a cash crop. Though other vegetables is taking over potato cultivation, in areas like Ishwarganj upazila and around vegetables is the major crop. On the other hand paddy and wheat are major cereal crops. In recent times cultivation of maize is becoming popular which generally fetches good income for the cultivators. In the rural settlements of the city, groves of bamboo and betel nut trees are a common picture. The area has potential for production of Boar firming.

The city of Ishwarganj is served by several highways. The main road transport is Dhaka-Mymensing highway. Mainly three types of roads such as pucca, HBB/ brick soling and kutcha roads connect different parts of the Upazilla. It has 61.02 km of pucca road, 13.03 km of kutcha road. The total union has 73.72 km of pucca road and 88.16 km of kutcha road. The total rural area has 14.94 km of pucca road and 132.69 km of kutcha road. The river way is about 12 km. Ishwarganj upazila is connected with the railway network. Daily train service connecting Dhaka to Mymensingh is by a pair of trains. Ishwarganj is served by Mymensingh section of meter gauge line. There are 18.97km railway line and three railway station in Ishwarganj upazila. There are three railstations, seventeen busstations and one helipad exist here. (Source: Banglapedia)

Map 1.4: Map of Ishwarganj Upazila



Source: JV of SCPL and ABL, 2015

N.B: Based on SOB, Map

1.7 Organization of the Report

Chapter One: Introduction: it is discuss about background of the project, goals and objective, scope of work in the Inception report, scope of services and activities, description of the project area. *Chapter Two:* Review of National Development Plans and Policies: it is discuss about Sustainable development goal, aspects of spatial consideration in the past, Sixth Five Year Plan. *Chapter Three:* Approach and Methodology: it is discuss about Planning approach, review/assessment of database and planning parameters, collection and review of materials and maps, preparation of base maps through satellite image processing by using photogrammetric method, surveys activities, sector studies and surveys, methodology of data processing and analysis, approaches to plan preparation, institutional capacity building or implementation and training assessments. *Chapter Four:* Output and Deliverables: it is discuss about data management structure, inventory, projection parameter, conversion factors, data precision, data precision of survey equipment, data precision of digitization of mauza maps, map layout, map legend, checklist for survey and studies, monitoring and supervision of project activities. *Chapter Five:* Progress of Work during Inception Period: it is discuss about office establishment, site selection for bench mark pillar, reconnaissance survey and revised work plan. *Chapter Six:* Conclusion: Discuss about conclusion.