Bangladesh: National Urban Policies and City Profiles for Dhaka and Khulna

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Cover photo: Aerial view of Dhaka city, Bangladesh

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<th>Full Form</th>
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<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>ADP</td>
<td>Annual Development Plan</td>
</tr>
<tr>
<td>ALPLUA</td>
<td>Agriculture Land Protection and Land Use Act 2016</td>
</tr>
<tr>
<td>BANBEIS</td>
<td>Bangladesh Bureau of Educational Information and Statistics</td>
</tr>
<tr>
<td>BBS</td>
<td>Bangladesh Bureau of Statistics</td>
</tr>
<tr>
<td>BNBC</td>
<td>Bangladesh National Building Code</td>
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<tr>
<td>BUF</td>
<td>Bangladesh Urban Forum</td>
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<tr>
<td>CRDP</td>
<td>City Region Development Project</td>
</tr>
<tr>
<td>CUS</td>
<td>Centre for Urban Studies</td>
</tr>
<tr>
<td>DADP</td>
<td>Detail Area Development Plan</td>
</tr>
<tr>
<td>DGHS</td>
<td>Directorate General of Health Services</td>
</tr>
<tr>
<td>DMDP</td>
<td>Dhaka Metropolitan Development Plan</td>
</tr>
<tr>
<td>DPEO</td>
<td>District/Divisional Primary Education Officer</td>
</tr>
<tr>
<td>DPHE</td>
<td>Department of Public Health Engineering</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
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<tr>
<td>FYP</td>
<td>Five Year Plan</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GoB</td>
<td>Government of Bangladesh</td>
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<tr>
<td>HFA</td>
<td>Health for All</td>
</tr>
<tr>
<td>HH</td>
<td>Households</td>
</tr>
<tr>
<td>KCC</td>
<td>Khulna City Corporation</td>
</tr>
<tr>
<td>KDA</td>
<td>Khulna Development Authority</td>
</tr>
<tr>
<td>KfW</td>
<td>Kreditanstalt für Wiederaufbau (German Development Bank)</td>
</tr>
<tr>
<td>KWASA</td>
<td>Water Supply &amp; Sewerage Authority</td>
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<tr>
<td>LDR</td>
<td>Land Development Rules</td>
</tr>
<tr>
<td>LGED</td>
<td>Local Government and Engineering Department</td>
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<tr>
<td>LIC</td>
<td>Low Income Country</td>
</tr>
<tr>
<td>LoU</td>
<td>Level of Urbanisation</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MoE</td>
<td>Ministry of Education</td>
</tr>
<tr>
<td>MoHFW</td>
<td>Ministry of Health and Family Welfare</td>
</tr>
<tr>
<td>MoLGRDC</td>
<td>Ministry of Local Government, Rural Development and Cooperatives</td>
</tr>
<tr>
<td>MoPME</td>
<td>Ministry of Primary and Mass Education</td>
</tr>
<tr>
<td>NEP</td>
<td>National Education Policy</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Government Organization</td>
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<tr>
<td>NHA</td>
<td>National Housing Authority</td>
</tr>
<tr>
<td>NSDS</td>
<td>National Sustainable Development Strategy</td>
</tr>
<tr>
<td>POGWCA</td>
<td>Playground, Open Spaces, Gardens, and Water Bodies Conservation Act 2000</td>
</tr>
<tr>
<td>PWD</td>
<td>Public Works Department</td>
</tr>
<tr>
<td>RAJUK</td>
<td>Rajdhani Unnayan Kartripakkha</td>
</tr>
<tr>
<td>RHD</td>
<td>Roads and Highways Department</td>
</tr>
<tr>
<td>RoU</td>
<td>Rate of Urbanisation</td>
</tr>
<tr>
<td>SHLC</td>
<td>Sustainable, Healthy and Learning Cities and Neighborhoods project</td>
</tr>
<tr>
<td>SIDA</td>
<td>Swedish International Development Cooperation Agency</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>UPE</td>
<td>Universal Primary Education</td>
</tr>
<tr>
<td>UPHC</td>
<td>Urban Primary Health Care</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>WDI</td>
<td>World Development Indicator</td>
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<td>WFP</td>
<td>World Food Programme</td>
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Definition of Key Terminologies

**Urban area**

Definitions and classification of urban areas in Bangladesh have been inconsistent since 1977. Urban area was first defined in the Pourashava Ordinance of 1977 and later in the Local Government (Municipality) Ordinance, 2009 all the three previous criteria were modified, and a new criterion on land use was introduced. The definition in the Population Census of 1981 was slightly different from then dominating definition set in the Pourashava Ordinance of 1977. This definition and classification were lasted up until 2001, and the Population Census of 2001 brought further modification of the definition and reclassification of the urban areas. From 1981 to 2001, urban areas included City Corporations, Municipalities, Cantonment area, Upazilla headquarters, industrial areas or growth centres, and urban agglomerations adjacent to large cities, i.e. City Corporation termed as Statistical Metropolitan Area (SMA). However, in 2011, Statistical Metropolitan Area, growth centre and some other urban areas were deserted, and the area only covered town, city, City Corporation, Paurashava/municipality area, upazilla headquarters and cantonment area (see Table 1). According to the Analytical report of census, 2011 (cited in BBS, 2015c, p.8), an urban area has at least 5000 population, majority of them are engaged in non-agricultural occupations, and where the population density is relatively high with amenities including metaled roads, improved communication, electricity, gas, water supply, sewerage and sanitation.

**Table 1: Classification of urban areas in the pop Census since 1981**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Town pop &lt;100000</td>
<td>Town pop &lt;100000</td>
<td>Town pop &lt;100000</td>
</tr>
<tr>
<td>City pop 100000 - 499999</td>
<td>City pop 100000 - 499999</td>
<td>City pop 100000 - 499999</td>
</tr>
<tr>
<td>Statistical Metropolitan Area (include Municipal, Corporations and adjacent areas with urban character)</td>
<td>Statistical Metropolitan Area pop 500000-4999999 (include City Corporations and adjacent areas with urban character)</td>
<td>City Corporation (includes city corporations)</td>
</tr>
<tr>
<td>Mega City pop 5 million and above</td>
<td>Mega City pop 5 million and above</td>
<td>Mega City pop 5 million and above</td>
</tr>
<tr>
<td>Municipality/Paurashava</td>
<td>Municipality/Paurashava</td>
<td>Municipality/Paurashava</td>
</tr>
<tr>
<td>Other Urban Area (thana headquarters and growth with urban character)</td>
<td>Other Urban Area (upazilla headquarters and growth centres with urban character)</td>
<td>Other Urban Area (upazilla headquarters which are not paurashava)</td>
</tr>
</tbody>
</table>


In this report the term city refers to City Corporation area and urban area means all the urban areas.
**Healthy city**

The primary aim of a healthy city is to achieve a health-supportive environment, good quality of life, basic sanitation and hygiene system and proper access to health care (WHO, 2018). Public space/open space is an essential component of the healthy city, which can play a role in creating health-supportive environments along with creating opportunities for social mixing and support, therefore, belongingness and improved the quality of life (UNESCO, 2016). Moreover, proper sanitation facilities and access to health care facilities are also a fundamental need for the development of healthy city. Based on this; this study conceptualises healthy city as an amalgamation of three principal component including public space, sanitation and hygiene and access to health care.

**Learning city**

UNESCO (2016) defines learning city as an element of sustainable development to promote lifelong learning which intends to endorse inclusive learning from essential to higher education along with reviving families and communities learning, also learning from and in the workplace through mobilising cities resources. The critical features of learning city are essential to ensure the broader benefit of the society including individual empowerment and the promotion of social cohesion, economic development and cultural prosperity and sustainable development (UNESCO, 2015). Moreover, to achieve these broader benefits there are six building block of learning city, which are: inclusive learning in the education system, revitalization of learning in families and communities, learning facilities for and in the workplace, prolonged use of modern learning technologies, quality enhancement in learning and promote a culture of learning throughout life.
Executive Summary

Bangladesh is one of the fastest urbanising countries in the world, with an average annual Rate of Urbanisation (RoU) of 5.34 since 1974. It is anticipated that by 2050 country’s share of urban population will reach to 56%, which was 35.8% in 2017. In the face of rapid urbanisation, country’s number of cities have increased by about 4.7 times in the last 40 years. Concentration of urban population is rising in the large cities disproportionately compared to the rest of the cities. In 2011, Dhaka itself comprised 44.26% of the total urban population where every year about 300000 to 400000 rural migrants arrive, who are mainly poor.

Rural to urban migration is always thought to be the primary factor contributed to the remarkable growth of the urban population in Bangladesh. In every 1000 people, the rural to urban migration rate was unbelievably high in 2011 as much as 222.9 compared to rural-rural migration of 52.6 and urban-urban migration of 44.4. The unequal distribution of land, high unemployment, inadequate education and health facilities, displacement by natural disasters in rural areas as push factors and income opportunities, better social amenities and improved livelihood in cities etc. as pull factors are drawing rural people to urban areas.

Rapid Urbanisation and swift industrialisation in Bangladesh have secured the annual GDP growth rate of 7.28% in 2017. The urbanisation process, however, have brought some of the most pressing urban sustainability challenges. As in 2011, 7.35 million people who account for 21% of the urban population remained under poverty. In 2014, nationally the number of slums increased dramatically to 13935 from 2991 in 1997. The concentration of poverty in different dimensions including employment, income, housing, and urban services is remarkable in the informal housing. Again, high density urban built-up areas are already putting pressure on extremely deficient urban facilities and services in the big cities. The traffic congestion in Dhaka cost $03 billion a year. About 40% solid wastes in Dhaka city and 52% in Khulna are left in the roadside or other places. Already these cities have lost their fundamental high-quality land including open spaces, green surfaces, and structures of water system and the process are ongoing. Unplanned infringement is not only having a detrimental effect on urban food security but also permanently damaging vital landscape elements and shrinking the possibilities of creating planned land uses in the future. In the face of the rapid urbanisation and poor city governance, the situation is likely to become worse in the coming days.

Bangladesh has made notable improvement in addressing inequality concerning school enrolment and learning outcomes. There was a dramatic rise of net enrolment rate in primary school from 90% in 2000 to 98% in 2015. The net enrolment rate at the secondary level has also increased from 45% in 2000 to around 54% in 2015. Still, urban exclusion, gender inequity and spatial imbalance of service distribution are challenging the effective and inclusive education service provision. The country has ranked on education expending 155 out of 161 countries in the world.

Urbanisation process in Bangladesh has witnessed an improved health status of the urban people, especially in achieving the MDG agendas. The country has also achieved notable recognition in improving general health status in compare to many of its neighbouring countries of the South Asia, in terms of reduced maternal mortality, reduced under-5
mortality, reduced infant mortality rate. Still, per capita expenditure on health sector is only about 5 USD against the standard of 34 USD. In 2011 the number of hospital beds per 1,000 people was only 0.6. Both the health sector and education delivery system are highly centralized system, which often leads towards inefficiency and inequality of service provision.

Towards sustainable urbanisation, the essential focus of the urban policies from 2011, in general term, remains on more magnificent regional development than before, polycentric decentralization, promoting the development of lower rank cities adjacent to the large urban areas and improved livelihoods of the rural people. Strategies focused on improved livelihood of the poor households through upgraded access to microfinance, job creation, better and quality education, health and nutrition services, target and coverage of social protection programs, and housing. Promoting a healthy living environment for urban dwellers through infrastructure and services at community level have been a key focus in recent national urban and development policies. Strategies after 2000 have put significant emphasis on protection and better utilisation of valuable land.

However, blueprint master planning approach, strategic planning approach and incremental planning approach all to some extent have failed to tackle the prevailing urban challenges and guide future development in the city and its periphery. Due to lack of resources, cities either fail to have any development plan regularly or when adopted major share of its proposals remain unimplemented. The poor coordination among the implementing authorities during or after the planning process that left many proposals unimplemented.

The MDGs informed specific national agenda of achieving universal primary education by 2015 (MDG 2) as well as ensuring gender equality in education sector (MDG 3). Informed by the MDGs, recent national educational goal, strategies, and policies (NSDS 2010-2021, the Seventh FYP, NEP 2010, NEP 2010) focus on ensuring inclusive education provision in terms of geography, gender, social background, and economic condition and emphasize that efficiency should be ensured in delivering education to disadvantaged communities. NEP (2000 and 2010) and the Sixth FYP introduce the idea of continuous learning. Such as, the fifth objective of NEP 2010 is “to foster creative and thinking faculties among the learners through a system of education that contains indigenous spirit and elements, and which will lead to a life-oriented development of knowledge of the learners”. In the Sixth FYP, sets goals for literacy and adult education “as a part of the effort to create eventually lifelong learning opportunities for all citizens”.

National development goals (MDGs, SDGs and Vision 2021) targets to promote the highest attainable level of health and sustained health and nutrition, improved longevity, reduced maternal mortality along with ensuring inclusive healthcare facilities. National Health Policies (2000 and 2011) in response, aim to ensure minimum and compulsory primary health service to all. Recent FYPs emphasise improved general health status and inclusive service provision irrespective of gender, ethnicity and income groups.

In line with the commitment of the constitution, health policies are sensitive towards the poor and the unprivileged group of people. Thereby, in Sixth FYP affordable health care service system was introduced under which semi-private health care service centres (private but receiving government fund) are bound to provide free treatment to at least 30% of people who cannot afford the health expenses. Policies further provide special attention towards the
hard to reach and geographically excluded populations, which includes about 2.5 million urban and rural people in Bangladesh and encourage the private sector to provide health care service to these group of people.

In the urban context of Bangladesh, neighbourhoods are being hardly considered as a planning territory; therefore, policies are not targeted at the neighbourhood level. National policies broadly guide, control, and inform the city level plans, which shapes health and education opportunities at neighbourhoods. Still standards and regulations for health and education provision remain extremely deficient. There are acute shortages of health and education related data at city and neighbourhood level, which create hurdles in measuring and evaluating city specific health performance and neighbourhood level necessities.

Khulna, located in Southern Bangladesh, near to the South-western coastal belt and the biggest mangrove forest in the world, is the regional (locally known as divisional) headquarter. Its location near to the vulnerable cyclone zone makes it a host for a rural migrant from the rural areas of this region. Khulna’s colonial origin and function as a central town ensured that it had a plan to guide its growth and development since 1961. However, in effect, the plans were implemented to a limited extent, and the city mainly followed a natural yet slow transformation until recent time. As the country’s first industrial city, its heyday was achieved in the late 1950s but was short lived. Despite efforts to make this city ship braking and jute based industrial city, in the midst of lack of infrastructure and financial support from the government and the face of changing market, the jute industries could not flourish. This drive for industrialization led to an influx of migration of worker to Khulna city who soon found them to be unemployed and looking for an alternative livelihood. Since the collapse of the industries planned development had been limited, and the city is now characterised by haphazard development, poor quality housing and lack of necessary urban infrastructure and services. Like any other service provisioning, health and education in the city face the challenge of limited infrastructure in comparison to the vast population. More recently, traffic congestion arising from lack of roads, public transport and uncontrolled urban expansion is exerting pressure on the city’s-built environment and resulting in unprecedented noise pollution. Within the context of haphazard growth and the scarcity of resources, the city authorities are struggling to cope with the challenges continually posed by the urban growth and limited economic transformation. Over the past three decades, its most intractable problem has been to provide long-term solutions to its inner-city problems through a variety of national policy initiatives and local partnerships. The planners moved away from the sustainability agenda and community focused development and emphasised on rebuilding the economic base, improving the city infrastructures such as roads and drains, and boosting the city's confidence through image reconstruction. However, plan-led development is very slow because of lack of investment, funding and institutional support. Overall, the growth of the city is driven by spontaneous transformation influenced by in-migration of people in the city through both push (mainly natural disaster) and full factor (employment opportunity).

Dhaka has a long urban history, which dates back to the 7th century. The city has always been a hub of growth and managed to attract migrants. The growth of the population gradually created pressure on the provisioning of urban services in the city. Demand based spontaneous growth has been the main transformer of this rapidly urbanizing city. Despite continuous effort from 42 city management authorities, the city is faced with the acute housing crisis, traffic congestion, unplanned use of space, pollution and shortage of urban
services. Although committed to accommodating growth, policy makers of the city have never been successful in doing so. Despite at least four plans at the city level, planners failed to control the development. This report concludes that decentralisation of activities rather than pro-growth planning is linked to the future success and development.

In terms of growth, Dhaka is experiencing unprecedented rate of urbanisation and growth whereas Khulna has much lower growth rate. Both the cities are finding this difficult to provide urban services and quality-built environment to their citizens. Dhaka’s challenge is linked to its inability to meet the demands of its growing population. However, Khulna is struggling because of limited investment and resources. Both the cities have local level urban plans in place, but Dhaka has a more forward-looking plan that includes sustainability agendas in comparison to Khulna. There are policy implementation challenges for both the city, which are mainly because of uncoordinated development projects and a lack of institutional and funding strength of the local planning and City Corporations in the cities.
By the mid-century, 66% of the world population will live in urban areas. Compared to Northern America (LoU 82%), Latin America and the Caribbean (LoU 80%) and Europe (LoU 73%), Asia remains mostly rural (LoU 48%). Yet, with the highest Rate of Urbanisation (RoU) of 1.5 among the other regions, it is projected that more than half of the world urban population (53%) will be concentrated in Asia by 2050. Furthermore, like Africa, the fastest growing urban areas, the medium sized cities and cities with 500000 to 1 million people are located in the Asia (UN, 2014, p1).

As per the data of 2016, the low-income countries and the lower-middle income countries are experiencing faster urbanisation with RoU of 3.9 and RoU of 2.7 respectively than the upper middle income (RoU 2.1) and high-income countries (RoU 0.9). Following this trend in the coming decades, in thirty years’ time, the proportion of the population living in urban areas in the lower-middle-income countries is expected to reach, on average, 57, which was 39 in 2016 (UN, 2014, p1).

The process of urbanization usually has been contributed to important economic and social transformations and central drivers of development. In general, however, cities in the low-income and the lower-middle-income countries are transforming through the rapid and unplanned urban growth, where there is high prevalence of inequality, the demand for necessary infrastructure remain unmet or policies and their implementation are failing to ensure that the benefits of city life are equitably shared. Within this reality, these cities will face increasing concentration of sustainable development challenges including urban inequality, rapid sprawl, pollution, and environmental degradation along with unsustainable production and consumption patterns. Urbanisation in these economies requires promoting equity, welfare and shared prosperity so as to attain urban sustainability.

Bangladesh - a lower middle-income country in the South Asia - had 57.09 million urban populations in 2016. Although its urbanization rate of 1.37 is lower than the rate of the lower-middle income countries, the country is experiencing fast pace of urbanization. It is anticipated that by 2050 country’s share of urban population will reach to 56%.

Rapid Urbanisation and swift industrialisation have secured the annual GDP growth rate of 7.28% in 2017 compared to the annual GDP rise of 5.3% in the lower-middle income countries. The urbanisation process, however, have brought some of the most pressing urban challenges towards sustainability including increasing numbers of slums and squatters, inadequate essential services such as health and education facilities, lack of affordable housing and facilities like water, sanitation etc. (Planning Commission, 2012, p.74; GoB, 2017, p.7953). National urban development goals and legislations are aiming at tackling the correlated forces and these pressing challenges, and there are notable achievements in the health sector and poverty reduction. Yet, the World Bank Poverty and Equity data (2014 revised in 2018) shows the poverty headcount ratio (International Poverty Line has a value of US$1.90 PPP) in Bangladesh is dropping at the average annual rate of 0.8% since 2010, which is lower than the annual drop rate of 1.236% (since 1990) in the Lower Middle-Income Countries. Even in 2015 almost half of (46.3%) of urban population failed to use basic sanitation services.
Within this context, SHLC project realises that a deeper understanding of the forces and features of urbanisation and associated sustainable development challenges, and an investigation on how urban policies and practices are aiming at creating sustainable future of our cities can better inform the future policies and its implementations for urban sustainability. Through four research task packages, the project aims to look at the challenges of urbanization and large-scale rural-to-urban migration in seven countries in Africa and Asia including Bangladesh through comparative studies of urbanisation and the formation and differentiation of 140 neighbourhoods in 14 case study cities. Dhaka and Khulna were strategically selected as case study cities to represent the contemporary urbanisation and sustainability challenges in Bangladesh where Dhaka is one of the most unplanned mega cities in the world and Khulna is a former industrial city that failed to host urbanisation during the last decade and now is a growing metropolis.

This report on the Research Task Package one aims to examine

- the main causes of urbanisation and the main trends and features of urbanization in Bangladesh as well as in Khulna and Dhaka
- the influence of different development policies on the case study cities
- the extent to which sustainability debates have affected planning practice and neighbourhood formation in Khulna and Dhaka
- how healthy living and continuous learning have been considered in development policies in Bangladesh
- the extent to which urbanisation has been a driving force for sustainable economic and social development in Bangladesh

The review of policies and documents, use of secondary data and key informant interviews these three data collection tools have informed this report. National and city level policies on urban development and planning, sector specific policies on health and education, largely over the last 20 years, relevant government reports including reports on projects and evaluation reports, scholarly journal papers are reviewed systematically. Secondary data was mined from reports, and open access national and international database to portray the picture of urbanisation and development issues. However, there were lack of recent open access national and city level data and the neighbourhood scale data on built environment factors as well as health and education were absent. Even some of the city level data on economic performance, density, labour market and trend of migration were unavailable. This research finds that there remains a need for up-to-date and publicly accessible data at a finer scale for making evidence-based decisions towards making sustainable healthy, and learning cities and neighbourhoods in Bangladesh.

This report is organized into three parts where Part One draws on the critical sustainability challenges associated to urbanisation and migration in Bangladesh and explores the scope of national policies and strategies concerning sustainable cities and neighbourhoods. Part Two and Part Three provides city profile of Khulna and Dhaka around the five key questions listed above.
1 National Policy Framework

1.1 Urbanisation and migration in Bangladesh

The pace of urbanisation in Bangladesh is lower than the rate of Asia (World Bank, 2018) and lower-middle income countries (UN, 2014, p.1). Still with the RoU of 1.37, Bangladesh is urbanising rapidly. The very rapid and uneven urbanisation and high densities have placed Bangladesh to stand out from the other South Asian countries and Low-Income Countries (LIC). This section provides an overview of the critical features and forces of urbanisation and migration in Bangladesh.

1.1.1 High population growth

Bangladesh is a densely populated country with the enormous size of the population. With an annual growth rate of 1.37% (BBS, 2017a, p. 47; 2017b, p. XXV), the population of Bangladesh became 158.9 million in 2017 (BBS, 2017d, p.vi). According to the UN estimates, however, even with the reduced annual growth rate of 1.04%, the current population of Bangladesh is 166,368,149 in 2018 (Worldometers, 2018a), which is likely to become at least 169 million in 2021 (assuming low TFR 1.6, see Table 1) (UNFPA, 2014 cited in BBS, 2015e, p.11). Already the density of the country is 1278 population per sq. Km (Populationof.net, 2018) that has placed Bangladesh as the densest countries in Southern Asia in 2018 (Worldometers, 2018b) and well above the average of low-income countries in the world. If the current growth rate continues, the country is likely to have an exceptionally higher urban population density in the future as counties problematic hydrology constraints expansion of urban areas (LGED, 2011, p.9). Referring the UN world population prospects 2017, Worldometers (2018b) has projected the density of Bangladesh is likely to become 1369 people/Km2 in 2025, which will rise to 1472 people/Km2 in 2035 and in 2050 it will be 1551 people/Km2.

Table 2: Population Projections of Bangladesh, 2021-2061

<table>
<thead>
<tr>
<th>Source</th>
<th>Year wise Population in Million</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td>H</td>
</tr>
<tr>
<td>UNFPA 2014a</td>
<td>174</td>
</tr>
<tr>
<td>EL-Sahany et al.2014b</td>
<td>174.8</td>
</tr>
<tr>
<td>Islam 2000c</td>
<td>165</td>
</tr>
<tr>
<td></td>
<td>256</td>
</tr>
</tbody>
</table>

TFR= Total Fertility Rate

a H= assuming high TFR (2.3) L= assuming low TFR (1.6)
b H= assuming low TFR (2.0) L= assuming average TFR (1.7)
c H= assuming high TFR (2.37) L= assuming low TFR (1.93)

Source: BBS, 2015e
1.1.2 **Rapid urbanisation**

Bangladesh is one of the fastest urbanising countries in the world, with an average annual Rate of Urbanisation (RoU) of 5.34 compared to the national growth rate of 1.99 since 1974 
5c, p.35; 2015a, p.85). Although there is a decreasing trend of RoU during the last few decades, still the Level of Urbanisation (LoU) is rising in an alarming rate. The LoU was only 8.78 in 1974 
(8.2 according to Planning Commission, 2013, p.33) that confronted a sharp rise to 23.30 in 2011(Planning Commission, 2013, p.89; BBS, 2014, p.13; see Figure 1). In another estimate, though, without the reclassification of urban area1 that had profound impact on the drop of RoU to 1.37 % (BBS, 2015c, p.36), the LoU was between 25 to 28 in 2011 (considering SMA concept of 2001) (BBS, 2014, p.9; UN, 2014 in BBS, 2015b, p.1; Planning Commission, 2015, p.459) and 35.8 in 2017 (data.worldbank.org, 2018). Following the growing trend, it is anticipated that the LoU in Bangladesh will be 38 by the year 2021 (Planning Commission, 2010, p.38), 50 by 2025 (BUF, 2012, p.26) and 56 by 2050 (UN, 2014 in BBS, 2015b, p.1). Shortly, the urban areas are likely to occupy more than 50% of the total population of the country.

![Figure 1: Urbanisation trend in Bangladesh, 1891-2011](source: SHLC Bangladesh, 2018 after BBS, 2014)

As a result of urbanisation, 21 new cities emerged in 2011 including the emergence of 5 higher rank cities with the population between 500000 – 4999999 (BBS, 2014, p.26-27). The rise of towns with 25,000- 1,00,000 population was about 300% in 2011, which accounts for the growth of medium type towns (BanDuDeltAS, 2015, p.22). The number of small towns declined only because other growth centres were eliminated from the new definition of urban areas in 2011. Overall, the number of cities have increased by about 4.7 times in the last 40 years.

---

1 The desertion of the Statistical Metropolitan Areas (SMAs), growth centres and some urban areas from the prevalent definition of urban areas which lasted between 1981 and 2001 and policy implications on the increase of rural wage and non-farm employment etc., had profound impact on the drop of RoU to 1.37 % (BBS 2015c).
1.1.3 Uneven urbanisation

The large cities where most of the economic investment and infrastructure are concentrated are drawing population disproportionately compared to the rest of the cities (Planning Commission, 2012, p.73; Planning Commission, 2015, p. 463-464; BanDuDeltAS, 2015, p. 7). In 2011, the top three large cities - Dhaka, Chittagong and Khulna - had 63.87% of the total urban population of the country (Planning Commission, 2015, p.463). Only Dhaka City Corporation Area, formerly Metro Dhaka, accounts for 80% of total garments factories of Bangladesh, is providing a significant share of employment (BBS, 2015a, p.93); subsequently, Dhaka itself had a total population of 18.9 million in 2011 comprising 44.26% of the total urban population (Planning Commission, 2015, p.462). The concentration of population in Dhaka is significant, which is well above the concentration in the cities with over 1 million of people in other countries in the South Asia and the Low-Income Countries (LIC) (LGED, 2011, p8). It is also the fastest growing city in the world where every year about 300000 to 400000 rural migrants arrive, who are mainly poor (World bank:2007ii cited in LGED, 2011, p.9).

1.1.4 Forces behind rapid and uneven urbanisation

The remarkable growth of the urban population in Bangladesh has driven by many factors including natural growth of urban population, rural to urban migration and reclassification of rural areas into urban areas (see Figure 1). Among these, migration is always thought to be the primary factor contributed to the rapid urbanisation in Bangladesh (Planning Commission, 2015, p.460). In every 1000 people, the rural to urban migration rate was unbelievably high in 2011 as much as 222.9 compared to rural-rural migration of 52.6 and urban-urban migration of 44.4. The rural to urban migration has contributed to more than 40% of changes in urban population in Bangladesh (Jahan, 2012, p.213 and BBS, 2015a, p.93). The unequal distribution of land in rural areas, high unemployment, inadequate education and health facilities, displacement by natural disasters in rural areas as push factors and income opportunities, better social amenities and improved livelihood in cities etc. (Hossain, 2001 in Lee and Hasan, 2015, p.10) as pull factors are drawing rural people to urban areas. Economic structural changes since the early 1990s have led to the rise of the industrial sector. New urban-based industries easily have been drawing an unlimited number of workers from rural areas where there exists the lower level of productivity and substantial under-employment (LGED, 2011, p.10).

1.2 Urban sustainability

Rapid Urbanisation and the higher concentration of urban migrants in the major cities are leading to sustainable development challenges including urban inequality, rapid sprawl, pollution, and environmental degradation along with unsustainable production and consumption patterns. These challenges have reduced the opportunities for achieving equity, welfare and shared prosperity. This section unpacks the details of these urban challenges.
1.2.1 Urbanisation of poverty

Urbanisation has undoubtedly contributed to the urban economic growth and the resulted implication on the decline of urban poverty is substantial (LGED, 2011, p.31; Sowgat & Roy, 2013, p.45, see Table 3). Still, the rate of urban poverty is high, and 7.35 million people who account for 21% of the urban population remains under poverty (LGED, 2011, p.31).

Table 3: Urban and national poverty headcount rates, upper poverty line

<table>
<thead>
<tr>
<th>Survey Year</th>
<th>Urban Rate (%)</th>
<th>Change on base (%)</th>
<th>National Rate (%)</th>
<th>Change on base (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>43</td>
<td>n/a</td>
<td>57</td>
<td>n/a</td>
</tr>
<tr>
<td>1995</td>
<td>38</td>
<td>(-12)</td>
<td>51</td>
<td>(-11)</td>
</tr>
<tr>
<td>2000</td>
<td>35</td>
<td>(-20)</td>
<td>49</td>
<td>(-4)</td>
</tr>
<tr>
<td>2005</td>
<td>28</td>
<td>(-20)</td>
<td>40</td>
<td>(-18)</td>
</tr>
<tr>
<td>2010</td>
<td>21</td>
<td>(-25)</td>
<td>32</td>
<td>(-20)</td>
</tr>
<tr>
<td>2016</td>
<td>19</td>
<td>(-2)</td>
<td>24</td>
<td>(-7)</td>
</tr>
</tbody>
</table>

Source: LGED, 2011, p.31 and BBS, 2017c, p.41

There are variations of the poverty situation exists between the urban centres and notably, among the major cities (LGED, 2011, p.31). The latest household income and expenditure survey in 2016 shows, the national average poverty gap in urban areas was 1.3% whereas the urban areas in Dhaka and Chittagong region (division) comprises 0.5% and 1.1% average poverty gap respectively. The lagging regions (division level) like Khulna (1.7%) and Barisal (2.6%) have higher average poverty gap in urban areas (BBS, 2017c, p.44). The poverty situation of the eastern regions (Dhaka, Chittagong and Sylhet divisions) is better than the westerns regions (Khulna, Barisal and Rajshahi divisions). In 2010, poverty headcount in urban areas of Chittagong was 26.2%; whereas in Dhaka it was 30.5% and in Khulna the headcount was 32.1% (Planning Commission, 2015, p.80).

Beside the aggregate picture of poverty, severe highly localized deprivations are also evident (BBS, 2005 and BBS, 2011 cited in LGED, 2011, p. 12). In 2014, nationally the number of slums increased dramatically to 13935 from 2991 in 1997 (BBS 2015g, p. 22). For some urban centres the rise was also notable (see Table 4). In the face of rising demand for land and housing, as a result of the rapid and high rate of urbanisation, the price for land and cost for shelter has become unaffordable to the general population. The costs for 1000 ft² housing unit ($50/ft²) is more than the average monthly income of the citizens ($45) in Khulna city which is far beyond the affordability of the poor who earn as low as US$1 a day. Even only a small share of the poor is engaged in formal services earn a regular individual income of over US$1.67 a day (Hasan, 2003 in Sowgat et al., 2017, p.6). In the absence of affordable housing, rural poor migrants when come to the urban areas are forced to move into established slums and squatters or construct new informal housing (Sowgat & Roy, 2013).
Table 4: Locational distribution of slums in Bangladesh, 1997-2014

<table>
<thead>
<tr>
<th>Locality</th>
<th>Slum Census 1997</th>
<th>Slum Census 2006</th>
<th>Slum Census 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>Dhaka</td>
<td>1579</td>
<td>52.79</td>
<td>4966</td>
</tr>
<tr>
<td>Chittagong</td>
<td>186</td>
<td>6.22</td>
<td>1814</td>
</tr>
<tr>
<td>Khulna</td>
<td>202</td>
<td>6.75</td>
<td>520</td>
</tr>
<tr>
<td>Barisal</td>
<td>NA</td>
<td>NA</td>
<td>351</td>
</tr>
<tr>
<td>Gazipur</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Narayangonj</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Rajshahi</td>
<td>84</td>
<td>2.81</td>
<td>641</td>
</tr>
<tr>
<td>Rangpur</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Sylhet</td>
<td>NA</td>
<td>NA</td>
<td>756</td>
</tr>
<tr>
<td>Comilla</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>9048</td>
</tr>
<tr>
<td>Municipality</td>
<td>940</td>
<td>31.43</td>
<td>NA</td>
</tr>
<tr>
<td>Other Urban Areas</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>National</td>
<td>2991</td>
<td>100</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: BBS, 2015g, p.22; CUS, 2006, p.35

The concentration of poverty in different dimensions including employment, income, housing, and urban services is remarkable in the informal housing. In Khulna, in 2013 only 5% of the poor people had access to jobs in the formal sector (Sowgat et al., 2017, p.150) and at national level, in 2014, 13.18% of the slum population was engaged in garments, 6.92% were either van/rickshaw puller, 6.71% were in business activities and 5.08% people were day labourer (BBS, 2015g, p.47). Due to meagre earnings from informal jobs, only 1.8% of poor households have an income more than US$58 per month, whereas 88% of poor households earn less than US$1.43 a day (Sowgat et al., 2017, p.150).

At the national level, the percentage of people living in semi-pucca dwellings increased from 53% (in 1997) to 63% (in 2014), which reveals the increase of income level of the poor people. Still, on an average, in the major cities, poor people generally live in areas with the density of about 205,415 people/Km2 (CUS, 2006 cited in Sowgat et al., 2017, p. 151). The density of the poor households in Narayangonj was as high as 20272 poor households/Km2.
in one section of the city (Noman et al., 2016, p. 17). Poor are exposed to the constant risk of eviction by the government and private landowners without prior notice and rehabilitation.

Poor people are lagging far behind than the rest as far as access to overall services and facilities are concerned. For Khulna, only 10% of the informal settlements have a proper drainage network, while 38% of them have an exceedingly poor drainage system. Likewise, there is no regular refuse collection system in place for 80% of the informal settlements (CUS, 2006 in Sowgat et al., 2017, p.7). Recent slum census of 2014 reveals that, only 26% slum households enjoy sanitary latrine facilities and about 7% households are using ‘hanging’ toilets in city corporation areas (BBS, 2015g, p.59-62).

### 1.2.2 Poor quality of urban living

Urbanisation is creating a new economic class in the major cities who indirectly enhance investment in real estate that shape the structure of cities and neighbourhoods such as the emergence the gated communities with high FAR and mixed-used high rise buildings. In line with public sectors inability to satisfy the enormous unmet market demand for housing, commerce, health and education services national urban policies are encouraging high-density mixed-use urban built-up area (GoB, 2017, p. 7958). The land ceiling by the private land developers as well as the public sector is another factor leading to high-density urban living as a significant amount of prime urban land is taken up by the government for housing its employees (Shafi 2012, p.17) and future development. Consequently, in Dhaka, 70% population was forced to live on just 20% of its land (Mahmud et al., 2001 in LGED, 2011).

High density urban built-up areas are already putting pressure on extremely deficient urban facilities and services leading to exceptionally deficient open spaces, severe traffic jam, reduced solid waste management, water logging during the rainy season, air pollution, inadequate public transport facilities all of which are limiting living a healthy life in big cities. As per 2017, Dhaka city roughly has only 5% of green and open space (Hara 2017, Financial Express). In 2014, the parks and playgrounds in Dhaka city comprised of only 14.5% of total land that is lower than the standard 25% (Chowdhury, 2014 in Islam et al. 2015, p.118). The traffic congestion in Dhaka cost $03 billion a year and 8 million working hours daily (Osman, 2011 in Khan & Hoque 2013, p.47). Only 40% solid wastes in Dhaka city, 52% in Khulna and 56% in Barishal (Planning Commission, 2015, p.472) are left in the roadside or other places causing environmental degradation, public health risk, blocked drains and waterlogging (Planning Commission, 2013, p.94). In Dhaka, 33% water bodies and 53% low lying lands were filled up during 1988-2008, and the canals are being blocked through landfilling and encroachment leading to water logging during monsoon and floods (Islam et al. 2010, p.38-40). In Chittagong city Suspended Particulate Matter (SPM) has been found 429µm3 that is over the standard (Sattar & Nazim, 2005 in Mia et al., 2015, p.36). In the face of the rapid urbanisation and poor city governance, the situation is likely to become worse in the coming days.

### 1.2.3 Loss of valuable lands and limited scope of planned development in future

The high rate of in-migration, mounting demand for land and unplanned infrastructure within the city and adjacent to its periphery all, to a great extent, are shrinking the possibilities of creating proper land use and essential services and amenities for all. Already
cities have lost its fundamental high-quality land including open spaces, green surfaces, and structures of water system putting the life of the citizens at risk of environmental hazards and the process are ongoing. In Khulna city, the open space/vacant land was 7.6% in 1961, which declined to 1.26% in 2012. The phenomenon can be supported by the increase of residential land use that increased to 49.11% from 28.7% during 1961-2012 (Ahmed, 2002; KDA, 2002 and KDA, 2012).

As government can provide only a small share of the serviced land in the major cities (Islam, 2001), in the face of the rising demand for affordable land, the productive agricultural lands and wetlands, act as flood protection zones, are being modified to residential and industrial plots for development. In Dhaka, a land developer (Metro Makers Ltd) filled up 2.23 km² of demarcated wetland (Morshed & Asami, 2015, p.10) and the Purbachal Housing project inside Dhaka has covered 25 km² of flood-flow and agricultural zones (Morshed & Asami 2015, p.9). The government even often fails to protect Khas land (govt. land) for future growth. This unplanned infringement is not only having a detrimental effect on urban food security but also permanently damaging vital landscape elements and shrinking the possibilities of creating planned land uses in the future.

1.3 Policy responses towards sustainable cities and neighbourhoods

Rapid urbanisation, weak city governance, and the macroeconomic background all exposed urban areas into multiple challenges. This section reveals the central national urban planning and development policies and strategies in Bangladesh relevant for the urbanisation and sustainability of cities and neighbourhoods.

1.3.1 Planning and development policy framework

The regulatory frameworks at the national level and local level govern urban planning and development in Bangladesh. The Constitution of the people’s republic of Bangladesh in the article 15 asserts ‘to improve the living conditions of Bangladesh through planned development’ (Planning Commission, 2018). To fulfil this obligation, the Planning Commission prepares different long-term, mid-term and short-term development and economic plans, e.g. Perspective Plan (PP) 2010-2021, Five Year Plans (FYPs), and Annual Development Programmes (ADPs). International development goals and agendas, most notably, the Millennium Development Goals (MDGs) 2000, Sustainable Development Goals (SDGs) 2016-2030, the Habitat Agenda 1996 and the New Urban Agendas 2016 all inform national development strategies including the National Strategy for Economic Growth, Poverty Reduction and Social Development (I-PRSP) 2002-2005 and Steps Towards Change: National Strategy for Accelerated Poverty Reduction II 2007-2011, the National Sustainable Development Strategy (NSDS) 2010-2021 and PP 2010-2021. These national development strategies offer impetus for these critical mid-term and short-term national development plans and economic plans. For instance, the PP 2010-2021 provides long-term strategies to eradicate poverty, inequality and human deprivation from society (GOB, 2012c), which is implemented through the Sixth FYP (2011-2015) and the Seventh FYP (2016-2020).

The UN MDGs and SDGs and New Urban Agendas are reflected in the national strategies and policies where there are emphasis on addressing issues like poverty and hunger,
challenges related to education, maternal and child health, the prevalence of diseases including HIV/AIDS, gender equality, protecting the environment, justice and aid, adequate housing, adequate access to basic needs such as health, educational facilities etc. (see Planning Commission, 2015b). National development goals in the National Water Management Plan (NWMP) 2004 include aspects like economic development, public health and safety, poverty alleviation, decent standard of living for the people, food security and protection of the natural environment. Additionally, Planning Commission formulated National Social Security Strategy in 2015 to ensure proper implementation of safety-net programs by Bangladesh Government (GOB, 2015a). All these development policies and strategies inform the city level physical plans.

Table 5: Planning policy framework - local level legislation and policies

<table>
<thead>
<tr>
<th>Metropolitan Master plan* (SMA includes City Corporation Area)</th>
<th>Municipality/ Paurashava and Upazilla Master Plan **</th>
<th>Purpose and Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Plan (20 Years) and Structure Plan (20 years) only for Khulna, for the remaining SMA Structure Plan (20 years)</td>
<td>Structure Plan (20 years)</td>
<td>Strategy for future development of metropolitan region Contains long-term spatial and sectoral directions and development policies</td>
</tr>
<tr>
<td>Master Plan (10 years)</td>
<td>Urban Area Plan (10 years)</td>
<td>Translates policies of structure plan into implementable development proposals Delineates existing land uses and specific location of roads and other infrastructure facilities and provides indicative locations of future land uses and specifications to assist the government for guiding and managing development control</td>
</tr>
<tr>
<td>Detailed Area Plan (5 years)</td>
<td>(Community) Ward Action Plan (5 years)</td>
<td>Provides more detailed planning proposals for local level planning those need immediate implementation</td>
</tr>
</tbody>
</table>

*Development authorities prepare these plans ** UDD prepares these plans

A handful of Acts, Rules, Regulations and Sector-specific policy documents are the fundamental basis for physical planning and development in the urban areas. Among these, the dominant statutes include the Town Improvement Act 1953 (Ahmed et al., 2012), the East Bangle Building Construction Act 1952 (Ahmed et al., 2012 and Choguill 2012) along with its six amendments until 2006 (GOB, 2015b), Bangladesh National Building Code (BNBC) 2006 and Imarat Nirman Bidhimala 2008. While the primary urban sector-specific policies involve National Urban Sector Policy (NUSP) 2011, National Housing Policy (NHP)
1993 and all its amendments until 2016, National Education Policy 2010, National Health Policy 2011, National Nutrition Policy 2015, National Food Policy 2006 as well as two Poverty Reduction Strategy Papers (PRSP) that is enacted between 2003 and 2010. On the other hand, both the Infrastructural Development (Flat) on Government Land Based on Joint-Partnership Rules 2008 and Private Housing Project Land Development Rule 2004 are in place to guide housing development through public-private partnership. However, some vital national level urban policy documents are yet to get approval such as the National Land-Use Policy, 2001, Urban and Regional Planning Act 2017 and National Urban Policy, 2014.

The key-planning document of urban area is the hierarchical multi-sectoral development plans (see Table 6). At present all the 11 city corporations, including the two city corporations of the mega city Dhaka, have development plans or policy documents. Among the 37 cities, 30 have their own plan and out of 267 towns, 234 have land-use Master Plan. Besides, out of 188 Upazilla Headquarters, 169 have development plans and preparation of Master Plan for 14 other upazilla is ongoing. Therefore, in total out of 504 urban areas (as per the population census, 2011), 59 urban areas do not have any form of the development plan in place yet.

1.3.2 Managing growth, and rapid and uneven urbanisation

The dominant regulatory framework intends to address the fundamental forces leading to the critical features of urbanisation in Bangladesh. Protection of public health, education provision and poverty reduction remain central to managing the high growth of population after the mid-1970s. Critical strategies connected to reducing the Total Fertility Rate (TFR) includes reduction of infant and maternal mortality rate through increased CPR training and birth attendance, decreasing child marriage, improving family planning services and increasing public awareness about family planning (Planning Commission, 2010; Planning Commission, 2015a, p.xlviii; Planning Commission, 2013 and BBS 2015f). Strategies aim to ensure girl's access to education (GoB, 2012c) and participation of women in employment (BBS, 2015f). Both the Sixth FYP (2011-2015) and Seventh FYP (2016-2020) propose for increased educational facilities for all especially for the urban poor (Hasan and Lee, 2015). These strategies were then incorporated into several population control policies beside development policies. It is fascinating that adoption of population control policies has significantly decreased the population growth after 1991; an average annual growth rate in the two decades until 1991 was 2.33 that dropped to 1.48 during the following decade.

Bangladesh is yet to endorse any sole national plan for urbanisation; however, the existing FYPs provide the fundamental regulatory framework to guide urbanisation in Bangladesh (Sowgat and Roy, 2013). In the second FYP (1980-1985), for the first time, focus toward urbanisation is observed where there was a growing concern regarding the concentration of urban growth in the major cities. In response, proposals include the development of infrastructure, better services and facilities for 1200 growth centres, which were formerly limited to 100 growth centres. This plan recommended up-gradation of 460 rural growth centres to urban growth centres. After 1990, however, in the hand of the new democratic government, there was a shift in the development focus on the urban growth centres. The idea was to put more focus on rural development and to address urban issues through rural development (Sowgat and Roy, 2013). National vision for balanced urbanisation is explicit in several more recent national level policy documents including the seventh FYP 2015-2020 and The PPB 2010-2021, where the essential focus of the policies, in general term, remain
polycentric decentralisation through dispersing of the rapidly growing population to secondary and small cities and among other towns and satellite township (Planning Commission, 2010; Planning Commission, 2013 and Planning Commission, 2015). Transformations of the slum into legal community, improving the lives of the urban poor and assuring equity for steady urbanisation and stable urban concentrations are considered useful (Planning Commission, 2010; Planning Commission, 2013 and Planning Commission, 2015). This will be achieved through development of community-level infrastructure, especially for the urban dwellers and improvement of economic opportunities in the disadvantaged areas and development of urban areas of various sizes to lead people to existing small towns and future satellite towns around Dhaka and to other cities away from the main centres like Dhaka and Chittagong (MLIT, 2015).

A more magnificent regional development and reducing regional imbalance through investment and increasing livelihood opportunities, implementing the government policies to have good connection with the capital city to other cities (see the draft USP, 2011; PPB, 2010-2021) and reducing regional disparity of poverty are proposed for stable urbanisation (See Sixth FYP 2011-2015 p.172). For reversing the trend of migration to other cities and growth centres from the large cities, NSDS, 2013 proposes for quality education, health facilities, employment opportunities etc. which will promote the development of lower rank cities adjacent to the large urban areas and will bring an equilibrium situation of present uneven urban concentration (ADB 2017; Planning Commission 2010; Planning Commission 2011; Planning Commission 2012a; Planning Commission 2013a; Planning Commission 2013b and Planning Commission 2015). The necessity to strengthen urban governance for attaining all these goals and targets are also highlighted in the recent plans (see draft NUSP, 2011 and seventh FYP (2016-2021) (GOB, 2015b; Planning Commission, 2015, p.480).

For reducing the rural-urban migration, national-level policies propose for the improved livelihood of the rural people through stimulating employment opportunities and skill development (see PPB, 2010-2021, p.7; Seventh FYP), economic stabilisation, improvement of necessary facilities/services i.e. health, education, nutrition, family planning etc. in the rural areas (see BPP, 2012, p.13). There are proposals on safety net programs after the natural disaster and creating financial support to the poor as well as poverty reduction and assuring food security so that the poor people do not feel to migrate (see NSDS, 2013 p.79).

1.3.3 Addressing urban poverty

Poverty reduction strategies as a fundamental aspect of urban development were firmly introduced in the FYPs. Strategies in the sixth FYP (2011-2015) emphasis on promoting growth by the steady rise in labour productivity and job creation in manufacturing and services, enhancing the access of the poor to inputs for production such as fertiliser, seeds, water for irrigation, power, construction of rural roads and institutional finance. For improved livelihood, strategies focused on poor households improved access to microfinance, better and quality education, health and nutrition services, and reinforced coordination, target and coverage of social protection programs (Planning Commission, 2011, p.149-150).
The current seventh FYP (2015-2020) sets targets for decreasing the incidence of poverty by 2020 to 18.6 from 24.8 in 2015 (Planning Commission, 2015, p.83). The main proposals for poverty reduction include i) job creation through the growth and structural change in economy like expansion of micro-credit programme, labour intensive manufacturing with export diversification etc.; ii) replicate of the micro success in eradication of extreme poverty through various targeted livelihood programs (i.e. EEP, CLP etc.); iii) shock prevention and risk reduction for the poor and the poorest iv) taking expanded and inclusive social protection programs for the extreme poor. Besides, the plan addresses the need to facilitate the accumulation of asset through better credit system for the poor to reduce the inequality.

A more striking feature of the plan is to redistribute the land alongside strengthening the land administration process in Bangladesh. In support, the seventh FYP also have fiscal plans for poverty reduction such as increase of spending on education and health to 3% and 1.2% of total GDP by 2020 respectively (Planning Commission, 2015, p.86).

The draft NLP of 2016 seeks to protect community-owned land, and guarantee allocation of urban non-agricultural Khas Land for housing the slum dwellers and use of non-agricultural Khas Land for building houses for the women and marginalised people, constructing vagrant homes and night shelters in the cities for the uprooted population etc. (Planning Commission 2012b, p.71), and climate migrants and landless people (GoB, 2016a). Moreover, Non-Agriculture Khas Land Management and Settlement Policy, 1995 alongside NLUP, 2001 are promoting inclusive land zoning system, which allows giving Khas land to any government agencies or departments in the current price of the land for climate disaster affected people and industrial development (GoB, 1995 and GoB, 2001). The draft National Housing Policy 2016 also aims to provide housing for all strata of society, especially the poor by reducing the necessity of housing in slums and improving the existing ones.

1.3.4 Promoting quality living environment

Promoting a healthy living environment for urban dwellers has been a key focus in recent national urban and development polocies (see NSDS, 2013, PPB 2010-2021, draft NUSP, 2011, p.6). Strategies urge to guarantee necessary infrastructure and services at community level (PLANNING COMMISSION, 2010, p.69; LGD, 2011, p.13; Planning Commission, 2012, p.12; Planning Commission 2013b, p.90; Planning Commission 2015, p.484) and housing projects furnished with community facilities in accordance with Detailed Area Plan of the area (see NHP, 2016). Essential principles for sustainable neighbourhood design includes accommodating green space, recreation, land use zoning comprises sectoral and economic clusters, mixed-use, mobility, street and public space design, diversity, local economy, local water management are proposed in BanDuDeltAS, 2015 (p.143). BNBC 2006 sets development control rules those have implications on density, access to air and natural light, accessibility to the property and building including conditions on setbacks, site coverage, construction of garages, access to the plot, provision of lift, land-use of that particular plot and height of the building. By addressing the limitations of Building Construction Rules 1996 and superseding that, Dhaka Metropolitan Building Construction rules 2008 focus on the policies on floor area ration and mandatory open space. The rules make provision to develop Urban Development Comity to resist violations of the rules. However, it is only applicable to RAJUK jurisdiction area and not applicable in any other cities. The policy removes the restriction on the building height (GoB, 2015b).
1.3.5 Safeguarding valuable lands towards planned development in future

Strategies after 2000 have put significant emphasis on protection and better utilisation of valuable land. Policies assert for preserving “wetlands and natural ecosystems in and around cities’ and strict control of ‘the flood flow zones and flood water retention areas around and inside major flood affected areas”, preventing purchase and use of agricultural land and protection of natural water bodies for the construction of houses and industries, brick field or any other non-agricultural development (see NSDS, 2013, p.90; ALPLZA, 2010; URPA, 2017; PHPLDR, 2004; draft ALPLU, 2015, p.2; POGWCA, 2000 and NHP, 2016). National Environment Policy and Implementation Plan, 1992, Bangladesh Environment Conservation (Amendment) Act 1995 and The Environment Conservation Rules 1997 are applied in environment sensitivity of any development activity (GoB, 1995). There are strategic directions for management, conservation, and sensible and efficient use of land (see NLP, 2016 in GoB, 2016c, p.7) and “protecting sensitive land resources by minimizing activates threatening environmentally sensitive areas (LGED, 2011, p.6). However, for effective implementation, only URPA 2017 stresses on coordination of activities among government organizations (Mahmud 2007 in LGED, 2011, p.12).

In response to the present unplanned land development, the seventh FYP (Planning Commission, 2015, p.xlviii) envisages for sustainable use of land and zoning, use of land in best possible way, preserving the land resources, prevent misuse of land, optimum utilization of land of different regions by its type etc. In line with these development strategies, the NLUP of 2001, awaiting enactment, suggests for a zoning law and land use zoning for all urban areas in Bangladesh (GoB, 2001, p. 12) and urged for building awareness among people about proper implementation of land policies. To stop the unplanned conversion of land uses, proposals include establishment of digital land management system (see Bangladesh Delta Plan, 2016, p.8-9). In the absence of any strict regulations on land ceiling and land grabbing as ‘a total of 1.3 million-acre of public land has been grabbed up to February 2010’ (LANDac, 2016, p.3), the draft NLP 2016 proposes for agricultural and non-agricultural ownership ceiling as area of 20 acre and 33.3 acre respectively (GoB, 2016c).

1.4 Challenges impeding the change

Due to several reasons, policies could not have positive impacts on the control of land use and proper urban development. Only ‘about 6.0 per cent (6.7% addressed by the senior assistant chief of Planning Commission Taibur Rahman) of total country land has been brought under planning’ (Shova, 2018). This section draws on the challenges limiting change towards sustainable future of our cities and neighbourhoods.

1.4.1 Planning practice is at infancy

The attempt of planned urban development and expansion of urban areas has begun in the then East Pakistan during the 1950s through the establishment of relevant authorities and enactments of multiple Acts such as TIA 1953, EBBCA 1952, EBBCR 1953 and Statutory Master Plans for the growing cities. During the first decade of the Independence (1971-1981), Bangladesh did not have any formal planning practice in the Paurashava and Upazillas. All the three Statutory Master plans enacted during 1959-1961 remained vastly unimplemented in the war affected new economy and became ineffective in the face of quick urbanisation.
and land use change. The Master Plan of 1959 became inappropriate to accommodate the socio-political changes in the capital of the newly liberated country. Although the guidelines of the plan suggested continuous review, that remained unattained (Shafi, 2010). By the end of the plan period of these master plans (1979 - 1981), cities were unable to afford new plans to put in place until 1995. A plan was initiated for Dhaka in 1982 and went through the approval process; however, due to shift of new military govt. this plan was never been enacted (RAJUK, 2010 p. 1-10; Kabir & Parolin, 2012, p. 16)

Table 6: Plans in the British Rule, Pakistan Rule and in Post-independence Bangladesh

<table>
<thead>
<tr>
<th>Concerned Organisations</th>
<th>Plan name</th>
<th>Reference Time</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Commission</td>
<td>Dacca Town Planning Report</td>
<td>1917</td>
<td>Completed</td>
</tr>
<tr>
<td>Dev. Authorities e.g. RAUK, KDA, CDA, RTIDA</td>
<td>Master Plan for Dhaka</td>
<td>1959</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Master Plan for Chittagong</td>
<td>1959</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Khulna Master plan</td>
<td>1961</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rajshahi Master plan</td>
<td>1984</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dhaka Metropolitan Development Plan</td>
<td>1995-2015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chittagong Metropolitan Master Plan</td>
<td>1995-2015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Khulna Master plan</td>
<td>2001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rajshahi Metropolitan Development Plan</td>
<td>2004-2024</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mongla Master Plan</td>
<td>2011-2031</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Khulna Detail Area Plan</td>
<td>2015-2020</td>
<td></td>
</tr>
<tr>
<td>Urban Dev. Directorate</td>
<td>Barisal Divisional Town Development Plan</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Sylhet Divisional Town Development Plan</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>50 District Town Land Use Plan/Master Plan</td>
<td>1981-1992</td>
<td></td>
</tr>
<tr>
<td></td>
<td>392 Upazila Town Land Use Plan/Master Plan</td>
<td>1981-1992</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Structure Plan and Action Area Plan for Madaripur and Rajoir Upazila, Madaripur</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mymensingh Strategic Development Plan (MSDP), 2011-2031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTDA</td>
<td>Risk Sensitive functional Master plan and Detail Area plan Under Rajshahi metropolitan Development Plan</td>
<td>2014-2015</td>
<td>On-going</td>
</tr>
<tr>
<td>RAJUK</td>
<td>Dhaka Structure Plan</td>
<td>2016-2035</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dhaka Detail Area Plan</td>
<td>2016-2021</td>
<td></td>
</tr>
<tr>
<td>Urban Dev. Directorate</td>
<td>Development Plan for Fourteen Upazilas</td>
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<tr>
<td></td>
<td>Development Plan for Kushtia Sadar Upazila</td>
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<tr>
<td></td>
<td>Risk Sensitive Land Use Plan (MUDP) for Mirsharai Upazila, Chittagong District</td>
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</table>

Source: SHLC-BD, 2018

However, micro scale project-based planning and developments were predominant even in the early decades of the Post independent Bangladesh. During this period (1979 - 1981) in the absence of any new statutory city plans for these cities with already out-dated master plans as the basis of guiding development, planning practice was limited to small need-based development projects with small extent in an incremental way. Both the Dhaka Master Plan of 1959 and Chittagong Master Plan of 1959 expired in 1979 yet followed in the legal basis for the planning practice until the enactment of the Dhaka Metropolitan Development Plan.
(1995-2015) and the Chittagong Metropolitan Master Plan (1995-2015) in 1997. Even out of 31 project proposals in the DMDP Structure Plan (1995-2015), 8 were fully implemented and 12 remain unimplemented and the rest 11 were partially implemented. In Khulna there was no city plan for 20 years from the year 1981 to 2001. Small need-based development projects, in a minor extent, were practiced in an incremental way.

The only exception was Rajshahi, where the first Statutory Master Plan was introduced in 1984 and only this city has got continuous city plan with the introduction of the Rajshahi Metropolitan Development Plan (2004 - 2024). Nevertheless, it is evident that after the emergence of the democratic government in the 1991, initiatives for new plans in all these three cities – Dhaka (Dhaka Metropolitan Development Plan 1995-2015), Chittagong (Chittagong Metropolitan Master Plan 1995-2015) and Khulna (Structure Plan, Master Plan and Detail Area Plan 2001) - were in place. However, development authorities in the respective cities are still failing to accommodate consecutive plans on time. Such as the DMDP was expired by 2015, but three years on, still the Dhaka Structure Plan (2016-2035) have not been enacted. Whereas, in Khulna, the DAP has been endorsed just in July 2018 when there are only three years left to expire the Structure Plan, Master Plan and Detail Area Plan of 2001. Having said that, between 1981-1992, UDD prepared Land Use Plan/Master Plan for 50 District Towns and 392 Upazilla Towns.

Therefore, it can be concluded that planning practice remained at infancy in the post-independence of Bangladesh until the emergence of the democratic government in the 1991. Although a new wave of plan preparation is evident, cities are failing to revise the existing plan as planned and struggling to accommodate new plans within the expected time frame.

Lack of resources was the most important constraint towards the failure to initiate plan or revise the plan and their implementation (Shafi, 2010). Scarcity of manpower is also evident in municipalities. Out of 329 pourashavas/municipalities only 27 have graduate planners. In 176 first class paurashava there are regulations to recruit planners, though no recruitment have been made till now. On the other hand, in the 2nd and 3rd class paurashavas there are no post for planners. Additionally, there is no planning division in the Paurashavas. Only one person has been designated for the preperation of the Paurashava master plan of the 1st class pourasha, which is challenging. Likewise, only 11 planners are working in the 11 city corporations.

As a consequence, at the end of the lengthy planning process when plans are endorsed many data informed proposals become out-dated. As an illustration, the Khulna DAP 2018-2023 was prepared based on the data collected in 2012. Proposals often fail to respond to the changing need of the market leading to the violation of land use plans. Although revision can accommodate the changing situation but there is very scarce evidence that such revision takes place in Bangladesh due to the lack of resources.

Another reason is the poor coordination among the implementing authorities during or after the planning process that left many proposals unimplemented. There are about 42 different organizations involved in the development of Dhaka (Ahmed et al., 2012). Lack of coordination among them and overlapping of responsibilities seriously obstruct urban development.

Still development control is limited to the refusal of land use permission for development. The regulations are weak to demonstrate the enforcement of the development control and
also there are actuate shortage of manpower and resources for enforcement. On average RAJUK receives 90,000 plans for approval among which on an average every year only 3750 plan gets approval. Without approval buildings are being built as data shows during 2006 to 2016 the number of built structures increased by 927948 (RAJUK, 2017). This practice is indifferent for all the other major cities. As a result, cities are taking their own course of spontaneous development without any guidance or direction.

1.4.2 Approaches to urban planning - poor realisation of the context

The dominating planning paradigms of the western world have always been the driving forces that shaped the approaches adopted for the city planning in Bangladesh since the early nineteen centuries. The Dacca Town Planning Report was prepared by Patrik Geddis in 1917 was inspired by the beauty and rooted in the concept of City Beautiful Movement that is evident in form of the adoring street pattern and garden of the Ramna area and canals. The plan intended at forming planning principles rather than to put down a detailed and inflexible scheme.

The plan was prepared based on just a weeklong ‘diagnostic survey’ in Dhaka, to Geddis, which was inadequate because of the time constraint, and proposed for further surveys in the same line to complete the process of diagnostic survey and subsequently to produce a more authentic master plan for the city (Kabir and Parolin, 2012). Dhaka city was divided into zones in this plan, which offered an outline for development of the old town area with colonial offices and residential buildings around Ramna Green (Safi, 2010). There were discussions on the geography of Dhaka, housing issue, open spaces and cannels etc (Geddes, 1917). But that plan was never adopted formally, or no efforts were made for implementing the same (Ameen, 1998 in Kabir & Parolin, 2012, p. 13). Hayder (1987, p. 12) argues that this “proposal was an informal document – a sketchy guideline for the future development of the city. It never met with formal recognition”. He argues that the main drawback of this plan was its incompleteness and lack of detail (Hayder, 1987). However, the influence of the guidelines that it chalked out is very prominently evident in the Dhaka University area (Hyder, 1994 in Kabir & Parolin, 2012, p. 13). The ‘diagnostic survey’ based plan although brought planning principles for future Dhaka but lack detail directions for future Dhaka.

Blueprint Master Planning approach dominated the urban planning in Bangladesh from the mid nineteen-century. Statutory plans were first prepared during 1950s and 60s followed by the dominating Rational Comprehensive Planning Approach emerged in late 40s locally termed as blueprint master planning approach. The approach was predominant even until 1980s before the Rajshahi Master Plan 1984 was prepared. All these blueprint master plans contain one or more maps indicating the future land use of master plan area with a supporting explanatory report. Planning was relied on evidence, all quantitative in nature and sectorial approach was followed where each of the urban sectors was considered independent from the other and urban functions were contemplated simply. Observer and observee remained detached. Consequently, the rigid land use zoning was violated at its best possible way. The general public, as well as the legal and government bodies were not aware of the land use zoning.

When there was no new plan for the three cities during 79/81 to 1995/2001, the small-scale area-based planning followed incremental planning. As cities were unable to afford new plan, the key idea was to tackle emerging problems based on problem-specific data. In few
cases, little resources were invested for understanding the urban problems. This elite lead process further alienated people from the planning process. As a consequence, poverty became an emerging urban issue, neglected at its best.

During 1990s a new approach of planning entered into the development planning process of Bangladesh in line with British Development Planning concept, namely strategic planning. Dhaka Metropolitan Development Plan 1995-2015, Chittagong Metropolitan Master Plan 1995-2015, Khulna master Plan 2000-2020, Rajshahi Metropolitan Development Plan 2004-2024 are the examples of strategic planning approach. The plan came in a package containing four/three hierarchical plans - Strategic Plan and or Structure Plan, Master Plan and Detailed Area Plan, among which ‘Master Plan’ remain still a key part same as the old master plan of 1960s in order to conform with the TIA 1953 and the old land use zoning system of development control. In Theory this approach should offer flexibility to accommodate the changing context and address urban issues those need immediate intervention.

However, in reality, planning practice failed to take advantage of this approach as after ten years the master plans were not reviewed in many cases and the DAP those were proposed for the first five years also remained unimplemented due to various reasons among which the key reason is the little control on guiding development of land under public ministries of the development authorities. Also, the preparation stage of DAP become so lengthy that their implementation year will exit beyond the Master Plan Period. Recently planning process in Dhaka city, however, has encompassed a participatory approach, where general people and community groups, diverse age groups, interest groups have opportunity to convey the urban challenges they experience and possible solutions. How effectively peoples view has been incorporated into plans is not certain yet as the process is still at its early stage.

Blueprint master planning approach, strategic planning approach and incremental planning approach all to some extent have failed to tackle the prevailing urban challenges and guide future development in the city and its periphery. In the blue print master plans there were little emphasis on implementation including resource allocation and financial feasibility of the policies and programmes. Also, how the proposals of those plans will be coordinated with the proposals of line agencies are not clear. Furthermore, too little attention was paid on the influence of the socio-economic and political process on those plans. Therefore, policies and programmes are too often ignored and rejected by the politicians such as the case of the abandonment of the DAP on the railway land (Ahmed et al., 2012). In most cases plans become difficult to follow after some years of preparation when projections were made in those plans exceed forecasted count as can be referred the case of the Dhaka Master Plan 1959. As a result, policies and development activities recommended in those plans were implemented partially and in very lower percentage. For example, 25.26% of the development proposals of Khulna Master Plan 1961 have been implemented during the plan period (Chaudhury n.d.).

1.4.3 Poor policy framework

The landscape of urban planning and development policies are diverse in Bangladesh but not vivid. In the new millennium, the country has enacted more policy than ever. Bangladesh is yet to have any sole policy for Urbanisation, National Urban Policy, National Land Policy and National Urban Sector Policy. Most of the fundamental and essential rules and regulations
are failing to respond to the contemporary need in the absence of amendments such as the case of the Town Improvement Act, 1953 which is old enough to address the current urban challenges concerning urbanisation. The country has its first national health and education policy in less than 10 years back. The national nutrition and food related policy emerged only five years back. Land policies are outdated and inappropriate at the context of population growth, growing attraction to urban areas and pressure on essential services and amenities (Islam et al., 2015). Lack of micro-level policy interventions is also evident.

The major share of national level policies, although, should be implemented through the local level plans, remained unimplemented. Cities either fail to have any development plan regularly or when adopted major share of its proposals remain unimplemented. Out of 31 proposals of the DMDP Structure Plan 1995-2015 only eight policies were partially implemented while 23 policies were totally remained unattained (Planning Commission 2015, p478). The Khulna Master Plan of 1961 became out-dated by 1981 but the city got the next plan in 2002.

Weak coordination among the implementation agencies, lack of governance at local level, lack of skill to plan and implement policies by the local authorities, top-down political approach in plan making and implementation (BanDuDeltAS, 2015), absence of local and regional level priorities is some of the significant challenges impeding to have holistic urbanisation policies. Other than this, the local level plans are not guided by the five-year plans or vice versa that add another dimension of poor policy framework of Bangladesh (MLIT, 2015). Except the economic plans (FYPs) policy/proposals are not supported by implementation plans specially the financial aspect of it (Shova, 2018, p.last page). Policies lack legitimate and robust policy guidelines for implementation by local governments when there exists poor coordination and dual responsibility among the implementation authorities (Nazem, 2002).

Poor clarity in planning policies, to some extent, is limiting or likely to restraint scope of ensuring sustainable cities and neighborhoods in Bangladesh. For example, the Draft Urban and Regional Planning Act, 2014 is yet to include the definition of urban planning, regional planning and rural areas and fails to establish proper land use management, ensure legitimate postulate of fundamental planning for integrative management and planned improvement of land (GoB, 2015b). The land administration laws in Bangladesh do not allow transferring or using the unused land occupied by the government or political bodies by the local governments, which could in effect release land for development. Likewise, BCR 1996 do not have any restriction on Floor Area Ration (FAR) and direction for the provision of green space. Again, the rule does not have any mechanism to check and verify if the construction is following the rules or not (Ahmed et al., 2012). Land-use guidelines on education and health are also deficient in the NLUP 2001.

1.5 Educational performance in Bangladesh

In July 2015, Bangladesh received the status of a lower middle-income country (LDC). Earlier, as a low-income country, its progress in Education gender parity was extraordinary compared to the performance of the other low-income countries and LMCs. As can be referred, in 1990, the Education gender parity in Bangladesh was in line with the average education gender parity value of the Low-income countries, which were 77.51 and 77.07
respectively. In 20 years’ time by 2011, when the value in Bangladesh progressed to 109.64, the average value of the Low-income countries remains at 96.22 (see Figure 2) (World Bank, 2018).

Figure 2: Education gender parity

The country also made remarkable progress concerning Literacy rate and Net enrolment rate in primary and secondary education against the other South Asian countries. In 2011, Bangladesh had the third highest literacy rate (46.74% male and 47.44% female) among the South Asian countries (World Bank, 2018) (see Table 7), where India performed the best with the literacy rate of 59.27% for male and 78.87% for female. In 2010, the Net enrolment rate in primary education in Bangladesh was 94.93%, which was close to the highest rate of 96.2% in India. At the lower secondary level, in 2013, the net enrolment rate in Bangladesh was 25.13% compared to the highest rate of 50.61% in Pakistan, where the rate was 14.75% in India and 19.61% in Bhutan (World Bank, 2018).

Table 7: Literacy rate in the South Asian countries in 2011 (% of population aged 15 and above)

<table>
<thead>
<tr>
<th>South Asian Countries*</th>
<th>Literacy Rate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Afghanistan</td>
<td>17.61</td>
<td>45.41</td>
<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>46.74</td>
<td>47.44</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>59.27</td>
<td>78.87</td>
<td></td>
</tr>
<tr>
<td>Nepal</td>
<td>48.83</td>
<td>71.70</td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>41.98</td>
<td>66.99</td>
<td></td>
</tr>
</tbody>
</table>

*Countries are selected based on the availability of data. Source: World Bank, 2018
Nevertheless, as per the data of 2011, the Primary completion rate of 74.56 in Bangladesh was better than the average completion rate of 70.86 in the LDCs yet was much lower than the average rate of 90.4 in low-income countries (see Figure 3). The dropout rate at the primary level is still high in Bangladesh as opposed to the other South Asian Countries. As per the statistics of 2010, in Bangladesh, 5.06% of children in primary school going age were out of school, whereas for India and Sri-Lanka this figure was 3.80% and 4.96% respectively. It is notable however that government expenditure on education sector is still weak in Bangladesh in comparison to other South Asian countries (see Table 8).

Urbanisation process has witnessed encouraging transformations in Education sector especially in the promotion of female literacy and net attendance. For instance, female literacy (above 15 years) in the urban area is 66%, which is only 48% for rural area (UNICEF, 2010, p.12; Cameron, 2012, p.8). Net attendance ratio in the urban area at primary level is 84% and at the secondary level is 53%, which are respectively 81% and 48% in rural area (UNICEF, 2010, p.12).

<table>
<thead>
<tr>
<th>South Asian Countries</th>
<th>% of government expenditure</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>14.10</td>
<td>3.47</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>13.82</td>
<td>1.97</td>
</tr>
<tr>
<td>Bhutan</td>
<td>15.63</td>
<td>5.58</td>
</tr>
<tr>
<td>India</td>
<td>14.05</td>
<td>3.84</td>
</tr>
<tr>
<td>Maldives</td>
<td>12.84</td>
<td>3.80</td>
</tr>
<tr>
<td>Nepal</td>
<td>17.56</td>
<td>3.47</td>
</tr>
<tr>
<td>Pakistan</td>
<td>11.51</td>
<td>2.49</td>
</tr>
<tr>
<td>Sri-Lanka</td>
<td>9.41</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Table 8: Government expenditure on education in the South Asian Countries (2013)

Source: World Bank, 2018

Considering the MDG agendas, there is a notable improvement in addressing inequality concerning school enrolment and learning outcomes (Rahman et al., 2016, p. xv). The constant attention on free and compulsory primary level education in every nationalized primary school and in each ward, there is at least a primary school (Planning Commission, 1995, p.xv-10, xv-14; 1997, p.429; MoE, 2010, p.4, 20), which not only has ensured access of the poor children in primary schools but also has contributed to a dramatic rise of net enrolment rate from 90% in 2000 to 98% in 2015, which was 61.2% in 1985 (World Bank, 2016 and World Data Atlas, 2018). Likewise, the net enrolment rate at the secondary level has also increased from 45% in 2000 to around 54% in 2015 (World Data Atlas, 2018) due to provision of different stipend and scholarships to the talented and the poor students (Planning Commission, 1997, p.442, MoE, 2010, p.20-25; Planning Commission, 2015, p.592, 632, 650). Along with the net enrolment, the adult (15+) literacy rate has also
increased from 29.23% in 1981 to 72.76% in 2016, with an average annual growth rate of 21.09% (UNESCO, 2018).

**Figure 3: Primary completion rate**

Still, urban inequality regarding geography and economic condition is the significant barrier affecting access of poor to education. For example, in 2010, the net attendance rate at primary education in urban areas was 83.9% compared to 65.1% for urban slums of Dhaka district. At the secondary level, the attendance rate was 53% for urban areas, which was only 18% in urban slums (UNICEF, 2010, p.12; Cameron, 2012, p.8). Whereas the average dropout rate at the primary level in both urban areas is 1%, in urban slums this rate is 8% (UNICEF, 2010, p.13). Urban exclusion, gender inequity and spatial imbalance of service distribution are still challenging the effective and inclusive education service provision.

### 1.6 National policy responses towards education provision

#### 1.6.1 A historical perspective

The Constitutions of the People’s Republic of Bangladesh formed in 1972, for the first time, emphasized on free and compulsory education along with eradication of illiteracy from the country in the shortest possible time (GoB, 1972; MoPME, 2003; MoE, 2010; p.72). These directions of the constitution are contemplated in the key national level economic and development policies including FYPs, PRSPs and NEPs, MDGs and NSDS 2010-2021.
In response to the spatial disparity and gender discrimination, there has been a shift of policy focus towards inclusiveness since the Fifth FYP (1997-2002) (Planning Commission, 2011, p.312-315). The Fifth FYP emphasises on development of education-related infrastructure in a spatially distributed manner, so that access to educational institutions regardless of spatial inequality can be achieved. Reflecting the national educational goal of ensuring inclusive learning in terms of geography, social background and economic condition and as extension of EFA-I, “Education for all: National Plan of Action II (EFA-II)” was adopted under Sixth and Seventh FYP (Planning Commission, 2011; p.314-316; 2015, p.588-592). Informed by the NSDS 2010-2021, the Seventh FYP focuses on inclusive education provision in terms of gender and geography as a means of developing social security and promoting good governance and therefore, sustainability (Planning Commission, 2015, p.579-580).
### Table 9: Minimum standards and level of service of educational facilities and service provision based on threshold population

<table>
<thead>
<tr>
<th>Name of the Guiding Rules</th>
<th>Educational Facilities</th>
<th>Threshold Population</th>
<th>Minimum Standard</th>
<th>Level Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNBC, 2014</td>
<td>Nursery/Kindergarten School (age group 3 to under 6 years)</td>
<td>400-600 families or 2000-3000 persons</td>
<td>Minimum 6 classrooms</td>
<td>Local</td>
</tr>
<tr>
<td>LDR, 2004</td>
<td>Per 1000 population (minimum 2500 person is required)</td>
<td>0.08 acre area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BNBC, 2014</td>
<td>Primary School (age group 7 to under 11 years)</td>
<td>1000-1600 families or 5000-8000 persons per1000 population (minimum 2500 person is required)</td>
<td>Min 3950 m&lt;sup&gt;2&lt;/sup&gt; area</td>
<td>Local</td>
</tr>
<tr>
<td>LDR, 2004</td>
<td>Per 1000 population (Minimum 10000 people)</td>
<td>0.10 acre area (min 1.2 acre area)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BNBC, 2014</td>
<td>Secondary School (age group 12 to under 17 years)</td>
<td>1800-2400 families or 9000-12000 persons</td>
<td>Min 6950 m&lt;sup&gt;2&lt;/sup&gt; area</td>
<td>Ward</td>
</tr>
<tr>
<td>LDR, 2004</td>
<td>Per 1000 population</td>
<td>0.10 acre area (min 1.2 acre area)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BNBC, 2014</td>
<td>Colleges/Community Colleges/Vocational Colleges</td>
<td>10000 families or 50000 persons</td>
<td>2000 m&lt;sup&gt;2&lt;/sup&gt; - 7000 m&lt;sup&gt;2&lt;/sup&gt; area</td>
<td>Regional</td>
</tr>
<tr>
<td>LDR, 2004</td>
<td>per1000 population (minimum 2500 person is required)</td>
<td>0.08 acre (min 1.2 acre area)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Housing and Building Research Institute, 2014, p.3-116 and MoHPW, 2004, p.892

Likewise, informed by the MDGs, NEP 2000 proposes for inclusive education provision in terms of gender and economic group (MoE, 2000), whereas NEP 2010 focuses on equity in education in terms of gender, religion ethnicity and spatial variation (MoE, 2010, p.1) and emphasizes that efficiency should be ensured in delivering education to disadvantaged communities (MoE, 2010, p.58). The MDGs informed specific national agenda of achieving universal primary education by 2015 (MDG 2) as well as ensuring gender equality in education sector (MDG 3) (Planning Commission, 2011, p.298). Over the time following different international goals and agendas national education policies and FYPs emphasized and promoted different strategies and set agendas (see Figure 4), in consequence of which Bangladesh achieved remarkable progress in education sector (see Figure 2 and Figure 3).

NEP (2000 and 2010) and the Sixth FYP indirectly introduce the idea of continuous learning. Such as, the fifth objective of NEP 2010 is “to foster creative and thinking faculties among the learners through a system of education that contains indigenous spirit and elements, and which will lead to a life-oriented development of knowledge of the learners” (MoE, 2010, p.1). In the Sixth FYP, under Primary Education Development Program (PEDP
II), national plan of action (NPA) sets goals for literacy and adult education as a part of the effort to create eventually lifelong learning opportunities for all citizens” (Planning Commission, 2011; p.314). According to these policies, municipalities and city corporations (KCC) are obliged to enforce primary and compulsory education and to ensure the primary school going age children in registered school within its juridical area” (GoB, 1977; 1983a; 2009a, p.6989; 2009b, p.6772).

1.6.2 Policies shaping education provision at neighbourhood

In the urban context of Bangladesh, neighbourhoods are being hardly considered as a planning territory. Not only there are acute shortages of policies targeted at the neighbourhood level, the national level plan and policies hardly delineate the neighbourhood situation and policy impacts at neighbourhoods. Yet national policies broadly guide, control, and inform the city level plans, which shapes opportunities at neighbourhoods. NEP 2010 emphasizes on creating neighbourhood education opportunities, reflecting which DMDP 1995-2015 proposes for at least two primary schools and one high school is compulsory at each neighbourhood (RAJUK, 2010, p.67). Under the UPE program the community children get free primary education in every nationalized primary school and in each ward, there is at least one primary school (Planning Commission, 1997, p.429, 436; 2011, p.307, 308; 2015, p.583,586). Likewise, Khulna Master Plan demarcated 1.90% of KDA jurisdiction area for the use of educational and related purpose (KDA, 2002, p.134). However, at city level plans, different authorized institutions set up different standards on similar attributes on the basis of the population density, available space and requirement of the services (see, Table 5), which reflect ununiform regulatory framework for implementation at local level. In particular, Dhaka Metropolitan Development Plan (DMDP) (1995-2015) delineates that for primary school provision minimum standard surface area coverage is 1 acre with accommodation capacity of 5000 students per shift (RAJUK, 2010; p.66), whereas Khulna city master plan (2001-2010) delineates different standards according to which primary school should be developed for approximately 3,400 students with area coverage of 0.50-0.70 acre (KDA, 2002, p.91). Furthermore, the details of these standards are challenging to understand by the general people. The reasons following the guidelines for provision of standards remains deficient. The Imarat Nirman Bidhimala, 2008 lacks any details on the necessity for the standards on the minimum FAR for any education institution except kindergarten above 3600 sqft. (1800) and kindergarten (1440) (RAJUK, 2008, p. 37).

Lack of proper regulations regarding travel mode, integrated land use and transportation system foster the suffering of the children and community people during the school period. As the quality of education largely varies from school to school and there are no rules regarding neighbourhood schooling, most of the parents want their children to take education from the best school irrespective of location and distance. This persuasion creates a huge burden on certain neighbourhood schools, whereas other schools remain idle. As parents also come to drop their children off to schools from a distant location, this create pressure on traffic system that lead towards traffic congestion, air pollution and noise pollution in times of schooling (Hasan, 2008).
1.7 Education provision in urban areas - key aspects and challenges

1.7.1 Autonomy in service provision

The education delivery system in Bangladesh is a highly centralized system, where the central government has the major decision-making power. For ensuring the effectiveness and sustainability of education service provision, the delegation of responsibilities to the local government is emphasized in different policies including NEP 2010, Vision 2021 and Seventh FYP (MoE, 2010, p.64-67; Planning Commission, 2012, p.13;2015, p.623-635). Since these policies came up with no further details on how and to what extent, which responsibilities need to be delegated, there is hardly any evidence of the level of autonomy at regional and local government in education service delivery. As most of the development policies including FYPs, and NEP, 2000 and NEP, 2010 are formulated by national level authorities including Planning Commission, the Ministry of Primary and Mass Education (MoPME) and Ministry of Education (MoE); these are the most autonomous body responsible for making the unprivileged group of people and provision of educational infrastructure (GoB, 2009a, p.6988-6989; 2009b, p.6721-6722; 2009c, p.7049-7050).

Local government has the autonomy to make strategies at the local decisions and exercising power from national level. District/Divisional Primary Education Officer (DPEO) have limited autonomy regarding the creation of opportunities for level for implementing national policies for educational development; yet, the major responsibility of local government is highly limited within maintaining education infrastructure, monitoring the quality of education standard and to some extent providing scholarships and financial support to private educational institutions (GoB, 1988; 2009a, p.6988-6989; 2009b, p.6721-6722). However, as the responsibility of policy formulation, work distribution and budget circulation is completely reliant on national government, without the assistance of national government, local government often fails to perform these responsibilities. As a result, local government being responsible for the most important responsibility of policy implementation often fails due to lack of proper autonomy (Panday, 2017, p.177).

The highly centralized education delivery system often leads towards inefficiency and inequality of education service provision. Though central government undertake initiatives for addressing inequality in terms of economic variation and introduced a conditional cash transfer programme for the poor students, due to the bureaucratic practice of central government and lack of autonomy of the local government, these programs couldn’t identify the local poor students and randomly distribute the money, which failed to address inequality (Al-Samarrai, 2008, p.1).

1.7.2 National spending on Education Provision

In spite of the fact that, after independence education sector received a comparatively greater amount of national budget in comparison to the pre-independence time, the current budgetary allocation is still lower than any standard (Rahman et al., 2016, p.xvi). Among the national budget the share of education budget, decreased from 15.9% in FY 2007 to 11.6% in
FY 2016 (Rahman et al., 2016, p.xvi). From 1979 to 2016, the average value of expenditure on the education sector in Bangladesh was 1.73% of GDP (MoPME, n.d.), which is very low even in comparison to most of the other South Asian countries (Rahman et al., 2016, p.xvi). As per the World Development Indicator (WDI), Bangladesh has been ranked on education expending 155 out of 161 countries in the world (Rahman et al., 2016, p.xvi) reflecting the poor budgetary allocation in the education sector.

**Figure 5: Budget allocation and % of national budget in education sector in the last 17 years**

![Graph showing budget allocation and % of national budget in education sector over 17 years](Source: MoE, n.d.)

During the Sixth FYP period (2011-15), education sector received the highest allocation, which was 2.3% of the GDP and 14% of the total government expenditure (Planning Commission, 2011, p.341-343), which regrettably, declined, in recent ADP year 2016-17 further to 5% (616.67 million) as a proportion of national budget (Planning Commission, 2015, p.610). This amount is very insufficient to deliver proper education services. Although the amount of national allocation in education sector increased over the time, as a share of the national budget the percentage of allocation remained more or less consistent (see Figure 5) which is the evidence of comparatively less attention of the government to the education sector.
Following the mandates of the constitution, over the time, primary education received more attention in the allocation of budget than other subsections of education (Planning Commission, 1995; 1997, p.430; 2011, p.343; 2015, p.610; BANBEIS, 2016). The target of attaining MDG agenda of ensuring universal access to primary education has put further impetus to the government expenditure on primary education. According to BANBEIS (2016), in 2014-15, almost half of the total allocation for education sector was on primary education (see Figure 6).

Poor meritorious and female students received special emphasize during financial allocation, especially at secondary and higher secondary education. Concerning the Prime Minister’s Education Assistance Trust Act, poor meritorious students are given financial support along with free education opportunity from class VI to Higher Secondary School. Moreover, scholarship on merit and free education up to class VII are provided for female students (GoB, 2012a, p.2066 and MoE, 2016, p.14-18). However, as there is no instruction in policies regarding the process of budgetary distribution and lack of coordination between local and central government, difficulties arise in delivering resources to the poor, unprivileged or the other disadvantaged group of people. Without the assistance of local government, it is impossible for the central government to identify the local poor and due to lack of coordination the actual target group does not receive the allocated budget. Moreover, Bangladesh being a middle-income country where 30% of people living under the poverty line, with the limited budget it is impossible to cover all the poor students. Because of that in higher secondary level, poor students being representing 31% of the total higher secondary age population, only 11% of public expenditure is allocated for their education (Al-Samarrai, 2008, p.6).

Moreover, budgetary information regarding spatial dimension is not disclosed or published, (Al-Samarrai, 2008, p.7 and BANBEIS, 2016) which generates inequality in terms of spatial distribution. As a consequence, the major cities received more budget rather than the priority education areas and hard to reach areas, therefore, despite continuous increase in national expenditure in the education sector since independence, lack of proper distribution strategy lead towards inequality and ineffectiveness of the education policies.
1.7.3 Balance between public-private education provision

Although state is responsible for the delivery of education services (GoB, 1972), because of its’ incompetency, a number of community organizations, NGOs and other private sectors are actively engaged in education (Planning Commission, 1997, p.427) service delivery (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.xviii and 24). To accelerate quality education provision joint sector (public-private) corporation from ‘no profit-no loss’ are encouraged by GoB since the Fourth FYP (1990-1995) (Planning Commission, 1995, p.xv-14). In line with the MDG 8 and SDG 17 that aim for encouraging partnership for development, to attract the private sectors, Government introduced tax-exempt private investment in the education sector (Planning Commission, 2015, p.430).

In Bangladesh, higher education is mostly dominated by the private sector (Planning Commission, 1995, p.xv-24; 2015, p.567). The Seventh FYP identified that among 117 universities of Bangladesh, there are only 37 public universities and other 80 are private universities. Because of the focus of the private sector, the number of private universities is increased; as a result, the gross enrolment of higher education has risen from 5.44% in 1999 to 13.15% in 2011 (Planning Commission, 2015, p.567). The NEP, 2010, the Seventh FYP and the PP emphasized on private education provision in the field of technical and vocational education (Planning Commission, 2011; 2012; 2015). Already, several private organizations are engaged in providing technical vocational training in urban areas, and many NGOs are providing free essential educational services to the urban poor. In 2012, about 65% of urban slum children attended primary education, mostly run by NGOs (BUF, 2012, p.34-35). However, in most of the cases, the government failed to mainstream this into the formal education system. Moreover, an imbalance between public and the private sector in education service providers regarding quality and cost, number of the educational institution, urban poverty and inequality, inclusiveness (KDA, 2002, p.49); are the major issues concerning education provision in major cities.

1.8 Health performance in Bangladesh

Urbanisation process in Bangladesh has witnessed an improved health status of the urban people in comparison to the low-income countries, even in some cases; the country outstripped the progress of the lower-middle income countries, especially in achieving the MDG agendas. In 2015, the rate of undernourishment in Bangladesh was 10.76 compared to the average rate of undernourishment of 15.47 in low-income countries and 12.27 in lower-middle income countries (see Figure A45). In the 24 years (from 1991-2015) Bangladesh as a low-income country secured a total reduction of the rate of 22.04 against the decrease of the average rate of 24.47 in the low-income countries. In 2015, the maternal mortality rate was also the lowest among low-income countries and lower-middle income countries, which were only 153.5 (see Figure 7). Infant mortality rate in 2015 was also lowest in Bangladesh. The rate was only 30.25 in Bangladesh against the lower income counties average rate of 31.9 and the lower middle-income countries average rate of 30.95 (see Figure 8). Bangladesh further achieved under-5 mortality rate of 36.86, which is much lower than the average rate of the low income and lower-middle income countries (see Figure 9) (World Bank, 2018).

Bangladesh has achieved many of its health targets associated to MDGs. Under MDG goals. Under-five mortality rates were reduced to 68% by 2016 against the target of 66%. Death per
100,000 live births was dropped to 70.3% in 2013 against the target of 75% decrease (Planning Commission, 2015, p.554-555). Outstanding progress is also noticeable in reducing infant mortality and developing nutrition status. Infant mortality rate per 1000 live births decreased to 28.2 in 2016 from 82 in 1996-1997 (World Data Atlas, 2018). Underweight children ageing under five years dropped to 33% in 2014 from 66% in 1990 (Planning Commission, 2015; p.555). As an overpopulated country, there is also a notable achievement in reducing total fertility rate (from 3.3 in 1996-1997 to 2.7 in 2007) (Planning Commission, 2015, p.556). About 88% of the urban population has at least a health facility within 1 km area (NIPORT, 2016, p.201).

Figure 7: Rate of maternal mortality (per 1000 live birth)

Source: World Bank, 2018

Over the time, Bangladesh has also achieved notable recognition in improving general health status in compare to many of its neighboring countries of the South Asia, especially in terms of reduced maternal mortality (see Figure A46), reduced under-5 mortality (see Figure A47), reduced infant mortality rate (see Figure A48) and prevalence of anemia among under-5 children (see Figure A49). Moreover, the crude birth rate and the crude death is also comparatively lower in Bangladesh than most of the South Asian countries including Afghanistan, Bhutan and Pakistan (see Figure A50 and Figure A51) (World Bank, 2018), which clearly reflect the improved health status of Bangladesh.
Figure 8: Infant mortality rate (per 1000 live birth)

Figure 9: Under-5 mortality rate (per 1000 live birth)

Source (figures 8 & 9): World Bank, 2018
Still, urban areas of Bangladesh are experiencing many challenges that are impeding the performance of the provision of health services. Per capita expenditure on health sector is still inadequate, which is only about 5 USD against the standard of 34 USD (MoHFW, 2011). The doctor-nurse ratio is also imbalanced, which is 1:0.48, against the standard ratio of 1:3 (MoHFW, 2011 and the Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.95). Using the statistics of 2011, World Bank (2018) acclaims that the number of hospital beds per 1,000 people is only 0.6. Health care in urban areas is yet to achieve an inclusive service provision. Expensive service delivery often restricts the access of the poor and unprivileged group of people to health facilities (Planning Commission, 2015, p.556-658). Women are still struggling to get access to healthcare facilities as health services are failing to offer privacy and confidentiality to female patients (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p. 13, 93).

1.9 **Health policies in Bangladesh**

1.9.1 **Health policies: a historical perspective**

The constitution of the people’s republic of Bangladesh (1972) declared ‘adequate health care’ as a basic right of every citizen (in section 15ka) and affirmed ‘the development of public health and nutrition status’ as a major responsibility of the state (section 18/1) (GoB, 1972). Thereafter, at the beginning of FYPs, the prime aim was to ensure basic health care service provision for all, which was shifted towards gender inclusive service provision with specific emphasize on women and children from the fourth FYP. Improved general health status and inclusive service provision irrespective of gender, ethnicity and income groups are emphasized in the Sixth and the Seventh FYP (Planning Commission, 2011; p.347, 351 and Planning Commission, 2015, p.566-568). National development goals (MDGs, SDGs and Vision 2021) targets to promote the highest attainable level of health and sustain health and nutrition, improved longevity, reduced maternal mortality along with ensuring inclusive healthcare facilities (Planning Commission, 2011, p.348-352, 389; 2015; p.566, and 2012, p.77). Preventive health care service provision received more attention in the new Millennium rather than curative healthcare service provision (Planning Commission, 1973, p.498; 2011, p.355; 2015, p.569-70). Therefore, National Food Policy 2006 and National Nutrition Policy, 2015 are proposed with objectives to improve the nutritional status for all and to ensure adequate and stable supply of safe and nutritious food for everyone (MoHFW, 2015, p.1-2 and MoFDM, 2006, p.2-3).

The first ever health policy in the history of Bangladesh “National Health Policy 2000 (NHP 2000)” aims to fulfil the promise of the constitution to ensure minimum and compulsory primary health service to all, which provides a set of objectives including: affordable health care provision for the urban poor, quality assurance of primary health care centres, development of special care facilities for female and children and so on (MoHFW, 2000, p.1-2). Following the NHP 2000, “National Health Policy, 2011” was introduced aiming at assuring compulsory primary health service to all, extending the accessibility to health care service centre through confirming equity and standard care facilities and encouraging people to prevent disease and take service facilities on the basis of necessity and priority (MoHFW, 2011).

National development ordinances including: the pourashava ordinance, 1977 (GoB, 1977); city corporation ordinance, local government (city corporation) act, 2009 (GoB, 2009a; p.6973-6975) local government (municipality) act, 2009 (GoB, 2009b, p.6751-6754) consider public health as a composite system of insanitary buildings, waste management, public toilet and health care facilities, which in a broad scale, introduce healthy city factors. These ordinances emphasised hygienic and healthy land and building management, proper sanitation facilities and public toilet management (GoB, 1977; 1983a; 2009a, p.6974; 2009b, p.6752), preventive and control measures for infectious diseases (GoB, 1977; GoB, 1983a; GoB, 1983b; 2009a; p.6974; 2009b; p.6753), child and maternity healthcare (GoB, 1983a; 2009, p.6975), trained delivery personnel and family planning (GoB, 1983a; 2009a; p.6975).

1.9.2 Policies shaping health provision at neighbourhoods

National level health policies provide guidance based on national health profile, which indirectly shape neighbourhood opportunities. Such as to ensure access of basic health care services, the FYPs, HFA-2000 and NHPs focus on community clinic adaptation that is completely neighbourhood level service aiming to serve the community (Planning Commission, 2011, p. 350-356; 2015, p.556-567 and MoHFW, 2011). Therefore, in context of urban area, urban primary healthcare (UPHC) with secondary and tertiary healthcare facilities are developed and operated in ward level by contracted NGOs and provide minimum cost service to the urban poor (Planning Commission, 2011, p.357; 2015, p.561).

As per the constitution, health is a basic right of every citizen and government is committed to arrange healthcare for all. In line with this commitment, health policies are sensitive towards the poor and the unprivileged group of people who are more vulnerable to ensure health service provision for all. Thereby, in Sixth FYP affordable health care service system was introduced under which semi-private health care service centres (private but receiving government fund) are bound to provide free treatment to at least 30% of people who cannot afford the health expenses (Planning Commission, 2011, p.368). Policies further provide special attention towards the hard to reach and geographically excluded populations, which includes about 2.5 million urban and rural people in Bangladesh and encourage the private sector to provide health care service to these group of people (Planning Commission, 2011, p.359-361).

Urban development policies including Urban Sector Policy (draft), 2011 and National Urban Policy (draft) 2014 emphasis inclusive health care service provision irrespective of economic variation and suggest providing designated health care zone at the appropriate location by a hierarchy of services to ensure accessibility of the urban poor (LGD, 2011, p.14-15 and GoB, 2014, p.13). NHP, 2011 further prioritise accessible and affordable health care service provision to the urban poor and deliver services to poorer neighbourhoods through development of community clinic for each 6000 populations (MoHFW, 2011).
Moreover, dissimilarities in provision of national standards among different legislations result in ambiguity in times of infrastructure development at neighbourhood level. Such as, BNBC, 2014 provided standard on the basis of threshold population where it is declared that for minimum 400 families/2,000 population health centre should be developed in 175 m² area and small clinic should be developed for 2000 families/ 10,000 persons in minimum 2200 m² area (Housing and Building Research Institute, 2014, p.3-117). Whereas LDR, 2004 recommends that for any health establishments minimum 0.04-acre area need to be provided for every 1000 population. (MoHPW, 2004, p.892). Moreover, Imarat Nirman Bidhimala, 2008 offers standards based on size of the health establishment. Following which for any health establishment of 3600-5760 sqft., FAR should be minimum 3.25 and Maximum Ground Coverage (MGC) should be 60%, for 5760-7200 sqft. FAR should be minimum 3.50 and MGC should be 57.5% and for health establishment above 8640 sqft. plot FAR should be 4 with MGC of 55% (RAJUK, 2008, p.38).

Except creating opportunities for the urban poor, national level policies hardly create any other opportunities at the urban neighbourhood. However, considering the national goals and policies (NHP 2000, HFA-2000, NHP, 2010) of ensuring health care service for all, city level plans shape opportunities at neighbourhood. RAJUK delineates that in every neighbourhood there should be at least two doctor’s/ dentist’s chamber and two medicine shop to serve neighbourhood people in emergency (RAJUK, 2010, p.67-68). Similarly, KDA, undertake initiatives to develop PHC at each ward for every 50,000 to 1 lakh population (KDA, 2000, p.82), which shape opportunities for health service provision at the neighbourhood level.

1.10 Challenges impeding the change

1.10.1 Autonomy in service provision

The health sector is a highly centralized system, governed and administrated by the Ministry of Health and Family Welfare (MoHFW) with a few authorities delegated to local levels. Key responsibilities of MoHFW include policy provision, planning and decision-making regarding financing, supplies, maintenance and infrastructure development for service delivery (Planning Commission, 2015, p.554-557; DGHS, 2012, p.22 and MoHFW, n.d.). In urban areas the central administrative responsibility is performed by the Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC) and at the local level urban Primary Health Care (PHC) services are delivered by the local government such as city corporations and municipalities (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p. 38-39; MoHFW, n.d. and Anon, 2014).
The healthcare system of Bangladesh is structured in a 5-tier hierarchical pyramid where Community Clinics (CC) serving at the ward level is responsible for providing the basic health care services. Whereas, Health and Family Welfare centre (HFWC), standing on the upper tier of CC, provides mainly maternal and child health care facilities at the union level. On the other hand, Upazila Health Complex (UHC) at the next level of the pyramid, provides inpatient and outpatient care, maternal and child health services as well as disease control services. Thereafter comes the district hospital with specialized doctors, better health care and operation facilities. Medical colleges and post-graduate institutes, representing the top tier of the pyramid, are equipped with a wide range of specialized services and specialized doctors (Planning Commission 2011, 2015).

Although the local government in urban areas are bestowed with the responsibility for delivering health services at the city and neighbourhood level (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.38-39 and Planning Commission, 2015), they have to rely on the central government for licensing and financial support, which creates barrier to the management of service provision. As the decisions regarding improvement and budget are formed by national government (such as MoHFW and MoLGRDC), it creates bureaucratic pressure on local government and local government have to provide service as per the decision of central government, irrespective of local needs and demands (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.35, 133, 144). This bureaucratic dominance over the local government often leads to inefficiencies in health service delivery.

### 1.10.2 National spending on Health Provision

The government allocation in the health sector is relatively low compared to other public sectors. Health expenditure in a ratio of GDP increased over the time in a slow but stable manner, the average value of which was 3.2% during 2003–2007 increased from the average value of 2.8% during 1998—2002. On the other hand, over the last seven fiscal years (2009 to 2016), budgetary allocation for the health sector dropped from 6.2% to 4.3% of the total government expenditure (Daily Star, 2017; Hassan, et al., 2016, p.505 and WHO, 2014). However, recently, (2016-2017) there is a slight increase in the expenditure on the health sector. In the current ADP year 2017-18, only 5.2% of the national budget is allocated to health sector, which is insufficient to fulfil the growing demand of health sector. The NHP 2011 states that, on an average approximately 7% of the national budget is allocated to health sector, which is about 1% of GDP (MoHFW, 2011). The percentage of the national budget
devoted to health sector reflects a slightly downward curve, which is the reflection of yearly lower expenditure in the health sector (see Figure 12).

**Figure 12: Health expenditure as % of total national expenditure**

![Graph](image)

**Source:** MoF, 2015; Hassan et al., 2016; p.506; WHO, 2014; Daily Star, 2017

Allocation for the public sector health facilities is highly biased upon the number of beds rather than disease burden, the size of the population, or community need (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.84). With the larger share of the population living in the rural area, the greater proportion of the government budget is concentrated on rural area. Yet, the per capita financing in the urban area is much greater than that of the rural area. Urban population constitutes only 23% of the total population for which government spend 33% of the total health expenditure, while the remaining 67% is for the rural population. However, per capita health expenditure for urban population is 3,083 BDT, while for rural population is only 1,894 BDT (USAID & GoB, 2015).

Inadequate budget allocation over a long period of time and unequal spatial financial distribution not only hinders the further progress of health service provision, but also impedes the poor citizen to access the basic and better healthcare facilities. Following the inadequate public expenditure in the health sector, only a limited number of public healthcare infrastructures can be built. As a result, poor people often fail to get access to public healthcare centres that leads them towards vulnerability in terms of healthcare service provision (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.54), which is why they are compelled to take basic health care services from the informal private sectors.

**1.10.3 Balance between Public-Private Health Provision**

Although state is responsible for the delivery of health services (GoB, 1972), because of its’ incompetency, several community organizations, NGOs and other private sectors are actively engaged in health service delivery (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.xviii, 24). Moreover, during the Sixth FYP (2011), Bangladesh government adopted MDG agendas and promised to achieve MDG health indicators (MDG 4, MDG 5 and MDG 6) by 2015. As a strategy to improved health service provision, government, and international donor agencies suggest adopting MDG 8 and thereby, public private partnership is further encouraged in health service provision. Private sector assists the public health delivery in different ways including, financing and service distribution. From per capita expenditure on health, the governments’ contribution to the health sector is
approximately 35%, while the remaining share comes from the private sector and the individual households (Planning Commission, 1997, p.487).

Regarding, healthcare service provides three distinct types of private sectors emerged over the time to assist the public sector. First one is the organised private sector comprises of qualified practitioners, providing standard and quality healthcare facilities, but is expensive in most of the cases. After that is the non-profit NGOs that attempt to provide essential health care services to the unprivileged people in free or subsidised manner. The last one is the Alternative Private Providers (APPs), comprises of private informal providers without having any formal qualifications, such as untrained allopath, homoeopaths and kobiraj who provide health care services in a cost subsidised manner. However, their authenticity and standard of service provision are always questionable (Planning Commission, 2011; p.382; 2015, p.560).

Private health service provision not only reduces the burden of the public sector (Planning Commission, 2015, p.561) but also develop national health care infrastructure and employ doctors, nurses and other health workers (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.26); which increase the service coverage and service quality. In particular, private providers are the only provider of health care in poor and remote areas (Planning Commission, 2015, p. 560). Lower duration of stay and higher occupancy rates in private hospitals in comparison to public ones indicate greater service efficiency of the private sector (Planning Commission, 2011, p.382).

To ensure more effective service delivery and balance between public and private sectors in service provision, government has developed several strategies. Such as, in 2010 the GOB with the collaboration of Development Partners developed “Bangladesh Joint Cooperation Strategy (JCS 2010-2015)” with an agreement of 21 principals for effective service delivery in urban areas (MoHFW, 2010). The collaborations between the MoHFW and NGOs guided by JCS in strengthening family planning, EPI, TB and leprosy activities have been effective through active involvement of the communities.

Although NGOs, contribute significantly to providing UPHC in a subsidised manner to the urban poor and delivering service in the hard-to-reach area, organised private sectors provides the most efficient service. However, private sectors lack sensitivity towards the local needs in providing service-mix, and mostly guided by the profit motive (Planning Commission, 2011; p.383, Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.26), restrict the access of urban poor. In 2015 per capita expenditure on health was 32USD, which is unaffordable for many people, as over 16% people in Bangladesh earn 1.9USD per day. Therefore, poor and marginalised people rather than seeking healthcare from the formal private sector, often seek health facilities from APPs. Guided by the profit motive, most of the private healthcare facilities are concentrated in the capital city and divisional headquarters (Asia Pacific Observatory on Public Health Systems and Policies, 2015, p.32), which create spatial inequality regarding service provision.

However, lack of government control and regulations and inefficiency of service provision and capitalism led the private sectors to control health service delivery. The profit motivated expensive service provision of private sectors to create inequality as poor and unprivileged people hardly get access to these services, which is a significant barrier towards inclusiveness.


1.11 Conclusion

Bangladesh is rapidly urbanising, and the process is uneven. However, the urbanisation process has experienced positive economic growth, which has implications for the reduction of poverty as well as in improvement of urban services and facilities compared to the rural areas. Though, the prevalence of multiple dimension of poverty and concentration of deprivation is still considerable in urban areas, especially in the major cities. Major cities are already unable to offer the required infrastructure, services and facilities necessary to accommodate high-density urban living. Urban areas are constantly losing its valuable land resources and the possibility of future planned development is challenging. Although efforts have been made to introduce diverse national level strategies, the country is yet to have national urban policies and national land use policies. Urban planning policy frameworks as well as planning practices is at infancy until now. The weak city governance coupled with people’s disassociation with the planning process is restricting to guide development expectedly. The highly centralised governance of the education and health sector is resulting in inefficiency in service delivery. As a consequence of lack of public expenditure in health and education sector, many international standards are impossible to achieve by the government. Although the private sector is filling the service gap, free markets are already magnifying urban inequality and exclusion from the essential services. So, the achievement of the sustainable future of the cities and neighbourhoods is highly dependent on addressing these challenges as soon as possible.
2 City Profile: Khulna

2.1 Background

Khulna city is the divisional headquarter of Khulna region and hosts all the relevant government offices and setups of the region. The city is 251.3 kilometres away from the capital city Dhaka and connected to the capital through mainly 8 hours road (through national highway 7) and 5 hours air transport (1-hour air journey followed by 2-hour bus travel to the airport). Its distance from Dhaka makes the city less connected to the Dhaka based economic activity in Bangladesh. This city is often called the gateway to Sundarbans as it is very close to the world’s largest tidal and mangrove forest. The strategic importance of the city and its competitiveness relates to its essential links with regional towns and growth centres, especially Mongla, the country’s second seaport. The connectivity created by the completion of the Lalon Shah Bridge (over the Padma River) and the Khanjahan Ali Bridge (over the Rupsha River) is expected to facilitate use by Nepal and the seven sister states of India to use Mongla port facilities if a government agreement can be reached. Since, this city has attracted growth and urbanisation until recently and has been one of the top 10 cities (Khulna ranked as 3) in terms of population and growth, (BBS, 2014) profile of this city can provide an overall understanding of typical Bangladeshi city.

Figure 13: Map of geographical location of Khulna

Source: SHLC-BD, 2018
2.2 An overview of the city

This section provides a brief introduction to Khulna, to set the context for the critical arguments in this report, it recognizes the history, natural setting, and built environment, housing condition, economy, health and education. The discussion takes a spatial planning perspective to best reflect the overarching questions asked in the SHLC project.

2.2.1 History

Among different myths about the history of the city, the most reverent to this project would be the naming of Khulna after the name of a Hindu temple (KCC, 2018a, Murtaza, 2014). The naming demonstrated the significance of social and public space during the Hindu middle period and its importance as a centre of growth for settlements (Mitray, 1914). Although there were confusions regarding the origin of the name, there was little confusion regarding the early settlements of Khulna. The settlements mainly flourished along the Rupsha River in its early days. During those days, the settlements were built around trading market along the Rupsha River but the expansion at that period was limited until the British rule Ahmed 1991 (Naznin, 2014, KDA, 2002b). Because of the growth potential and proximity to the then capital of British rule (Kolkata), the area was first declared a Thana (see terminology) headquartered in 1836. The declaration has drawn new administrative offices around the original growth centre around Rupsa River. The growth was further aided by administrators when the town became 1836 the sub-divisional headquarter². More offices and employment created in 1842 when the city was upgraded to a sub-divisional headquarter. Shortly after that, the city became district headquarter in 1882 before getting a status of a city council in 1884 (Sowgat et al., 2017, Islam and Swapan, 2013). The city had to wait for another hundred years until it became a city corporation in 1984 (unitary city authority who has a city corporation office and a separate planning authority) (KCC, 2018b).

Apart from the administrative shifts, the city’s historic transformation was linked to its industrialisation. In fact, post-1947 Khulna city has observed attempts of industrialisation and experienced transformation of the city. Overall, the urban history of this city did not start until 1836 and had mainly been attached to administrative upgradation. The drive for industrialisation and political conflict in the region influenced the growth of this city. The city gradually grew up on the western side of the Bhairab-Rupsha River near the southern end of the levee and extended towards northwest on moderately high lands (KDA, 2002c). After the construction of Khulna-Jessore road and development of economic activities, the city started to take shape along the two sides of the Khulna-Jessore road.

2.2.2 Natural setting

The physiography of Khulna is broadly characterised by Ganges tidal floodplains having lower relief and is crisscrossed by innumerable river channels (Kumar et al., 2011). Average

² Bangladesh is divided into eight administrative divisions. Each division has a head quarter (A regional capital that houses all the main offices and governs the region).
ground elevation of the city is between 2.5 meters with minor variation in its elevation with limited undulation (KCC, 2018; KDA, 2002a). Relatively flat land and low variation of contours make the city a perfect combination for habitation and business (Islam and Swapan, 2013), but at the same time, it exposes the city tidal flood and water logging during monsoon (Rosensweig et al., 2018). The digital elevation model shows the western part of the city lower lying (See Figure 14). The level of humidity rises to 89 per cent in July, and high humidity continues till the end of September in this city. Heat waves create high temperature (33 degree centigrade) and above during the summer season (Kabir & Sowgat, 2016). The geographic location of the city makes it a vulnerable climate city because of its location in the cyclone-
prone area; Sundarbans act as a buffer and protect the city from massive storms (Rosensweig et al., 2018). Increased waterlogging, frequent flood and scorching weather are observed recently in the city.

2.2.3 Demographic and social data

The average sex ratio (male-female) of KCC area is 108 (BBS 2014). There are 177 thousand households in KCC. The religious groups of KCC area are divided into five clusters. The Muslims comprises 89.02% of the total population. Whereas, the Hindus comprises 9.74% of total population. About 0.01% people are Buddhist and 1.21% are Christian. Others comprise 0.02% (BBS 2013). The marital status of male-female people reflects that about 62% male people are married in KCC area and 67% of female population are married as per 2011 census report. Overall, 37.5% male were unmarried, and 23.2% female were unmarried during the census of 2011 (BBS 2013). Of the total household heads surveyed in DADP (Detail Area Development Plan) of Khulna city, over 96% found married, 1.16% widow/widower and only 0.06% divorced. The percentage of separated is 0.05% (KDA 2012). Data on dependency ratio in the city is 54 meaning that there is large proportion of dependent population in the city (See Figure 15).

Table 10: Age-sex wise population (%) data of Khulna City, 2011

<table>
<thead>
<tr>
<th>Male %</th>
<th>Female %</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>7.9</td>
<td>0-4</td>
</tr>
<tr>
<td>9.2</td>
<td>9.3</td>
<td>5-9</td>
</tr>
<tr>
<td>10.8</td>
<td>10.6</td>
<td>10-14</td>
</tr>
<tr>
<td>10.5</td>
<td>10.2</td>
<td>15-19</td>
</tr>
<tr>
<td>10.4</td>
<td>12.1</td>
<td>20-24</td>
</tr>
<tr>
<td>9.4</td>
<td>11.0</td>
<td>25-29</td>
</tr>
<tr>
<td>7.8</td>
<td>8.5</td>
<td>30-34</td>
</tr>
<tr>
<td>7.3</td>
<td>7.8</td>
<td>35-39</td>
</tr>
<tr>
<td>6.8</td>
<td>6.3</td>
<td>40-44</td>
</tr>
<tr>
<td>5.8</td>
<td>4.7</td>
<td>45-49</td>
</tr>
<tr>
<td>4.5</td>
<td>3.5</td>
<td>50-54</td>
</tr>
<tr>
<td>3.1</td>
<td>2.2</td>
<td>55-59</td>
</tr>
<tr>
<td>2.7</td>
<td>2.2</td>
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<td>1.3</td>
<td>65-69</td>
</tr>
<tr>
<td>1.4</td>
<td>1.2</td>
<td>70-74</td>
</tr>
<tr>
<td>0.6</td>
<td>0.5</td>
<td>75-79</td>
</tr>
<tr>
<td>0.7</td>
<td>0.8</td>
<td>80+</td>
</tr>
</tbody>
</table>

Source: BBS 2014, p.332
Figure 15: Age-Sex Pyramid of Khulna City, 2011

Source: SHLC-BD, 2018 after BBS 2014

2.2.4 Population and migration

Khulna city is 45.65 square kilometre with a population of 663 thousand and a declining growth rate of -0.99%. Currently, the density of population in the city is 14 thousand per square kilometre (BBS, 2013). The trend of population growth in Khulna city was relatively stable between 1901 and 1951. Urban population grew at a rate increased by 4.25% in 10 years’ time by 1961. The rate of urbanisation profoundly increased in the next ten years, and by 1974 this was 13% (Annex 2: Shift in the population, growth and density in Khulna city). The first uprise in the population between 1950 and 1960 is linked to the drive for industrialisation (Shamsad and Shamsad, 2004) which brought migrant workers to the city. The following ten years went through significant political shifts in the region. The Kolkata riot that instigated religious violence between Hindu and Muslim resulted in migrant Muslims to come to Khulna from Kolkata. Since Khulna was relatively politically stable during the riot and, the east Bengal was mainly a Muslim dominated region, many Muslim chose to come to Khulna city in 1965. The independence war in 1971 further influenced migration between and this time Hindu population migrated to India (which is a Hindu dominated country) but was insignificant in compare to 1965 migration. The evidence of post-independent and pre-independent migration is reflected in the age difference of the Muslim population (In 1961, 80% were Muslim, but currently it is 90%).
Post independent Khulna city observed the collapse of its industries and limited urban development. However, the population continued to grow at a rate of 3.5% (Figure 16). This growth rate then became steady until and even after the post-1971 economic decline, natural population growth continued and rose to half a million by 1981. The next ten years saw a reduced growth of the city’s population as there was a limited investment in the city during the regime of General Irshad. This declining growth has hit the city very hard in the recent years because statistics suggest that the city is now observing a negative urbanisation rate (-0.99%).

Migration has been a critical driving force for urban population growth in Khulna city especially between 1950 and 1981. More than 43% of the population of Khulna city is migrant, which is partly because of industrial activities in the city and partly due to the lack of opportunities in the rural areas (KDA, 2018). Post-1981 decline in economic activities in the city (Ahmed 2003), reduced the migration rate and the city is now observing even a decline in its population. Data on 1998 statistics (KDA 2002a) showed that out of 3.5% urban growth rate, 1.5% was contributed by natural growth, whereas 2% was due to migration. BBS (2013) finds urban transformation is characterised by the rapid growth of the urban population mainly as a result of natural population growth (1.38% per annum) and spontaneous spatial expansion. Rural unemployment (45% of the migrants come for this reason), rural poverty (25%), business opportunity (23.55%), natural disaster (2.30%), and village conflicts also bring the decline in migration rate is also partly blamed to out-migration of people in the city’s periphery areas and sprawl in the urban fringes (KDA, 1998, 2012). Recent literature suggests that recent migration in the city is highly influenced by impacts of climatic disaster in the rural coastal areas of Khulna region (Ahsan, 2013). Recently, the Khulna region is experiencing extreme climatic events because of climate change. Frequent natural disaster in this region is forcing people from adjacent rural areas to migrate to Khulna city decade (Hasan, 2010, Ahsan et al., 2011, Kundu and Sowgat, 2013; Sowgat and Kundu, 2016).

Figure 16: Rate of population growth and decline in Khulna city between 1901 and 2011

Source: BBS, 2013; Sowgat, 2012
2.2.5 Built environment and land use

Data shows an almost insignificant change in the land use between 1961 and 1998, and therefore, clearly, the increased population growth has highly influenced the land use change after 1998 and until now (table 11). There has been a drastic reduction of agricultural land over time and currently is a 43% reduction of urban agriculture land. There is no significant space provided from recreation purpose. If compared with the population growth, the land use transformation clearly shows increased pressure on the vacant and agricultural road because of the gradual increase in population and urbanisation. The data on residential land use did not vary until 1998, and therefore it can be claimed that population density in the residential or built-up areas has been very high. Although, the city does not have many high-rise buildings, (only 0.44% of the buildings are either equal or above floor height of 5) (Source: Author’s calculation from 5 m resolution image of Khulna city, 2014). Current data show limited space allocated for commercial and industrial land use. It indicates that the city is yet to develop a firm economic growth that is led by commercial or industrial growth.

Table 11: Land use changes in Khulna city between 1961 and present

<table>
<thead>
<tr>
<th>Types of Land Use</th>
<th>1961</th>
<th>1998</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>28.7</td>
<td>28.13</td>
<td>49</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>--</td>
<td>1.04</td>
<td>2.45</td>
</tr>
<tr>
<td>Agricultural</td>
<td>25</td>
<td>52.20</td>
<td>8.82</td>
</tr>
<tr>
<td>Water Bodies</td>
<td>06</td>
<td>1.14</td>
<td>5.65</td>
</tr>
<tr>
<td>Road</td>
<td>2.8</td>
<td>4.96</td>
<td>12.34</td>
</tr>
<tr>
<td>Restricted Areas (Military areas)</td>
<td>0.2</td>
<td>0.62</td>
<td>3.88</td>
</tr>
<tr>
<td>Manufacturing &amp; Processing (Industrial)</td>
<td>12.15</td>
<td>4.55</td>
<td>4.65</td>
</tr>
<tr>
<td>Commercial</td>
<td>0.3</td>
<td>1.86</td>
<td>3.39</td>
</tr>
<tr>
<td>Education and Research</td>
<td>3.9</td>
<td>1.40</td>
<td>3.01</td>
</tr>
<tr>
<td>Vacant Land</td>
<td>7.6</td>
<td>0.31</td>
<td>1.26</td>
</tr>
</tbody>
</table>

Source: Ahmed 2002; KDA 2002a; KDA 2012

Landuse for industrial and manufacturing activities decreased by 7% between 1961 and 1998. This change reflects the decline of industry and manufacture based industries in the city. Notably, despite the rise in the density of population in the city between 1961 and 1998, the use of residential land did not change significantly (Figure 17). The increased population growth creates pressure on the available urban land which led to the lessening of public open spaces. Legislative authority not only failed to preserve and revitalise the open space but also to keep balance with the increased population and land scarcity, the standard of public spaces is reducing (KDA, 2002a). Overall, the data on population growth and land use transformation brings out that economic growth or housing supplies have not driven the
transformation of land use this is instead a spontaneous response to the growing population between 1961 and 2001. Existing land use tried to accommodate the influx of population between 1961 and 1998 and after that there has been an expansion of sporadically residential development throughout the city and agriculture use reduced. Over 60 years of the time the city expanded by 18% whereas the population grew more than 8 times from the population of 1961 (A mapping of the growth of built-up areas over time is shown in Figure 18).
Figure 17: Landuse change in Khulna city

Source: SHLC-BD, 2018
Figure 18: Map of urban expansion of Khulna city

Source: SHLC-BD, 2018
2.2.6 Housing

The city has a huge shortage of housing (KDA 2002b) as only 40% houses are a permanent structure in the city (Figure 19). About 58% people live in rented house and 6% households live in rent-free structures (BBS 2014).

Figure 19: Map of permanent and temporary structures in Khulna city

Source: SHLC-BD, 2018

Age wise a large number of buildings are older than 30 years and had little renovations, 22.90% HH have built their houses during the last five years, while 11.37% either developed or renovated between last 10-15 years. About 21% of houses were constructed in the last 15-20 years, and over 30% structures were constructed 30 years back. There has been no housing supply in the public sector over the last 20 years, and current supply is dependent mainly on the private sector. There are severe shortages of housing units in Khulna city, and
by 2020, the city will need 224,000 houses to meet the demand of a growing population (KDA, 2002a). On top of that 90,000 of the existing housing units will require replacement. Even the conditions of existing housing are not satisfactory. In 2001, 32% of the population lived in permanent structures whereas in 2011 that has increased only by 7% (BBS, 2015e; BBS, 2003). The private sector supplies 90% of the houses, whereas only 5.5% come from the public sector or KDA. Managing urban services and facilities for the growing population of the city has always been a challenge for the city.

2.2.7 Urban services

The city authority could not bring the full city under its coverage. About 20.41% of KCC enjoy municipal water supply and 51% of households have access to safe drinking water through tube wells, and only 28% have access to piped water provided by the municipality. Regarding the drainage system, the 68% HH is connected to the drainage system besides their houses. 45% HH have their toilets connected to the drains illegally which has increased at present (KDA 2012). Alongside the sanitation, the municipal waste is also seen thrown to the drains. Only 41% HH in the city have a door-to-door waste collection system. Data also shows that In Khulna city there is only 6 amusement parks and 24 playgrounds and or Stadium (KDA, 2002a). Open space including the park, stadium, the urban green of Khulna city only constitutes about 1.13% of land use (Akter, 2017, p.4). Newly urbanised areas are mainly outside the KCC service coverage and lack access to formal urban services and facilities, whereas people living in an increasingly high density within the serviced areas of the city (Sowgat et al. 2017, p. 149).

2.2.8 Key Urban environment issues

The built environment of Khulna faces a massive challenge regarding housing, traffic congestion, environmental pollution, lack of services and waterlogging. Roads of the city observe traffic congestion because of limited roads in compare to the growing demand. Battery-operated Easy Bike and rickshaw are the two most dominating local travel modes in Khulna city in the absence of public bus service. People pay 10 pence per km for a rickshaw, 5 pence per km for an Easy Bike ride (KDA 2012; BBS 2013). Un-controlled licensing or flexible licensing system has created an unprecedented increase in the easy bikes and has caused increased traffic congestion in the city during peak hours. High pollution is also a character of the city. There are some polluting industries in the city which discharges pollution in the air and river water. The liquid wastes in the process of transportation tend to contaminate the soil as well as the surface and sub-surface water, thereby, creating a wide range of health problems for the city dwellers. In addition, to this noise pollution has been a significant issue these days because of uncontrolled horns of transport on the road.

2.2.9 Neighbourhood characteristics

Before, understanding of neighborhood planning, an insight into the development of neighborhood in Khulna context is crucial. Early neighbourhood classification and concepts can be best understood in Khulna context if their naming is followed. In the oldest part of the city, the neighbourhoods were named after the family name of the surname of a particular clan or ethnic group. For example, Roy para, Basu para, Mia para, Mistiri para- all these neighbourhoods are named after the family titles. This naming indicates that in the past, people of same family title lived close together and closed and extended family members
would gradually form a more significant community. This concept also goes very much with the formation of rural Bangladeshi communities where members and extended members of the same family tend to live in clusters, and on many occasions, the name of the village is named after the family. There are limited scholarly articles to defend this argument but a review of the naming of the places, clearly supports the argument. However, for Khulna, the post-1961 might have influenced the erosion of the family-based living as many of the original residents fled to India and new migrants from India came and started selling to the old neighbourhood. If the current trend is followed, in the new neighbourhoods are no more named after any particular family.

The recent urban expansion within and beyond the city has observed that places are named at times based on topographic and physical characteristics. For example, Lobon Chora, Mojgunni, Boyra etc. Overall reflection of social clustering has been limited in the recent days, and the clustering often is influenced by other urban structural and spatial factors. (Sowgat, 2012, p. 167 & 184) suggested that people select their choice of location based on their income and urban facilities. Although there are still evidence of clustering based on ethnicity, this clustering is diminishing over time. There has been an evident influence of the administrative, geography in the formation and the growth of popular neighbourhoods.

Khulna city corporation has been subdivided into 31 administrative parts each representing an electoral constituency. Government allocation in terms of resource distribution is done following this divisions each of which are known as wards. Population has been the key criteria in selecting boundary for the words but in recent years political decisions are also imposed regarding selecting boundary for a particular ward. Since all allocations from local government are on a ward basis, each of the ward are socially and politically understood as a community cluster, which is mainly headed by an elected local councilor. A councillor office is seen as the key meeting hub for the community and key social decisions are made here. Furthermore, clustering of urban services such as school, community centre, mosques are based on these administrative divisions. Taking form the text on current structure of the neighbourhood, we can claim that existing city development practice have foucs on the geo-administrative division rather than the traditional formation of neighborhood which was orginally dependent on social-aglomaration.

### 2.2.10 Socio-spatial divisions

Despite different national level poverty reduction programmers, the city has spatially excluded the poor, and they mainly live in serviced or poorly serviced areas (Sowgat et al., 2017). Most of the informal jobs demand hard physical labour but provide extremely low earnings. These settlements are poorly serviced and densely populated (CUS, 2011). Although, the city does not have any data on gradual changes in poverty situation in city the latest poverty mapping conducted shows that 32.4% (World Bank, 2016) of the people are poor in the city in 2016, 31.9% (Averaged based on range identified in the map) in 2010 (World Bank, 2010). There are clear divisions of poor and non-poor areas in the city because most neighborhoods in the city are spontaneously developed. CUS (2005) conducted a study of slum population in the city and found that most administrative neighborhoods had slums. Slums grew all over the city. However, large slums were more clustered around the city peripheries (eg. Rupsha Slum, Railway Slum, Khalispur slums). Spatial data also recognize that slums are built along the railway line, as there were empty parcels of land to encroach. There have been sporadic settlements of poor people within the unplanned residential areas. However, the planned residential areas managed to keep away the slum population out of its
boundary. Poor people tend to live at the peripheries of these planned residential areas. Non-poor settlements also have to distinct spatial division.

Two main planned residential areas namely Nirala and Sonadanga hosts higher middle-income tenants and high-income owners. Also, an unplanned residential area attracted high-income group, which is located along the ‘Hazi Mohsin’ road strip. Recent developments along the Zila school field also attracted development of apartment housing because of its proximity to the government administrative buildings and open spaces around it. Apart from these selected areas, the mixed residential areas mainly host lower middle income and middle-income population.

Figure 20: Neighbourhood classifications in Khulna city

Five distinctive spatial characters are prevenient in the city as far as spatial division is concerned: slum areas, unplanned middle-income areas and planned high class areas. Slums and squatter settlements are characterized by dense living, temporary structure, no provisioning of urban services and are built on encroached land if not rented. According the KDA:

“Squatter settlements are those which are unauthorized construction and where the poor people live in thatch houses without or with inadequate housing facilities such as sanitation, drainage, electricity, water supply, etc. Slums are defined as legal
The unplanned areas mostly have two-storied buildings with steel turf roofs. Irregular street patterns (lack of legibility and hierarchy), low width of roads in these areas, small building size with organized layout structure (Kuffer & Barros, 2011), improper setback and presence of gate locks, etc. (Rajapaksha et al. 2016) are dominant characters of these non-poor yet lower middle- and middle-income areas. The planned areas are mainly provided by the site and services schemes by the public authority and apartment-based staff housing by public agencies. The planned areas are characterized with gridiron road and building pattern, uniform land cover, availability of basic amenities, available green space (proper setback), generally larger building size, low-moderate density area (Kuffer & Barros, 2011) etc. (e.g. Sonadanga, Nirala, Boyra etc.). But these planned areas also have bottlenecks like unaffordability of land in these areas by general people and lack of proper plan implementation in terms of social services (i.e. dustbin, tubewell, medicine shops, public toilets, etc.). The unplanned yet high-class areas are developed along the main wide city roads and are characterized by newly built apartment housing. Semi-urban areas (predominated alongside Bhairab and Rupsha river and Khulna-Jeshore rail line area,) are characterized by low density, limited access to urban services, dominance of semi-permanent structures, presence of agricultural land and middle income or low-income population.

2.2.11 Economy

Khulna’s GDP per capita of Khulna is around £1288, and the gross domestic product is estimated to be £166 million. While shipping activities have shifted mainly to Mongla Port, the industry sector represented by more than 800 mills and factories has also witnessed the significant reduction of activities in the manufacturing sector. It is estimated that 20% of employment from the industry and manufacturing has been lost because of the collapse of the industries and led to dependency on the service sector (KDA, 2002a). The city is dependent on its service sector (76%), but industry and manufacturing sector (19% of jobs) is the second important sector (ADB, 2016). The city has a high unemployment rate of 9%. Female meaning contributes only 11% of jobs that the women workforce is underutilised in the city (male-female ratio is 108). 20.5% people are employed in the informal sector in the city (male 18.67% and female 1.87 (BBS 2014)). Alarmingly, currently 26.5% male are unemployed in the city whereas female unemployment rate is 24.6%. Average monthly earnings of the working population are between £360 and £560 Rahman (2017). Only 27% of people are earning £510-£700 whereas the income differential of the intra-household in Khulna city. It is estimated that approximately 40% of the population is under the poverty line, and 20% lives in slums (ADB, 2011). One-fifth of households live below the poverty line (ADB, 2016).

Because of a labour-intensive industrial base, traditionally Khulna City has been functioning as a significant employment centre. Industries have led to employment crisis in the city, forcing its growing population to rely mainly on the service sector. Trend analysis between 1991 and 2011 statistics shows that service and business sector has constantly contributed 80% to 82% jobs in the city. In 1991 jobs in the manufacturing sector contributed 7% of jobs but now the contribution increased to 17% because of the new shrimp-based industries. The major shift in the employment sector between 1991 and 2011 has been the agriculture sector.
Because of the decrease in urban agriculture land, employment in this sector decreased by 8% over the last 30 years. A member of chambers of commerce in Khulna city claims:

“The city is in crisis. We have limited investment in the city, resulting in a reduced number of jobs and opportunities. This city will soon decline if there are no new investments” (Interview, 2018)

Alarmingly, the city still has many dependent populations (under 15 and over 60) who are outside regular employment. In 1991, 63% of people were dependent, and currently, that has dropped down to 40%. Thus, the active age group has been the main workforce in the city. Being a female, many among them are outside work and mainly contribute to their own house or others’ house as a domestic worker. Although the establishment of Khulna University created new jobs in the city, the jobs are high skilled jobs mainly offered to academics from all around the country. As a result, locals had limited access to new jobs and are mainly dependent on informal and private sector jobs. New employment in the shrimp processing industries is remarkable and positively changed livelihood of some locals. Overall, the livelihood of the citizens in Khulna is gradually shifting from skilled jobs in the manufacturing sector to low skilled jobs in the informal service sector.

### 2.2.12 Health: current status

Discussion on the current built environment shows that modern sanitation and open space situation in the city is failing to provide a healthy living condition to its city dwellers. Health care service in Khulna city followed a pluralistic approach (see Figure 21) and mostly provided by three different authorities namely, City Corporation, government and private sectors. Government health care services include specialised hospitals, charitable dispensaries and some general hospitals are provided and maintained by MoHFW (KDA, 2002a, p.144). From the data of Urban Community Health Services, 1996, KDA (2002a) acclaims that within KCC area government operates nine general hospitals, three health care centres and nine FP&EPI clinics, KCC operates six general hospitals and 97 FP&EPI clinics, NGO operates 10 general hospitals, 17 health centres and 21 FP&EPI clinics and private organisations operate 35 general hospitals, 10 health centres and one FP&EPI clinic.
National Health Service delivery is a centralized system under MoHFW and at the local level service delivery is influenced and governed by the local government. Following the top-down approach, government health service is delivered from national to local level where City Corporation provides need-based health care services within its jurisdiction (GoB, 1983).

Encouraged by profit-motive private sectors mostly deliver their services in the areas where there are demands for health services (see Figure 21), such as, in the high-income residential area, centralized places or in places with available patients. However, NGOs follow different approaches and mostly concentrate their services in slum areas or poorer neighbourhoods and provide focus on maternal and child health care provision.

Moreover, healthcare infrastructures are spatially distributed in an uneven manner throughout the Khulna city without the considerations of the density of population or the number of population or number of households. According to KDA, (2002b) there is no spatial distribution pattern of health care centers, which create spatial imbalance in service provision at neighbourhood level. The existing health infrastructure in Khulna city developed in the inner city following an aggregated pattern, where most of the health care centers are located within close proximity of inner neighbourhoods. However, in the city periphery and in the outer suburbs there are only a few health care facilities. As household density is poorly considered in the provision of health care infrastructure at the neighbourhood level, distribution of health facilities in neighbourhood are clearly uneven. For instance, ward 31 being a densely populated area there is only one health care center and ward 04 located at the city periphery does not have any health care center. Again ward 23, a small...
neighbourhood with low household density, has the highest number of health care centers (BBS, 2012; KDA, 2012). However, health care facilities are mostly distributed proportionately within the close proximity of the poorer neighbourhoods (KDA, 2012; CUS, 2011) (see Figure 26).

**Figure 22: Healthcare distribution at neighbourhoods of Khulna City**

Health care service delivery is highly centralized and controlled and operated from the central level, which led to inefficiency in service delivery at neighbourhood and city level. Local development plan such as master plan, DAP also failed to provide clear guidance about the responsibilities of local delegated authorities regarding service provision (KDA, 2018, p.3-6; 2002b, p.82-89). Realizing the need of neighbourhood level facilities, KDA, 2002b further states that government need to take initiative for the development of neighbourhood level health facilities as so far, no initiatives were undertaken at neighbourhood level. This clearly delineates the failure of local development plans to address the neighbourhood level challenges and issues.

The limited number of government health infrastructures to deliver health care service provision pressurises the health care delivery system and make the citizen dependent on
private services (KDA, 2002b, p.83, 2012, p.145). There are eight government health care
centres, whereas 72 private health care centres and 27 community healthcare centres in
Khulna city (BBS, 2013). Low and lower-middle-income groups prefer public health care
facility because of its lower cost but because of the lack of health centres and hospitals poor
people find this extremely difficult to get access to available services. Long queues are delays
common for those who are unable to get private services. In fact, about 45.98% of
households undertake private healthcare facilities for regular treatment. Due to the lack of
quality services of public health care solvent households are gradually shifting their option to
private healthcare services (KDA, 2018, p.2-12).

Lack of health data also creates challenge in health-related service provision. Such as, UN-
Habitat (2004) identify ‘Under-five mortality’ which is the ‘probability expressed as a rate
per 1,000 live births, of a child born in a specified year dying before reaching the age of five’
as an important indicator to measure the quality of urban life. Moreover, several
international organizations including UNESCAP, World Bank, UNICEF also considers this as
an important indicator to measure the performance of health service and to evaluate the
health status (UNESCAP et al., 2015; UNESCAP, 2017; UNICEF et al., 2014). Despite this
much importance, the rate of under-five mortality related data and information is not
available at city level. However, in Khulna district level the under-5 mortality is 49, and it is
far better than that of national average, which is 64 (BBS and UNICEF, 2009, p.82-83). The
inadequate number of public sector health care facilities and imbalance of public-private
service facilities in terms of cost and quality; are one of the major issues regarding healthcare
provision in Khulna city. Because of the limited and inadequate number of public health care
facilities, private sector dominates the health sector in Khulna city, which is often motivated
by profit and offer expensive services (KDA, 2002a and KDA, 2002b). This limits the access
of the poor to the private health care service centers and contributes to deprivation (KDA,
2002a).

2.2.13 Education: current status

In the KCC area, central education service is delivered through pluralistic approach and
mainly provided by the government, the private sector and NGOs, however, the primary
education is mostly publicly financed and operated by the Ministry of Primary Education
(MoPME) (World Bank, 2008). However, public and private sector follows different
approach regarding education service provision. Public education is delivered either by
central government (MoE or MoPME) or KCC. For education delivery in Khulna city, public
service delivery is followed by need-based pluralistic approach, according to which, central
government either directly provide education service or delegate the responsibility to KCC
and provide service based on needs. Whereas, private sectors including different private
institutions and CBOs is completely focused on profit motive and NGOs are solely engaged in
education provision in urban slums of Khulna city (see Figure 23). Unlike health service
 provision, government education service is not provided following any strata from district to
city level, rather than only provided as city level service and delivered mostly based on the
need. Education service being controlled by the central government and delivered as city
level service, almost overlook the neighbourhood situation. Although the structure plan and
the DAP, 2018 emphasized primary and pre-primary school development at neighbourhood
level, there are hardly any specific neighbourhood standard or guidance or distribution of
responsibilities except identification of the implementation authority regarding service
provision proposed in the policies (KDA, 2018, p.3-6; 2002a, p.149-155; 2002b, p.89-95).
In 2011 in Khulna city, there is 77 government primary schools, 30 registered primary school, 23 private non-registered primary schools and 53 NGO schools (KDA, 2002a; BBS, 2013). According to KDA (2002), 450-acre area of KCC area is used for education and related infrastructure. About 23,645 students are enrolled in government primary schools, whereas only 5372 and 10638 students are respectively studied in private, and NGO operated schools (KDA, 2002a, p.71-73). Interestingly, the enrolments in colleges are high in comparison to primary level education and the higher secondary level institutions get more students (see Figure 24). Enrollment of higher secondary level could be because of the students who migrate from nearby districts and Thana to get an education. Since most rural areas have a limited number of higher secondary and secondary level institutes; students often come to the city. KCC is obliged to ensure free primary education provision and provision of general and primary education within its juridical area as per KCC ordinance KCC developed four schools within its juridical area (KCC, 2018). However, in the urban
slums of Khulna city education NGOs and private sectors provide supports through their programs.

**Figure 24: Number of students studying in Khulna city**

<table>
<thead>
<tr>
<th>Education Institution</th>
<th>No of Students</th>
<th>No of Education Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>University</td>
<td>585</td>
<td></td>
</tr>
<tr>
<td>Medical College</td>
<td>1351</td>
<td></td>
</tr>
<tr>
<td>Technical and Vocational Institution</td>
<td>3272</td>
<td></td>
</tr>
<tr>
<td>Madrasah</td>
<td>5923</td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>19</td>
<td>67091</td>
</tr>
<tr>
<td>Schools and Colleges (operating jointly)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary School</td>
<td>4429</td>
<td></td>
</tr>
<tr>
<td>Primary School</td>
<td>46569</td>
<td></td>
</tr>
<tr>
<td>Kindergarten</td>
<td>10638</td>
<td></td>
</tr>
</tbody>
</table>

**Source: BBS, 2013**

Khulna city is comparatively performing better in primary education provision in compare to other major cities of Bangladesh. The ratio of primary school and students for Khulna city is 1:278 (BBS, 2013), which is comparatively better in comparison to most of the major cities of Bangladesh. For instance, this ratio for Dhaka city is 1:640 (BBS, 2013b), for Barisal city is 1:352 (BBS, 2013a), for Chittagong is 1:664 (BBS, 2013b), for Rajshahi is 1:595 (BBS, 2013f), for Rangpur is 1:252 (BBS, 2013e) and for Sylhet is 1:888 (BBS, 2013h). Likewise, the ratio of secondary school and number of students for Khulna city is 1:278 which is also better in compare to other major cities as for Dhaka the ratio is 1:729 (BBS, 2013b), for Chittagong it is 1:853 (BBS, 2013d), for Barisal it is 1:348 (BBS, 2013c), for Rajshahi it is 1:590 (BBS, 2013e) and for Sylhet it is 1:815 (BBS, 2013g). In higher education provision, Khulna is comparatively backward than Dhaka, Chittagong, Barisal and Rajshahi. In Khulna city the ratio of college and student is 1:3531 (BBS, 2013). Khulna city has the second highest literacy rate according to the statistics of 2011; which is 72.68% (BBS, 2013), while the literacy rate of Dhaka, Rajshahi, Chittagong, Rangpur and Sylhet are respectively 74.6%, 71.9%, 58.9%, 61% and 63.9% (BBS, 2013b; 2013c; 20113d; 2013e; 2013f, 2013h).

Moreover, unequal spatial distribution of education institution is also responsible for reducing access in education facilities. Primary schools and high schools are also distributed disproportionately within Khulna city. For instance, in some neighbourhoods (ward no 08, ward no 16, ward no 17, ward no 21, ward no 28, ward no 24, ward no 31) there are no primary schools. Even with the highest household density there are no education institution in 24 no ward and also in ward no 31 there are no primary or high school (Figure 25), for which students of these neighbourhoods are forced to travel in other neighbourhoods in search of education opportunities (KDA, 2012; BBS, 2011). Even the poorer neighbourhoods are not considered for the distribution of education facilities and thereby these areas are the most vulnerable. For instance, ward no 16, ward no 17 and ward no 31 are mostly concentrated with poor settlements, but there are hardly any primary and high school (KDA
Moreover, in the neighbourhoods of the inner city the number of education institution is comparatively greater than the outer neighbourhoods of periphery (KDA, 2012) (see Figure 25), for which students of the surrounding neighbourhoods regularly travel in the inner city, which creates pressure in the inner neighbourhoods of Khulna city. However, the major issue regarding education provision in Khulna city is the insufficient number of education infrastructures.

**Figure 25: Distribution of education institution in Khulna City**

Source: SHLC-BD, 2018

Study reveals that in six schools there have no school building and there is an acute shortage of teachers in compare to the number of students (Biplob, 2015). Schools are also inappropriately distributed, such as where some neighbourhood offer more than one government schools, in some wards there is school at all. Moreover, some other major issues regarding education provision in Khulna city includes imbalance between public and private sector in terms of quality and cost, urban poverty and inequality, lack of inclusiveness and dropout rate. Due to unaffordability, expensive service provision by private sectors and limited number of government service, often the urban poor can’t access formal education
60

service and thereby undertaking free primary education often drop out in a massive rate in the early secondary age.

2.3 Planning and development

2.3.1 City governance and structure

Khulna is a city corporation and has four categories of multiple actors from national and local levels are engaged in city management. The first category includes national-level public department and non-departmental bodies including PWD, LGED, DPHE, NHA and RHD. These organisations typically work for overall infrastructure development such as constructing roads, houses, drainage networks and public buildings. Apart from the infrastructure development, the DPHE and LGED get involved in upgrading informal settlements and poverty reduction programmes coordinated with the city corporation. The DPHE works for better sanitation whereas the LGED implements different informal settlement upgrading programmes in conjunction with international organisations. The second category of institutions includes the KWASA, City Corporation for Khulna city (KCC) and the KDA. KWASA is responsible for water supply in the city; KCC collects most of the taxes and revenues and is liable for any infrastructure development in the city. KDA is responsible for planning and development control for Khulna city. However, the KDA is also responsible for the implementation of the plans without any further institutional support or resources.

In practice, KDA’s function is limited to the provisioning of planning permission and residential area development schemes. The third type of institution consists of both local and international NGOs, which follow neither city-level or national strategies. However, NGO activities require prior authorisation from related public departments and are therefore nationally regulated. Current NGO projects include sanitation, housing for the poor, solid waste management, water supply, urban health programmers, family planning programmes and micro-credit for income generation. The fourth category is the private sector that includes real-estate developers, business entrepreneurs and individuals. The private sector plays an active role in Khulna city regarding housing and public service provisions because of the budget constraints of the local public sector and local city council in meeting the growing demand. Especially in the housing sector, the roles of the private sector and individuals are predominant because of limited public sector investment.

KDA often engages external consult for master plan preparation and its staff or officials from KCC to have very little input to the plan. Current participation process in the plan preparation stage is also not transparent and clearly defined. The Khulna city is being planned following utopian or blueprint approach (Sowgat et al., 2017).

The planning interventions are done according to the population projections and land use changes determined by the project team (KDA master plan preparation project team). Nonetheless, the peoples’ participation is merely addressed which does not have any policy level application in the preparation of the city plan of Khulna. Ahmed & Shawpan (2009) claims that KDA does not have guidelines in place to ensure peoples’ participation. Lack of

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3 In urban areas, development authorities (6 authorities), city corporations (12 city corporations), municipalities (there are 329 municipalities), wards and Mohallas are the main administrative units.
coordination with people seriously affects the plans. Because of corruption and political pressure, however, city development authorities often showcase false or ineffective participatory mechanisms as part of their planning practices. In such a situation, where local agencies are required to engage the community in consultation, it is commonly opined among planning practitioners that city development authorities tend to seek out ways to satisfy the donor demands without undertaking any reforms (Khan & Swapan, 2010 cited in Khan & Swapan 2013, p.190). Likewise, political consensus is often a barrier to successful implementation of the plan (Chaudhury, 2010, Rahman, 2008; Sarker, 2008). Ongoing political unrest and lack of consensus seriously hinder the implementation process of city development projects. Large political parties failed to fulfil their election manifesto regarding the country’s development, and opposition parties would often hinder development dialogues between the community and city authorities.

2.3.2 Coordination among authorities

Lack of coordination among the city management agencies management leads to multiple plans not aligned with each other. For example, apart from the master plan prepared by KDA, there is an individual plan for water supply (prepared by KWASA), drainage master plan (prepared by KCC) and faecal sludge management plan (prepared jointly by an NGO and KCC). Again, Bangladesh Railway is currently preparing a plan that includes a new rail line on the opposite side of the Rupsha River than KDA’s Structure Plan, 2001–2020 (ADB, 2016). Such dichotomy further complements the development process and end up in unimplemented plans. One example of lack of coordination could be the difference in definition of the city boundary among different agencies. Because of the difference in city boundaries followed by different agencies, work in different jurisdiction get further complicated in the planning process. Because of the boundary confusion, agencies exclude areas inside master plan zone or include areas outside the zone while proposing their plan.

Under-representation of the local government members severely affects the planning process. Only two Ward Commissioners (people’s representatives) of the Khulna City Corporation are included in the Executive Body of KDA. Furthermore, KDA has fourteen sectorial policies for the development of the city, among which only housing sector policies set out for promoting participatory development process. DAP suggested conducting a community meeting with the interested community groups only. The suggestion was a positive indication of introducing peoples’ involvement in city development, but the consultants were not legally bound rather they were just only encouraged (Khan & Swapan, 2013). Limited coordination also results in the dichotomy of activities at the implementation stage. Literatures (Rahman, 2017) find that lack of coordination between KCC and KDA often leads to unsuccessful implementation. Since KDA only have the authority to plan, they cannot implement any significant project unless KCC invests money in it. However, during the planning process, KDA often do not consult KCC regarding the practicality of implementation.

2.3.3 Planning policy framework

In the absence of national-level planning policies, the city plans urban guide development for the city. The overall planning approach for the city planning looked into ‘problem-solving
approach’ supported by the specific ‘goal of achieving strategies’ (KDA 2002c). The first tier of city plan complies the strategic plan or urban strategy plan. The plan has comprehensive overall physical, economic, social and environmental policies regarding the urban development for 20 years. The structure plan is the second-tier plan following the upper-level planning strategies. The structure plan deals with the urban structure or builds up areas. The major items of the description of this planning area major transportation network, connected with the built-up area. The structure plan is an ‘urban development strategy at city level’ (KDA 2002a, p.2) having a broad structure of the future city. The plan describes the policy intervention. The next level planning instruments for Khulna city is the statutory master plan that concerns for more micro level details than the previous plans. The master plan for urban development control mechanism for desired land development in the city. Khulna city master plan is the sole planning and development document to control the infrastructure development in the city. The main idea of the plan is to promote the standard land use zoning including the development of the essential urban services.


“The policy objectives for the Urban Strategy of Khulna city were derived from national development goals spelt out in the national plan document”
(KDA 2002c, p. 9).

2.3.4 Policy implementation realities

However, a review of the plans and draft plans prepared by Khulna Development Authority do not recognise how these policies are reflected in the plan. The documents are unclear about the strategic direction reflected in the plan. Lead consultant of the Khulna Masterplan, Dr. Chaudhury highlights in one of his papers that overall only 25% of the planning proposals have been implemented between 1961 and 2010 (Chaudhury, 2010) (See Table 12).

As far planned intervention is concerned, over the last 20 years the city planning authority (KDA) invested in 10 residential developments for middle and high-income people. Both KDA and KCC also constructed new roads in the city and built some basic service infrastructure. In addition to this, in Khulna, several projects are being taken with the help of different international donor organisations to boost the built environment of the city. For example, ‘Climate Change-Adapted Urban Development in Khulna’ project is carried out in co-financing with ADB’s City Region Development Project (CRDP) and SIDA. The component supported by KfW aims at improving the resilience of Khulna City Corporation by providing transport infrastructure which takes into account climate change, poverty and governance aspects. Measures have included the raising of embankments, improving access roads to slums and key road intersections as well as constructing bus and river terminals. The project is being implemented by the Local Government Engineering Department (LGED) and benefits 200,000 people (KfW, 2017).
Table 12: Implementation status of the 1961 master plan proposals

<table>
<thead>
<tr>
<th>Sector</th>
<th>No. of Development Proposals</th>
<th>Status of Implementation of Proposals</th>
<th>Overall Implementation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Fully No. %</td>
<td>Partly or in Modified Form No. %</td>
</tr>
<tr>
<td>Road Transport</td>
<td>18</td>
<td>9 50</td>
<td>2 11.11</td>
</tr>
<tr>
<td>Public Building</td>
<td>4</td>
<td>1 25</td>
<td>1 12.5</td>
</tr>
<tr>
<td>Commerce</td>
<td>15</td>
<td>3 20</td>
<td>- -</td>
</tr>
<tr>
<td>Industrial Area</td>
<td>15</td>
<td>3 20</td>
<td>3 10</td>
</tr>
<tr>
<td>Open Space</td>
<td>21</td>
<td>- -</td>
<td>3 7.14</td>
</tr>
<tr>
<td>Health Facilities</td>
<td>7</td>
<td>1 15.71</td>
<td>1 7.86</td>
</tr>
<tr>
<td>Special Project</td>
<td>4</td>
<td>- -</td>
<td>1 0.13</td>
</tr>
<tr>
<td>Overall Status of Implementation:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Chaudhury, 2010. * Note: Proposals partly implemented or implemented in modified form is valued as 50% of full implementation.

2.3.5 Investment and planning

Both the government (which is allocated to KCC and KDA for infrastructure development) and private investment are extremely limited in Khulna (Rahman et al., 2011). KDA (2002c) claims that a higher share of the national resources while Khulna receives comparatively a lower share. A leading business entrepreneur in Khulna claims during his interview:

‘To foster achievement of the planning objectives, the preferential investment may be necessary. The size of the private sector investment is small, and Khulna is yet to have the congenial atmosphere for large-scale investment by the private entrepreneurs.’

Interview with two different business investors finds that because of the lack of supporting infrastructure investors are unwilling to invest in Khulna. The investors also have limited incentive from the city authority which would encourage them to invest. A recent report from the Asian Development Bank (2016) reveals that KCC’s own-source revenue as a share of total revenue was 30% in fiscal year (FY) 20124. Its largest source of own-source revenue is from property taxes followed by solid waste collection fees. Khulna’s operating expenditures

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4 Khulna City Corporation collects revenue from mainly two sources. The biggest one is the ‘holding tax’. Wealth, license fees from trade and transportation are in the others part. Latest update of tax collection report reveals that from 2015, the KCC authority collected revenue of total $9.57 million having a deficit of $132.41 million in total to December 2017. Here deficit was calculated by subtracting the collected revenue from all sources available from actual revenue should have been collected. On an average, KCC has a deficit of $44.14m per year since 2015 to till now (calculated from KCC data). However, in 2017, the authority has collected total $4.22m that was $5.75m in 2016 (KCC 2017). Most of the revenue was collected from holding tax and deficit is highest in this section without no doubt. The main reason of this sort of low revenue collection is the tendency of the holding owners not to pay the holding taxes. Moreover, lack of efficiency to collect the due taxes by the KCC is another bottleneck of having this sort of low revenue collection resulting resource deficiency.
averaged 69% of total expenditures from FY2010 to FY2012. Government grants accounted for an average of 55% of its total revenue during the same 3-year period. KCC has never borrowed from the market but has taken multiple loans from the Bangladesh Municipal Development Fund for capital investments. On the other hand, KDA sources, it is income for planning authorisation and development of site and services schemes. It is also dependent on allocation from the government for the major projects.

Significant financial supports for the projects come from various international donors. Some of the plans are implemented through the support of the German Development Bank (KfW), JAICA, and World Bank (KWASA, 2016). The recent development includes construction of a road, improvement of drains and water works to improve water supply. However, there is limited financial support from investors or the government to invest to boost up the economy. The challenge of this donor investment is that they focus on their international agenda rather than focusing on local agenda needs. A sector expert from one of the key donor organisation states:

“...We have clear and specific agendas set by our organisation. Our project activities in Bangladesh are not a set of isolated efforts but a part of the international goals that we have set, following the current international crisis. For example, adaptation to climate change is an utmost priority for this region.”
(Interview with an NGO expert, 2018)

Donor-driven agenda play an important role in city development, but to some extent, it often undermines the local need. Local city authorities often negotiate with the donor to promote their local priorities. Discussions between the two parties on some occasion help to merge the city agenda with the international agenda. An executive from KCC adds:

“...We have regular meetings with donors. During these meetings, we always try to negotiate with them so that they invest money about the needs of the city. We find this difficult to uphold our agendas and priorities because the donor organisation cannot help us beyond their set agendas.”

### 2.3.6 Neighbourhood development and planning

Until now neighbourhood-level planning is practised only in planning documentation process at the detail area plans. The first detailed area plan for the city, however, did not focus any neighbourhood regeneration of development approaches. The proposals focus on economic regeneration of the Railway land area and proposals for the low-income residential area. The efforts for neighbourhood-level planning are however reflected in ‘site and service’ schemes aimed at providing land for housing. So far 10 housing schemes have been proposed by the Planning authority. A review of documents of these schemes could not identify any strategic aims to promote sustainability. Most of the schemes are based on subdivision layout of plots with provisioning for roads, mosques, schools and Community Park (See Figure 26). None of the plans to date have any detailed guidelines or proposals regarding sustainability, economic, environmental or social aspects. Once built, KDA does not hold any
responsibility of service provisioning or maintenance of this neighbourhood apart from providing planning permission. KCC is responsible for further service provisioning of this newly developed area. However, KCC does not follow any planning or policy guidelines for the service provisioning. Already existing neighbourhoods that came to existence spontaneously (unplanned residential areas) are mainly transformed through piecemeal construction, modification and reconstruction of the dwellers. KCC often bring minor changes and acquires land for local roads and drainage infrastructure. As representatives of KCC, elected local level city councillors to meet the local people and discuss needs for service provisioning. Once identified, the councillors would negotiate with KCC to help bring fund and project for the road, tube-well, drains, and public toilets, community centres for his or her community. Apart from this infrastructure, regeneration of existing neighbourhoods is absent both in planning and practice.

Figure 26: Map of Nirala residential area

Source: SHLC-BD, 2018
2.3.7 Sustainability and planning

Khulna Urban Strategy Plan (2002), states:

“ensuring sustainability in urban forms, and development spatial plans may be achieved by careful utilization of scarce resources and through the reflection of community priorities and participation’ in one of the key aspects behind formulating the plan” (KDA 2002c, p. 12).

Mentioning of ‘sustainability’ as core strategy clearly reflects that this agenda is prioritised in the city level. However, the city wants to achieve sustainability through:

“removal of long stagnation of the city by revitalizing its growth and to make it a poverty free, livable and economically vibrant city” (KDA 2002c, p. 10).

If we see the subsequent strategic options of the city, we will find there are lack of perception of sustainability with reference to the international ideology and overemphasis on economic growth agenda (KDA, 2002c, p50, p67). The local level planning policies also lack vision in scale down to neighborhood level planning. The only community level service provision related policy interventions are found in master plan of the city that too miss the sustainability issue. Current structure plan says in its page 50:

“(Creating) opportunities for establishing new industries, which may open a new horizon in the production and employment generation’’ (Interview,2018)

One of the consultants of the master plan claims:

“The logic of creating an image for attracting more investment is often presented to support these plans’. (Interview, 2018)

Recent detail area plan (which is still under preparation) focuses on health, drainage, recreation facilities at the neighbourhood level (KDA, 2012, p 4-12). Since there is a clear lack in the basic infrastructure for services at the community level; planners find this difficult to promote environment or social agendas in planning. A professor at Urban and Rural Planning Discipline states:

“City authorities here in Khulna are struggling with provisioning of basic service need. They are far from a holistic ‘sustainable community’ concept. They can only promote social or environmental agendas once they can make sure that they met the basic needs of the people of this city.’” (Interview, 2018)

2.3.8 Integrating migrants

Current planning policies responds to growth and demand for services. Existing sector policies are based on population projection and projection of housing and utility demand in relation to population changes. This clearly indicates city’s intension to host new migrants. City level policies do not offer any direction regarding decentralization or de-population. It does not have any strategies dedicated to population and migration.

66
2.3.9 Health: progress over time

In Khulna city, to meet the service demand of the growing population, the number of hospitals and clinics are rapidly increasing. According to KDA (2018), in total there are 31 hospitals and 89 clinics in Khulna city (KDA, 2018). Although, the number of private healthcare facilities increased more rapidly than the government hospitals, the health centres (urban primary healthcare centre) provided by the MoHFW in collaboration of NGOs and another private organisation is also increasing simultaneously (see Figure 27).

![Figure 27: Change in the health facilities between 1991 and 2011](source: BBS, 2013, 1991)

Moreover, most of the healthcare facilities are within the range of densely populated area, which is positive to ensure the physical access to health care centres (Figure 22). Islam and Aktar (2011) claim that UPHCC (urban primary health care centres) is the most accessible health care facility. Considering 500m distance UPHCC is available to 40% of the population, whereas, government hospital is available to 15.25% of the population and private facilities are to 22.64% population (Islam and Akter, 2011, p.39). Because of the emerging number of education institutions in Khulna city, the average daily travel distant for the education purpose is also minimal, which varies between 0.05-1.75 km, which is reasonable regarding time and cost than another travel purpose (KDA, 2012, p.2-15).

2.3.10 Education: progress over time

Because of policy emphasise and government focus on education provision, the average literacy rate in continuously increasing in Khulna city. In comparison to the 58.7% average literacy rate of 7 years and above; in 1991 in 2011 the average literacy rate was 74.92% and at present (in 2018) it is 74.40%, which is a slight decreased from 2011 (BBS, 1992; 1997, KDA, 2018, 02-12). According to the statistics of 2011, the literacy rate of Khulna City Corporation (KCC) is 65.06% of the total population aged 15 years and above, whereas the male literacy rate above 15 years is 73.26% and for female it is 54.98% (BBS, 2014). Although this literacy rate seems pretty high but there is a major deviation in the definition of literacy in Bangladesh in compare to the definition of UN-Habitat. UN Habitat (2004), defines literacy as the “percentage of the population, male and female, aged 15 years-old and over who can both read and write with understanding a short simple statement on everyday life” (p.18),
where according to the operational definition of BBS (2015), literacy is the “ability of writing a letter in any language” (p.7). The definition did not consider understanding ability of any daily statement.

Despite government’s continuous effort to ensure inclusive education provision and reducing drop-out ratio, Khulna city is still backward in achieving gender inclusive education delivery and eliminating the drop-out rate. As a result, the percentage of school attendance at primary and secondary level is relatively higher than the percentage at tertiary level. Almost equal percentage of male and female attend school at primary and secondary level, whereas at tertiary level, higher percentages of male attend school (Table 13). Moreover, the school attendance rate in government and non-government school at all level including primary, secondary and tertiary level are almost similar. For example, at primary level about 48.56% male attend government school and 52.53% attend non-government school, whereas 51.44% female attend government school and 47.47% attend non-government school (see Table 13) (BBS, 2013).

Table 13: School attendance in the KCC area (in %)

<table>
<thead>
<tr>
<th>Level</th>
<th>Primary (%)</th>
<th>Secondary (%)</th>
<th>Tertiary (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Government</td>
<td>48.56</td>
<td>51.44</td>
<td>46.71</td>
</tr>
<tr>
<td>Non-Government</td>
<td>52.53</td>
<td>47.47</td>
<td>54.35</td>
</tr>
</tbody>
</table>

Source: BBS, 2013

However, there is remarkable progress in developing education institutions. Except for the kindergarten, there is an incredible escalation in the number of the education institutions specially madrasa, primary school and secondary school provision (KDA, 2002a) are seen. Whereas in 2011 there were only 185 primary schools, in 2015, the number increased in 228 and similarly at secondary school, against 86 schools in 2011, in 2015 there was 138 secondary schools (see Figure 28).

Figure 28: Chronological change in number of education institution

Source: BBS, 2013
2.3.11 Policies for healthy and learning cities

Regarding the health and education service provision in Khulna city, city government and other legitimate authorities mostly follow the key policy documents, among which master plan, structure plan and detailed area plan 2002 and the DAP 2018 are the most prominent policy documents. Moreover, in order to control and guide these service provisions, KCC ordinance, local government (municipality) ordinance, local government (City Corporation) ordinance are followed over time. However, these plans and ordinances are largely guided by the national development plan and national goals and objectives. Nevertheless, there is serious recession regarding the inclusion and adaptation of the contemporary international agendas in national level policies, especially in the aspects of education and health. As acceptance of the international development agendas at the national policies pave the way to their inclusion in the local policies and strategies, at city level policies and plans the contemporary international development agendas are hardly reflected in harmony to their emergence. Such as, sustainability concept first emerged in 1987 and in 1992 it was internationally recognized, but in context health and education policies the Sixth FYP first introduced and included the aspect of sustainable health and education service provision (Planning Commission, 2011).

The latest DAP, KDA (2018) did not recognize the direct implication of sustainability agendas in health and education sector. DAP emphasizes the increased number of educational institutions of all forms, schools for disabled children, which indirectly will contribute to increased access and increased literacy rate. Similarly, in health sector, several policies include creation of health awareness, increased access to urban poor, primary health care provision at the neighbourhood level and strengthening preventive health care services (KDA, 2018). Although this might indirectly contribute towards sustainable healthy development, there are hardly any direct guidance or reflection of strategies to attain SDG agendas.

Instead of providing any particular city or neighbourhood-specific guidelines and strategies for healthcare provision, national policies such as National Health Policy 2011 focuses on broad guidelines of health provision from national to local level (MoHFW, 2011). City authorities do not have any local level policies, but they follow the national policy and the local urban plans. Following the agenda of the Fifth FYP to ensure “health for all” and the policies and strategies of the structure plan, master plan propose the development of new health infrastructure and the extension of existing ones’ on the basis of accessibility, availability of adequate land and density of population in a rationalise locational distribution manner (KDA, 2002b). Moreover, to ensure an adequate number of healthcare facilities, KCC is implementing “Primary Health Care” project, under which one primary health care centre will be developed for every 50,000 to 1 lakh population(KDA, 2002b, p88) and primary health care centre will be established in each ward (KDA, 2002b, p88). Structure plan recommends policy provision regarding inclusive health service provision so that most of the urban poor people can get easy and better service access to the healthcare and emphasised neighbourhood-level health facility to ensure primary health care service delivery at the doorsteps (KDA, 2002b, p146). Following the guidelines of structure plan, DAP, 2018 provides special emphasize on ensuring the access of the urban poor to health care services as a means of reducing the level of ‘hard-core’ poverty (KDA, 2018, p.2-21). However, the implications of urbanization and migration on the growing demand of health
service provision is completely overlooked in the policies and strategies (KDA, 2018, p.2-10, 3-2; 2002a, p.40-46).

Healthy living or healthy city is not considered directly at any local level development policies of Khulna city including the Pourashava ordinance, KCC ordinance, local government (municipality) act, local government (city corporation) act, master plan, structure plan (GOB, 1977;1983; 2009a; 2009b) However, different development plan and policies, indirectly consider different aspects of healthy living. Such as the Pourashava ordinance, KCC ordinance local government (City Corporation) act and Local government (municipality) act demonstrated public health as a broad aspect considering health provision and built environment including hygiene and healthy environment (GOB, 1977; 1983; 2009a; 2009b). Moreover, the structure plan of Khulna city focused on inclusive healthcare provision. Pourashava ordinance, KCC ordinance, local government (City Corporation) act and local government (municipality) act emphasize need-based service provision (GoB, 1977; 1983, p.6974; 2009b; p.6752, Planning Commission, 2011), structure plan and KCC ordinance introduce health awareness creation (GoB, 1983); these all indirectly play roles towards healthy living. Overall, health provisioning has been prioritised at the local level. Along with creation of health awareness, the DAP of 2018 recommends projects on slum towards creating healthy living environment for the urban poor in Khulna city. Moreover, healthy sanitation practice and solid waste management and recycling are also emphasized in the DAP (KDA, 2018). However, following the trend of health service situation and trend of relevant services, it is clear that the policies are competing with the ever-growing need and shortage of resources.

Education is mainly guided by national education policy and national level five-year plan. The policy guidelines for the city are provided in the city planning documents. Structure plan of Khulna city recommend policy strategy to develop neighbourhood level nursery and primary school development to produce quality human resource and increased accessibility to schools to increase the enrolment and reduce the dropout rate (KDA, 2002a, p.154). Moreover, enough infrastructure development at primary, secondary and tertiary level is also encouraged in policy to ensure recreational facilities in school and encourage students to attend school (KDA, 2002a, p.154). The DAP proposes for further measures for ensuring access of the poor in education institute so that their basic needs are fulfilled, and ‘hard-core’ poverty is eliminated (KDA, 2018, p.2-21). The masterplan of Khulna city provides spatial standards and guidelines for the development of new educational institutions. According to KDA (2002b) and KDA (2018), for every 3,400 populations one primary school should be established with 0.50 acre to 0.70-acre area which is similar to the Masterplan of 2001. Likewise, at secondary level same spatial standard is provided by the Masterplan of 2001, which is 1.50 acre to 1.60-acre area for 5000 populations so that it can accommodate 800 students. In the recent DAP of 2018, 1.65-acre area is proposed for secondary school with every 5,000 populations. KDA (2018) further recommend standard for colleges and private universities. According to which, for every 36,000 populations one college is recommended with approximately 10-acre area and for development of any private university the proposed area is 5-acre (KDA, 2018, p.3-12).

However, urban planning documents and local level policies of Khulna city have hardly any focus on the implication of urbanization and migration in education service provision (see KDA, 2018, p2-10, 3-2; KDA, 2002a, p 40-46). Master plan of Khulna city 2001 considers the impact of rapid urbanization in education service provision and thereby, proposed
development of new education institutions in the periphery of KCC area considering the potential area of future urban growth (KDA, 2002b, p.94). Current city-level policies are focused mainly on space standard and dependent on the numeric projection of required education institute. Since dependent on national level policy and implementation, the guidelines provided in the master plan are not followed by the implementation authorities (KCC and the ministry of education). The investment and the infrastructure development are mainly dependent on the government’s annual development budgets, which comes to KCC through a direct allocation from the concerned ministry. KCC uses the allocation after consulting with the local level ward councillors. There are no long-term plans or strategy set by KCC regarding this. Overall, current city level policies fail to outline non-spatial aspects of the ‘learning city’ agenda. However, the national level policies play a strong role in promoting low-cost education for all and especially for women.

2.4 Conclusion

Khulna city experienced spontaneous urban transformation with very limited provisioning of planned housing, services or facilities. Despite economic downfall and lack of employment opportunities, the city never stopped growing regarding population. The tradition of compact and unplanned living hosted many citizens within its limited residential areas. Since services and facilities are available in only limited areas; most citizens tend to live in areas that are serviced. The citizens of this city are deprived of piped drinking water, sewerage network, solid waste management services and sustainable public transport options. Housing, sanitation, water supply and other urban services including open spaces can cover only a small area and also very small in number in comparison to the existing population. Within the context of haphazard growth and the scarcity of resources, the city authorities are struggling to cope with the challenges continually posed by the natural urban growth which is backed up by only limited economic transformation. Most plans prepared by KDA are dependent on external funds, but they do not have any long-term investment planning to support the costs (Asian Development Bank, 2016). Without promise and assurance of funding, such a plan is unlikely to be implemented. In fact, the city proposed its first plan in 1961 and the second one was proposed in 2020. However, lack of investment and source of funding led to the failure of those plans and the plans were implemented to a very limited extent. Only successful implementations are the planned residential areas. KDA acted as developer for such residential area development and sold away land as plots to citizens.
3 City Profile: Dhaka

3.1 Background

Dhaka is the capital of Bangladesh and one of the highly populated cities in the world. The city has attracted growth since 7th century and flourished under favorable climate, availability of fresh drinking water and transport routes. This 304 square kilometre city has always managed to attract people and activities because of the geographical settings. The city is 265 km away from second largest city and port city named Chittagong. About 250 km long Dhaka-Chittagong highway is the main transportation between the two cities (Figure 29). Urban economic growth and transformation in Bangladesh is highly centralized in this city and there has been a regular flow of migration to the city. Yet, the city is highly polluted and recently ranked as one of the worst cities in terms of livability. This write up brings before the urbanisation and spatial transformation of this city and offers an insight into the migration despite low livability. This profile represents key issues around the mega cities in the Global South.

3.2 An overview of the city

This section provides a brief introduction to Dhaka, to set the context for the critical arguments in this report. It recognises the history, natural setting, built environment, housing condition, economy, health, and education. The discussion takes a spatial planning perspective to best reflect the overarching questions asked in the SHLC project.
Figure 29: Network distance between top 10 cities of Bangladesh

Source: Google Maps

3.2.1 History

Urban settlements of Dhaka have been the first urban habitation in Bengal, and it dated back to 7th century (Soud&haque, nd). During the Mughal rule (1608) the city was named as Jahangirnagar by the Mughal rulers and was declared as the capital of Bengal. Dhaka became famous for its Muslin cloth trading, and by the 17th century, it emerged as one of the biggest trading hubs in Southeast Asia, attracting trade from Asia and Europe. However in 1706, capital of Bengal was shifted from Dhaka to Murshidabad (now Kolkata of India), and Dhaka lost its significance for the next 100 years until more than a century until the British government colonised Bengal and took steps to transform Dhaka to a modern city. During
this period Dhaka observed changes such as public water supply system (1874) and electricity supply (1878 in Dhaka), the Narayanganj-Dhaka-Mymensingh railway (1886). Before 1864 Dhaka was a small divisional headquarter with an area of 20.72 square kilometres with the population 52,000. In 16th century Dhaka became highly connected to the other region because of Grand Trunk that connected the city to Kolkata. In the late 19th century, accessibility was further enhanced by the construction of railways, including the Dhaka- The railway line, together with riverine and road networks, turned Dhaka into a nodal point acted as a significant trading and commercial centre of the region (Hasan, 2008 in Bird et al., 2018).

Dhaka municipality was established in the year 1864 (under the Act No. III of 1864) to provide civic services including maintenance of road, conservancy, health and education. Source of the fund was municipal tax and conservancy tax. During the Partition of Bengal in 1905 (divide and rule concept initiated by the British government), Dhaka was declared the capital of the newly established state of East Bengal and Assam. Since then, Dhaka has always been a centre of focus for the East Bengal. After the partition of Indo-Pak Subcontinent, Dhaka was made the capital of East Pakistan. The then city demarcated its boundary up to 31 square kilometres with a population of 250,000. After that, attention was given to the increase of political, administrative, economic, industrial, educational, and military importance of Dhaka. Throughout the Pakistani period, Dhaka remained a municipality through the city expanded in size and population. After independence in 1971, Dhaka became the capital of Bangladesh. In 1983 Dhaka became City Corporation under Dhaka City Corporation Ordinance, 1983. By the year 2016 city population was increased to 8,749,468, and the area was expanded to 304.17 square km (BBS 2014). Currently, the city is one of the fastest growing cities in the world because of the high influx of people from across the whole country. Dhaka is the 9th largest city in the world and also 28th among the most densely populated cities in the world.

### Natural setting

Dhaka City is located at 23°42′ to 23°52′ north latitude and 90°22′ to 90°32′ east longitudes. Proximity to the river, an international airport, connection to 8 regional highway and rail network makes Dhaka advantageous regarding its location. The elevation of City (DCC) area varies from 2 to 13 meters above the mean sea level. The overall flat plane and elevation turned Dhaka to be an attractive location for urban settlements. Dhaka’s weather also makes the city very habitable. Dhaka City experiences a hot, wet, and humid tropical climate with the distinct monsoon season. Annual average temperature is 25°C (77°F) and monthly means varying between 18°C (64°F) in January and 29°C (84°F) in August. Nearly 80% (1,854 millimetres) average annual rainfall occurs during the monsoon season (from May until the end of September). Moreover, the availability of ground water is high in Dhaka. Average groundwater level of the DCC area is 88 meters (DWASA, 2015). The water of Dhaka is regarded as one of the best qualities in Bangladesh, and it requires limited purification to make it drinkable.

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5 Dhaka City has been expanded in 2016 and became 304 sq. km. For latest administrative area, the population is calculated based on 2011 census data considering the new administrative area. So, the population number increased.
Despite all the geographic advantages, Dhaka is vulnerable to flooding and earthquake. The vulnerability has intensified because of the large and dense population. Relatively flat elevation and low height expose the city to the flood during monsoon. The four primary rivers make the city highly suitable for flooding during the monsoon. The city frequently experiences flash flooding, and in the past, it experienced significant flooding (1988 was the worst hit). As far as an earthquake is concerned, there is two fault-line crosses the Dhaka City (boundary line of the DCC area) from south to east named Dhaleshwari-Sitalakhya Fault (called Banar fault) and Dhaleshwari-Bangsi fault (called Turag fault) at the south to west. The city has already experienced four significant earthquakes (1775, 1897, 1918, 2011). Since the centre of quakes was not near Dhaka, there were limited damages.

### 3.2.3 Demography

Sex ratio of Dhaka City is highest among the cities of Bangladesh. Sex ratio is 124 that means among 100 families 124 people are male in 2011. Cause of high sex ratio is migration of a large number of males in the city without their counterparts. In 2001 this sex ratio was 125 (BBS, 2014). The population pyramid reflects that 37% populations are aged in between 15-29 years (both male and female). Female population is more than male population for age 0-24. The marital status of male-female people reflects that about 55.4 % male people are
married in Dhaka City area and 62.9% of female populations are married as per 2011 census report.

**Figure 31: Age Sex structure of Dhaka city**

![Age Sex structure of Dhaka city](image)

Source: BBS, 2014

The Muslims comprise 95.71% of the total population, whereas, the Hindus comprise 3.6% of total population. About 0.12% people are Buddhist and 0.55% is Christian. Others comprise 0.02%.

### 3.2.4 Population and migration

Dhaka has a population of 8,749,468 and an urbanisation rate of 5 percent (RAJUK, 2015, p.36). Currently, the density of population in the city is 28 thousand people per square kilometre (BBS, 2015). About 40% of the residential communities of Dhaka have a density over 400 people per acre, 24% have 400 ppa densities, 7% with 300ppa, 10% 250 ppa and only 11% have a density of 150 ppa. Dhaka is the primate city of Bangladesh and the age-sex ratio in the city clearly shows that Dhaka has a large number of dependent populations (30%) (under 15 and over 60) (Figure 31). But, at the same time a good percentage of population at working age group (70%). This city is Muslim dominated (95%) and also known as the city of mosques.

The population of Dhaka is growing rapidly since 1850. The growth started when the British rulers invested on the infrastructure, road, and railway in Dhaka. New offices created jobs and better connectivity attracted business. As a result, people from rural areas migrated to the city. The growth rate reached to 5% by 1940. After the partitioning of Pakistan and India, the then provincial capital of East Pakistan, observed a decline of the population as many
Hindu migrated to India. However, the growth rose to 10% per year by 1970 as the city attracted a lot of migrants in the post-independent Bangladesh (Figure 32). War-torn country was struggling with its rural development program, and therefore people from rural area migrated to look for jobs in cities. The failure of agriculture revolution and limited rural economic growth forced people to migrate to the cities (Bagum, 2007). Rural-urban migration continued in the following years and until recently. In the following years, Dhaka invited even more population because of lack of decentralisation of offices and government activities in Bangladesh. All ministries, and government headquarters are now located in Dhaka. Moreover, apart from Chittagong, most industries are established in and around Dhaka. Because of the very high concentration of economic activities in Dhaka and because of lack of opportunities in other urban and rural areas, Dhaka has become a highly populated city. Dhaka is still going at a rate of 5% and this growth in contributed mainly migration. District level data on urban migration shows that the rate is 24% (BBS, 2015a, p48-50). Most of the migrants in Dhaka are from Khulna. Among 42.49 % migrated people of Dhaka, 13.13 % from Khulna, 9.29 % from Rajshahi, 8.09 % from Rangpur, 5.04 % from Chittagong (BBS 2015a, p 30).

Figure 32: Urbanization rate of Dhaka city

Spatial expansion of Dhaka city could not cope with its fast-growing population. Since 1850, the city has been observing a gradual increase of the density of population. In 1867, the 25 thousand people lived per square kilometre but in 100-year time this rose to 7.5 thousand by 1961. After the independence of Bangladesh, the city did not expand much regarding the area but had to accommodate a large number of migrants from rural areas and the density just doubled only in 10-year time by 1971 (Swapan, et al., 2017). Since then the density has been rising with a sharp increase over the last 20 years (Figure 33). Although the city corporation area expanded in 1981, to develop the infrastructure of the surrounding areas so that more people could move to the periphery of the city, it could not help much in reducing density. Its physical characteristics especially the river limits the expansion of the city. Consequently, the city experienced increased density and went for a vertical expansion to continue welcoming new migrants to the city until recently.
The pressure of urbanisation over the last 40 years has forced the city to transform rapidly (Figure 34). Despite different plans for the city (since 1959), the spatial transformation of the city was mainly driven by piecemeal demand and resulted in proceeds in unplanned and unprecedented urbanisation (Islam et al., 2010). Critical urban settlement of early Dhaka was found around the Buriganga River especially around Nayabganj and the Red Fort. The growth of Dhaka surrounded the river Buringanga and continued to grow in all direction until 1947. During this period the residential areas developed almost spontaneously with a narrow road, congested development, mixed resi-com use. The development during this period was very much like Western medieval streets where narrow streets, use of the ground floor as shops and upper floor as the residences were seen.

Establishments of new government buildings guided the further spatial expansion of the city between 1947 and 1970. After independence (in 1971), Dhaka became the capital of Bangladesh and hosted a large number of migrants. The migrants started to use up the unused lands rapidly. Especially ditches, swamps and marshes filled-up rapidly in order to construct new houses. Individual initiative played a dominant role in this process, and there was a little mechanism in place to control the development. The city authority saw this urban spatial expansion and urban densification to be a future threat to the city and in 1986 established the town planning authority RAJUK. RAJUK came with a new residential project such as the highlands of Dhaka-Tongi axis. However, the initiatives were too small to accommodate the rapid population growth.
At this stage, slums and squatters mushroomed in different locations of the city to support the poor population. (Ahmed, Nahiduzzaman and Hasan, 2018, p.143). Until 1960, there was no fringe and scattered development in the city (Ahmed, Bramley & Dewan 2012). After 1971 the city experienced new residential uses in the northern urban fringe and all of the residential areas were spontaneously developed (Ahmed, Hasan and Maniruzzaman, 2014) because of massive rural-urban migration (Islam, 1991). Between 1975 and 1998 the city expanded in all directions. Until 2005 people avoided wetlands and flood-prone areas but since 2005 there were new settlements in the fringe areas in the wetlands and flood zones (Ahmed, Bramley and Dewan, 2012, Roy, 2009, Haq and Alam, 2003). Recent literature reveals that recent urban transformation is seen along the existing main roads in the north and northwest direction (JICA & DTCA, 2015). Ahmed (2012) traces the urban sprawl followed three different patterns for Dhaka. First, infill growth that took over the vacant land within the already built up area; second, new developments that converted rural areas and third, leapfrog growth in the urban fringe areas. A combination of these three-growth resulted in rapid transformation of the city and mainly driven by spontaneous and unplanned habitation of migrated people.

After 1990, the city started to grow beyond the river Buriganga and Turag rivers in the north and south. It also saw new high-rises both as residential and commercial buildings. High land value and limited availability of land further accelerated vertical development of Dhaka between 1990 and 2000. During this period violation of building height and use codes was universal. RAJUK became ineffective in implementing its zoning regulation and forced to allow the unplanned changes to the city. In an attempt to provide housing for the citizens RAJUK implemented several sight and service schemes such as Gulshan, Banani, Uttara, Mohammadpur, Bashundhara and Mirpur. Yet, these areas soon converted to mixed-use areas and were struggling to manage growth in the next 20 years.
These new residential areas soon transformed into new hubs of urban expansion and started to expand vertically to accommodate a growing population. Land use changes in Dhaka have been rapid. Specially, built-up area increased more than 81% over the recent 25 years. Especially, these areas increased 88.78% in 20 years between 1989 and 2009 (Ahmed, et al., 2012) (see Figure 35). The built-up area represents residential, commercial, industrial and road infrastructures. This increase has put enormous pressure on open space, water bodies and vegetation of the city. Hassan and Southworth (2017) identify that between 1970 and present the built-up areas annually increased at a rate of 4%.

3.2.6 Housing

Currently, the city faces an acute housing crisis because of low-quality housing supply, shortage of housing, and high land value. Currently, 62.08% of the households live in permanent structure, and others live in temporary structures (BBS, 2015). Most of the households (about 73.96%) live in the rented house, and only 22.16% has house ownership. The government provides 7% of total housing whereas the private sector provides the rest. Out of that 93%, individual developers provide 55% housing (BBS, 2015). For instance, 25,
81,000 housing units are provided annually by the private sector. Land price is exceptionally high in DCC area. In a planned residential area such as in Baridhara, average land price is £261 thousand per decimal (Islam, 2017). Because of high land price in city core private land developers are focusing on peripheral areas of the city. This high land price forces the lower-middle-class households out of the market. Data shows that 57% of people have no land and 4% of people owns around 28% land of Dhaka City. The acute housing shortage is increasing in Dhaka city as by 2035 there will be a need of 120 thousand new housing. Dhaka housing market currently serves the upper and upper-middle-income households primarily. So, most of the people in the city do not own any land. Renting in an unplanned urban periphery or squatting illegally is the only option available to them. Moreover, recent data shows a minor change in the tenancy and structure permanency.

### 3.2.7 Urban services

Dhaka faces severe challenges in meeting the demand of urban services. More than 9.7 million tons of solid waste produces per year in the DCC area. Per person waste generation is somewhere around 0.29 and 0.60 kilograms dependent upon the people of various income levels (APO 2007). A recent report of 2015 assessed that around 62% of the whole city’s waste is managed by DSCC and DNCC involving the NGO’s (Hai and Ali, 2005). Around 15.15% people collect drinking water from tube-well. 5.1% of the households have non-sanitary toilet facilities, and 0.27% has no toilet facilities. The city has a water-borne sewage system, which can serve 25% of the population, and another 30% are served with septic tanks. Drainage congestion and inadequate pumping facility lengthen drainage facility. Because of inefficient solid waste management, wastes block the drains and create water logging in the monsoon. The city comes to a halt every year during heavy rainfall as water take over the major roads. Because of the growing population and increased land demand, there is an acute shortage of opens spaces in Dhaka city. There are only 99 stadium and playground and 17 amusement parks in Dhaka city (Soud & Haque, n.d, p.18). Against the standard of 20-30% of open and green spaces, in Dhaka city, the available parks and open spaces comprise less than 1% area, (Hasan, 2008, p.39) which is alarming and threatening (Hasan, 2008, p.59) the urban living condition in Dhaka city. During the next 20 years’ number of vehicles, and number of trips for Dhaka which will increase traffic congestion and reduce traffic speed at peak hour (from 8 km/hour at present to about 4 km/hour by 2035) (RAJUK, 2015). Data on daily trips shows that car and rickshaw dependency is increasing in Dhaka city whereas there is a limited increase in public transport. Furthermore, future Dhaka is projected to be less walkable as 14% trips will be made on foot in 2035 whereas current on foot trips contribute to 18.51% of the trips. Essential service such as water supply, sanitation, sewerage and solid waste management provisioning still faces shortages because of the growing demand. Only 58.6% people have access to improve Sanitation whereas 84.35% have access to water supply (SHLC calculation based on BBS, 2018). Current data on water supply show that 11.19 million additional people will need new connections (currently 15 million people have access). Again, daily waste generation will increase from 8.6 thousand tons to 13 thousand tons per day. Overall pressure of additional population will seriously affect the future built environment of the city.

### 3.2.8 Key environment issues

Dhaka struggles to provide housing, transport, and service to the increasing population. Although, there have been different plans for the city, mainly spontaneous growth guided the
Traffic congestion and lack of adequate public transport services extremely affects the transport system of Dhaka. The bus makes 90% of the daily trips, even though there are shortages of the number of buses. Overcrowding in the bus is a typical picture in the city. Because of the traffic congestion the average commuting time of the city is 50 minutes and sometimes reaches 2 hours at peak time (Figure 36). These long travel times cost both for individuals and the economy of the city. Dhaka traffic congestion costs about US$3 billion per year in 2010, equivalent to almost 3 percent of the GDP (MCCI&CMILT, 2010). Due to the congestion, 3.2 million business hours lost every day. Because of traffic and polluting industries, Dhaka becomes one of the most polluted cities in the world. Main air pollutants of the city are Nitrogen Oxides (NOx), Sulfur Dioxide (SO2), Carbon Monoxide (CO), Ozone, Volatile Organic Compounds (VOCs) and Lead. Motor vehicles and brick kilns are the main sources of air pollution. The concentration of suspended particulate matter (SPM) in the air, especially in the commercial area is more than 10 times higher than the WHO standard (150 mg/m³) (Alam et al., 2000 in Roy, 2009). 70% of CO₂ comes from the transport sector among them 20-30% comes from Dhaka. Dhaka struggles to provide housing, transport, and service to the increasing population. Although, there have been different plans for the city, mainly spontaneous growth guided the city.

Figure 36: Traffic congestion in Dhaka during the morning peak hour (red-high congestion, orange-moderate congestion, and green-no congestion)

Source: Google maps
3.2.9 Neighbourhood characteristics

Before, understanding of neighborhood planning (discussed in the next section), an insight into the development of neighborhood in Dhaka context is crucial. Early neighbourhood classification and concepts can be best understood in Dhaka context if their naming is followed. In the oldest part of the city, the neighbourhoods were named after either the family name of a particular ethnic group or the names (e.g. Kazi para) followed a particular professional group (e.g. Sakharipatti is the neighborhood where the bangle makers used to live). The old part also named places after landmarks of built environment character. For example, ‘Hatir Pul (In English: Elephant bridge)’ was named as there was a bridge in this neighbourhood that was used for elephant crossing. Evidence of name after spatial character can be found in the naming of ‘Dhanmondi’ (Paddyfields), which was named because of paddy filed in the area. The naming of neighbourhoods after professional groups and ethnic groups indicate that people used to live in certain places based on their profession or family ties. However, unlike other cities, these naming did not follow for many neighbourhoods, which were named after landmarks or spatial features. Historians of Dhaka recognise that many neighbourhoods were developed in response to urban migration and these places mainly hosted migrants from different ethnicity and groups. The recent urban expansion within and beyond the city has also observed that places are given by city authorities (For example Banani, Uttara, Fulsharetc).

Overall reflection of social clustering has been limited in the recent days, and the clustering often is influenced by other urban structural and spatial factors. Previous studies suggest that people select their choice of location based on their income and urban facilities. Like any other cities on Bangladesh, there has been an evident influence of the administrative geography in the formation and the growth of popular neighbourhoods. Dhaka city corporation has been subdivided into 128 administrative parts each representing an electoral constituency. Government allocation in terms of resource distribution is done following this divisions each of which are known as wards. Population has been the key criteria in selecting boundary for the wards but in recent years political decisions are also imposed regarding selecting boundary for a particular ward. Since all allocations from local government are on a ward basis, each of the ward are socially and politically understood as a community cluster, which is mainly headed by an elected local councilor. A councillor office is seen as the key meeting hub for the community and key social decisions are made here. Furthermore, clustering of urban services such as school, community centre, mosques are based on these administrative division. Taking form the text on current structure of the neighbourhood, we can claim that existing city development practice have foucs on the geo-administrative division rather than the traditional formation of neighborhood which was orginally dependent on social-aglomaration.

3.2.10 Socio-spatial divisions

Socio-spatial division of Dhaka is complex than rest of the country. There are two major parts in Dhaka: old Dhaka and New Dhaka. The old Dhaka is unplanned but serviced and lived by different income classes in a very dense and compact living environment. Here the streets are continuously twisted in and out and zigzag in some places with some sharp turns with rectangular plots beside. This is very difficult to recognize particular division of social classes. The new Dhaka has clear division: old planned residential areas, planned residential, unplanned middle and higher income, unplanned lower and middle income, peri-urban
settlements, and low-income slums. The old planned neighbourhoods emerged through colonial intervention for modernization of old Dhaka. Urban form of this area was proposed as gridiron pattern with wider traversing roads and rectangular blocks. But the proposal was not followed fully except areas along civil line. This type of urban neighbourhood now looks formal with low-density horizontal development containing wider roads with tree in both sides giving access to Bungalow of each plot beside it (Examples, Wari, Ramna, paltan, Minto Road, Hare Road, Bailey Road, and Park Road). New planned areas have grid-iron roads with some semi-circular arcs and subdivided into plots. These areas also have a community centre, a planned mosque and in case a park. However, such planned areas have gradually been converted to resi-com areas and high-rise apartment areas in recent time (examples: Dhanmondi, Gulshan, Banani, Baridhara and Uttara).

**Figure 37: Urban Pattern of different types of neighbourhoods of Dhaka City**

Source: SHLC_BD, 2018 from Open Street Map

The unplanned middle- and high-income neighbourhoods include apartments and some multi-storeyed houses with road with a mixture of lane, by-lane and cul-de-sacks but roads are wider and less complicated than Old Dhaka. Alleys here developed in organic way and they are also narrow and circuitous like old Dhaka (example: Kolabagan). The middle and lower middle-income neighbourhoods have unplanned street networks, high-density living and a combination of apartment housing and detached multi (4-5) storied houses. Slums and squatter settlements are characterized by dense living, temporary structure, no provisioning of urban services and are built on encroached land if not rented (Figure 37).
Current crisis ascends to an acute intensity because of high level of poverty in the city and a large number of slum populations. Only 3% enjoy a high standard of living, 45% defined as urban poor and 25% are classified as “extremely poor” (Corner and Dewan 2014 in Swapan et al., 2017). Rate of growth of the slum population in the city is as high as 9% (BBS, 2014a; BBS, 2016).

### 3.2.11 Economy

In the year 2017, GDP share of Dhaka city was US$ 10 billion (Swapan et al., 2017). In terms of GDP, the city holds the 78th position among cities of the world. Despite of high population concentration, the city is yet to make its claim as a successful engine from growth. Average household income of the city people was about US$ 4,284 in 2016, higher than other cities (around US$3,360) of Bangladesh and near double relative to that for the whole country (US$3,360) (BBS, 2016). The rate of unemployment in this city is as high as 26.6 percent (BBS 2014).

<table>
<thead>
<tr>
<th>Job Category</th>
<th>Number of Jobs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary/ Agriculture</td>
<td>1457093</td>
<td>25.60</td>
</tr>
<tr>
<td>Secondary/ manufacturing</td>
<td>599640</td>
<td>10.54</td>
</tr>
<tr>
<td>Tertiary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Services</td>
<td>20576</td>
<td>0.36</td>
</tr>
<tr>
<td>Construction</td>
<td>220374</td>
<td>3.87</td>
</tr>
<tr>
<td>Transport</td>
<td>331079</td>
<td>5.82</td>
</tr>
<tr>
<td>Hotel and Restaurant</td>
<td>35039</td>
<td>0.62</td>
</tr>
<tr>
<td>Business</td>
<td>1015771</td>
<td>17.85</td>
</tr>
<tr>
<td>Service</td>
<td>160415</td>
<td>2.82</td>
</tr>
<tr>
<td>Other</td>
<td>1850714</td>
<td>32.52</td>
</tr>
<tr>
<td><strong>Total Job</strong></td>
<td><strong>5690701</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>


With shares of 36% of national GDP most employment in Dhaka is in informal sectors, whereas the second contributing sector is the agriculture sector in the city periphery (25.60%) (Table 14). Manufacturing sector, however, contributes to 10.54% of the job. In 2002, five-ranking industries in Dhaka were: textiles, furniture, food & beverage, plastic products and leather. According to the employment, top five-ranking industries are: wearing apparel, textiles, furniture, food & beverage and leather. Woven garments are the most significant contributor to formal employment generation in Dhaka city, but increase of
employment in this sector is declining (World Bank, 2012). During early eighty’s Bangladesh government was taken policy for decentralised administrative and economic development. In spite of the policy, export-oriented garment industries concentrate in Dhaka during that time (1982 to 1988).

More than 80% of the total garments industries (about 4000 garments industries) of Bangladesh are located in Dhaka (Mohsin, 1989; Islam, 2006). At present, garments industries are de-concentrating to peripheral areas of the Dhaka city. Dhaka provides a large scale of informal jobs including rickshaw pulling, street vendor and household service, run by the urban poor. Nearly 400000 rickshaw pullers are in the Dhaka city and half of the lower-income group is involved in household services. According to the World Bank report in 1981, 65% total employed labour of Dhaka city were involved in the informal sector (RAJUK, 2015). Male unemployment rate is 11% whereas female unemployment is 9%. Latest data shows that 25% people are in the informal sector. 18.90% male are in informal sector whereas 6% of total female employees are in informal sector (BBS, 2014). Current statistics indicate that 80% people are in wage employment in Dhaka district whereas 20% are in non-wage employment.

The telecom industry is the main source of Foreign Direct Investment (FDI) and tax revenues. This sector performs a transformative impact on the economy of Dhaka. The City has Total Factor Productivity (TFP) premium in garment production. Because of locational advantage, the city has strong labour productivity premium compared to other cities of the country. Average garments productivity is 7.9% (about double than Chittagong City). The high productivity of garments industry is the best access to skilled labour together with access to reliable power supply. But the quality of power supply is highly inadequate. Garment industries in Dhaka city experience 4.2 hours of power outages per day (World Bank, 2012).

Because of different built environmental issues such as: traffic congestion, limited availability and high prices of land, the high price of housing accommodation, polluted urban environment, over-crowding and lack of necessary amenities are affecting investment in the city. Moreover, high level of crime and violence in Dhaka experiences considerable economic costs, including loss of productivity due to injuries and direct financial costs due to the collection of “tolls” (World Bank, 2012). Dhaka also recently lost its competitiveness as a manufacturing growth centre and becoming a service-based economy because of not being able to create investment-friendly environment. About 25 percent of firms not based in Dhaka have an office in Dhaka city to reduce travel time, and an additional 25 percent would be willing to open one (World Bank, 2012).

The projected population growth and corresponding job requirement show that job creation will have to increase from 6.54 million of 2010 to 12.87 million in 2035 (RAJUK, 2015) but data suggest that in 2001 the required number of jobs has been 4 million (RAJUK, 1995). Although the number of jobs increased in the city, it is not enough to follow the high urbanisation rate in the city. Dhaka has observed minor changes in the main manufacturing sectors over the last 30 years. The city is becoming more and more dependent on garments sector over the last 30 years this sector has dominated and contributed around 50% (Current) to 60% (in 2001) of the total employment. Moreover, a job in the informal sector is also on the rise as it has risen from 65% (2001) to 84%. The annual rate of increase in an informal sector, for male, was 4.27 percent from 22.7 million in 1999-2000 to 32.4 million in
2010, whereas female employees have grown from 6.6 million in 1999-2000 to 14.9 million in 2010 with a rate of 12.58 percent per annum (Ali, 2013). Over the last 30 years, the participation of women in the garment and service sectors has increased, and consequently, this has made the city more productive. However, in the absence of new manufacturing sectors, citizens are forced to work in the garment sector or service sector. Overall, employment of Dhaka city has the challenge to create formal sector jobs.

3.2.12 Health

Dhaka as the capital city of Bangladesh has a comparatively higher number of healthcare facilities than other major cities of Bangladesh. In Dhaka, the healthcare facilities are provided either by the government or by private sectors. Government health services are provided by the MoHFW and private services are provided by NGOs and private organizations. However, like other major cities, the private sector dominates the health service provision in Dhaka city. According to BBS (2013) at present government health complexes provide 8719 beds for health care services, whereas, 620 private hospitals and clinics provide 16944 beds, which is almost double than public health care services. Moreover, there is 27-community clinic in providing the health care services (BBS, 2013; p.63-68). Healthcare service in Dhaka city is mostly provided by NGOs and private sector which is about 99% against 1% of public sector services (Anon, 2015). Moreover, satellite clinics served in the slums of Dhaka city to provide maternal and child health care facilities, which also provide free medicines to the urban poor (Jahan et al., 2015). Because of geographical inequalities of public healthcare service provision, especially at the poorer neighbourhoods, NGOs and other informal sector focused on slum area regarding healthcare service provision (Jahan et al., 2015; NIPORT et al., 2013; Anon, 2015). Due to unaffordable health care services, 82.4% of the urban slum dwellers received health care service from the informal sector, whereas only 13.9% received health care from government health care (Jahan et al., 2015).

Dhaka city lacks health related data and information at city and neighbourhood level, which create hurdles in measuring and evaluating city specific health performance. For instance, information regarding some important international health indicators including under-5 mortality rate, maternal mortality rate, infant mortality rate is not available for Dhaka city, which causes service inefficiency in healthcare delivery as without any exact data it is hard to determine what types of service is required. For instance, in Dhaka district under-5 mortality rate is 51 and infant mortality rate is 40, which is better than the national average, as the national average of these are respectively 64 and 49 (BBS and UNICEF, 2009, p. 82,83). Thereby, service is provided based on district level information.

Inequality of healthcare service provision, inadequate and unaffordable health care services and lack of accessibility in healthcare facilities are the major issues regarding the healthcare provision in Dhaka city. Rather than getting health care service from public or private healthcare centres, urban poor specially the people of slum area in Dhaka city prefer to take healthcare facilities either from pharmacies or from informal private providers due to their unaffordability to get formal health care services (Jahan et al., 2015; Khan et al., 2012; p.261). Moreover, an imbalance between public and private service provision regarding cost and service is also an important issue of healthcare provision (Planning Commission, 2015).
Rapid urbanization led to social development in Dhaka city, especially in terms of increased literacy rate, quality education provision and improved health indicators and at the same time creates heavy demand in the urban services including health and education sectors (RAJUK, 2015, p.36). Dhaka being the administrative headquarters offers best education and health facilities in the country, which is identified as one of the major pull factors of migration (RAJUK, 2015). The highest order general and specialized education and health care facilities are located in the core of Dhaka city. To tackle the pressure of urbanization and the migration pull and to minimize travel and traffic congestion, RAJUK (2015) recommends decentralising the education institutions. For reducing traffic congestion in the city, 1m to 4m sidewalks are provided with most of the health and education institutions covering 600 km in length (RAJUK, 2015, p.92).

Dhaka as the capital city of Bangladesh is doing comparatively better in terms of education provision and in 2011, the literacy rate of 74.55% in DCC was above the national average literacy rate of 69.34 (BBS, 2014). The average literacy rate (of and above 7 years) was71.77%, among which male literacy rate was 74.53% and female literacy rate was 68.73% (BBS, 2015), against the average literacy rate of 52.36% in 1985 (BBS, 1985). Following the definition of UN-Habitat, the literacy rate of 15 years and above is 70.3% of the total population, among which male constitute 76.31% and female make 62.11% (BBS, 2014). Ennoblement at primary level is 26.5% male and 25.4% female, but one-third of them complete primary-level education. The scenario is more acute at the secondary level, where male enrolment is 22.4% and completion rate is 4.5, female enrolment is 25.9%, and completion rate is 3.5. In spite of lack of service provisioning, the housing crisis and polluted environment, the city is still urbanising and becoming an expensive city to live in this is the 66th most expensive city in the world.

Although the literacy rate of Dhaka is high relative to other urban areas of Bangladesh, because of gender inequality, there is a notable gap between the educational status of male and female. Whereas the 75% of the total male population attend school at different level (primary, secondary and higher education), only 71.4% of the total of female population attend school. 16.91% of the total population remained illiterate, as they don't attend any school. Because of gender disparity against 11.90% male, 22.83% of female are illiterate (Household socio-economic survey, 2006 cited in RAJUK, 2010b).

With the increased level of education (primary to higher education), the percentage of school attendance is consistently decreased in context of Dhaka city. Moreover, more percentage of male attends school in comparison to female. Whereas 8.3% male complete primary education, only 8% female complete primary education; against which only half of them complete secondary education (see Figure 38).
Education in this city is mostly dominated by private sectors. Because of continuous effort of government towards inclusive education provision, female school attendance is continuously increasing in Dhaka city. At primary level, the school attendance rate of male and female is almost similar, whereas in secondary level, school attendance rate of female (51.42%) is greater than the rate of male school attendance rate (48.58%) (BBS, 2013) (see Table 15).

**Table 15: School Attendance in DCC area (%)**

<table>
<thead>
<tr>
<th></th>
<th>Primary (%)</th>
<th>Secondary (%)</th>
<th>Tertiary (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Government</td>
<td>47.66</td>
<td>52.34</td>
<td>-</td>
</tr>
<tr>
<td>Non-government</td>
<td>56.4</td>
<td>43.6</td>
<td>48.58</td>
</tr>
</tbody>
</table>

Source: BBS, 2013

However, urban poverty, inequality and urban exclusion is still impeding education provision in Dhaka city. Lack of government attention towards urban poor hinders education in the poorer neighbourhoods. In Dhaka city, there is hardly any government education service provision in or near the slums (Cameron, 2009), which reflects the inefficiency of education service delivery.

Dropout and child labour is another issue in education service provision. Due to poverty, children of the poorer households often fail to pay the fees of schools and private tuition which are one of the major reasons for dropping out from school in Dhaka city (Cameron, 2010). Most of the poor family prefers their children to engage in work as a child labour to support their family instead of continuing education. Using the data of 2000, a report of World Bank (2007) identifies that 20% of children aged 5–14 in Dhaka city were working as a child labour, and in the poorest household children earnings represented about one third of the total income of the poorest household, which is also a major reason for hindering education. Lack of specific policy for the urban poor especially at city and neighbourhood scale regarding education service provision is further claimed as a key issue of education provision in Dhaka city.
Moreover, excessive commercialization of education service facilities is also identified as a major issue and challenged the education provision. There is also imbalance between the coordination and management of MoE and MoPME in Dhaka city. However, Dhaka Structure Plan 2015-2035 (draft) already introduced “Unified School District” to eliminate this imbalance. Under which MoE and RAJUK will perform mutually to manage and distribute the education facilities within the DMR (RAJUK, 2015).

Although there is still inadequacy in the number of the educational institution to provide education to the growing number of populations, because of continuous emphasise on primary education, there is a notable improvement in the number of primary school development. Against the national standard of one school for per 7000 students, in 1995 the situation was 1 school for 220,000 students, (RAJUK, 1995; RAJUK, 2010b, p.3-5) which improve by 1 school for 14,000 students in 2016. (RAJUK, 2015, p.188), which is very close to achieving the target standard (see Figure 39).

**Figure 39: Chronological changes in the number of students/per school in Dhaka city**

![Graph showing changes in number of students per school from 1995 to 2016 and national standard.]

*Source: RAJUK, 2015; BBS, 2015; 1985*

From the data of BBS 2013, it is identified that primary school is mostly dominated by the government sector, whereas higher-level education including secondary school and college is dominated by the private sector. Against 399 governments’ primary school, there is only 86 non-governments primary school. To deliver education service to the poor and the unprivileged population, 517 NGO schools are operating in Dhaka city. Moreover, with the increased level of education (primary to higher level) both the number of educational institutions and the number of students is gradually decreasing (see Figure 40) (BBS, 2013; p.55-59).
3.3 Planning and development

3.3.1 City governance and structure

Dhaka City Corporation, a self-governing corporation called Local Government, runs the affairs of the city. In 2011, Dhaka City Corporation is divided into two administrative parts named North Dhaka City Corporation and South Dhaka City Corporation for ensuring better urban services. Two Mayors head the two Corporations, elected by direct vote of the citizen for a 5-year period. The city consists of 128 Wards. In May 2016, more 16 Unions added to the city Corporation. Former area of City Corporation was 126.41 square km with 92 wards and 837 mahallas. After adding 16 unions, it becomes 304.17 sq. Kilometre. Among those 16 Unions, 12 are still governed by their respective Union Councils (Bhattacharjee 2016; Azad 2017; Rahman, 2017, Islam et al., 2003, Talukder, 2006).

In total, 42 different organisations run the administration of Dhaka city, which includes RAJUK, DCC, PWD, NHA, DWASA, LEED, RHD, DTCA etc. Planning, development, development control, construction approval, plot allotment etc. is done by RAJUK. The government construction projects are implemented and maintained by PWD. NHA is responsible for preparing to house for low and middle-income families. The city corporation (DCC) provides urban services (Solid waste, sanitation; control food adulteration; market and slaughterhouse setup; construction of the roads, buildings, park, open space etc.; create

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**Figure 40: Total number of education institutions and total number of students**

- University (Public and Private): 79923 students, 41 institutions
- Technical and Vocational institution: 44921 students, 19 institutions
- Madrasah: 52344 students, 108 institutions
- Private College: 71231 students, 64 institutions
- School and College (operating jointly): 71231 students, 64 institutions
- Private Secondary School: 176471 students, 242 institutions
- NGO School: 72530 students, 517 institutions
- Private Primary School: 13511 students, 86 institutions
- Government Primary School: 267963 students, 399 institutions
- Kindergarten School: 332634 students, 2328 institutions

*Source: BBS, 2013: p.55-59*
a an opportunity for different cultural events; tree plantation) and collects revues. DWASA looks after the water supply whereas DTCA is responsible for public transport in the city. There are several other organisations partly responsible for the development of Dhaka.

In the absence of national-level planning policies, the city plans guide urban development for the city with its three-level plans—Structure plan, Urban Area Plan and Detailed Area plan. In the first level of city plans, Structure plan, spatial and sectoral development policies are formulated for a long-term (20 years). Development policies of Structure plan are translated into implementable form through Urban Area Plan, commonly known as Master Plan. Also, land use zones are delineated in urban Area Plan to control development activities in city area. Location-specific development proposals are given in the Detail Area plan, prepared for 5 years’ period.

### 3.3.2 Coordination among authorities

In the face of high growth, the city requires a very efficient management system. But the current system often makes the institutional management weak because of the management inadequacies, personnel and capacity deficiency, lack of commitment and motivation, resource constraint, corruption of the Dhaka city corporation (Islam et al., 2003, p-194, Islam 1996b, 189-213). The governance of Dhaka City holds a persistent crisis because of the conflictual relationship between the elected mayor and the central government. The national government often challenges decisions made by the city authority, and the city mayor requires negotiating with the concerned ministers and the government before he can take any steps. The city also has an acute manpower shortage for management. The city Corporation have only five magistrates for six million peoples it serves. Another example is the Slum Improvement cell of DCC has a shortage of qualified, motivated and enough stuff so the fund for slum improvement could not be fully utilize (Ahmed, Hasan & Maniruzzaman, 2014, p.207) during years 2000 and 2001. This shortage is observed in all other authorities responsible for city management.

There is also an apparent lack of coordination among the existing management authorities. Especially both DCC and RAJUK have the authority to plan. In reality, RAJUK prepares the plan but it has limited financing and power to implement its plan. In practice, all urban service infrastructures are managed and constituted by DCC. However, there is limited coordination among these two authorities. Furthermore, other management authorities follow their plan and management mechanism (Such as DWASA has its own sewer monument Plan). This leads to confusion among the city management authorities.

About 70-80% of DCC’s fund comes from its own sources (Islam 1996a, 61-94) and rest comes from the central Government. Central governments provide a condition about the use of their fund and DCC have to act accordingly. The condition provides the city corporation with a tiny amount of fund to conduct its development project (CUS, 1997 in Islam et al., 2003). In fiscal 2014/15, the two Dhaka CCs together collected about US$50 million through holding tax, the main property-related tax instrument. That only amounted to about US$8 per resident per year. In fiscal 2015/16 holding tax revenue was budgeted to increase to about US$50 million in the Dhaka North CC and about US$36 million in the Dhaka South CC. However, this still amounts to an average of less than US$13 per resident per year. The weak performance of holding tax stems partly from its low coverage and leads to weak funding for the projects (Bird et al., 2018, p.34-36).
3.3.3 Planning policy framework

Planning focus of Dhaka structure plan has been to ensure liveability, functionality, and resilience (RAJUK, 2015, p.3). Liveability agenda refers to increase a healthy natural environment through ensuring social equity, cleanliness, safety and security, employment, affordable housing and transport, and better access to services and facilities. The functionality agendas want to make the city efficient in terms of provisioning of urban services and governance. The resilience agenda wants to deal with the exposure to natural hazard, climate change and economic downturn. These recent agendas respond to the current crisis in the built environment mentioned in the early chapters (Section 2 and Section 3). Resilience agenda is prompted in the policy direction since Bangladesh is profoundly affected by the impacts of climate change and it intends to promote climate adaptive agendas. Further review of the recent master plan presents high commitment for these agenda. The plan commits to deliver an environmental sustainability and improved socio-cultural fabric in the country.

The proposals made in the plan shows the clear commitment of the government in improving the built environment and bringing sustainability. According to international experts, each of these plans conveys a coherent long-term vision and is characterised by high technical quality (World Bank 2017a, 2017b). However, the same problems that plague the institutional structure are at play in planning processes. Plans are designed mostly in isolation, often by external consultants, and have limited inputs by the stakeholders (Bird et al., 2018, p.40). Again, limited implementation of the previous plans (1917, 1959, 1981, and 1995) questions the practicality of this proposals and the future of the strategies. Again, previous plans are sectoral (e.g., sewerage, transportation, or housing), partial (dependent on short-term projects or schemes rather than strategies) and uncoordinated. Previous plans lack an understanding of the problems and the potential of the rapid urbanisation processes and fail to provide guidelines for the management of growth (Talukder, 2006, p.219).

Previous plans focused on land use zoning and had an intention to supply housing and urban services to accommodate growth in the city. None of the plans actually set any strategy to divert the growth or decentralisation. Therefore, planning focus more or less has been pro-growth. Because of the pro-growth philosophy, the plans always projected future growth and intended to meet the demand. However, the growth in reality has been much faster than anticipated and therefore plans have never been able to predict or meet the actual demands.

3.3.4 Policy implementation realities

Controlling development and implementation of the plans have never been in Dhaka city. Lack of participation of the stakeholders lead to weak ownership and deter them from being accountable versions (Rahman 2017). The structure plan proposed 31 policies under broad themes, such as spatial and environmental sector, socioeconomic sector and infrastructure sector. Of the policies, 23 were not implemented at all, and 8 were partially implemented. The urban area plan divided Greater Dhaka into 26 strategic planning zones and produced land use proposals for each of them. At best, about half of the proposals were implemented. Long delay in the planning approval process seriously affects the implementation. For example, DAP has published in 2010 that is 15 years later issuance of DMDP. Dhaka’s urban form had changed substantially by then. The DAP has followed the main strategies of 1995 but by the time the plan was approved, the growth pattern of the city changes and required
new strategies. Such long delay in the approval process led to a plan that has not been implemented.

When it comes to development control, the zoning criteria and building heights, critical components of any city master plan, are not been strictly enforced. Transformation of Gulshan and densification of Dhanmondi are examples of change of use and height code. Gulshan had been planned and developed in the early 1960s with the idea of supporting low-height residential accommodation for an emerging middle class. Gulshan became keenly sought after by private businesses, foreign organisations and better-off households because its neat layout and abundance of amenities set it apart from the messiness prevailing elsewhere in Dhaka. Because of weak implementation and lack of development control, 73 percent of the encroached areas have been occupied for residential purposes, 10 percent for mixed land use, and the rest for other uses. Overall, about a third of the surface of the canals and ponds has disappeared, covered by illegal construction (Ahmed, Hasan & Maniruzzaman, 2014, Brammer, 2010).

3.3.5 Neighbourhood development and planning

Most part of the city are spontaneously developed as a response to the growing population. People at neighbourhood level follow their piecemeal needs and negotiates with other neighbours before they make any change to their building structures or use. There is the limited implementation of development control regulations, and it is very often a customary step before making a new construction.

However, there has been a number of planned residential areas over the years to promote a sustainable living environment. All the proposals emphasised on open space and parks, water features and a well-planned. As per recommendation of East Pakistan Planning Division, 500 acres land in northwest fringe was acquired for development of Dhanmondi residential area. To meet the housing demand, Dhaka started to grow towards the suburban areas. In that time Dhaka expanded in the north as Banani (140 hectors), Gulshan (290 hectors), Baridhara (150 hectors) was developed as a housing estate. These planned residential areas supplied only a little in compare to the needs of Dhaka.

The city authorities failed too many of the residential areas and spontaneous change of use and a new building appeared. Ahmed et al. (2014) bring the case of Gulshan, the planned residential neighbourhood built in 1960. They describe that because of unplanned growth, change of use without permission has reshaped this planned residential area. As more firms, offices, and people settled in, Gulshan gradually underwent a transformation from a low-height residential area to a high-rise area characterised by mixed land use. The densification of the Dhanmondi area is another illustration of the tension between zoning and dynamism. Dhanmondi was the first residential area planned by DIT, the predecessor of RAJUK. It covered about five square kilometres of what were mostly paddy fields in 1950. With an average plot size of 1,296 square meters, the area was envisioned as a neighbourhood for higher income groups. The height of residential buildings was not to exceed two stories. During the 1970s and 1980s, however, urban regulations were not enforced. To increase their revenue from investments, landowners attracted foreign. Institutes and private companies on short-term leases, turning many low-density residential plots into high-density plots with mixed land use (Figure 41).
Recent plan focuses on promotion of mixed-use neighborhood development (RAJUK 2015, p.74) that would have effective neighborhood based traffic management (RAJUK 2015, p.110), and healthy living environment (RAJUK 2015, p. 129). Yet these commitments are yet to be reflected in the ongoing detail area plan for Dhaka city.

**3.3.6 Sustainability and planning**

In response to sustainability issue of New Urban Agenda (NUA), Dhaka structure plan 2016-35 aims to ensure social-cultural and environmental sustainability. The plan also aims to ensure liveability through ensure accessibility and affordability to urban services. Direction of NUA was ‘equal right for all’ to urban services. Considering the goal of NUA, structure Plan aims to increase accessibility and affordability but either equal right for all will be ensured or not is not clear here. The new plan has set vision to make Dhaka ‘Liveable, functional & resilient metropolis respecting local socio-cultural fabric & environmental sustainability (RAJUK, 2015, p3). The plan highlights on environmental sustainability
(RAJUK, 2015, p 202), wetland protection (RAJUK, 2015, p197). The other principles of NUA include sustainable employment creation, ensuring safety and security, ensuring quality education and health facility. Goal of NUA was to increase socio-economic and cultural diversity but in structure plan focus is on social equity and justice and create interesting cultural activities. Food security and nutrition & eliminating discrimination and violence are ignored in the structure plan totally. In recent DAP, focus is given on adopting participatory approach in ‘community planning’ which is one of the principles of NUA to make cities and human settlement participatory.

### 3.3.7 Integrating migrants

Dhaka has always welcomed the growth of population and new economic activities. The key politicians and government are based in Dhaka, and so are their offices. All the ministries and government headquarters are located in Dhaka. Both city planning and national level development activities have been pro-growth. This is leading to the high urban primacy of the city and creating a massive imbalance in comparison to other cities (Figure 42). Recent structure plan (2016-2035) for Dhaka proposes policies to make housing accessible by lower income and floating people and therefore clearly welcoming to the influx of poor migrants. The plan proposes shifting of economic activities in city periphery and implement subsidizes housing projects there for them so that it can provide jobs to the in-migrant.

**Figure 42: Primacy of Dhaka city in comparison to other main cities**

This tendency of centralising key activities and offices in Dhaka has encouraged urban migration. Moreover, because of over-emphasis on the allocation for Dhaka other small cities and rural areas are failing to attract investment. For example, cities such as Khulna is experiencing very negative growth in recent days.
Ahmed (2016) claims that Dhaka’s liveability can be increased if the city can be effectively decentralised. He said that the government created sub-districts to redistribute urban services and to decentralise them, but the sub-districts could not flourish in the long run. Bangladesh and many other developing countries the central government often intend to retain power to control local governments (Ahmed, Boex, Momen & Panday, 2015, Panday, 2011, Panday & Assaduzzaman, 2011 in Panday, 2017, p.178) and as a consequence of this political decision, the capital city requires to accommodate beyond its capacity. In a recent national seminar scholar argued that head offices of some of the ministries such as the shipping ministry, coast guard and railway ministry to Chattogram (Ahmed, 2016) would reduce the pressure on Dhaka city, primarily the traffic congestions would reduce to a great deal. Overall, policy-induced primacy (Bird et al., 2018) and urbanisation should be replaced by decentralisation policies to best manage the city.

3.3.8 Health

The Pourashava Ordinance, 1977; DCC Ordinance, 1983; the Local Government (City Corporation) Act, 2009 and the Local Government (Municipality) Act, 2009 provide similar strategy regarding health service provision (GoB, 1977; 1983a; 2009b; 2009a). As per these ordinances and acts DCC is responsible for the development of hospitals to deliver health care services to the infectious disease attacked patients, promotion of health education, maintenance of hospitals and dispensaries and develop hospitals as per need; provide drugs, medicines, equipment, appliances, establishment of first aid centers, development of medical aid unit for the promotion of public health (GoB, 1977; 1983a; 2009b; 2009a). DMDP provides spatial guidelines of healthcare facilities within the neighbourhoods of Dhaka city. Because of the limited resources of government, health care service provision is guided by pluralistic approach, where along with government and city authority, several private sectors and NGOs provide healthcare services. Government and city authority mostly focused on need based service provision, whereas private sectors like CBOs and individual private organizations provide health care service following the profit motive approach. However, NGOs mostly provide their service in the patient concentrated poorer and unprivileged area. Different types of organizations provide health care service in diverse nature.

3.3.9 Education

The education provision is mostly guided by several local development ordinances and acts including the pourashava ordinance, 1977; Dhaka city corporation ordinance, 1983; the local government (City Corporation) act, 2009 and the local government (municipality) act, 2009, which all provide similar strategies regarding education service provision (GoB, 1977; 1983a; 2009b; 2009a). DCC is responsible to providing financial aid to private education institutions, suggest government and private institutions build up new educational institutions as per necessity (GoB, 1983a; 2009b).

Like health service provision, education service provision of Dhaka city is also followed by the pluralistic approach. In Dhaka city education service delivery is mostly dominate by the private provider. Public service is delivered on the basis of need situation, where government (MoE), RAJUK or DCC can deliver the service. Private organizations provide service guided by profit motive, whereas NGOs are focused on need-based service provision in the unprivileged and hard-to-reach area. Public sector and private organizations delivered
education facilities of primary, secondary and tertiary level, whereas NGOs are dedicated to providing the basic education service within Dhaka city.

### 3.3.10 Policies for healthy and learning cities

As there are no city level education or health policies in Bangladesh, health and education service provision in Dhaka city is mostly guided by several development plans including master plan, structure plan and detailed area plan (DAP). These plans are further guided by national policies, plans and ordinances including NEPs, NHPs, FYPs, DCC ordinance, local government (municipality) ordinance and local government (city corporation).

Still policies and plans are struggled to ensure education provision and minimizing the hurdles and pressures of urbanization and migration. Therefore, at local level plan and policies of Dhaka city, there are no direct reflections of continuous learning. However, unlike the policies of Khulna city, Dhaka structure plan 2016-2035 consider education provision as an integrated factor of sustainability, thereafter also recommend policies, with an aim to ensure quality education provision as a means of achieving sustainable urban growth (RAJUK, 2015, p.188). To address the future need and to eradicate the existing problems this plan introduces policies namely ‘school district concept’ and ‘campus town creation’ with an aim to revitalize local education facilities and decentralize education service delivery integrating with land use to reduce the travel distance. Policy namely ‘unified school district’ is recommended to minimize the mismanagement between MoE and MoPME (RAJUK, 2015, p.188-189).

DMDP being another leading local development plan only delineates the educational status, existing educational facilities, recommends for new educational institution, a set of standards for those education institutions and certain land use zone for educational facilities (RAJUK, 2010b, p.16, 30, 66, 67). Such as for primary school minimum 1-acre area is required, whereas for secondary school 1.5 to 3-acre area is required. (RAJUK, 2010b, p.66, 67). DMDP further provides spatial guidelines and neighbourhood standards for the provision of education service. For example, DMDP denotes at least two primary schools and one high school as a compulsory service at neighbourhood level and the minimum unit for primary school is denoted as 1 acre, and for high school it is 1.5 acre. (RAJUK, 2010b; p.67).

Unlike continuous learning, healthy living is considered in the Dhaka structure plan and emphasized to develop healthy living through promotion of health awareness in families and schools. This plan further focuses on the development of convenient, accessible, and affordable health care services as the strategy of ensuring wellbeing of the inhabitants of Dhaka city. In order to doing so, setting up of community clinic in each ward and development of regional healthcare zone are recommended in this plan, which altogether contribute to healthy living (RAJUK, 2015).

Moreover, neighbourhood level healthcare service provision strategy is recommended in DMDP. Such as, DMDP delineates that in a neighbourhood of 50-acre area in Dhaka city minimum 120 sq.m area should be for health care zones. In addition, there should be at least 2 medicine with 25 sq.m area for each (RAJUK, 2010a).
3.4 Conclusion

Influenced by migration, Dhaka has been growing unprecedentedly over the last 100 years both regarding population and space. This Island city is surrounded by river and therefore is now struggling to grow beyond its boundary. As a result, density is increasing with limited control over the development. People are responding to their daily needs and are often violating building codes because of the crisis in space. The current situation worsens in the face of a shortage of housing and urban services. With a limited self-financing mechanism, lack of coordination, and lack of labour, the city authorities are finding it difficult to cope with the rapid growth and demand. Although there are good and visionary plans in place, they remain mostly unimplemented because of the long delay in the approval process, governance issues, and financing limitations. Overall, the primacy of Dhaka is driven by migration, and the capital focused centralisation of activities and used. Efforts are on-going to manage the city and to accommodate the growth. Nevertheless, the city’s pro-growth and pro-migrant strategy has started to backfire making the city to be the second worst liveable city in the world. Promotion of decentralisation and redistribution of resources in other urban centres might be an answer to the current crisis.
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## Annex 1. Comparison among top ten city regions of Bangladesh

<table>
<thead>
<tr>
<th>Indicators</th>
<th>City Name</th>
<th>Level</th>
<th>Dhaka</th>
<th>Chattogram</th>
<th>Khulna</th>
<th>Sylhet</th>
<th>Rajshahi</th>
<th>Tongi</th>
<th>Bogra</th>
<th>Mymensing</th>
<th>Barisal</th>
<th>Rangpur</th>
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<tbody>
<tr>
<td>Area (sq.km)</td>
<td>City</td>
<td>304.17</td>
<td>155</td>
<td>50.61</td>
<td>26.5</td>
<td>97.18</td>
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<tr>
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<td>4611</td>
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<td>5493</td>
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<td>1.57</td>
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<td>*</td>
<td>182864</td>
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<td>City</td>
<td>2314457</td>
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<td>64.38</td>
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<td>Rural to Urban</td>
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<td>17.51-29.50</td>
<td>4.81-17.50</td>
<td>4.81-17.50</td>
<td>2.21-4.80</td>
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<td>4.81-17.50</td>
<td>0.81-2.20</td>
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<td>0.81-2.20</td>
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<td>Literacy Rate (%)</td>
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<td>73.6</td>
<td>68.7</td>
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<td>Rangpur</td>
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<tr>
<td>Poverty Rate (%) (HCR) 2010</td>
<td>Zila</td>
<td>10</td>
<td>13.7</td>
<td>30.8</td>
<td>13</td>
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<td>4</td>
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<td>547</td>
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<td>No. of Health facilities Public</td>
<td>City</td>
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<td>11</td>
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<td>Private</td>
<td>City</td>
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<td>79</td>
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<td>62</td>
<td>35</td>
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<td>36</td>
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<td>Daily avg. wage rate (Urban) BDT</td>
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<td>765</td>
<td>2131</td>
<td>786</td>
<td>4083</td>
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<td>3025</td>
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<tr>
<td>Number of permanent establishments</td>
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<td>544524</td>
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<tr>
<td>Number of temporary establishments</td>
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<td>61294</td>
<td>34388</td>
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<td>10621</td>
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<td>Bogra</td>
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<tr>
<td>Total number of urban establishments (%)</td>
<td>Zila</td>
<td>447070</td>
<td>193919</td>
<td>65941</td>
<td>54780</td>
<td>62622</td>
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<td>58684</td>
<td>51705</td>
<td>37864</td>
<td>56049</td>
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<tr>
<td>Investment below 100th (in 000 BDT) (%)</td>
<td>Zila</td>
<td>840</td>
<td>382</td>
<td>57</td>
<td>189</td>
<td>11</td>
<td>297</td>
<td>15</td>
<td>33</td>
<td>100</td>
<td>27</td>
<td></td>
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<tr>
<td>Investment above 100 thousand (BDT) (%)</td>
<td>Zila</td>
<td>5879</td>
<td>3609</td>
<td>436</td>
<td>2762</td>
<td>234</td>
<td>1403</td>
<td>412</td>
<td>297</td>
<td>349</td>
<td>231</td>
<td></td>
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<tr>
<td>Wage employment (in relation to total establishment) (%)</td>
<td>Zila</td>
<td>79.76</td>
<td>80.79</td>
<td>57.23</td>
<td>58.1</td>
<td>62.23</td>
<td>82.11</td>
<td>57.56</td>
<td>64.1</td>
<td>67.51</td>
<td>61.62</td>
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<tr>
<td>Non-Wage employment (in relation to total establishment) (%)</td>
<td>Zila</td>
<td>20.24</td>
<td>19.21</td>
<td>42.77</td>
<td>41.9</td>
<td>37.77</td>
<td>17.89</td>
<td>42.44</td>
<td>35.9</td>
<td>32.49</td>
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<tr>
<td>Annual growth rate of establishments (%)</td>
<td>Zila</td>
<td>6.05</td>
<td>9.34</td>
<td>6.31</td>
<td>5.55</td>
<td>7.49</td>
<td>10.35</td>
<td>9.1</td>
<td>9.34</td>
<td>6.23</td>
<td>7.38</td>
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**Note:**
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<th>Chattogram</th>
<th>Khulna</th>
<th>Sylhet</th>
<th>Rajshahi</th>
<th>Tongi</th>
<th>Bogra</th>
<th>Mymensing</th>
<th>Barisal</th>
<th>Rangpur</th>
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</thead>
<tbody>
<tr>
<td>Dhaka City</td>
<td>Dhaka district</td>
<td>Tongi City = Gazipur district and Gazipur Sadar for city data</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Chattogram City</td>
<td>Chattogram district</td>
<td>Bogra City = Bogra district</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Khulna City</td>
<td>Khulna district</td>
<td>Mymensing City = Mymensing district</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Sylhet City</td>
<td>Sylhet district</td>
<td>Barishal City = Barishal district</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rajshahi City</td>
<td>Rajshahi district</td>
<td>Rangpur City = Rangpur district</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>HCR</td>
<td>Head Count Ratio</td>
<td>LPL</td>
<td>Lower Poverty Line</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Total internal migration rate</td>
<td>Summary of Urban to Urban, Rural to Urban, Rural to Rural and Urban to Rural Migration</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty gap</td>
<td>Poverty gap is calculated using lower poverty line</td>
<td>Zila</td>
<td>District</td>
<td></td>
<td></td>
<td></td>
<td></td>
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### Annex 2: Key data requirements in Khulna city profile for comparison in RTP1

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<th>Relevant text from the report</th>
<th>Page number(s) of the report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Population and Growth: Average annual growth rate of population during the last ten years; population density</td>
<td>Khulna city is 45.65 square kilometre with a population of 663 thousand and a declining growth rate of -0.99% BBS (2013) finds urban transformation is characterised by the rapid growth of the urban population mainly as a result of natural population growth (1.38% per annum) and spontaneous spatial expansion.</td>
<td>42-43</td>
</tr>
<tr>
<td>Basic City Demography: Percentage of males and females by age cohort</td>
<td>Age Group</td>
<td>Male (%)</td>
</tr>
<tr>
<td>0-4</td>
<td>7.5</td>
<td>7.9</td>
</tr>
<tr>
<td>5-9</td>
<td>9.2</td>
<td>9.3</td>
</tr>
<tr>
<td>10-14</td>
<td>10.8</td>
<td>10.6</td>
</tr>
<tr>
<td>15-19</td>
<td>10.5</td>
<td>10.2</td>
</tr>
<tr>
<td>20-24</td>
<td>10.4</td>
<td>12.1</td>
</tr>
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<td>25-29</td>
<td>9.4</td>
<td>11.0</td>
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<tr>
<td>30-34</td>
<td>7.8</td>
<td>8.5</td>
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<td>Sector</td>
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<tr>
<td>35-39</td>
<td>7.3</td>
<td>7.8</td>
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<tr>
<td>40-44</td>
<td>6.8</td>
<td>6.3</td>
</tr>
<tr>
<td>45-49</td>
<td>5.8</td>
<td>4.7</td>
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<td>50-54</td>
<td>4.5</td>
<td>3.5</td>
</tr>
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<td>55-59</td>
<td>3.1</td>
<td>2.2</td>
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<tr>
<td>60-64</td>
<td>2.7</td>
<td>2.2</td>
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<tr>
<td>65-69</td>
<td>1.5</td>
<td>1.3</td>
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<td>70-74</td>
<td>1.4</td>
<td>1.2</td>
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<td>75-79</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>80+</td>
<td>0.7</td>
<td>0.8</td>
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</table>

Income distribution and Poor Households: Percentage of women and men-headed households situated below the poverty line (national or locally-defined poverty line).

The latest poverty mapping conducted shows that 32.4% (World Bank, 2016) of the people are poor in the city in 2016, 31.9% (Averaged based on range identified in the map) in 2010 (World Bank, 2010, 2010).

Headship wise poverty data is not available
<table>
<thead>
<tr>
<th>Sector</th>
<th>Relevant text from the report</th>
<th>Page number(s) of the report</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main housing types and proportion in each sector:</strong> Construction type, Provision/Tenure types, Age of buildings</td>
<td>Only 40% houses are a permanent structure in the city (Figure 19). About 58% people live in rented house and 6% households live in rent-free structures (BBS 2014). Age wise a large number of buildings are older than 30 years and had little renovations, 22.90% HH have built their houses during the last five years, while 11.37% either developed or renovated between last 10-15 years. About 21% of houses were constructed in the last 15-20 years, and over 30% structures were constructed 30 years back. In 2001, 32% of the population lived in permanent structures whereas in 2011 that has increased only by 7% (BBS, 2011; BBS, 2013).</td>
<td>48-49</td>
</tr>
<tr>
<td><strong>Durable Structures: Proportion of households living in a housing unit considered as ‘durable’, i.e. built on a non-hazardous location and has a structure permanent and adequate enough to protect its inhabitants from the extremes of climatic conditions such as rain, heat, cold, humidity.</strong></td>
<td>Only 40% houses are a permanent structure in the city. <strong>Data on durable structures on a non-hazardous location are not available</strong></td>
<td>48</td>
</tr>
<tr>
<td><strong>Unemployment: Average proportion of unemployed (men and women) during the year, as a fraction of the (formal)</strong></td>
<td>Alarmingy, currently 26.5% male are unemployed in the city whereas female unemployment rate is 24.6%</td>
<td>52</td>
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<tr>
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<td>-----------------------------------------------------------------------------------------------</td>
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<tr>
<td>workforce (using the ILO definition of unemployment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal Employment: percentage of the employed population, men and women, whose activity is part of the informal sector.</td>
<td>20.5% people are employed in the informal sector in the city (male 18.67% and female 1.87 (BBS 2014).</td>
<td>52</td>
</tr>
<tr>
<td>GDP per capita and City Product: Total product of the city as defined in national accounts procedures.</td>
<td>Khulna’s GDP per capita of Khulna is around £1288, and the gross domestic product is estimated to be £166 million.</td>
<td>52</td>
</tr>
<tr>
<td>Under Five Mortality: Probability, expressed as a rate per 1,000 live births, of a child born in a specified year dying before reaching the age of five.</td>
<td>Data on mortality rate at city level are not available</td>
<td>**</td>
</tr>
<tr>
<td>Literacy: Percentage of the population, male and female, aged 15 years-old and over who can both read and write with understanding a short simple statement on everyday life.</td>
<td>According to the statistics of 2011, the literacy rate of Khulna City Corporation (KCC) is 65.06% of the total population aged 15 years and above, whereas the male literacy rate above 15 years is 73.26% and for female it is 54.98% (BBS, 2014).</td>
<td>67</td>
</tr>
<tr>
<td>School attendance: Percentage of female and male enrolled at primary,</td>
<td>at primary level about 48.56% male attend government school and 52.53% attend non-government school, whereas 51.44%</td>
<td>68</td>
</tr>
<tr>
<td>Sector</td>
<td>Relevant text from the report</td>
<td>Page number(s) of the report</td>
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</tr>
<tr>
<td>secondary and tertiary levels in public and private schools.</td>
<td>female attend government school and 47.47% attend non-government school (see Table 13) (BBS, 2013).</td>
<td></td>
</tr>
<tr>
<td>Travel time*: Average time in minutes for a one-way work trip to work. This is an average over all modes of transport.</td>
<td>Battery-operated Easy Bike and rickshaw are the two most dominating local travel modes in Khulna city in the absence of public bus service. People pay 10 pence per km for a rickshaw, 5 pence per km for an Easy Bike ride (KDA 2012; BBS 2013)</td>
<td>49</td>
</tr>
<tr>
<td>Local Government Revenue: Total local government revenue from all sources in US dollars annually, both capital and recurrent, for all local governments in the metropolitan area, averaged over the last three years divided by the population.</td>
<td>Latest update of tax collection report reveals that from 2015, the KCC authority collected revenue of total $9.57 million having a deficit of $132.41 million in total to December 2017. However, in 2017, the authority has collected total $4.22m that was $3.75m in 2016 (KCC 2017).</td>
<td>63</td>
</tr>
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</table>
### Shift in the population, growth and density in Khulna city, 1901-2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
<th>Population (000)</th>
<th>Growth Rate</th>
<th>Density of population (per sq.km)</th>
<th>Level of urbanisation in the region (% of people living in urban area in Khulna District)</th>
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<td>1901</td>
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<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>1911</td>
<td>NA</td>
<td>18</td>
<td>5.55</td>
<td>-</td>
<td>-</td>
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<td>1921</td>
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<td>24</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
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<td>1951</td>
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<td>13.04</td>
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<td>45.4</td>
<td>562</td>
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<td>12151</td>
<td>42.27</td>
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<td>1991</td>
<td>45.4</td>
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<td>1.66</td>
<td>12778</td>
<td>50.1</td>
</tr>
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<td>2006</td>
<td>45.65</td>
<td>830</td>
<td>3.5</td>
<td>-</td>
<td>-</td>
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<tr>
<td>2001</td>
<td>59.57</td>
<td>770</td>
<td>2.93</td>
<td>16241</td>
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</tr>
<tr>
<td>2011</td>
<td>50.61</td>
<td>663</td>
<td>-0.99</td>
<td>13107</td>
<td>33.54</td>
</tr>
<tr>
<td>Year</td>
<td>Area</td>
<td>Population (000)</td>
<td>Growth Rate</td>
<td>Density of population (per sq.km)</td>
<td>Level of urbanisation in the region (% of people living in urban area in Khulna District)</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>------------------</td>
<td>-------------</td>
<td>-----------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>

Source: KCC website; BBS 2014
Annex 3: Key data requirements in Dhaka city profiles for comparison in RTP-1

<table>
<thead>
<tr>
<th>Sector</th>
<th>Relevant text from the report</th>
<th>Page number(s) of the report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Population and Growth: Average annual growth rate of population during the last ten years; population density.</td>
<td>Dhaka has a population of 8749468 and an urbanisation rate of 5 percent (RAJUK, 2015, p.36)</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Currently the density of population in the city is 28 thousand people per square kilometre (BBS, 2015). About 40% of the residential communities of Dhaka have a density over 400 people per acre, 24% have 400 ppa densities, 7% with 300ppa, 10% 250 ppa and only 11 % have a density of 150 ppa.</td>
<td>76</td>
</tr>
<tr>
<td>Basic City Demography: Percentage of males and females by age cohort</td>
<td><img src="image" alt="Diagram" /></td>
<td>76</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Sector</th>
<th>Relevant text from the report</th>
<th>Page number(s) of the report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income distribution and Poor Households: Percentage of women and men-headed households situated below the poverty line (national or locally-defined poverty line).</td>
<td>Current crisis ascents to an acute intensity because of high level of poverty in the city and a large number of slum populations. Only 3% enjoy a high standard of living, 45% defined as urban poor and 25% are classified as “extremely poor” (Comer and Dewan 2014 in Swapan et al. 2017). Rate of growth of the slum population in the city is as high as 9% (BBS, 2014a; BBS, 2016). There is no data available on the “Percentage of women and men-headed households situated below the poverty line”</td>
<td>84</td>
</tr>
<tr>
<td>Main housing types and proportion in each sector: Construction type, Provision/Tenure types, Age of buildings</td>
<td>Currently, 62.08% of the households live in permanent structure, and others live in temporary structures (BBS, 2015). Most of the households (about 73.96%) live in the rented house, and only 22.16% has house ownership.</td>
<td>80</td>
</tr>
<tr>
<td>Durable Structures: Proportion of households living in a housing unit considered as ‘durable’, i.e. built on a non-hazardous location and has a structure permanent and adequate enough to protect its inhabitants from the extremes of climatic conditions such as rain, heat, cold, humidity.</td>
<td>Currently, 62.08% of the households live in permanent structure There is no data available on the “structures built on a non-hazardous location”</td>
<td>80</td>
</tr>
<tr>
<td>Unemployment: Average proportion of unemployed (men and women) during the year, as a fraction of the (formal)</td>
<td>The rate of unemployment in this city is as high as 26.6 percent (BBS 2014).</td>
<td>85</td>
</tr>
<tr>
<td>Sector</td>
<td>Relevant text from the report</td>
<td>Page number(s) of the report</td>
</tr>
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<td>-----------------------------</td>
</tr>
<tr>
<td>Workforce (using the ILO definition of unemployment)</td>
<td>Male unemployment rate is 11% whereas female unemployment is 9%.</td>
<td></td>
</tr>
<tr>
<td>Informal Employment: percentage of the employed population, men and women, whose activity is part of the informal sector.</td>
<td>Latest data shows that 25% people are in the informal sector. 18.90% male are in informal sector whereas 6% of total female employees are in informal sector (BBS, 2014).</td>
<td>86</td>
</tr>
<tr>
<td>GDP per capita and City Product: Total product of the city as defined in national accounts procedures.</td>
<td>In the year 2017, GDP share of Dhaka city was US$ 10 billion (Swapan et al., 2017). In terms of GDP, the city holds the 78th position among cities of the world. Dhaka City shares 36% of national GDP.</td>
<td>85</td>
</tr>
<tr>
<td>Under Five Mortality: Probability, expressed as a rate per 1,000 live births, of a child born in a specified year dying before reaching the age of five.</td>
<td>There is no city level data on “Under Five Mortality”</td>
<td>**</td>
</tr>
<tr>
<td>Literacy: Percentage of the population, male and female, aged 15 years-old and over who can both read and write with understanding a short simple statement on everyday life.</td>
<td>Whereas the 75% of the total male population attend school at different level (primary, secondary and higher education), only 71.4% of the total of female population attend school. 16.91% of the total population remained illiterate, as they don’t attend any school. Because of gender disparity against 11.90% male, 22.83% of female are illiterate (Household socio-economic survey, 2006 cited in RAJUK, 2010b).</td>
<td>88</td>
</tr>
<tr>
<td>Sector</td>
<td>Relevant text from the report</td>
<td>Page number(s) of the report</td>
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</tr>
<tr>
<td>School attendance: Percentage of female and male enrolled at primary, secondary and tertiary levels in public and private schools.</td>
<td>At primary level, the school attendance rate of male and female is almost similar, whereas in secondary level, school attendance rate of female (51.42%) is greater than the rate of male school attendance rate (48.58%) (BBS, 2013) (see Table 15).</td>
<td>89</td>
</tr>
<tr>
<td>Travel time: Average time in minutes for a one-way work trip to work. This is an average over all modes of transport.</td>
<td>Because of the traffic congestion the average commuting time of the city is 50 minutes and sometimes reaches 2 hours at peak time.</td>
<td>82</td>
</tr>
<tr>
<td>Local Government Revenue: Total local government revenue from all sources in US dollars annually, both capital and recurrent, for all local governments in the metropolitan area, averaged over the last three years divided by the population.</td>
<td>In fiscal 2014/15, the two Dhaka CCs together collected about US$50 million through holding tax, the main property-related tax instrument. That only amounted to about US$8 per resident per year. In fiscal 2015/16 holding tax revenue was budgeted to increase to about US$50 million in the Dhaka North CC and about US$36 million in the Dhaka South CC. (Bird et al., 2018, p.34-36)</td>
<td>85</td>
</tr>
</tbody>
</table>
## Shift in the population, growth and density in Dhaka city, 1600-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (sq.km.)</th>
<th>Population</th>
<th>Population density</th>
<th>Annual Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>2.6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1700</td>
<td>12.6</td>
<td>900000</td>
<td>71429</td>
<td></td>
</tr>
<tr>
<td>1800</td>
<td>20.7</td>
<td>200000</td>
<td>9662</td>
<td>-0.78</td>
</tr>
<tr>
<td>1867</td>
<td>20.7</td>
<td>51600</td>
<td>2493</td>
<td>-1.11</td>
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<tr>
<td>1901</td>
<td></td>
<td>104000</td>
<td></td>
<td>2.99</td>
</tr>
<tr>
<td>1911</td>
<td>15.7</td>
<td>125700</td>
<td>8006</td>
<td>2.09</td>
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<tr>
<td>1921</td>
<td></td>
<td>169000</td>
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<td>1.60</td>
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<td>1941</td>
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<td>296000</td>
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<td>1951</td>
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<td>336000</td>
<td></td>
<td>8.60</td>
</tr>
<tr>
<td>1961</td>
<td>72.5</td>
<td>550100</td>
<td>7588</td>
<td>6.37</td>
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</tbody>
</table>
## Shift in the population, growth and density in Dhaka city, 1600-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (sq.km.)</th>
<th>Population</th>
<th>Population density</th>
<th>Annual Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
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<td>1500000</td>
<td>14479</td>
<td>17.27</td>
</tr>
<tr>
<td>1974</td>
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<td>1774000</td>
<td></td>
<td>6.09</td>
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<tr>
<td>1981</td>
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<tr>
<td>1991</td>
<td>153.84</td>
<td>3612850</td>
<td>23484</td>
<td>4.59</td>
</tr>
<tr>
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<td>5327306</td>
<td>34629</td>
<td>4.75</td>
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<td>2011</td>
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<td>55139</td>
<td>3.08</td>
</tr>
<tr>
<td>2016</td>
<td>304.17</td>
<td>8749468</td>
<td>28765</td>
<td>5.11</td>
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</tbody>
</table>
Figure A43: Responsibilities of national, regional and local government in delivery system of primary education

Figure A44: The respective responsibilities of national, regional and local government in delivery system under DSHE of MoE

Figure A45: Undernourishment Rate (% of total population)

Source: World Bank, 2018
Figure A46: Rate of maternal mortality (per 1000 live birth)

Figure A47: Rate of under-five mortality (per 1000 live birth)
Figure A48: Infant mortality rate (per 1000 live birth)

Figure A49: Prevalence of Anaemia among children
Figure A50: Crude birth rate (per 1000 population)

Figure A51: Crude death rate (per 1000 population)

Source (figures A3-A9): World Bank, 2018
This report is published by the GCRF Centre for Sustainable, Healthy and Learning Cities and Neighbourhoods (SHLC). The contents and opinions expressed in this paper are those of the authors only.

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