

## **Chapter II**

### **Geo-environmental, historical background and Social composition of the people of the study area**

#### **2.1. Geo-environmental status of the study area**

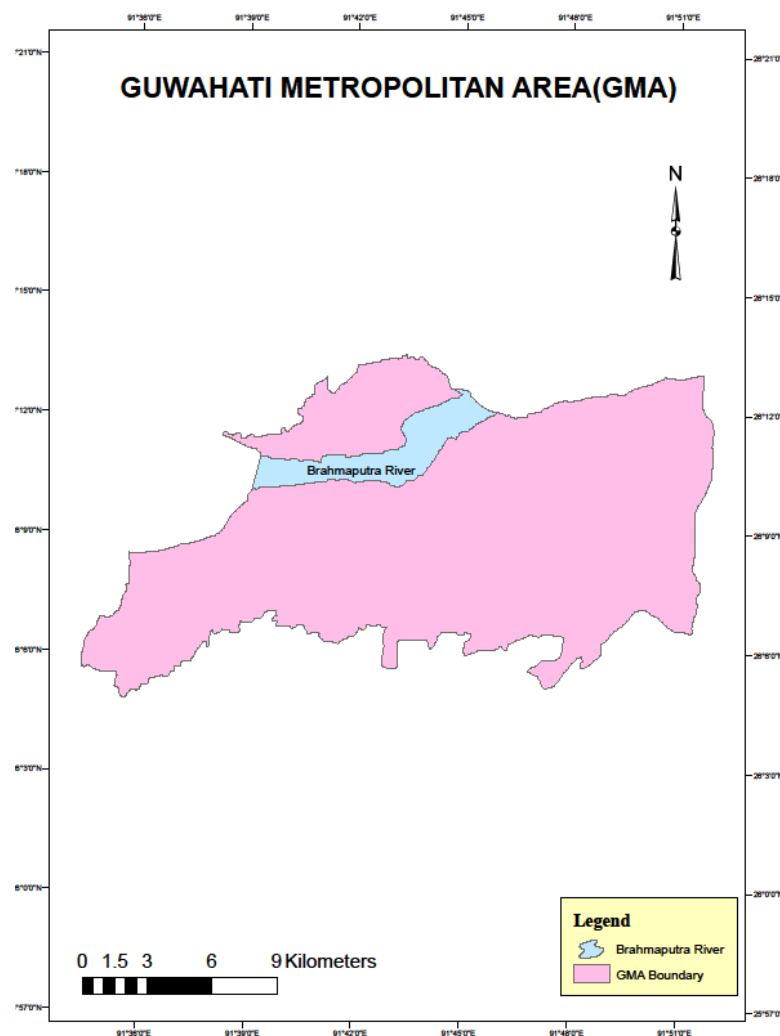
In this segment of the chapter the geo-environmental background of the study area is tried to be described under different sub-headings viz. location, physiography, climate and drainage. While writing the segment, reference of a number of books, journal articles and a few unpublished theses and Guwahati Metropolitan Development Authority report(GMDA)were taken into consideration.

Guwahati metropolitan area(GMA), the study area is located in an around Guwahati which is a very significant city and real gateway to the region and consist of parts of Kamrup (Metro)and Kamrup districts. It is the most important city terms of its population size, transport connectivity and strategic location Guwahati has a historic past and named as Pragjyotishpur (the City of Eastern Light) which is mentioned in epics like Mahabharata, Ramayana, Raghuvansham of Kalidasa. The famous Chinese traveller Yuen Chawan visited the city in 640 AD. The area delineated under Guwahati Metropolitan Area (GMA) constitutes areas of Guwahati Municipal Corporation, North Guwahati Town Committee, Amingaon Census Town and 21 revenue villages (Abhoypur, Rudreswar, Namati Jalah, Gouripur, Silamohekhaiti, Tilingaon, Shila, Ghorajan, Mikirpara, Kahikuchi, Mirjapur, Jugipara, Borjhar, Garal Gaon, Ajara Gaon, Dharapur, Jansimalu and Jansimalu (NC), Kalitakuchi & Kalitakuchi (NC), Kharghuli, Bonda, Bondagaon and Bonda Grant (I&II), Birkuchi). The total area covered under GMA is approximately 262 sq. km (GMDA Report, July,2009).

Guwahati is a hub for major hub of cultural and sports activities in the North Eastern Region as well as for the administrative and political activities in Assam and transportation in entire the NE.

### 2.1.1. Location of the study area

Guwahati metropolitan area(GMA) which has been chosen as the study area is located between 26°5'33"North to 26°15'50" North latitude and 91° 33'18" East to 91° 53'41" East longitude. The study area is surrounded by Nalbari district in the North, in the East Darrang and Marigaon districts, Meghalaya State in the south and Goalpara & Barpeta districts in the West. GMA is situated at an altitude of 55 meters above mean sea level (Fig.2.1).



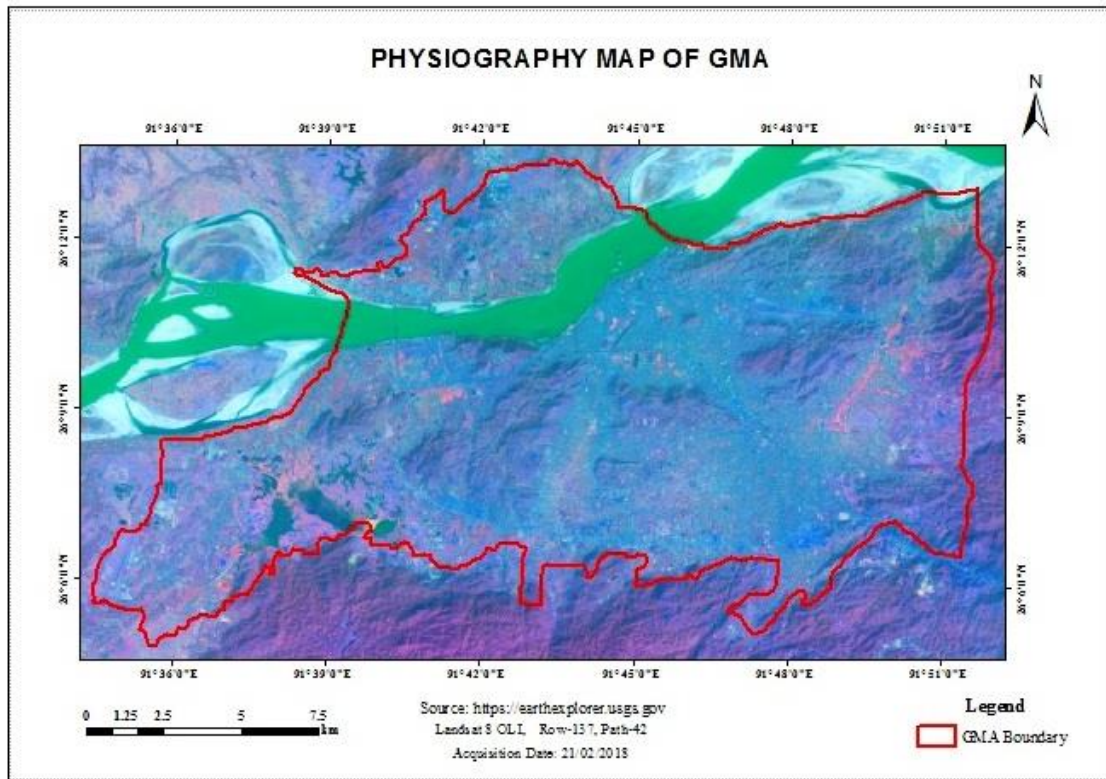
**Fig.2.1. Study Area (GMA)**

### **2.1.2. Physiography**

The study area, GMA is situated on the bank of the Brahmaputra river to the north. To the south foothills of Shillong plateau exist. Kulshi reserve forest and Dipor bil are situated to the west and Amchang Wildlife sanctuary to the eastern side of the study area. Besides Brahmaputra, Digaru, Bharalu, Basishtha and Puthimari are some of its rivers in the study area. The study area is situated on undulating plain with varying altitudes ranging from 49.5 m to 55.5 m above mean sea level (MSL). The southern and the eastern sides of the study area are surrounded by hillocks. The central part of GMA has small hillocks namely Sarania hill (193 m), Nabagraha hill (217 m), Nilachal hill (193 m) and Chunsali Hill (293 m). The study area is also covered by swamps, marshes and water bodies like Dipar Bil, Dighali Pukhri, Silsakoo bil (Fig.2.2).

### **2.1.3. Weather and Climate**

The climate of the study area (GMA) is sub-tropical humid with semi-dry summer & cold winter with annual rainfall ranges 1698 mm per year (Table.2.1). The Koppen-Geiger climatic classification is Cwa. Its average humidity is 80%-90%. Hottest month is August with 29.0°C average temperature, coldest month is January with 17.5°C average temp in the study area. Average temperature is 24.6 °C. Monsoon season in the study area lasts from June to early September with frequent downpour and thunder-showers. Autumn is the most comfortable season in the study area with warm and moderate weather and clear skies in the months of mid-September to early November. Winter season prevails from November to February.



**Fig.2.2. Physiography of GMA**

**Table:2.1. Month wise average temperature & rainfall of the study area**

Months	Januar y	Februar y	Marc h	Apri l	Ma y	Jun e	July	Augus t	Sept .	Oct .	Nov .	Dec .
Avg.Tem p in( <sup>o</sup> C)	17.5	19.5	23.3	26	26.8	28.1	28. 9	29	28.6	26. 2	22.5	18.7
Rainfall in(mm)	12	16	60	141	278	315	313	261	181	100	15	6

Source: *en.climate-data.org,2019*

## **2.2. Historical background of the people of the study area**

Guwahati is one of the beautiful ancient cities and hub of learning, art and culture in India, located on the bank of river Brahmaputra which centers Guwahati Metropolitan Area. The only way to find out the historical background of the study area is to relate GMA with the city Guwahati. As Guwahati is an ancient city known as *Pragjyotishpur* while GMA is a modern development under Guwahati Metropolitan Development Authority and Urban Planning of the state Assam.

The emergence of modern Guwahati as an urban area started in 1826. In 1890, the town was connected by railway line with the rest of India. Guwahati had phenomenal growth after independence followed by the establishment of major academic institutions of higher education like Guwahati University, Engineering College, and Medical College. In addition to that the Guwahati Oil Refinery was established in 1961. In 1972, the capital of Assam was shifted from Shillong to Dispur (Guwahati), leading to enough political importance for Guwahati. Since then the Guwahati has grown significantly in terms of population and development of commercial activities.

### **2.2.1. Cultural history**

*Geetevadye cha Nipuna sa Kamrupa Kamini*

Since time immemorial till date the study area has been the homeland of various ethno-linguistic groups with their unique heritage and culture. Guwahati is also culturally and economically connected with other states on bank of the river Brahmaputra since ancient times. The temple of Aswaktanta in North Guwahati, Kamakhya temple in Nilachal hills, Basishtha temple in Bashishtha etc. are the evidences of ancient sculpture and architecture in the study area. The word Pragjyotispura denotes prag meaning pre, jyotis meaning astrology and pur meaning town, meaning the town or place of 'old astrological centre,' the present

Navagraha temple in Navagraha hill stands as the evidence of the same. In classical literature, reference regarding the ancient city are found. The great classical poet, Kalidasa, in his epical literature, *Raghuvmsa*, had mentioned about the foundation of the Pragjyotispura and also mentioned about Kamrupa along with the river Lauhitya (Sharma,1988). The archaeological evidences in the Ambari reveals that civilization was in existence within the locality as back as 200-300 AD and clear evidences shows that trade relations existed between the people of this region and the countries, such as China, Rome, Ceylon. Java etc. In Bharatamuni's *Natya-shashtra*(under Odramagadhi style of drama) the name of the place Pragjyotishpur was mentioned.

In 640 AD Huen Tsang, a Chinese monk and traveler, visited Assam and he recorded his observations in his travelogue. During that time Kumar Bhaskar Barma was on the throne of Kamrupa. It is found from the observations of Huen Sang that there were more than one hundred Hindu temples in the region but none of the Buddha Viharas or Sangharams. The relics of the old monuments found in different parts of the study area clearly indicates that Guwahati was glorious and famous for religious and cultural activities of the region. Besides this, in Kumar Bhaskar Barma's court(Raajsabha), Huen Tsang was daily entertained with dance and songs of the region. It is also evident that at the time of Huen Tsang visited Pragjyotishpur, a Chinese song was also became popular among the mass which lyrics was translated into Bodo dialect of the region(Chatterji,1970). During the time of Kumar Bhaskar Barma influence of Arya and vedic rituals and music became evident. During 8<sup>th</sup> to 11<sup>th</sup> century, based on *raaga* another type of songs which is called *Sarjyapada* became very popular in Kamrupa. Later on *Borgeet* and *Ujapali* songs also were composed based on almost similar line of *raagas* of *Sarjyapada*.

In 15<sup>th</sup> century, Neo-Vaishnav movement led by Sri Shankardeva and Sri Madhavdeva enriched the music of Assam with their contributions of *Brogeet*, *Bhaona*, *Kirtan-Ghosha*, *Naam-Ghosha* etc. Guwahati was the capital of the Koch Kingdom for a short period. Koch Kings Naranarayan and Chilarai encouraged the spread of *vaishnav* musc and religion in the

region by Srimanta Shankardeva and Madhavdeva. Koch kingdom also encouraged *Ujapali* songs to stay alive among the indigenous people.

Ahoms invaded the study area in 1625 A.D. Ahoms occupied both the banks of the Brahmaputra and established Guwahati in place of Pragjyotishpur. It is found in the historical records that almost all the battles including the battles of Saraighat (Aandharu bali, Allaboi and Itakhuli) against the Mughals were fought from the south bank headquarters. There were as many as ten chowky (Garrison gateway) constructed around Guwahati, including North Guwahati for its security and protection. Karoipani chowky, Patduar, Sendurighopa, Chilar chowky and Kanaibarashiboa chowky, are on the north bank, while Pandu, Duargaria, Dharamduar, 7 Jaiduar and Latasil pani chowky are in the south bank (Sharma, 1988). Ahom Kings also were evident as great admirer of music and culture. A few Ahom kings namely Jayadhwaj Singha, Shiva Singha and Rudra Singha used to compose *raaga* based songs and they had proper knowledge of music of that era. In Auniati Satra, which was established by Ahom King Jayadhwaj Singha in 1653, two songs composed by Jayadhwaj Singha and one song composed by Rudra Singha use to sing till date. Rudra Singha upgraded the practice of music to the Royal status. He used to encourage common people by sending musicians to the western regions (presently Bengal, Kochbihar, Uttar Pradesh, Rajasthan etc.) to learn the music of those regions and provided platform to perform those in the Royal court.

After the Yandabo treaty in 1826, Assam came under the control of East India Company till 1836. But the British could not establish any effective administrative control over Guwahati. The British soldiers suffered from various diseases due to poor hygienic conditions and they shifted the capital to Shillong and made Guwahati the headquarter of Assam. In 1878, Municipality Board in Guwahati was formed and the first task considered was to construct a water supply tank covering about 6.5 sqkm. Guwahati was linked with Shillong by a narrow cart road at that time. In 1987, Guwahati was linked by railways from North Bengal to Upper Brahmaputra valley to Cachar. As a result of this connectivity, the educational and cultural activities of the study area was geared up leading to establishment of Cotton College in 1901. Another significant contribution during this time period was made by

the Christian Missionaries who came to spread the religion through music and education. The Baptist Missionaries towards the 19<sup>th</sup> century introduced western style of music to the people of the region in the form of hymns or carols. They used lyrics written in Assamese language for the region. The Baptist Missionaries initiated and encouraged the people of Assam to develop Assamese language in a more systematic way by publishing books, newspapers etc. Many youth of Assam were inspired to pursue education in Calcutta (now Kolkata) and paved the way to mingle with the culture of Bengal. In the same line the music of the study area was also mingled and inspired by the Bengali popular music. Construction of the Saraighat Bridge across the Brahmaputra in the year 1962 was the landmarks in the history of Guwahati. The strategical significance of Guwahati radically changed and magnified, when the North-Eastern States were politically reorganised into one region called northeast India. Entire North-Eastern States were linked with the mainland by Guwahati only and served as a gateway of the region. Growth of Guwahati accelerated with the shifting of capital from Shillong to Dispur(Guwahati) in the year 1973.

### **2.2.2. The nomenclature**

The present Guwahati was known as Pragjyotishpura in epic period meaning the eastern city of astronomy. According to Kalika Purana (written in 10th century A.D.) Lord Brahma stayed in this region and created stars, thus the city equals to the city of Indra. Edward Gait (1962), in his book “A History of Assam” mentioned that in Sanskrit, ‘Prag’ means former or eastern and ‘Jyotish’ means a star or astrology and ‘Pur’ means place, therefore Pragjyotishpur meaning ‘the city of Eastern Astrology’. Likewise regarding the name of Guwahati also different views are found. According to some, ‘Guha’ means ‘a cave’ and ‘hati’ means a row thus ‘Guwahati’ means ‘a city with a row of cave’. Some other scholars opined that ‘Guwa’(Sanskrit-Guvaka) mean ‘areca nut’ with ‘hati’ means a row of houses in a village or town, thus ‘Guwahati’ meaning to be a town full of areca nuts.



## **2.3. Social composition of the people of the study area**

In this segment of social composition of the people of the study area, peopling, population growth, urbanization status, population and religious composition are discussed. By discussing the peopling, agglomeration of various genre of music with wave of people came to settle in the study area is tried to be focused.

### **2.3.1. Peopling**

Guwahati has been witnessing continuous human-habitat uninterruptedly through all the periods of pre-historic, historic to till date. The peopling process of the study area can be well explained with the waves and streams of migration and population distribution to the study area. Since time immemorial Guwahati has been a place for Hindu and Buddhist (Tibetan Buddhists) religions which is evident from various temple remnants found in the area. Then in an around 640 Bhaskar Varma ruled in Kamrupa that evident the presence of Varman dynasty in Guwahati. During this period trading also took place between Kamrupa and China leading to cultural exchange between the two regions which is written in the travelogue of Huen Tsang. Bhaskar Varma also made alliance with rulers of Bengal paving the way of cultural and economic exchange with the area. In 15th century, Neo-Vaishnav movement Sri Shankardeva and Sri Madhavdeva brought association of another group of people from Kochbihar, Varanasi etc. Ahoms invaded Kamrup in 1625 A.D. and Mongolian group of people came to the area from eastern side of Assam. Ahoms made a strong foundation of the culture of Assam. During this time period, Mughals tried to invade Kamrup which was in vain in front of courageous Ahoms. But after war, a group of Mughal army stayed back in and around Hajo and settled down there. After the Yandabo treaty in 1826, Assam came under East India Company rule as a result of which British soldiers and Christian Missionaries came to the study area. British also brought Adivasi's from Jharkhand, West Bengal, Telangana, Chhattisgarh and Orissa to work in the tea gardens in Assam during 1860-90's. In 1973 along

with the shifting of the capital of Assam from Shillong to Dispur another significant migration of people took place to Guwahati.

### 2.3.2. Population growth

In 1891, the population of Guwahati was only 8,394 which increased to one lakh people in 1961. In 2001 the population of Guwahati Metropolitan Area(GMA) was 890773(Table.2.2). Based on the trend of population growth of the study area, population estimates for Guwahati Metropolitan Area(GMA) for the period 2005 to 2025 have been calculated at five yearly intervals(Table.2.3). In the Fig.2.3(Table.2.3) the estimated growth can be observed in an ascending manner at an alarming rate in every five years (from almost 10 lakhs to more than 21 lakhs).

**Table:2.2. Population Growth in GMA:1951 to 2011**

Year	GMA Population	Decadal Growth
1951	97389	
1961	199482	104.83
1971	293219	46.99
*1981	435280	48.45
1991	646169	48.45
2001	890773	37.85
2011	986549	10.75

*\*No Census could be conducted in Guwahati in 1981. The 1981 population figures have been extrapolated on the basis of the 1971-1991 data.*

*Source:1. GMDA,2009, 2. CUE,2014;*

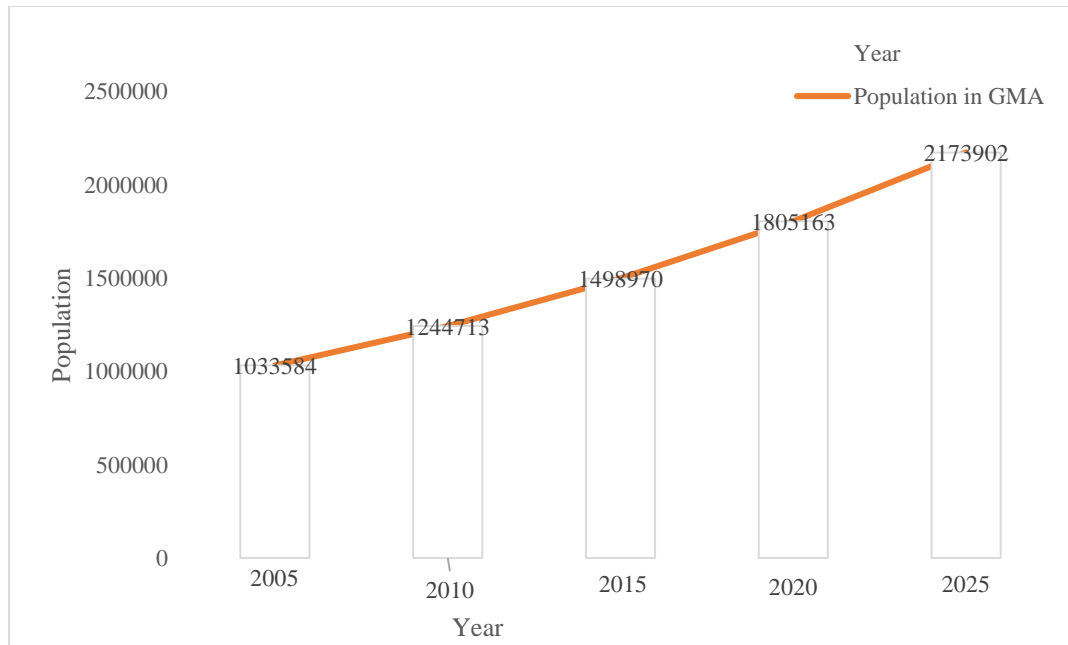
The decadal growth of population of GMA from 1951 to 1961 was 104.83% which is highest till date. Then it was 46.99% from 1961 to 1971 followed by 48.45% in 1981 and 1991, 37.85% in 2001 and 10.75% in 2011 which is the lowest. Migration from rural areas of Assam and other states of North-East India after shifting of state capital to Dispur and cross-border migration from Bangladesh after Bangladesh formation in 1972 led to increase in population growth from 1971 to 1991. Then this growth slowed down in 2001 and 2011 showing less migration from nearby areas to the study area. This declining population growth made the area economically and geopolitically stabilised since 2001.

**Table.2.3. Population growth estimates in GMA at 5 years' interval**

<b>Year</b>	<b>Population in GMA</b>
2005	1033584
2010	1244713
2015	1498970
2020	1805163 (P)
2025	2173902 (P)

\*P= Projected

*Source: GMDA, July, 2009*



Source: GMDA, July, 2009

**Fig.2.3. Population Growth Estimates in GMA-2025 at 5 yearly intervals**

### 2.3.3. Urbanisation

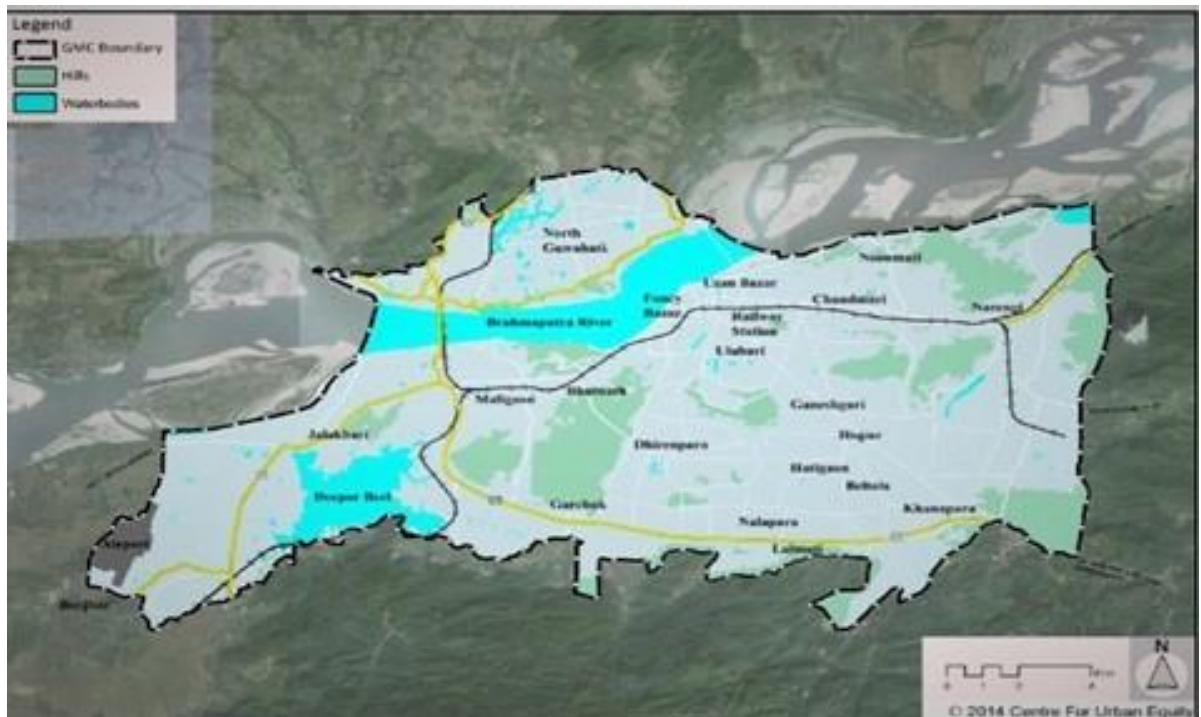
Since urbanization data of GMA is not available, the data available on Guwahati city which is an integral part of the study area, has been considered here to describe the urbanization of the study area. Guwahati is the capital city of Assam and is one of the most rapidly urbanising place in north east India. It is a major commercial and educational pivot of northeastern India such as Tea Auction Center, the Indian Institute of Technology Guwahati etc. The city is also a major center for cultural activities, sports in the North Eastern Region as well as for the administrative and political activities in Assam.

The major economic activities of the Guwahati are trade and commerce, transportation and services. It is also a major wholesale distribution centre, a marketing hub and a growing retail hub in the region.

The study area has been a vital place for rural to urban migration as the socio-economic development of the area attracts the people leading to unnatural growth of urban population. The accommodation of such a huge population has become one of the main concerns for the administration of the study area due to limited geographical area. The study area(GMA) comprises about 22 per cent of the state's urban population. The study area has a mix geo-hydrological features of plain areas, low-lying marshy lands and hills, with the Brahmaputra river running across the Guwahati city in the north have impacted greatly in the physical growth of the area. The older core administrative and commercial centers of Guwahati like Uzan Bazar, Fancy Bazar, Pan Bazar, Kachari and Paltan Bazar have developed along the banks of the Brahmaputra river. Other two major cores that developed on the river bank were the Kamakhya Temple on the Nilachal Hills and the Northeast Frontier Railways Headquarters in Maligaon, this place has also developed as an important corridor to link between Guwahati to North Guwahati. The Inland Water Transport Authority (IWTA) ports and many smaller jetties are also linking to this road, where some amount of trade takes place. Dispur developed as the capital complex of Assam (the Secretariat) to the south-east of the older core area. The Guwahati-Shillong (now Mahapurush Srimanta Sankerdev Path) link road (NH 40) that connects the older core area to Dispur, has developed as an important commercial corridor as well as a densely-built residential area in the inner parts. Along this corridor, Ganeshguri has developed as a sub-center in the south. GMDA had proposed expansion of GMA to accommodate around 2.3 million people by 66 km<sup>2</sup> within 2025(Fig.2.4.).

The 1971 census showed that 59 per cent of Guwahati's population had migrated to the city(CUE,2014). 17% of rural-urban migration was from within the Kamrup district (to Guwahati). Another 16.9% migrant source was from outside Assam of which a large proportion came from Bihar (41.9%) followed by West Bengal (12.6%), Rajasthan (10.4%), Meghalaya (10.2 %) and Uttar Pradesh (9.6%). This was followed by another 15% intra-state migration from other districts of Assam. A high proportion of Guwahati's migrants came from outside India (10.6 %) due to the international borders surrounding Assam from East Pakistan

(now Bangladesh) and Nepal (Borgohain, 2011). Population growth in Guwahati was marked further high by in-migration in the 1970s and 1980s. From 1991 onwards, the population growth rate has decreased, reflecting the decreasing migration rates into the city(CUE,2014).



Source: CUE,2014

**Fig.2.4. Urban core areas, Guwahati city (GMA)**

### **2.3.4. Population composition**

The population composition of Guwahati as per the 2001 census shows that about 46% of the total population is female and 54% is male. As per 2011 census, population density of the study area is 1313/sqkm. The sex ratio is 936 per 1000, whereas child sex ratio is 946 between 0-6 age group. Average literacy rate has been calculated as 88.71% followed by 92.13% male literacy and 85.07% female literacy.

### 2.3.5 Religious composition

**Table. 2.4. Religious composition of Kamrup Metro**

<b>Religion</b>	<b>Percentage(%)</b>
Hindu	84.89
Muslim	12.05
Christian	1.50
Sikh	0.29
Buddhist	0.13
Jain	0.74
Others	0.01
Not Available	0.39

*Source: Census,2011*

Religious composition information on the study area is not available. As a consequence of which the available Kamrup Metropolitan district data as per 2011 census is being used here to represent the study area's religious composition.

As per the official census 2011 and population data of Kamrup Metropolitan district, Hindu religion occupies the majority share at 84.89%. From the census it is found that Muslims are at only 12.05% holding minority status followed by 1.50% Christian, 0.29% Sikh, 0.13% Buddhist, 0.74% Jain and 0.01% other religions. About 0.39% people did not disclose about their religion as per the census 2011(Table.2.4).