

Chapter-III

Urban Governance and Service Delivery in Guwahati City

3.1. Introduction

Cities and towns play a vital role in the country's socio-economic growth, its transformation and change. The exponential increase in population and unplanned growth over the years have created enormous pressure on the land and infrastructure with the result that most cities and towns are severely stressed in terms of available infrastructure and delivery of basic services. Guwahati is recognized to be the most critical city in the North east India. The city has a well-developed connectivity with the rest of the country and act as the gateway to the entire North eastern India. Hence, the development of the city is not critical to the state of Assam but also to the entire North east. In this chapter an attempt has been made to know the implications of urban governance with regard to current situation of service delivery mechanism in Guwahati city.

3.2. The City of Guwahati

Guwahati, meaning “areca nut marketplace” in Assamese, was known by the name of “Gauhati” during British period. It is situated along the Brahmaputra River and is bound on the southern side by the foothills of the Shillong plateau. It is the capital city of Assam and gateway to North-East India. Guwahati is also the business hub and the largest city of Assam and the North-East. The physical features of the Guwahati city sufficient impact on its urban development process, particularly in the settlement pattern in the post 1974 period. During the British the internal spatial pattern of the city was restricted on the river side giving it a linear elongated shape. The expansion was restricted by the hills in the east and the west. The existence of low lying flat lands having swamps restricted the expansion on the south. However, the city throughout the years has been gradually developing towards the south and east engulfing the peripheral rural areas. The physical expansion has been recognized as urban agglomeration; greater Guwahati; Master Plan Area and Metropolitan Area at different times. All these expressions recognize the units

larger than the legal city or the “political city”³⁹ Urban Agglomeration concept was accepted by the Revenue Department after 1971 to recognize various pockets of development in the town which were outside the statutory Municipal Board, but within the revenue boundary of the adjoining area. The municipal area with the 14 wards and the surrounding areas into which the urban population had expanded were included in Guwahati Urban Agglomeration. The concepts of Greater Guwahati and Guwahati Metropolitan Area also to the main city and areas around it determined on the basis of their interrelationship with Guwahati, as revealed through commuting pattern and the nature of daily contact for economic, social cultural purposes. Guwahati Metropolitan Development Authority Act, 1985 made provision for declaration of Guwahati Metropolitan Area:

The State Government may, by notification in the official Gazette declare the area covered by the Guwahati Municipal Corporation Area and any other areas contiguous to the Guwahati Municipal Corporation Area to be the Metropolitan area for the purpose of this Act(Footnote: Section 3 (1), Guwahati Metropolitan Development Authority Act, 1985). Accordingly, the Guwahati Master Plan Area (GMPA) has been considered as Guwahati Metropolitan Area.

The greater Guwahati as envisaged in the previous Master Plan area included a vast area of 262 sq. km. The GMDA recognized this area as Guwahati Metropolitan area which has almost 30 km. radius. At the end of the 19th century the town had an area of 2.95 sq. km. However with the declaration of the municipal boundary initially with 8 wards an area of 6.5 sq. km. was covered by the town. In 1940 the boundary of the legal city was extended to include 3 more wards, the area engulfed more areas. Total 14 wards covered an area of 14.24 sq. km. In 1974, the number of municipal corporation wards was extended to 34 and it continued upto 1994. The present number of ward is 31 and the municipal boundary covers an area of 216.19 sq. km. The area of 2.95 sq. km in the beginning of the twentieth century has expanded into more than 2.16 sq. km. at the century. The

³⁹ Jammes A. Quinn, *Urban Sociology*, Eurasia Publishing House, New Delhi, 1995, p-12

establishment of a Municipal Corporation in 1974 and declaration for as legal status as a city was a major landmark in its growth process throughout the years.

The New Master Plan-2025 has proposed development of new area: approximately 66 sq. km, incorporating more villages in the North-East, North-West and the South-West of the present GMA. Most of this will be developed as Special Scheme Areas and have been categorized as New Towns numbering three. The total Master Plan area including these new towns accordingly is 328 sq. km, it extends substantially to peripheral areas of the present city.

The spatial growth of Guwahati city has been accompanied by growth of population. This in turn has contributed towards the continuous growth of the city revealed through the high density of population and magnitude of function. Guwahati is the largest city in the North Eastern Region and enjoys a prime status with broad population base in relation to the other centres of the region. The rapid population growth indicates increased functional efficiency of the city. At the same time demographic attributes in a development process influences the urban condition including the infrastructural facilities to a great extent.

According to the 2011 census, Guwahati Municipal Corporation Area (GMCA) and Guwahati Metropolitan Area (GMA) had a population of 963,429 and 968,549, respectively (Table 1). The municipal area is under the jurisdiction of the Guwahati Municipal Corporation (GMC) whose limits were last extended in 1991 to cover an area of 216.79 sq.km. The GMA covers about 262 sq.km. and is under the jurisdiction of the Guwahati Metropolitan Development Authority(GMDA)

Table 3. 1: Guwahati Population Growth

| Year | GMCA* | | GMA excluding GMCA | | GMA* | |
|--------|---------------|----------|--------------------|----------|------------|------|
| | Population in | CAGR (%) | Population | CAGR (%) | Population | CAGR |
| 1951 | 43,615 | | 53,774 | | 97,389 | |
| 1961 | 1,00,707 | 8.7 | 98,775 | 6.3 | 1,99,482 | 7.4 |
| 1971 | 1,23,783 | 2.1 | 1,68,436 | 5.5 | 2,93,219 | 3.9 |
| 1981** | 2,68,945 | 8.1 | 1,02,351 | -4.9 | 4,35,280 | 4.0 |
| 1991 | 5,84,342 | 8.1 | 61,827 | -4.9 | 6,46,169 | 4.0 |
| 2001 | 8,09,895 | 3.3 | 80,878 | 2.7 | 8,90,773 | 3.3 |
| 2011 | 9,63,429 | 1.8 | 85,998 | 0.6 | 9,68,549 | 0.8 |

* GMCA- Guwahati Municipal Corporation Area; GMA- Guwahati Metropolitan Area (also known as the Guwahati Urban Agglomeration)

** The Census 1981 was not conducted in Assam. The population figures have been extrapolated on the basis of the 1971-1991 Compound Annual Growth Rate (CAGR).

Source: (i) GMDA (2009: 12), and (ii) Census 2011 Provisional Report

According to Table 3.1 Guwahati witnessed a very high rate of growth of population in the period from 1971 to 1991; 8.1 percent p.a., which is likely on account of the city becoming Assam's capital in 1972, migration from rural Assam and other states of the North-East region of India, and also the cross-border migration from Bangladesh after the latter's formation in 1972. Since then, GMC area has registered slowing down of population growth rate, from 3.3 percent p.a. in 1991-2001 period and 1.8 percent p.a. in 2001-2011 (Table:3.1). In fact, in the last decade the GMC area has experienced a growth rate that is even lower than that of Assam's urban population growth rate of 2.5 percent p.a. The GMA areas have registered a population growth that is even lower than that of GMC rate in 2001-2011. This means that the migration rate to the city has slowed down in the decade of 2001-2011 due to either decline in migrants from other North-East states and rural Assam or decline from cross-border migration or both. Thus, contrary to the expectation, the population of Guwahati city and its metropolitan region has stabilized since 2001 due to economic and geo-political reasons.

It is interesting to note that despite a very high population growth, the birth rate in the city remained almost same as shown in the records. The medical Officer of the GMC is the Registrar of birth and death for the Corporation area. Though the Government of Assam framed the Registration of birth and death rules in 1978, the system of birth registration was not very effective until 1985s due to lack of awareness among people. The number of birth registered in the GMC Office is shown below in Table 3.2

Table 3. 2: Number of Birth Registered in Guwahati Municipal Corporation: 2000-2014

| Year | Population | Year | Population |
|------|------------|------|------------|
| 2000 | 11,353 | 2008 | 15,615 |
| 2002 | 18,165 | 2010 | 15,250 |
| 2004 | 14,624 | 2012 | 15,034 |
| 2006 | 14,367 | 2014 | 14,121 |

Source: GMC office

However the Registrar admits that the system of keeping birth record is not at all foolproof to ensure hundred percent registrations of births. This table has been included here just to indicate the pattern of birth rate registered in the city in a very significant phase of its growth. Since 2010 there has been a steady decline in the birth rate in the city. One-fifth of the total population consists of youths in the age group of 15-24, which indicates the proportion of population constituted by students going to schools and colleges in the city. It implies the predominance of young people in the urban population.

With the growth of population, there is also an increase in the density of population. Socio-economic conditions and urban environment together with facilities are greatly influenced by the density of population. In the Guwahati Municipal area the population density was as high as 2695 persons per square km. It shows that in the Municipal area there is heavy pressure of people on limited land. The low density is observed in the Master Plan area- it is about 1800 persons per square km.⁴⁰

There are variations in the population density in different areas which indicates that certain areas are not heavily populated due to late development of areas, existence of large underdeveloped areas and existence of newly built residence not fully occupied. The areas which show high density are largely main business areas. Among the newly developed areas of the city also, there is high population density. These areas are

⁴⁰ Master Plan for Guwahati Metropolitan Area- 2025, *Part-I*, July, 2009

Jyotinagar, Bamunimaidam, Dispur- Ganeshguri, Beltola and Kahilipara. It shows that these areas, though were not developed till the later part of the 1970s, have been the major residential zone for the ever increasing population coming from different parts of the state.

Residential density as an important demographic aspect of a city indicates the living conditions of the people. The Modified Final Master Plan and Zoning Regulations for Guwahati showed gross residential density in the Master Plan area as 172 persons per hectare. In the old city there is higher residential density which is about 254 persons per hectare. In the main business areas like *Fancy Bazar, Paltan Bazar* there is high residential density of 10 persons per residential building. The residential houses in these areas shows vertical occupation in chain of houses with very little space in between. The number of households in the Municipal Corporation area was 125906 in the population census, 1991. The CMP-2025 cites that the number of households in 2001 increased to 184,454.

3.3. Sex Ratio

The percentage of male-female ratio in Guwahati in 1991 was 783 females per thousand males. The all Indian figure was 929 females per thousand males. Sex composition of population in the city reveals the disparity in numerical strength of male and female population. This disparity has occurred, apart from the natural cause, also due to large number of male immigrants from the rural areas. It is an indicator of pull factor prevailing in the city. The predominantly male work force is a common feature of gradually expanding functional base of a city. In Guwahati the sex ratio was much lower in 1971-637 female per 1000 males. The increase in the sex ratio in the last two decades can be explained apart from the natural cause, in terms of migration of female population also. However, the low sex ratios found among the population of working age groups starting from 25 to 59 indicate the urban settlement pattern and the need of housing in the city.⁴¹ As per the recent census, population of Guwahati in 2011 is 963,429; of which

⁴¹ Ibid. p- 14

male and female are 502,255 and 461,174 respectively. The sex ratio of Guwahati city are 86,806 as per the report out of which 43,217 are boys while 43,589 are girls constituting 9.01 % of total population of Guwahati city. The minor children are considered non active population of the society. Child sex ratio of girls is 1009 per 1000 boys which is a unique feature.

3.4. Migration

Guwahati, like any other city, has grown through in-migration during different periods of its history. Guwahati experienced a massive population increase in the 1971-1981 and 1981-1991 decades (Table 1). With Assam's capital shifting from Shillong to Guwahati in 1972, the latter's population grew with migrants pouring into the city. The migration was social and economic in nature. Poor people who were facing extreme poverty and hardship in rural areas of Assam came to Guwahati for survival. Some of these were people who had lost their land due to erosion caused by the river Brahmaputra. Slightly better lower middle class people came from various parts of Assam for employment opportunities and a better life. Well-off families also came due to the opportunities the city presented and since it has been the primate city in the region. Students came in large numbers, not only from other parts of Assam but also from some other Northern-Eastern states for education. There was also a flow of people from other states to earn livelihood in different economic activities. There has been migration from Bihar and as far away as Andhra Pradesh and Punjab since the colonial period. In fact, the Guwahati Municipal Corporation's colonies for its sanitation employees consist of many second-generation migrants from Bihar, Andhra Pradesh and Punjab (Desai et al 2012). The composition and structure of the immigrant population show that migration of population from three distinct sources is a common and continuing feature⁴². These are inter-state migration, intra-state migration and migration from outside the country, particularly the Bangladeshis. It is evident that the migrants constitute the major share of the total population of the city. Census Report of 1971 showed that 59.27 percent of the total population had migrated to the city. Only 40.73 percent of the population were non-

⁴² Census of India, 1971, Part IV- B, *Special Survey Report*, Guwahati

migrants. Migration from outside Assam was 16.92 percent and from outside India 10.62 percent. In the absence of recent survey on migration to the city undertaken by competent authority, it is not possible to know accurately the major sources of migration in our period of study. However from the 1991 Census Report on population for the state, it can be easily assumed that the major source of migration to the city is from the neighbouring country i.e. Bangladesh. In our view, besides the political and social implications of large scale migration of Bangladeshis to the whole region, there is an immense economic burden of such migration on city management system. The illegal occupation of land leading to growth of slums in the city is a clear outcome of migration from outside the country. A simple observation on magnitude of the activities going around the city indicates the volume of inflow of people from outside. It was learnt from the discussion with prominent builders of real estates in the city that more than 90 percent of the workers are migrants. However, the issue needs detailed investigation.

3.5. Institutional Arrangements for the Delivery of Services

The primary development agenda of Guwahati city is carried out by two main agencies, the Guwahati Municipal Corporation (GMC) and the Guwahati Metropolitan Development Authority (GMDA). The area covered under GMDA includes the GMC area of 216 sq. kms and an additional 48 sq. kms. The institutional arrangements for the delivery of services in Guwahati city are shown below:

Table 3.3: Institutional Framework for the Delivery of Services in Guwahati city

| Infrastructure | Planning and Design | Construction | Operation and Maintenance |
|------------------------------------|---------------------|--------------------|---------------------------|
| Water supply | PHE/AUWSSB/GMC | PHE/AUWSSB/GMC | PHE/AUWSSB/GMC |
| Sewerage | PHE/AUWSSB/GMC/FCD | PHE/AUWSSB/GMC/FCD | PHE/AUWSSB/GMC/FCD |
| Drainage | PHE/AUWSSB/GMC/FCD | PHE/AUWSSB/GMC/FCD | PHE/AUWSSB/GMC/FCD |
| Storm water drainage | GMDA/GMC/T&CP | GMDA/GMC | GMDA/GMC |
| Solid Waste disposal | GMC | GMC | GMC |
| Municipal roads(Including flyover) | PWD/GMDA/GMC | PWD/GMDA/GMC | PWD/GMDA/GMC |
| Street lighting | PWD/GMDA/GMC | PWD/GMDA/GMC | PWD/GMDA/GMC |
| Town Planning | GMDA and T& CP | GMDA | GMDA |

AUWSSB- Assam Urban Water Supply and Sewerage Board
FCD- Flood Control Department
GMC- Guwahati Municipal Corporation
GMDA- Guwahati Metropolitan Development Authority
PHE- Public Health Engineering
PWD- Public Works Department
T& CP- Town and Country Plannin
Source: City Development Plan, Guwahati, 2006

The presence of multiple agencies while discharging similar duties has compounded the problem of service delivery in the city of Guwahati. Though each of the agencies in question has a clear demarcation with respect to service delivery in specific locations, for example, the PHE supplying drinking water to State Government installations, many a time, there are duplications of effort. The problem is compounded more so with respect to consumers, who have to deal with a number of agencies for redressal and service delivery.

The need of the hour with respect to the functioning of the various agencies concerning the discharge of civic functions is to bring about accountability of service delivery. In addition, wherever possible, the functioning of the agencies need to be streamlined to bring it under one agency, which will not only help in improving service delivery but also bring about accountability. Further, some of the specific activities further streamlined with entrustment to individual agencies. For example, the planning and design for drainage could be entrusted to the Public Health Engineering Department and the construction could be with the Public Works Department..

It is, however, apparent that each of the agencies operating in the city has predefined areas in which they operate, and hence there is a broad clarity on their roles and responsibilities. But it is recognized that the various need to be brought under the ambit of the Guwahati Municipal Corporation, which should have the overall responsibility of providing infrastructure services in Guwahati and shall utilize the services of other agencies on a need basis.

3.6. JnNURM- An Overview

Jawaharlal Nehru National Urban Renewal Mission (JnNURM) was launched to address the growing challenges of urbanization by improving infrastructure, governance and the quality of life in cities. Urbanization in India has had an evident downside in proliferating slums, increasing homelessness, growing urban poverty, pollution and ecological damage. The former Prime Minister of India ManMohan Singh, in his speech at the launch of the JnNURM on 5th December 2005 mentioned this very downside of urbanization as a challenge to be fulfilled by the JnNURM. The aim was to encourage reforms and fast track planned development of identified cities with a focus on efficiency in urban infrastructure and service delivery mechanisms, community participation, and accountability of ULBs or Parastatal agencies towards citizens.⁴³

3.6.1. JnNURM: Sub-missions

The JNNURM incorporates four sub-missions. These are briefly discussed as follows:

Urban Infrastructure and Governance (UIG)

The UIG is administered by the Ministry of Urban Development with a focus on infrastructure projects relating to water supply and sanitation, sewerage, solid waste management, road network, urban transport and redevelopment of old city areas with a view to upgrading infrastructure therein, shifting industrial and commercial establishments to conforming areas etc.⁴⁴ Initially the sub-mission had identified 63 cities however two more cities namely Tirupati and Porbandar were added in 2009 increasing the number of mission cities to 65. The sub-mission thus eventually identified a list of 65 cities that included 7 Cities or Union Territories with 4 million plus population as per 2001 census, 28 million plus cities with less than one million population.

⁴³ Government of India, Ministry of Urban Development (2006), "JUNNURM Overview" document, p. 85

⁴⁴ Ibid

Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT)

The UIDSSMT is also administered by the Ministry of Urban Development. It subsumed the schemes of Integrated Development of Small and Medium Towns (IDSMT) and Accelerated Urban Water Supply Programme (AUWSP). All towns or cities as per 2001 Census except 65 Mission cities or Urban Agglomeration covered under UIG and BSUP are eligible to be covered under the scheme.⁴⁵ The components for assistance under the Scheme include all urban infrastructure development projects such as water supply, roads, parking space, drainage, solid waste management, sewerage, urban renewal, preservation of water bodies and prevention of soil erosion. The objectives of the scheme are to improve infrastructural facilities and help create durable public assets and quality oriented services in cities and towns, enhance public-private partnership in infrastructural development and promote planned integrated development of towns and cities.⁴⁶ The sharing of funds is in the ratio of 80:10 between Central Government and State Government and the balance 10% could be raised by the nodal or implementing agencies including ULBs from the internal resources or from financial institutions. However, in case of cities or towns in North Eastern States and Jammu and Kashmir sharing of funds would be in the ratio of 90:10 between Central and State Government.⁴⁷

Basic Services to Urban Poor (BSUP)

The BUSP is administered by the Ministry of Housing and Urban Poverty Alleviation. It focuses on integrated development of slums through projects for providing shelter, basic services and other related civic amenities with a view to providing utilities to the urban poor.⁴⁸ The objective of the sub-mission is provision of Basic Services to the Urban Poor

⁴⁵ Government of India, Ministry of Urban Development (2009), "UIDSSMT Overview and Salient Feature", P.3

⁴⁶ Ibid

⁴⁷ Ibid

⁴⁸ Government of India, Ministry of Housing and Urban Poverty Alleviation (2009), "Modified Guidelines for Sub-mission on Basic Services to the Urban Poor", P.3

including security of tenure at affordable prices, improved housing, water supply, sanitation and ensuring delivery through convergence of other already existing universal services of the Government for education, health and social security. The sub-mission initially identified a list of 63 cities that included 7 Cities/Union Territories with 4 million plus population as per 2001 census, 28 million plus cities and 28 cities of religious, tourist and historic importance.⁴⁹ However two more cities namely Tirupati and Porbandar were added in 2009 increasing the number of mission cities to 65.

Integrated Housing and Slum Development Programme (IHSDP)

The IHSDP is also administered by the Ministry of Housing and Urban Poverty alleviation. It aims at combining the schemes of Valmiki Ambedkar Awas Yojana (VAMBAY) and National Slum Development Programme (NSDP) under the new IHSDP Scheme for an integrated approach in ameliorating the conditions of the urban slum dwellers who do not possess adequate shelter and reside in dilapidated conditions. The basic objective of the Scheme is to strive for holistic slum development with a healthy and enabling urban environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers of the identified urban areas.⁵⁰ The scheme is applicable to all cities and towns as per 2001 Census except cities/towns covered under UIG and BSUP.⁵¹ The sharing of funds would be in the ratio of 80:20 between Central Government and State Government or ULB or Parastatal. States or Implementing Agencies may raise their contribution from their own resources or from beneficiary contribution/financial institutions. However, in case of special category states, the sharing of funds would be in the ratio of 90:10 between Central and State Government.⁵² The funding pattern under JnNURM to various cities, towns and union territories is shown in the following table 3.4

⁴⁹ Ibid

⁵⁰ Government of India, Ministry of Housing and Urban Poverty Alleviation (2009), "Modified Guidelines for IHSDP", P.1

⁵¹ Ibid

⁵² Government of India, Planning Commission *Sixth Five Year Plan* (1980-85)

Table No. 3.4: Funding Pattern under JnNURM

| Scheme | Category of Cities/Towns/UAs | Centre | State | Local |
|----------------|--------------------------------------------------------------------------------|---------------|--------------|--------------|
| UIG | Cities/UAs with 4 million plus population as per 2001 Census | 35% | 15% | 50% |
| | Cities/UAs with million plus but less than 4 million | 50% | 20% | 30% |
| | population as per 2001 census | 90% | 10% | — |
| | Cities/towns/UAs in North Eastern States and Jammu and Kashmir | 80% | 10% | 10% |
| | Cities/towns/UAs other than those mentioned above | | | |
| BUSP | Cities with 4 million plus population as per 2001 census | 50% | | 50% |
| | Cities with million plus but less than 4 million population as per 2001 census | 50% | | 50% |
| | Cities/towns in North Eastern States and Jammu & Kashmir | 90% | | 10% |
| | | 80% | | 20% |
| | Other cities | | | |
| UIDSSMT | Cities/towns | 80% | 10% | 10% |
| | Cities/towns in North East States and Jammu and Kashmir | 90% | 10% | - |
| IHSDP | Cities/towns | 80% | 20% | - |
| | Special category states | 90% | 10% | - |

Source: Ministry of Urban Development, Govt. of India, Modified Guidelines For Projects of Jawaharlal Nehru National Urban Renewal Mission on Infrastructure and Governance, (September, 2006), P. 13; Ministry of Housing and Urban Poverty Alleviation, Govt. of India, Modified Guidelines for BSUP, February 2009, P. 10

3.6.2. JnNURM and Guwahati City

In order to encourage planned development of the urban sector across the country, the Government of India has launched the Jawaharlal Nehru National Urban Renewal Mission (JnNURM) in 2005. The mission aims at bringing about fast track planned development of identified cities with a clear focus on bringing efficiency in urban infrastructure and service delivery mechanisms, community participation, and accountability of Urban Local Bodies (ULBs) or Parastatal agencies towards citizens. Guwahati is one of the 63 cities, which have been identified under the said mission. The mission has also identified drawing up a City Development Plan as one of the critical milestones in this regard.

In view of the above, Guwahati has taken up a programme of a City Development Plan (CDP). The CDP focuses on the development of infrastructure and builds up strategies that deal specifically with issues affecting the urban poor, strengthening of municipal governments, their financial accounting, budgeting systems and procedures, creation of structures for bringing in accountability and transparency, and elimination of legal and other bottlenecks that have stifled the land and housing markets, it provides a basis for cities to undertake urban sector reforms that help direct investment into city-based infrastructure using the Public Private Partnership (PPP) route.

The Most recent programme for housing for the urban poor was JNNURM's sub-mission of Basic Services to the Urban Poor (BSUP). Under this, three sites of the Guwahati city were proposed for construction of housing for the urban poor: Fatasil, Morasoli and Amingaon. Only the Morsali site has been completed where Guwahati Municipal Corporation (GMC) built 128 dwelling units. In Fatasil approximately 400 dwelling units have been constructed so far against the proposed 1,104 dwelling units. In Amingaon, where 1,028 dwelling units were to be built, construction work has not been started. The

dwelling units at Morasali and Fatasil have been allotted to the GMC Class IV employees who used to earlier live in dilapidated houses and hutments on the same land. Slum free city planning is now being done under Rajiv Awas Yojana (RAY), the flagship scheme of the Ministry of Housing and Urban Poverty Alleviation (MHUPA). The GMC's 2012 slum survey was done with the purpose of preparing a Slum Free City Plan of Action under Rajiv Awas Yojana. However, the very slow progress on RAY so far suggests that it will not help the urban poor much.

Three water supply projects are currently under implementation in Guwahati under three different funding agencies. JnURM is also one of the agencies which are funding West Guwahati Water Project (107 MLD per day). Recently Guwahati Metropolitan Development Authority (implementing agency) has claimed that every household in West Guwahati will have round-the clock safe and clean water supply by 2016, once the water supply projects taken by it is completed.

Public transportation system is one of the essential components of the infrastructural aspects of the urban development process. In Guwahati the transportation system has played a major role in determining the spatial patterns of urban activities; the urban morphology, particularly the settlement pattern; and the price of land in the city. The JnNURM scheme was extended to bus funding scheme in the year 2008-09. The aim and objective of the bus funding scheme was to ensure a sustainable urban transport system in 65 mission cities. Accordingly in the year 2009 as many as 15250 nos. Buses were sanctioned and the plan outlay for additional Central Assistance was to the tune of Rs.5000.00 crore. Under JnNURM-I scheme 200 nos. Buses were sanctioned to Guwahati city. The scheme was piloted by Guwahati Metropolitan Development Authority which procured the buses and finally handed over to Assam State Transport Corporation for operationalisation of the buses.⁵³ The scheme JnNURM-II is again extended for the year 2013-2014 and under JnNURM-II bus funding scheme 10000 nos. Buses were sanctioned for 65 mission cities and ministry of Urban Development

⁵³ www.assamstatetransportcorporation.com (accessed on 03/01/2015)

sanctioned 400 nos. Buses for Guwahati city. Thus, under JnNURM scheme Guwahati city was facilitated with low-fare hi-tech buses for improving urban transportation.

3.6.3. JnNURM and Service Delivery: A Critique

It cannot be denied that JnNURM has been instrumental in rejuvenating the urban space in the country. Even though JnNURM provides additional central assistance to the ULBs, the discretion to exercise that option had been left to the respective state governments. Out of the 65 mission cities, the state capitals and million plus cities may not require the extent of funding under the umbrella of JnNURM as most of these cities have the capacity to generate resources. In fact, funding may be scaled down for them to increase the funding for smaller towns. Funding of the mission cities was decided on the basis of population based on 2001 census; the smaller states with smaller towns had some disadvantage over the large cities in access to the funds which has resulted in disparity in the creation of infrastructure across urban centres across the country.

The ten years' experience with JnNURM has been a substantial learning experience. It has also revealed weaknesses in the governance systems (Kundu, 2011). Although JnNURM mandated preparation of City Development Plans (CDP) and Detailed Project Reports (DPR) before taking up any projects, in many cases, the CDPs failed to link spatial planning with socio-economic planning and become a mere mandatory requisite to avail JnNURM funds. Most of the CDPs gave limited consideration of socio-economic aspects and excluded peri-urban areas. This has further limited the adequacy of CDPs and has led to haphazard growth on the city boundary. Also, the process of consultation was limited to preplan finalization stage. Further, CDP was seen as an investment plan for projects in the immediate term and not as a vision document for the city with very limited cities revisiting the same CDP is not a statutory document as the master plan or regional plan.

Again, most of the smaller ULBS could not avail the grants as they were unable to prepare DPRs and generate matching resources. Many ULBs have taken up projects arbitrarily which resulted in sub-optimal utilization. The ULBs though augmented level

of service delivery but were not able to adopt Service Level Benchmarks in appraising the outcome of the projects. The entire process of implementation involves many stakeholders and sanctioning authorities. This resulted in lack of coordination and unusual delays. Implementation of the reforms was delayed due to lack of adequate capacities for the ULBs and the legislative process involved in it.

It is a fact that the JnNURM has provided for substantial central assistance to cities for infrastructure development, and has indeed been effective in renewing the country's focus on the urban sector (Kundu & Samanta, 2011). However, the analysis exhibits a move towards polarized development and an inbuilt big city bias. Also, only 72 per cent of the total allocations have actually been released under JnNURM till date. This phenomenon of large scale underutilization of the JnNURM funds and inability of the smaller ULBs to prepare DPRs and generate matching resources can only be addressed by paying urgent attention to urban governance reforms, building capabilities of city governments in them, especially those in the economically backward states. Efforts should be taken to make special provisions for unconditional general grants addressed towards their infrastructure needs till the time they develop the capacities to receive projects funding. This will certainly help in making the growth process more inclusive and ensure equitable and sustainable urban growth.

3.7. Multiple Agencies in Guwahati Metropolitan Area

Multiple agencies work in Guwahati metropolitan area including Guwahati Development Department (GDD), Guwahati Metropolitan Development Authority (GMDA), Guwahati Municipal Corporation (GMC), Assam Urban Water Supply and Sewerage Board (AUWS&SB), Public Health Engineering Department (PHED), Public Works Department (PWD) etc. The regulatory frameworks and functions of these agencies can be summed up in the following table 3.5.

Table 3.5: Institutions and Regulatory framework for Service Delivery for Guwahati City

| Agencies/ Institutions | Regulatory Framework | Functions |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Directorate of Town & Country Planning, Urban Development Department (UDD, Govt. of Assam) | The Assam Town & Country Planning Act, 1959 | Preparation of Master Plan for urban areas in the state. Technical advisory wing of the UDD on matters concerning urban and regional planning strategies, research, appraisal and monitoring of central government schemes and development policies in the state. |
| Guwahati Development Department | Established by the Govt. of Assam in 1994 | Administration department for urban development for Guwahati city. Coordinates between various city level authorities in Guwahati city including GMDA, GMC, AUWS&SB, ASHB, etc |
| Guwahati Metropolitan Development Authority | Guwahati Metropolitan Development Authority Act, 1985 (as amended in 1989) | Master Planning, Service (water supply, sewerage/ drainage facilities) and infrastructure provisions (roads, street lighting) and Housing for GMDA area (areas that do not fall under jurisdiction of GMC) |
| Guwahati Municipal Corporation | The Guwahati Municipal Corporation Act, 1969 | Grant of building permissions, provision and maintenance of urban infrastructure & services in Guwahati city (Municipal area) |
| Assam Urban Water Supply & Sewerage Board | The Assam Urban Water supply & Sewerage Board Act, 1985 | Planning and provision of water supply and sanitation facilities in urban areas of the state, including AUWS&SB area in Guwahati city |
| Assam Public Health Engineering Department | Established by the Govt of Assam in 1956 | Planning and provision of water supply and sanitation facilities in rural areas of the state and PHED area (government installment) in Guwahati city. |
| Assam Public Works Department | Established by the Govt. of Assam in 1880 (during British rule) | Construction of roads (PWD roads in the city) Construction and maintenance of Government buildings and housing, co-ordinate with agencies providing & managing urban utilities like water supply, sewerage, storm water drainage etc. |

Source: Climate proofing Guwahati Assam: City Resilience Strategy & Mainstreaming Plan, *Synthesis Report*, June 2013

3.8. Urban Governance in Assam

The Municipal Act of 1956 was a significant development towards administration of urban local bodies in Assam. It was the first urban legislation in Assam in the post-independence period which provided a strong basis for organization and administration of municipalities. At that time the Municipal Boards were the principal agencies for management of urban development. The Local Self Government Department in the Assam Secretariat was entrusted with the overall control of urban local bodies prior to this Act. There was no suitable upto date municipal law to guide the municipal agencies. This Department was changed into Municipal Administration Department (MAD) in 1964. A unified system was established in which MAD was in charge of control of municipal agencies. In 1969 the Directorate of Municipal Administration was created to ensure better control over financial and administrative matters. The role of the Directorate can be ascertained from its responsibilities in regard to approval of the Annual Budgets of the Urban Local Bodies (ULBs) and scrutiny of financial discipline of bodies. The Directorate is responsible for routing the grant-in-aid, share of taxes, loans and all matters of plan schemes and their implementation. However, the Municipal Administration Department (MAD) in the secretariat retained the overall authority in the matter of policy decision, finance and administration regarding the urban affairs of the state. As per 1991 census, there were 69 Urban Local Bodies with 25 lakhs population. These local bodies were supported by the MAD as a governmental agency by providing financial assistance in terms of loan and grants for creation of civic amenities and upgradation of urban environment.⁵⁴ Grants were sanctioned in Annual Plans to support the Guwahati Municipal Corporation under the Directorate of MAD in these categories: General purpose grant, Adhoc general purpose grant, Cash allowance to sweepers, PWD road side drains, Communication grant and Compensatory grant. But the role of the MAD has been altered in the context of Guwahati with the creation of a new department

⁵⁴ Administrative Report, 1990-1991, Directorate of Municipal Administration, Govt. of Assam, p-1

under the govt. of Assam in 1994, the Guwahati Development Department. The ever increasing demands for the government intervention in the development affairs of the city led to the birth of a new controlling organization with political backing and patronage. The Guwahati Development Department (GDD) was created to facilitate proper and co-ordinated development of the city. The department has been named as the administrative department for the Guwahati Metropolitan Development Authority and Guwahati Municipal Corporation and matters relating to construction of Assam's permanent capital and the government issued order for transfer of all records and files relating to Guwahati Municipal Corporation (GMC) and Guwahati Metropolitan Development Authority (GMDA) to Guwahati Development Department (GDD). Consequently, the Municipal Administration Department (MAD) ceased to be administrative department for the GMDA and GMC. It also integrated the state's permanent capital constructions matters with the development machinery operating in the city. It is evident that the Guwahati Development Department (GDD) is the overall controlling agency for the city development management process. The further ordered for transferred of all record and files relating to GMC and GMDA to GDD. Thus it now provides unified control over both GMC and GMDA. Further, the Guwahati Development Department executes the various developmental schemes under the Twelfth Finance Commission and through the funds sanctioned by the Government of India under Non Lapsable Central Pool of Resources (NLCPR), One Time Additional Central Assistance and JnNURM. From the beginning GDD has been considered a powerful agency of the city development under the direct control of the Chief Minister of the state for over all planning, enforcement and execution of development strategies for the city. The administrative set up includes one Commissioner and Secretary and one Deputy Secretary and the office staff. During the initial period IAS officers were appointed as Secretaries one after another. It is observed that since its establishment, frequent changes have been made at its bureaucratic leadership level. As a higher political wing its role can be projected as follows:

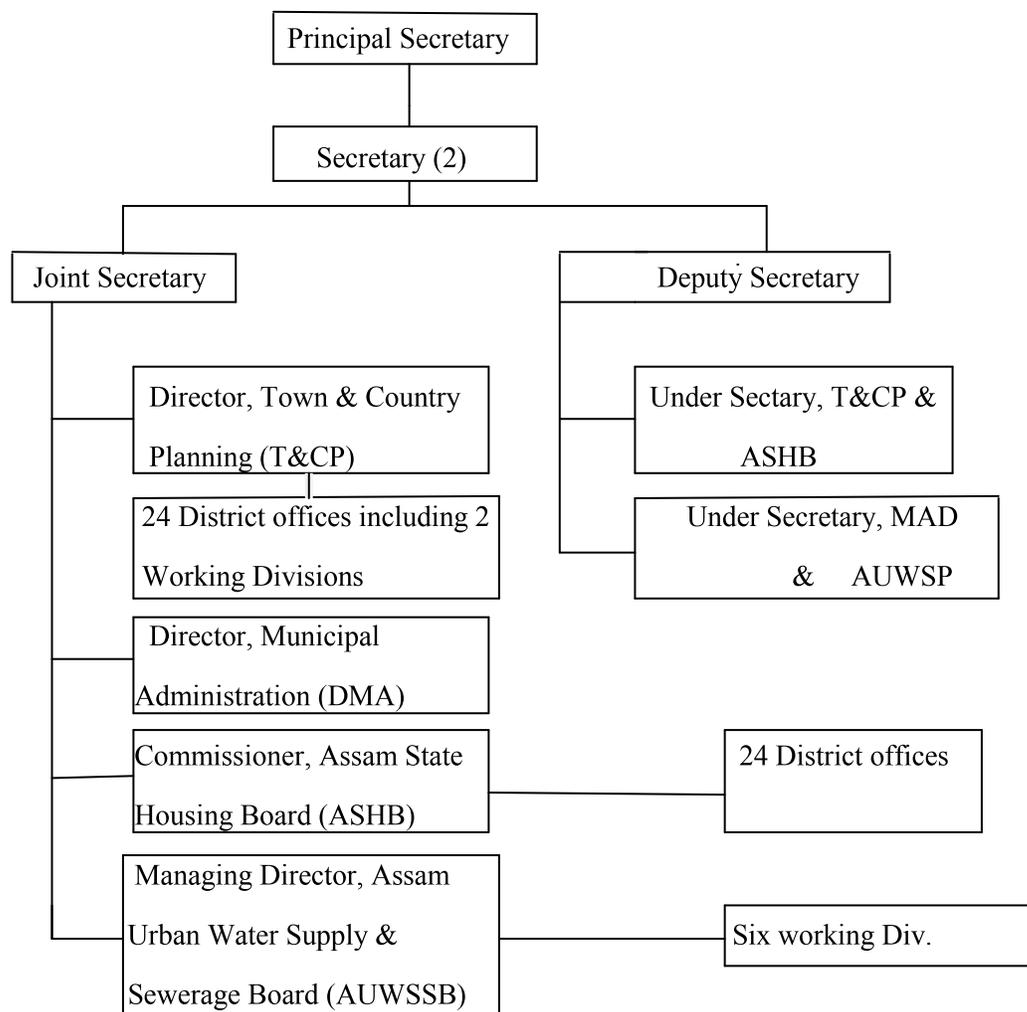
(a) To sort out interdepartmental problems for all round development of the Municipal Corporation and the GMDA area.

- (b) To review the progress of various ongoing schemes of the departments within the GMDA area and schematic release of fund by the state government.
- (c) To oversee the overall co-ordination between GMC, GMDA and other Departments for improvement of services of GMC.

3.9. Urban Governance in Guwahati and Existing Status

According to the tenets of the 74th Constitutional Amendment Act, Guwahati has well established institutions for decentralized governance. There are 88 Urban Local Bodies in Assam governed by the State Urban Development Department (UDD). For Guwahati, a separate State Level Department has been created- Guwahati Development Department (GDD), which is at par with UDD. GDD governs (i) State Level nodal Agency (SLNA) for JnNURM (ii) GMDA and (iii) GMC. Urban Development Department (UDD) is functioning with two Directorate *viz.*, Municipal Administration Department and Town and Country Planning (T&CP) and two Boards *viz.*, Assam Urban Water Supply and Sewerage Board (AUWSSB) and Assam State Housing Board (ASHB). The Directorates and Boards undertake their activities through 24 Development Authorities (DA) in 24 towns and 88 Urban Local Bodies (ULBs) in the State to provide basic civic amenities such as housing, drinking water facilities, road networks, market complex, Bus/Truck Terminus etc. AUWSSB was set up in May 1988 for development, maintenance and regulation of water supply and sewerage facilities in the urban areas of the State. ASHB was constituted under the Assam Act of 1994 to implement Housing Schemes. The organizational set up of UDD is shown in the chart 3.1.

Chart 3.1: Organizational Set up of Urban Development Department



Source: Urban Development Department, Assam Secretariat, Dispur

The Guwahati Municipal Corporation, the first and the only municipal corporation in the state was constituted in 1.2.1974⁵⁵ under the Guwahati Municipal Corporation Act, 1969. The Guwahati Municipal Corporation covers an area of 216 sq.km. The Corporation has a council of 31 elected ward councilors. The council is headed by a Mayor. As per under

⁵⁵ Assam Act – 1 of 1973

section 20 A of Guwahati Municipal Corporation Amendment Act, 1971 and under section 12 Of the Assam Nagara Raj Act, 2007, thirty one (31) wards committees has been constituted in 31 wards in the Guwahati city. Apart from these eighty nine (89) Area Sabhas has been constituted for these wards. Ward Committees, with the assistance of the Area Sabhas, are supposed to prepare an Annual Plan with budget for their ward; however, the Nagar Raj Act has been implemented only partially yet in the city.

3.10. Guwahati Municipal Corporation at a glance

The Guwahati Municipal Corporation was constituted in 1974 under the provisions of the Guwahati Municipal Corporation Act, 1971. The Corporation covers an area of 216 sq k.m. The entire Guwahati Municipal Corporation Area is divided into 31 wards. Each ward is further divided into 2, 3 or 4 Area Sabhas. Presently there are 90 Area Sabhas in the city. The Corporation has a council of 31 elected ward councilors representing 31 ward committees. The basic information related to Guwahati Municipal Corporation can be summed up with help of following table 3.6.

Table No 3. 6: Administrative Set up of Guwahati Municipal Corporation

| | |
|-----------------------|------------|
| GMC area | 216 sq Kms |
| Wards | 31 |
| Wards Committees | 31 |
| Area Sabhas | 90 |
| Employees | 3054 |
| Revenue zones | 4 |
| Public works division | 5 |
| Public work zones | 23 |
| Primary schools | 5 |
| High schools | 1 |
| Parks | 12 |
| Municipal markets | 11 |
| Holdings | 1,00,000 |

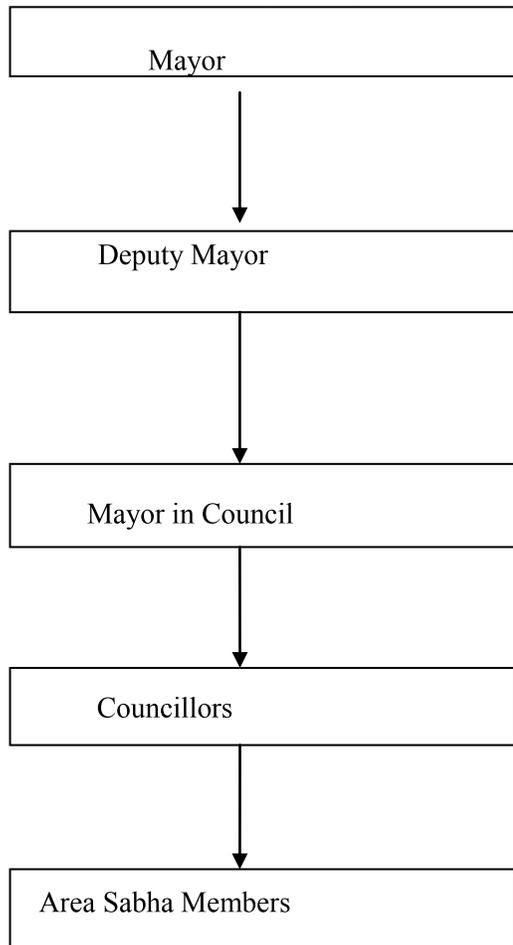
| | |
|------------------------|------------------|
| GMC roads | 1919 (511.5 Kms) |
| Water treatment plants | 3 |
| Production of water | 80 MLD (per day) |
| Water pipe length | 425 Km (approx) |

Source: GMC office, Panbazar

3.11. Organizational Hierarchy of Guwahati Municipal Corporation

The Organizational Hierarchy i.e., Legislative Body and Administrative Body of Guwahati Municipal Corporation is shown in following charts (chart 3.2and 3.3).

Chart 3.1: Organizational Hierarchy of Legislative Body

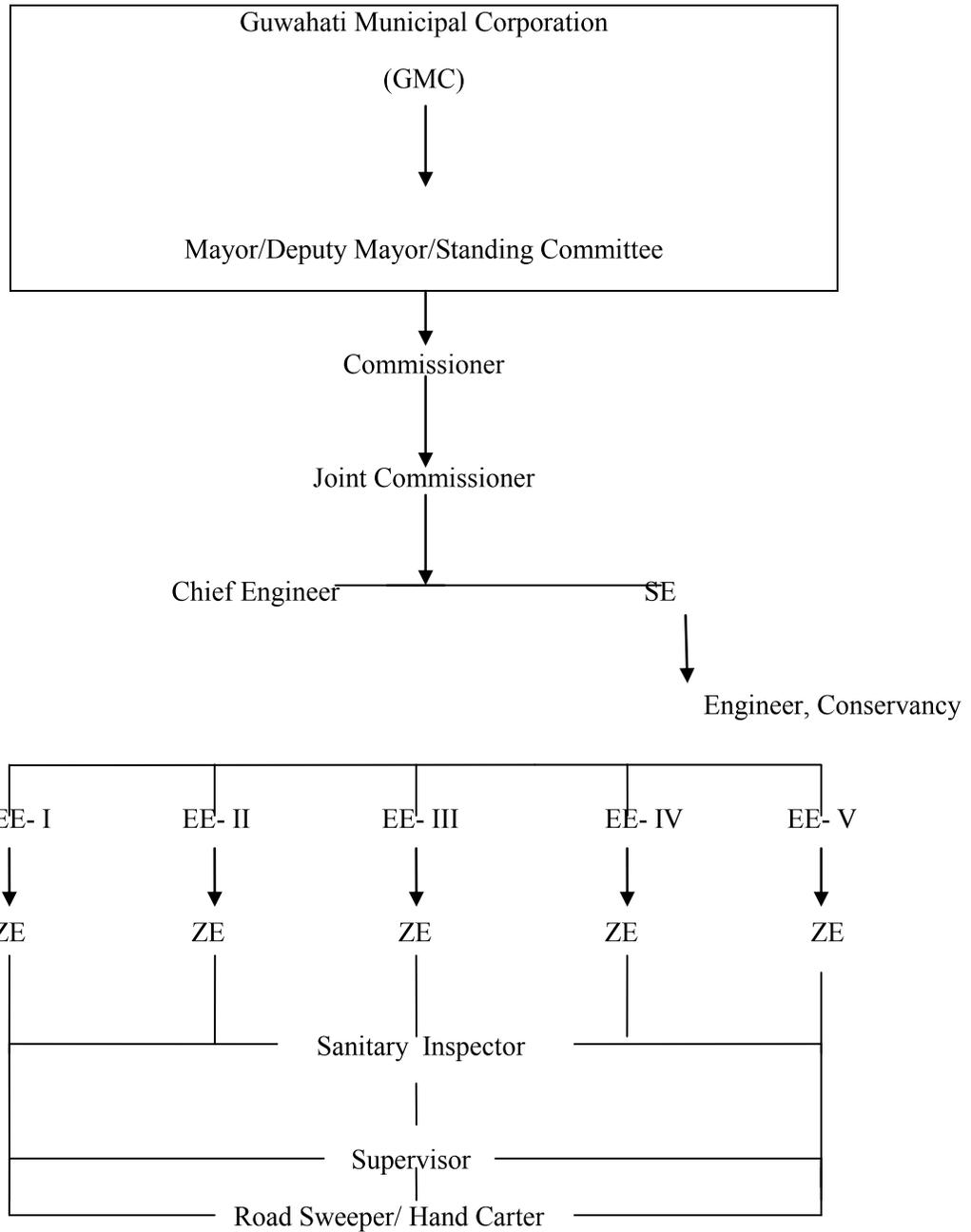


Source: GMC office, Panbazar

The Guwahati Municipal Corporation is headed by a council of elected ward councilors. The council is headed by a Mayor and a Deputy Mayor. There are seven Mayor-in-

Council members in the council to supervise various works. There is an Area Sabha Representative in each Area to take up its issues with the next higher level.

Chart-3.3: Organizational Hierarchy of Administrative Body



Source: GMC office, Panbazar

SE: Superrintendent Engineer

EE: Executive Engineer

ZE: Zonal Engineer

3.12. Public Utilities under GMC

A comprehensive list of public utilities that Guwahati Municipal Corporation provides to the Guwahatians is as follows:

- Conservancy
- Water works tax division
- Public works
- Building Permission
- Streetlight and Electrical Section
- Municipal Markets
- Sanitation & Health
- Dead body and night soil removal Branch
- Poverty alleviation
- Birth and death registration
- Garage Branch
- Accounts Branch
- Veterinary
- Enforcement
- Property Tax
- Mutation Branch

- Trade License
- Advertisement
- Slow Moving Vehicle

3.13. ICT and Urban Governance in Guwahati

E-governance is one of the method by which governments can attempt to integrate and improve relationships with their citizens. It utilizes ICT (Information and Communication Technology) to maximize the outreach of governments in consultation programs; to gather information from citizen; and for citizen to access information regarding services. As a part of e-Governance initiatives, Guwahati Municipal Corporation (GMC) has already an online property tax system available at its website www.gmcportal.in for payment of property tax from the convenience of home of the tax payers. In order to enhance municipal service delivery, GMC has recently started development of six more software modules apart from upgradation of the existing online property tax system for reliability of citizens of Guwahati as well as office automation of GMC. The new six modules are- Bilingual (English/Assamese) official website of GMC, Online Trade License System, Online Birth and Death Certificate Registration System, Public Grievance Redressal System, e-Tendering System and Human Resource Management system. The initiative will take transparency and accountability in system.⁵⁶

3.14. Political Leadership and Party Affiliation of GMC Councillors

In 2013, Guwahati Municipal Corporation election was held to elect 31 councillors for 31 wards. Accordingly 19 councillors were elected from Indian National Congress (INC) and 12 from Bharatiya Janata party (BJP). As Indian National Congress got the mandate, the party formed the Municipal Corporation. Mr. Abir Patra of INC has been selected as Mayor of the Guwahati Municipal Corporation. Regional parties like Asom Gana Parishad were not capable to win a single seat in the corporation election. The number of

⁵⁶ GMC, e-newsletter, Issue# 1, July, 2015

councillors of Guwahati Municipal Corporation elected from the political parties is shown in the following table 3.9.

Table 3.9: Party Affiliation of GMC Councillors

| Political Party | N0. Of Councilors | Percentage |
|--------------------------|-------------------|------------|
| Indian National Congress | 19 | 60.8 |
| Bharatiya Janata Party | 12 | 39.2 |
| Total: | 31 | 100.00 |

Source: Field study

Ethnic background of Councillors

Elected Councilors of Guwahati Municipal Corporation is representing cross sections of the Guwahati. Since Guwahati is a Assamese people dominated society obviously their representation in the corporation is high than other communities. Ethnic background of corporation councilors is illustrated in the following table 3.10.

Table No. 3.10: Ethnic Background of GMC Councillors

| Ethnic Background of Councilors | No. of Councilors | Percentage |
|---------------------------------|-------------------|------------|
| Assamese | 22 | 70.96 |
| Bengali | 06 | 19.35 |
| Bodo | 01 | 3.22 |
| Bihari | 01 | 3.22 |
| Marowari | 01 | 3.22 |
| Total | 31 | 100.00 |

Source: Field Study

3.15. Functions, roles and responsibilities of GMC and Parastatals

Multiples agencies work in Guwahati metropolitan area including the Guwahati Development Department (GDD), Guwahati Metropolitan Development Authority (GMDA), Guwahati Municipal Corporation, Public Health Engineering Department, Assam Urban Water Supply and Sewerage Board, Public works Department etc. Most of the Twelve Schedule functions have been transferred to GMC on paper, however the overall capacity of the ULB is weak to assume charge of these functions and ensure effective delivery of functions. Even though GMDA has been merged with GMC, it operates as an independent organization which plays an over-arching role in delivering most of the functions. The status of transfer of functions to Guwahati Municipal Corporation (GMC) under Twelve Schedule can be shown under the following table3.10.

Table No 3.11: Status of Transfer of Functions to GMC

| | 12th Schedule Functions | Status of Transfer |
|----|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Urban planning including town planning | GMDA has been merged with GMC to transfer the urban planning functions. However on a day to day basis GMDA operates independently |
| 2 | Regulation of land-use and construction of buildings | GMDA |
| 3 | Planning for economic and social development | GMDA |
| 4 | Road and bridges | PWD/GMDA/GMC |
| 1 | Water supply- domestic, industrial and commercial | PHED/ Water works department of GMC/AUWSSB. Recently a Jal Board has been constituted which will supersede all these organizations. |
| 2 | Public health, sanitation, conservancy and Solid Waste Management | GMC |
| 3 | Fire services | State Fire services |
| 8 | Urban forestry, protection of environment and ecology | GMC |
| 9 | Safeguarding the interests of weaker sections society including the handicapped and mentally retarded Slum improvement and upgradation | GDD/GMDA/GMC |
| 10 | Urban poverty alleviation | GDD/GMDA/GMC |
| 11 | Provision of urban amenities and facilities- parks, gardens and playgrounds | GMC |
| 12 | Promotion of cultural, educational, and aesthetic aspects | GMC |
| 13 | Burials and burial grounds, cremations, cremation grounds and electric crematoriums | GMC |

| | | |
|----|---------------------------------------------------------------------------------------------|--------------|
| 14 | Cattle pounds, prevention of cruelty to animals | GMC |
| 15 | Vital statistics including registration of births and deaths | GMC |
| 16 | Public amenities including street lighting, parking lots, bus stops and public conveniences | PWD/GMDA/GMC |
| 17 | Regulation of slaughter houses and tanneries | GMC |

Source: Rapid Baseline Assessment Report, 2013- Guwahati city (MoUD)

3.16. Municipal Financial Management

Existing Status

The budget of Guwahati Municipal Corporation is (GMC) prepared in compliance with section 119 of the Guwahati Municipal Corporation Act by the accounting department of GMC. In the absence of councilors (GMC election was not held up to June, 2013), since last five years, the Municipal Commissioner approves the budget documents.

In Budget 2012-13, 25 percent of the total capital expenditure has been earmarked for urban poor. Thrust areas include roads and drainage, e-governance and solid waste management. The budget also made allocations for disaster management, urban forestry, and ecology. The budget acknowledges the need to raise more own resource and step up efforts for collection to meet the funding gaps.

Financial Status

GMC's municipal finances have been reviewed for five years, commencing from the financial year 2008-2009 to 2012-2013 through budget documents provided by the accounts department. The items of both receipt and expenditure are classified under revenue and capital accounts as per their sources and uses. GMC's financial status, major heads of revenue income and major heads of revenue expenditure are shown in the following tables no. 3.12, 3.13, and 3.14.

Table No. 3.12: Financial Status of GMC

| Item | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | CAGR |
|-------------------------------|------------------------|---------|---------|---------|---------|------------|
| | Actuals (Rs in crores) | | | | | Percentage |
| Opening Balance | 12.80 | 34.97 | 73.97 | 87.81 | 117.71 | |
| Revenue Account | | | | | | |
| Income | 97.93 | 135.51 | 129.15 | 117.65 | 153.68 | 9 % |
| Expenditure | 75.77 | 96.51 | 115.31 | 87.74 | 161.64 | 16% |
| Surplus/ (Deficit) | 22.17 | 39.00 | 13.84 | 29.90 | (7.96) | |
| Overall Status including O.B. | 34.97 | 73.97 | 87.81 | 117.71 | 109.75 | |

Source: GMC budget document

Table No. 3.13: Percentage increase in Major Heads of Revenue Income (Rs in crores)

| Heads of Revenue Income | 2011-2012 | 2012-2013 | Percentage Increase |
|----------------------------------------------------|-----------|-----------|---------------------|
| Tax Revenue | 33.77 | 38.96 | 15% |
| Rent from municipal Properties | 2.07 | 1.50 | -28 |
| User Charges and Fees | 4.76 | 5.53 | 16% |
| General Administration Fees and Other User Charges | 0.21 | 0.16 | -24% |

Source: GMC budget document

Table No. 3.14: Percentage increase in Major Heads of Revenue Expenditure (Rs in crores)

| Heads of Revenue Expenditure | 2011-2012 | 2012-2013 | Percentage Increase |
|-------------------------------------|-----------|-----------|---------------------|
| General Administrative Expenditures | 50.39 | 51.49 | 2% |
| Other Administrative Expenditures | 0.60 | 0.49 | -18% |
| GMC Cost Centerwise Expenditure | 20.17 | 18.63 | -8% |
| Other Development Expenditure | 6.93 | 4.46 | -36% |

Source: GMC budget document

Revenue Income consisting of tax revenues; rent from municipal properties; fees and user charges; revenue grants; JnNURM grants; has grown to a level of Rs. 153.68 crores in Financial Year 2012-2013 from Rs. 97.93 crores during financial year 2008-2009, registering a compounded annual growth rate (CAGR) of 9 percent. While revenue expenditure increased at a CAGR of 16 percent (table: 3.11). GMC was in deficit in financial year 2012-2013. Property tax from private holdings and trade licenses are the

prime sources of tax revenues constituting 40 per cent and 29 per cent of total tax revenue respectively, Salaries account for 44 per cent of total revenue income and 69 per cent of total revenue expenditure.

The overall financial status of GMC has seen marginal improvements over the years. Dependence on grants and subsidies is high at 69.17 crores vis-à-vis own source of revenue. Grants accounts for 59 percent of total revenue. Overall revenue mobilization is slow although key expenditures are seeing downward trend with greater internal control.

Revenue Income

Guwahati Municipal Corporation's own source of revenues comprise of the following:

1. Taxes including property tax; tax on draught animals and non machine vehicles; advertisement tax; trade license; toll tax etc.
2. User charges from:
 - Water services for provision of tankers, new connection fees, sale of water through metered water connections; sale of bulk water etc.
 - Building permissions;
 - Registration fees of health department covering birth and death certificates, scavenging and fines from hotels and restaurant;
 - Garage branch including hiring of vehicles, cess pool, septic tank cleaning.
3. Rent from municipal properties.
4. General administration fees from mutation, tenders etc.

Non tax sources of revenue are in the form of tender fees and interest;

Grants are from central and state finance commissions.

Revenue Expenditure

Revenue expenditure heads at Guwahati Municipal Corporation comprise of the following:

1. General administrative expenses covering salaries, allowances, wages, pension, gratuity etc. This expense head as seen an increase of 2 percent from 2010-11 to 2011-12.
2. Administrative expenses covering office rent, telephone, machinery and equipment and managing overall office operations.
3. GMC cost center wise expenses which comprise of O&M expenses of various departments like water works, health, conservancy, public works, electrical branch, garage branch, PWD branch etc.
4. Other development expenses like preparation of project reports, institutional development studies, asset valuation, computer installations, construction works for development.
5. Acquisition and purchase of assets.
6. Payment to government account for PF, GIS, VAT, labour cess, TDS etc.

Property Tax Structure of GMC

GMC levies property tax based on annual rental value of the holding. The components and rates of property tax are levied on land and buildings are shown in the following table 3.15.

Table No. 3.15: Property Tax Structure at GMC

| Type of Tax | Rate of Tax |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Tax | 15% for commercial or rented for residence 10% for residential |
| Water Tax | 10% if the holding is connected to water pipe connection 7.5% if the holding is not connected to water pipe connection but water supply is available in the adjacent holding |
| Scavenging Tax | 2.5% for all types of holdings |
| Light Tax | 1% for all types of holdings |
| Urban Immovable Property tax | 3% for all types of holdings |

Source: GMC budget document

Bills are generated once in a year in April-May manually and distributed by tax collectors who also collect tax on visit. Online payment gateways are also available but are not widely used due to high unwillingness to pay tax. Tax is collected through the tax collectors in zonal offices. Practice of submitting hand receipts instead of computerized receipts is common amongst tax collectors, which also highlights leakage of tax revenue. Currently there is no incentive or penalty mechanism for taxpayers.

The GMC has been facing a perennial financial crunch responsible for the dismal picture of the provision for urban basic services. Development works are envisaged in the Budget, but remained immaterialized for want of fund. The total amount of liability is much higher than the total revenue income of the Corporation as revealed in the budgets in several times.

Functions of the GMC and expenditure incurred on these functions indicate the poor nature of development promotion by the Corporation. The usual coverage of functions by the Corporation is limited. The Guwahati Municipal Corporation faces financial constraints in initiating any major development project.

The revenue expenditure of the Guwahati Municipal Corporation has shows a voluminous increase of expenses which are to be required particularly for running the

general administration and performance of obligatory services. About 90 percent of GMC's income is spent on salaries, terminal benefits and other establishment expenses, leaving only about 10 percent for maintenance and development works. Hence, the improvement of the financial position of the Corporation is highly necessary for maintaining the basic urban infrastructures.

3.17. Service Delivery in Guwahati City

Presence of multiple agencies for provision of various infrastructure facilities is prevalent in the city. Guwahati Municipal Corporation has limited role in infrastructure provisioning, planning for new infrastructure, implementation and service delivery. Amongst the key services mentioned below. GMC's core function is water supply, solid waste management, maintenance of roads and drainage apart from social infrastructure like community toilets etc.

3.17.1. Existing Status- Services

3.17.2. Water Supply

Production: Presently only 30% of the Guwahati city area is covered under piped water supply. The total installed capacity of potable water generation is around 110 MLD against which actual production is 73 MLD (66%). The present production from all sources (73.4 MLD) is inadequate with respect to present demand around 150 MLD. The three treatment plants are also old and damaged due to which they are running much below their actual capacities. Additionally the city is growing fast and manages high floating population, 3 new townships proposed under Master Plan 2025 and new industrial development and service sector expansion planned in the future. Together, the demand for water is set to be high which can be easily met through existing river sources through new augmentation schemes.

Transmission and Distribution: The total piped water supply network in the city is only about 30%. The water supply to the city is provided by three agencies viz. Guwahati Municipal Corporation (GMC), Assam Urban Water Supply & Sewerage Board (AUWSSB) and Public Health Engineering Department (PHED) through their existing

system. Besides Railways, Indian Oil and Defense agencies also have their own independent supply systems for their areas.

Cost Recovery: The cost recovery for water supply at GMC is shown in the following table 3.16.

Table 3.16: Cost Recovery for Water Supply at GMC

| Year | O&M Costs (In Rs Lakhs) | Revenue Receipts (In Rs Lakhs) | Cost Recovery (%) |
|--------------------|----------------------------|------------------------------------|----------------------|
| 2013-14 (budgeted) | 225 | 160 | 75 |
| 2012-13 | 203 | 143 | 70 |
| 2011-12 | 110 | 111 | 56 |
| 2010-11 | 220 | 106 | 48 |
| 2009-10 | 373 | 101 | 45 |

Source: GMC, document

Guwahati Municipal Corporation (GMC) levies water tax as part of property tax based on Annual Rental Value (ARV) Method. Currently it is charged at 7.5% of property tax for non-piped connections and 10% for piped connection. No user charge is levied. This is because 70% of the population does not have access to piped water and use ground water or tanker for their daily needs. Meters on piped supply are also not there. Other sources of revenue include new connection fee, sale of water tanker, sale of bulk water, shifting of water connection, checking and rectification charges, penalty on illegal connections etc. Key source of revenue comes from sale of water tankers.

3.18. Water Supply Schemes under implementation in Guwahati Metropolitan Area

Three major water supply projects are currently under implementation in Guwahati under three different funding agencies, namely Jawaharlal Nehru National Urban Renewal Mission (JnNURM), Asian Development Bank (ADB) and Japanese International Company (JICA). The project planning has been done keeping in mind the future water demand of the city with regards to increase in population, expansion in economic base, industrial development, new township etc. with the guiding vision to surpass the performance on Service Level Benchmark (SLB) indicators. The present three water

supply projects are under implementation in Guwahati is shown in the following table 3.17.

Table 3.17: Design Population& Capacity of ongoing Drinking Water Project in Guwahati Metropolitan Area

| SI No | Projects | Implementing Agency | Design Population- In Million by 2025/2040 | Design Capacity- In MLD for 2025/2040 | Expected Commissioning by | Money Allocated for the Projects |
|-------|-----------------------------------------------------------|--------------------------|--------------------------------------------|---------------------------------------|---------------------------|----------------------------------|
| 1 | West Guwahati Water Supply Project- JnNRUM | GMDA through PMU- JnNRUM | 0.5/0.90 | 107/170 | June 2014 | Rs. 280.94 Crores |
| 2 | JICA assisted South Central Guwahati Water Supply Project | GMDA through PIU- JICA | 1.01/1.40 | 191/255 | November 2016 | Rs. 1427 Crores |
| | JICA assisted South North Guwahati Water Supply Project | GMDA through PIU- JICA | 0.15/0.24 | 37/57 | July 2016 | |
| 3 | ADB assisted East Guwahati Water Supply Project | GMDA through PIU- ADB | 0.44/0.69 | 98/148 | December 2017 | 2166 Crores |

JnNURM- Jawaharlal Nehru Urban Renewal Mission

JICA- Japan International Cooperation Agency

ADB- Asian Development Bank

PMU- Project Management Unit

PIU- Project Implementation Unit

Source: Guwahati Jal Board Brochure, 2014

West Guwahati Water Supply plan

The Government of Assam has taken up South Guwahati Western Water Project for supply of potable water for South Guwahati Western Part. The project has been sanctioned from Govt. of India under JnNURM at a total cost of Rs. 280.94 crores for 107 MLD capacity water supply project. The project is meant for supplying potable water as per standard of CPHEEO (Central Public Health and Environmental Engineering organization) by abstracting raw water from the River Brahmaputra which would be completed in 30 months period. A new type of Intake well system together with water treatment facilities have been adopted for this project. This project will serve 5.83 lacs population by the end of 2025 AD. The project area comprises of west *Bharalumukh area, Santipur, Kamakhya, Pandu, Maligaon, Fatasil, Ganeshpara, Gorchuk, Jalukbari, Dharapur, Azara, Mirjapur, Borjhar* etc. The project area is divided in 5 major zones namely (1) *West Kamakhya*, (2) *Ganeshpara*, (3) *Jalukbari*, (4) *Mirjapur* and (5) *Borjhar*. Water will be extracted from river Brahmaputra by installing intake well near Pandu Ghat. The water to be treated at Water Treatment Plant (WTP) will be installed at Sadilapur. The treated water will be distributed to the consumer round the clock from 8 nos. of reservoirs by gravity through approximately 500 km of pipe network. The water supply pipe line to be connected to each consumer end through a water meter. Construction of Water Treatment Plant, Intake Well and Reservoirs are in progress. Pipe laying has also been started (illustrated in picture III and IV).

Picture III: Installing of New Water Supply Pipe line near Gauhati University Campus



Picture IV: Installing New Water Supply Pipe line near Maligaon Chariali OverBridge



South Central Guwahati Water Supply Project

In order to provide affordable, reliable, safe, pressurized and continuous (24x7) supply of water to this fast developing Guwahati Metropolitan area, the Government of Assam has also taken up South Central and North Guwahati Water Supply Project with the funding from Japan International Cooperation Agency (JICA). The project has been sanctioned from JICA at a total cost of Rs. 1427.00 crores for 228 MLD (191+37) capacity water supply project.

South Central Guwahati Metropolitan Area will be supplied from a new 191 MLD water treatment plant located Kharguli under a project funded by the Japanese International Cooperation Agency (JICA).

Northern Guwahati Metropolitan Area will be supplied from a new 37 MLD water treatment plant located at Amingaon under a project funded by the Japanese International Cooperation Agency (JICA).

The pipe laying works in the South Central and Northern Guwahati were commenced during the beginning of the year 2012 and the Contractors for the Intake, Treatment and Pumping Plants works have been mobilized and the works will commence shortly after finalizing the designs. These projects are scheduled for completion by the middle of 2016.

East Guwahati Water Supply Project

The Government of Assam has also taken up East Guwahati Water Supply Project for supply of potable water for East Guwahati Part. The project has been sanctioned from Asian Development Bank (ADB) at a total cost of about 2,166 crores for 98 MLD capacity water supply project. The designs for the Intake, Treatment plants and Distribution networks are in progress. The works will commence shortly and this project is scheduled for completion in the year 2017.

The above mentioned water supply projects are already underway implementation to provide a continuous (24X7) pipe supply of safe drinking water. The Government of

Assam has given the responsibility to construct all these three projects to Gammon India, a private limited company. The Guwahati Jal Board will be responsible for operation and maintenance of these facilities upon their completion. It is also responsible for ensuring long-term sustainability of the entire water supply system by collecting fees from its consumers, based on their actual metered water use and a volumetric tariff structure designed to guarantee water affordability for all to cover its annual operating expenses and capital replacement costs.

3.19. Institutional Mechanism

Guwahati Jal Board

Guwahati Jal Board has been instituted as the new institutional mechanism for handling water supply and sewerage functions and will supersede all existing agencies that are responsible for water supply in the future. The entire infrastructure currently being created under various projects for Water Supply and Sanitation (WSS) will be handed over to the Jal Board who will be responsible for its O&M. The Government of Assam has constituted the Guwahati Metropolitan Drinking Water and Sewerage Board (Guwahati Jal Board) in 21st December 2011 under the Guwahati Metropolitan Drinking Water and Sewerage Board Act, 2009. The Guwahati Jal Board has been established as a single organization responsible for Water Supply and Sewerage services to the residents of the Guwahati Metropolitan Area (GMA). Upon completion of three major water projects, the water supply facilities now under implementation will be taken over by the Guwahati Jal Board, which will be responsible for operating and maintaining them on a sustainable basis.⁵⁷

Functions of the Board

The Board will plan, design, construct, maintain, operate and manage the Water Supply system and the sewerage treatment works in Guwahati Metropolitan Area (GMA).

The Board will plan for, regulate and manage the exploitation of ground water.

⁵⁷ <http://www.guwahatijalboard.gov.in> (accessed on 07/01/2016)

The board will promote measures for conservation, recycling and reuse of water.

Board Members

The Guwahati Jal Board (The Guwahati Metropolitan Drinking Water and Sewerage Board) consist of the following members: Minister in-charge of GDD- Chairman, Mayor of GMC- Vice chairman, Secretary to Government of Assam, Finance Department- Ex-officio Director, Secretary to Government of Assam, GDD- Ex-officio Director, Secretary to Government of Assam, PHED- Ex-officio Director, Commissioner, GMC- Ex-officio Director, Managing Director, Guwahati Jal Board- Ex-officio Director. Besides, the Special Invitees of the Jal Board are Chairman, ASEB; Commissioner & Secretary, PWD and Senior most Secretary, UDD.

Regulatory Authority

The Guwahati Jal Board Act also provides for constituting a three member Water Regulatory Authority to ensure more transparent tariff management system, which will approve the tariff proposals from the Jal Board (with or without modifications), verify water quality periodically, scrutinize metering and adjudicate on consumer complaints.

3.20. Service Level Benchmarks (SLB)

The ongoing water supply projects will address household level metering for effective cost recovery and implement a volumetric tariff plan; include a leak detection plan with water audits to reduce Non- Revenue Water (NRW) and Unaccounted for Water (UFW) and ensure quality of water supplied which will impact the SLBs positively in the future.

3.21. Sewerage

Current Situation: Presently the Guwahati Metropolitan Area (GMA) does not have any integrated sewerage system except for certain pockets such as Railway colonies, I.O.C. Refinery and Defense establishment having their own independent system. There are generally septic tanks in Guwahati. The effluent is released untreated into the nearby drains and low-lying areas. Similar is the case of industrial wastewater. In case of septic

tanks, the soak pits are becoming non-functional in many areas because of high sub-soil water table within a short span of time.

Proposed Projects: The Master Plan 2025 proposes to cover the entire city and 3 new townships with underground sewerage network. Asian Development Bank (ADB) and Japan International Company (JICA) will fund the sewerage system in various tranches. South East Guwahati will be covered under ADB project; and South Central, South West; North Guwahati will be covered by JICA. A Detailed Project Report (DPR) has been prepared covering entire GMA area but the detailed designing has been only for core city. The DPR was approved by Ministry of Urban Development (MOUD). At the next level of approval, the Department of Economic Affairs raised some concerns. Currently a revised DPR is being prepared which is expected to be completed by July, 2015.

An integrated planning approach has been adopted and the sewerage system has been planned keeping in mind the future population projections, city development, increase in water consumption from new water supply projects and drainage requirements. However the key challenge area would be to adopt an integrated approach in laying of the network along the roads. If the roads are dug separately for water supply and sewerage, cost efficiency will be compromised along with public convenience.

3.22. Solid Waste Management

The terminology of solid waste is material, which is not in liquid form, and has no value to the person who is responsible for it. Although human or animal excreta which often ends up in the solid waste stream, generally the solid waste does not include such materials. Synonymous to solid waste are terms such as “garbage”, “trash”, “refuse” and “rubbish”⁵⁸. The term municipal solid waste, refers to the solid wastes from domestic sources (household), commercial establishments, hotel and restaurants, markets, school, institution and offices, street sweepings and drain clean and other sources which include temples, parks, exhibition halls, marriage halls, hostels, paying guests which is very often

⁵⁸ C. Zurbrugg, (2003): Solid Waste Mangement in Development Countries, SANDEC News, EAWAG, adapted from the SWM introductory text on [www. Sanicon net](http://www.Sanicon.net)

the responsibility of municipal or other governmental authorities. Solid waste from industrial processes is generally not considered “municipal”.

In general, Solid Waste Management (SWM) is defined as an organized process of storage, collection, transportation, processing and disposal of solid refuse residuals in a sanitary landfill. It is an integrated process of several collection methods, varied transportation equipment, storage, recovery mechanisms for recyclable material, reduction of waste volume and quantity by methods such as composting, waste-to power and disposal in a designated sanitary landfill. The selection of a suitable Solid Waste Management process is driven by the source and quality of the waste produced.

Management of solid waste is one of the most challenging tasks for the developing countries as well as developed countries. In Indian cities management of solid waste has become a mammoth task for city administrators. The quantity of municipal solid waste generated in the Indian cities has been consistently rising over the years. The situation of solid waste management in our country is discussed below.

3.23. Solid Waste Management in India

In India, municipal wastes have to be managed as per the provisions of Municipal Solid Wastes (Management and Handling) Rules, 2000 promulgated under Environment Protection Act, 1986. As per these rules, all the biodegradable municipal solid wastes shall be required to be processed by appropriate biological processing method. Municipal Solid Waste (Management and Handling) Rules 2000 has made MSWM the Litigation responsibility of urban local bodies (municipal corporations), which asks for source segregation of waste for cleaner composting and recycling. Further, the Supreme Court of India, acting on Public Interest Litigation directed all urban local governments to install scientific solid waste treatment plants before a set deadline. Thus the installation of a scientific solid waste management system, though a costly proposition for most of the urban bodies, has become a necessity. Also the Ministry of Environment and Forest (MOEF), Government of India, has issued the Municipal Solid Wastes (management and handling) Rules in the year 2000, which identify the Central Pollution Control Board) as

the agency to monitor the implementation of these rules. In Indian cities, management of solid waste has become a mammoth task for city administrators. With the burgeoning population, rapid urbanization, massive migration, increased consumerism, throw away life style, apathy of Government and callousness of citizens towards common concern, the issue of solid waste management are bound to become further complicated. Waste management cannot be anymore perceived as just clearing the rubbish from one place and dumping as waste at some other place. Its implications have multiple consequences on public health, environment, socio-economic development, natural resources, business and aesthetic values of the city. Solid waste disposal poses a greater problem because it leads to land pollution if it is openly dumped, water pollution if dumped in low lying area and air pollution if it is burnt. The quantity of municipal solid waste generated in the Indian cities has been consistently rising over the years. This can be attributed to the rapid population growth, mass migration of population from rural to urban areas, increase in economic activities in general in the city and the change in the lifestyle of the people. The current practices of waste management in India and most other developing countries are by and large unscientific and unsustainable. There is a desperate need to think beyond conventional approaches with a holistic view than piecemeal ambitions.

The nature of waste varies with time as societies develop. Hence the mechanism to handle waste management needs to be dynamic; it also has to differ from place to place; therefore the strategies have to be different and comprehensive, with enough sensitiveness to place and culture. Many factors affect the composition and characteristics of solid waste and no one method of waste disposal can have universal application and that the need for as divergent practices as possible depend on the requirement. Blind copying of one or other method will not serve any purpose and might complicate the consequences.

In recent years, the management of solid waste has been a serious environmental issue in all urban areas of our country. Guwahati city is no exception to it. Solid waste disposal poses a greater problem for the city like Guwahati. Due to increasing population (including floating population), industrialization and urbanization the quantity of waste

generated in the city is increasing alarmingly. The present solid waste management system in Guwahati can be discussed as under.

3.24. Solid Waste Management in Guwahati City

As per the provision made in the 74th Constitutional Amendment Act.1992, the Urban Local Bodies are primarily responsible for management of Municipal Solid Waste (MSW) of the respective cities and towns. Accordingly, Guwahati Municipal Corporation (GMC) is the agency who is primarily responsible for the MSW management of the city. Generally, MSW includes waste generated from households, slums, commercial establishments hotels, restaurants, markets, hospitals or nursing homes, institutions or offices, marriage halls, parks, drain cleaning and street sweepings, and construction and demolition sites. In the present study on the Municipal Solid Waste (MSW) management of the Guwahati city, it is observed that the Guwahati Municipal Corporation (GMC) has a separate conservancy department under the authority of a Superintendent Engineer to deal with the huge piles of wastes generated daily in the city. Land filling was the only method adopted by the GMC for disposal of the waste from the waste points and bins. The study revealed that the collection and disposal of solid waste of the Guwahati city are done by private parties on contractual basis under the supervision of Guwahati Municipal Corporation authority.

The conservancy department of the GMC supervises the MSW collection and disposal works of the city. For this purpose, the city has been divided into 20 zones which fall under 5 administrative divisions. Each zone covers one or a number of wards depending upon the size of population. Division- I is located at Bhutnath, Division- II at Uzanbazar, Division- III at AIDC area Division- IV at Dighalipukhuri and Division- V is located at Dispur Supermarket. The collection of MSW is done manually and the wastes are transported by open trucks of ton capacity to designated dumping sites located in and around the city for the purpose of land filling.

Segregation of the Waste

Segregation of waste at the source is almost absent in Guwahati with the exception of recycling of items such as newspapers, bottles, metals etc., in individual households. The rag pickers also assist in the recycling process at the secondary or intermediate storage points and /or waste disposal sites by segregating waste of any value (e.g., paper, plastic, metal, etc.) for their own sustenance.

Collection and Storage System

Primary Collection of Solid Waste

Primary collection of solid waste is absent in many parts of Guwahati. As a result, people usually throw their waste to the nearby roadside, open spaces, the river and other water bodies. Guwahati Waste Management Company Limited (GWMCL) has recently deployed about containerized tri-cycles for door-to-door waste collection in certain areas of the city. Additionally, in some housing societies, there are door-to-door collection systems carried out through private initiatives. (notably in colonies such as *Rehawari*, *Uzan Bazar*, *Chandmari*, *Silpukhri* and *Pan Bazar*).

The visible MSW is mainly collected through street sweeping. The municipal sweeper usually collects piles of waste along the road for it to be carted away to secondary collection points by a team operating hand carts.

Secondary Storage and Transportation of Waste

As per the estimation provided in the Detailed Project Report (DPR) on Integrated Solid Waste Management for the GMC area, 2006, there are 778 secondary waste storage points within the GMC area. Out of these 460 are open storage depots; the remainder are RCC/masonry/metal containers. Based on the recommendations in the DPR, GWMCL has procured and deployed an additional 398 secondary metal storage containers to the city. In addition, GWMCL has also procured 400 liter bins and placed them at different locations such as major temple premises, open spaces, parks, bus stations, market area and central city area.

The vehicles that are primarily used for transportation of solid waste from the secondary storage points are dumper placer vehicles, tipper trucks, ordinary trucks and compactors. Most of the vehicles that transport solid waste are uncovered. GMC has outsourced the solid waste transportation to private operators who are responsible for the collection of waste from the secondary collection points and for the disposal at the dumping sites. They have annual contracts with the GMC and are paid according to the quantity of waste cleared by them from their assigned work areas. The private operators maintain their own fleet of vehicles for waste collection which is separate from the GMC owned and maintained vehicles.

Transfer System of Solid Waste

Solid waste is usually transferred manually from the secondary storage points to the solid waste transport vehicles. GWMCL has engaged two JCBs for mechanical loading of solid waste on to the solid waste transport vehicles. Generally, the sanitary workers who are involved in manual transfer of solid waste to the transport vehicles do not have any personal protective equipment (e.g., overalls, gloves, boots, helmets, masks etc.) and are subject to potential health risk and other occupational hazards.

Garbage Dumping and Disposal Sites

Solid waste collected from Guwahati is disposed at the Boragaon site in Guwahati by open dumping. However, GMC had entered into a Memorandum of Agreement (MoA) dated August 3, 2007 with Infrastructure Development Corporation of Assam Limited (IDCAL), to evaluate suitable waste management solutions, and develop tender documents for potential bidding to enable collection, transportation, processing and disposal of MSW under the public-private partnership (PPP) framework. Under the MoA, IDCAL shall set up a Special purpose Company (SPV) to develop the project and to obtain requisite clearances necessary for implementing an integrated waste management facility, and an integrated waste processing facility at Boragaon. Additionally, IDCAL shall select a suitable private party through competitive bidding process to acquire the entire equity holdings in the SPV along with all the rights and responsibilities vested

therein and execute the contract. GWMCL has already set up a SPV to develop the project and to obtain requisite clearances necessary for implementing an integrated waste management facility and an integrated waste processing facility at Boragaon. The scope of the project includes the following:

- Primary and secondary collection activities
- Transportation of waste to the processing site
- Deployment or maintenance of transport and processing equipment and machineries
- Processing and disposal of MSW
- Collection, segregation and proper utilization of recyclables
- Landing of inert materials.

Solid Waste Converted to Compost-Composting Site and Its Capacity

M/s North East Green Tee, a private agency has set up a vermin-compost plant with a capacity of 50 tons per month in the outskirts of Guwahati at Panikhete. In addition to this small-scale initiative, GWMCL has set up a 50 tpd capacity compost plant at West Boragaon in Guwahati under the Guwahati Integrated Municipal Solid Waste Management Project. GMC has obtained a grant of Rs. 3,634.47 Lakhs for the project under JnNURM by the Ministry of Urban Development, Government of India for improvements of solid waste management in Guwahati.⁵⁹ The compost plant utilizes the window method of composting for processing of biodegradable waste and is fully operational. The plant's facilities include a weigh bridge, administrative building, car parking yard and workshop. In addition, about 2,500 samplings have been planted within the premises of the plant to develop a 'green belt'.

⁵⁹ Pollution Control Board, Assam Conservation of River Bharalu, Guwahati, *Preparation of Detailed Project Report*, City Sanitation Plan, December, 2013

Recycling of Solid Waste

The rag pickers mainly collect recycle items of the Municipal Solid Waste (MSW). The rag pickers play a prominent role in the MSW system. They contribute to the segregation and sorting of the recyclables in the MSW. Their role begins right at the point of waste generation including residences/households, offices, shops, markets and others from where they collect paper, plastic bottles, buckets, metals and other recyclable items and sell them for reuse. They also pick up recyclables from secondary collection points, roadsides, open sites and the landfill site. This unorganized sector affects the final quantity of the waste reaching the landfill site significantly. Generally, these rag pickers are strewn over in busy places like Fancy Bazar, Paitan Bazar, Pan Bazar, Ganeshguri, Chandmari, Maligaon and others. They collect the recyclable waste and sell it to contractors who again sell it at wholesale markets for recycle waste processing. Some of the selling locations are at Lakhtokia (under the over bridge), Beltola Charali, Khanapara, Fatasil, Dhirenpara and Chatribari.

Assessment of Solid Waste Management as practiced in Guwahati

Major deficiencies identified in comparison with the aforementioned on-going and firmly planned activities are summarized as follows:

Legislative Gaps

- Non-compliance with Municipal Solid Waste (Management and Handling) Rules, 2000.

Service Delivery Gaps

- No primary collection of waste in many areas under the jurisdiction of GMC
- Collection of solid waste is irregular and not on daily basis
- Limited segregation of waste at the source within the GMC area
- Inadequate secondary storage facilities

- Inadequate solid waste transportation system
- No safe disposal of waste (e.g., no sanitary landfills)
- Poor health and hygiene conditions of sanitary workers
- Limited community participation

Public Awareness Gaps

- Limited and ‘piecemeal’ initiatives of GMC for building public awareness and community mobilization
- No long-term planning for public awareness campaign programs covering the entire GMC area

Current Situation: Guwahati Municipal Corporation is mandated to deliver the Solid Waste Management (SWM) function in its area. On November 2008, the management of entire municipal solid waste of the city was handed over to the Hyderabad-based private sector Ramky Enviro Engineers for 20 years (2028). This company has undertaken Integrated Solid Waste Management in the under the Jawaharlal Nehru National Urban Renewable Mission. As per its agreement with the Guwahati Municipal Corporation, the company is to collect municipal solid waste from the households as well as roadside dustbins and dispose and process them in an environment-friendly manner. But the company has failed to keep these mandates. So, GMC has withdrawn its agreement with Ramkey Enviro Engineers on June, 2014. Now GMC has put in place a new Solid Waste Collection and Transportation system in association with different NGOs from July, 2014. GMC has entrusted 31 NGOs for 31 wards (one NGO for each ward) which is executing door-to-door collection of household solid waste, sweeping of arterial roads, streets, footpath and pavements, and collection of solid waste from bulk generators- for a nominal monthly charge per household and commercial establishment.

Process: GMC has engaged 31 NGOs and facilitated them with 50 auto tippers, showers, and 298 tricycles to collect waste from households in selected localities. In the morning

between 7 am to 9 am and in the evening 4 pm to 7 pm the sweepers rings the bells or whistles to collect waste. Glass and plastic materials are segregated at doorstep and rest is dumped at secondary collection point which has two-bin dustbins of 3.5 cubic meter capacity. There are about 300 dustbins in the city. Total waste generated is about 600 Metric Tonnes Per Day (MTD) including dumping by uncovered households at secondary collection points of which about 500 MTD is collected by the GMC.

The waste is transported through dumper placers vehicles, dumpers and compactors to the landfill facility at Boragaon (120 bigha) which houses a 50 TPD compost plant, a workshop and admin building. 100 bigha land is for open dumping. Regular spraying is done on the open waste to control foul smell and pest and bird infestation.

3.25. Bio-medical Waste: Bio-medical waste means “any solid and /or liquid waste including its container and any intermediate product, which is generated during the diagnosis, treatment or immunization of human beings or animals”. Bio-medical waste poses hazard due to two principal reasons- the first is infectivity and other toxicity⁶⁰. The collection, storage and disposal of medical solid wastes are a growing environmental problem in Indian cities which needs immediate attention before it goes out hand of hand. While the government of India is making efforts to expand medical services by allowing private hospitals in the country, the management of medical wastes received little attention despite their potential environmental hazards and public health risks.

The city of Guwahati contains a good number of hospitals and Nursing Home. However, they do not have updated and sophisticated medical waste management facilities. The Bio-medical wastes are also getting dumped along with domestic wastes. These wastes though are generated in small quantities, poses a great risk to the community due to their potential biohazard. As far as hospital waste is concerned, there is no separate disposal site in Guwahati. There is no functional incinerator, which is mandatory in government hospitals.

⁶⁰ <http://www.cpreec.org/pubbook-biomedical.htm> (accessed on 28/01/2016)

Thus, overall the present solid waste management process covering the entire Guwahati region is found to be highly inadequate. There is virtually no Solid Waste Management system in almost the whole of the Guwahati city.

3.26. Storm Water Drainage

Drainage plays a major role in the development of any city. There has to be a systematic outflow for the rainwater and other wastewater generated in a city in any given day in order to avoid the problem of water logging. Storm water is generally rain water and melting snow that run off surfaces that cannot readily absorb water. These surfaces include rooftops, pavement, compacted gravel lots, and even frozen ground⁶¹. As it flows towards larger water bodies such as streams, lakes, rivers or infiltrates down into the aquifer, it picks up pollutants. These pollutants include elements such as sediments, airborne dust, pet waste, oil, grease, chemicals, litter and whatever that are left on the ground or poured down to drains and grates that can be carried along or dissolved in water.

Usually, roadside storm water drains carry the storm water. In the absence of a proper sewerage system, they also carry domestic sewerage. Absence of efficient Storm Water Drainage network will invariably lead to water stagnation on roads, which in turn pose the problem of water borne diseases, inconvenience to traffic and pedestrian movement besides damages to the conditions of the roads. In effect, without an outlet and if delivered in large scale quantities, such storm water can cause artificial flooding.

Current Situation: Considering the topographical features, the whole Guwahati Metropolitan Area (GMA) is divided into 6 (six) drainage basins, which are ultimately drained into the river Brahmaputra either directly or through various drainage channels and reservoirs- Bharalu, Dipar, Silsako, Foreshore, North Guwahati and Kalamoni basins. Various studies and Drainage Master Plan have been prepared by the Town and Country Planning Office in the past but they have outlived the carrying capacity of the city.

⁶¹ City Development Plan Guwahati, July 2006

At present, Guwahati does not have a planned drainage system with the exception of a small area where Town and Country Planning development has implemented drainage schemes in the past. The GMC area has got some roadside small drains which have problems of encroachments, poor outfall channels, silting etc. Many areas of the city stay water-logged during rainy season.

The overall drain network in the city is highly insufficient. Most of the drains fall on the upstream side of the river Bharalu, the level of which is higher than the level of the drains, the outlet of the water is retarded by the difference in the levels. Bharalu basin is also the most flood prone area. If the Bharalu River fails, the entire drainage system of the city collapses. The main causes for flooding include heavy situation on the Bharalu River and encroachments on the natural drainage catchments areas. There are encroachments on the drainage systems as well. Apart from that there is garbage dumping which has resulted in blocking of natural drains.

GMC needs to invest in new infrastructure development and improve O&M of existing drains with efforts at removing encroachments, regular de-silting and effective Solid Waste Management to avoid dumping. The drainage infrastructure needs to be planned 'Basin wise' such that, if required, flood water may be diverted to other basins when the capacity of one basin is full.

3.27. Governance of Urban Disasters in Guwahti City

From the Bhuj earthquake in 2002 to the Uttarakhand floods in 2013, we see a striking commonality in most media reports and scholarly discussions on disaster issues in India. This has to do with the shift in the focus of both the administrative and theoretical discourse around disaster on flash or sudden disasters in India (Yadav: 2014). In disaster studies, disaster has been defined as "*non-routine events in societies... that involve conjunctions of historical conditions and social definitions of physical harm and social disruption*" (Kreps and Drabek: 1996). Another pragmatic definition states, "a disaster is the result of vast ecological breakdown in the relation between humans and their environment, a serious event on such a scale that the stricken community needs extra-

ordinary efforts to cope with it often with outside help or international aid” (Noji: 1997).One of the major calamities that has caused extreme loss in India is recurrent or regular floods. India faces floods primarily during the monsoon period, which last from June to August. Twenty-three out of 35 states/union territories in the country are subject to floods (Arya: 2007) and the city of Guwahati is also no exception.

According to the Assam State Disaster Management Policy (2010) urban floods and landslides are the two most prevalent hazards that undermine the urban development of Guwahati. However, the other extreme events causing the disaster are rare except the earthquake, which visits the zone frequently with low intensity and rarely causes disasters except the disastrous earthquake of 1950. The entire state of Assam has been identified as Seismic Zone-V by the Government of India.

Flooding

Flooding events have become quite common in Guwahati in past few years. Although there is no data available on such events but during the field study (consultation with the officials of Guwahati Municipal Corporation), it was told that Guwahati city has typical situation of manmade hazard as the city does not experience normal flooding events but is characterized by urban flooding owing to a number of issues like lack of drainage, unmanaged solid waste, reclamation of low lying lands and unplanned urban growth, hill cutting, etc. Another reason is the increased intensity of rainfall occurring in a very short duration. Although there are no recorded statistics on this but it has been observed that frequency of such extreme events has increased.

According to the city assessment report,⁶² backflow of the water from the River Brahmaputra, due to blockage in the drainage system through Bharalu, Khanajan and Bonddajan, causes floods frequently every monsoon. Bharalu basin is the most flood prone area in the region. This is probably because most of the drains fall on the upstream side of river Bharalu. The river is at higher level than the level of the drains leading to the retarded outlet of the water. Also, there is heavy siltation and dumping of garbage in the

⁶² CEPT, 2011, Carrying Based Urban Development Regulations, (GMDA)

Bharalu River. Rarely flooded areas are mainly on the outskirts of the city and the stretch along National Highway 37.

Landslides

During the consultation with the Assam State Disaster Management Authority (ASDMA), it was informed that landslides are a frequent phenomenon in Guwahati owing to flooding and the soil characteristics. A number of landslides have occurred in Guwahati in recent past causing extensive damage to life and property and have adversely impacted economic development. In the past few decades, increasing frequency of landslides have become a concern for the Guwahati city especially around the low lying hills. Encroachment due to growth in settlements on these hills has led to slope modification thereby making the land more vulnerable. According to ASDMA, among all natural hazards, landslide has caused maximum loss of life in the last 20 years. Still, a comprehensive study taking into account all aspects of landslides is yet to be made, in absence of which the policymakers and urban planners find it difficult to initiate any mitigation and management plan (ASDMA, 2012).

3.28. Water Supply and Sanitation during Disasters

Flood inundation and water-logging is a major problem faced in several wards of Guwahati Municipal Corporation Area during the rainy season. The city of Guwahati experiences inundation and water logging problem after every medium to heavy shower. It is observed from the field study that during artificial floods, polluted water enters through the leakages of the old pipes and fittings and consumers are often supplied with such polluted water. It is also revealed from the study that shortage of water has become a major problem for the waterlogged areas of Guwahati city as the concerned authorities failed to supply water to the affected areas. The people of worst hit Anil Nagar and Nabin Nagar areas (ward no. 20, intermediate area) had to survive without water. Guwahati Municipal Corporation supplied biscuit and water bottles in the Anil Nagar and Nabin Nagar areas but the residents alleged that most people did not get the Government relief. Two one litre bottles of water were provided to each family of this locality, which is

hardly adequate. The affected people will have to face more problems after the water level recedes as most of the household items were damaged, while cleaning the houses will also be an easy task. Majority of those who have vehicles of their own will also face problems in the days to come as the vehicles were under water for days and the condition of those can be ascertained only after the water level comes down.

3.29. Measure adopted by the GMC to make Guwahati Flood Free

Guwahati Municipal Corporation (GMC) is adopting a comprehensive plan for mitigation of artificial flood in Guwahati with measures like drain desiltation, construction of sump well, installation of dewatering pump at low lying areas etc. Continuous cleaning and removing of silts from all drains of Guwahati City in phased manner seemed to be fruitful to a large extent. The first phase of desiltation work has been completed and maintenance works are under progress. The estimated amount required for desilting and maintenance of the drains for next three years would be Rs.40 crores.⁶³ Desiltation of River Bharalu has also been taken up by GMC and the work is being carried out departmentally. To mitigate the flood problems of Anil Nagar and Nabin Nagar areas, a sump well⁶⁴ is being constructed to store the excess runoff and six high power pumps have been installed to pump out the water to River Bharalu. Due to the construction of this sump well, the people of Anil Nagar are breathing a sigh of relief as the water from the artificial flood can be pumped out within a short time. Thus, it can be seen that the sump well has been able to solve the problem of artificial flood to a great extent. Moreover, several silt traps are under construction at strategic points to catch the silt so that the city drains are not clogged with silt. Dewatering pumps have also been placed at several strategic places for pumping out flood waters.

⁶³ GMC e-News Letter, July, 2015, Issue # 1

⁶⁴ GMC e-News Letter, August, 2015, Issue # 2

3.30. Urban local networks and civic groups in the city of Guwahati

The 74th Constitutional Amendment Act has opened up spaces for the participation of civil society organizations in the Urban Governance. In the shift of government to governance, the role of civil society organizations has been very significant. Non Governmental Organizations (NGOs) play multifarious roles in the implementation of governmental programmes. Non Governmental Organizations have carved out new spaces in the political processes and delivering public services. NGOs play an important role in contributing to filling the gaps in the efforts of the government. Guwahati has different types of NGOs, voluntary organisations and community organizations like *Save Guwahati Build Guwahati* (SGBG), *Environ*, *Abhijatri*, *unnayan samitis* (development councils), *mahila samitis* (women's groups) and youth clubs. *Unnayan samitis*, and *mahila samitis* and youth clubs in some settlements, play a significant role (Like Residential Welfare Organization in Bangalore) in improvement of infrastructure and services in the neighbourhood. This is done through two ways: collective self-help and seeking political patronage. In the absence of adequate infrastructure and services, these community organizations participate in the building of infrastructures of water, drainage, roads and street-lights. They collect regular monthly fees from their members and use these for development works and other activities (like building a temple or celebrating a festival) as well as collect one-time contributions from their members for specific development purposes. Some *unnayan samitis* also organize and motivate its members to contribute their labour. These organizations also seek political patronage (and some organizations are, in fact, formed with the support of a political leader like the MLA or municipal councilor). They make appeals and applications to their elected representatives, whose support is crucial for obtaining funds for the development of the neighbourhood and for getting various government departments to make bore-wells, roads, drainage, etc, in their neighbourhoods. Their success varies widely in obtaining this support and often the realization of benefits through political patronage also fluctuates.

3.31. Urban Poor in Guwahati

As per 2011 population Census, 37.7 Crore people reside in urban area. It constitutes 31.16% of the total population of the country. In post independence era, while population of India has grown three times, the urban population has grown five times. The rising urban population has also given rise to increase in the number of urban poor. As per 2011 census the slum population is estimated to be 65 million the ever increasing number of slum dwellers causes tremendous pressure on urban basic services and infrastructure.

The Government of India (1988, p.5) defines slum as “housing that is unfit for human habitation or detrimental to safety, health and morals of the inhabitants.”Physically, slums consist of clusters of hutment comprising several rooms constructed with building materials where each room is inhabited by a family sharing a common latrine without arrangement for water supply, drains, disposal of solid waste and garbage within the slum boundaries. Apart from degrading environmental conditions, slums in the urban settlements are also characterized by almost total absence of community and recreational facilities.

Proliferation of urban slum is a characteristic feature of India’s migration urbanization⁶⁵. This indicates massive poverty induced migration from stagnated villages to towns and cities. The Town and Country Planning Organization of Assam offers following explanation on the growth of slum:

Slums are the settlement of urban poor. As the demographic pressure on towns and cities grows, the needs of urban infrastructures and services also increase. This very problem is further compounded by increasing concentration of poor in the towns and cities.

The carrying capacity of the urban local bodies in respect of urban amenities and services thus decline. As a result, some areas of town and cities are being deprived of basic civic amenities and these overcrowded under serviced areas of urban conglomeration, thus turned into slum. These settlements that are slum pockets lay their very nature need

⁶⁵ Shekhar Mukherji, “Rapid Metropolitan Growth and Alternative Perspective and Strategies, IASSI, Vol-II, Nos- 3&4, 1993, p- 15

minimum basic services like adequate water supply, hygienic sanitation, scientific drains, electricity, housing etc. in order to improve the environmental conditions of the town/city as a whole.

In the city of Guwahati growth of slum pockets was a result of concentration of beggars, sweepers, cobblers, street vendors, rickshaw and cart-pullers and day-labourers in certain distinct areas of the city. These areas were river bank from Bhrarumukh to Uzanbazar, below the over bridges and areas along the railway lines. However the District Administration takes initiative in driving out such concentration from river bank and in areas below the over bridge from time to time. Large scale encroachment on Railway land is an usual phenomenon. The railway authorities carry out eviction drives. In 2006, Guwahati Municipal Corporation (GMC) had identified 26 settlements as slum (CDP, 2006); they had a total population of 1.6 lakh people. Later, the Guwahati City Slum Policy 2009 identified 90 slums having 167,769 populations (GMC 2009). The GMC survey of 2012 identified 217 slum pockets with a population of 1.39 lakh. The drastic change in number of slums is due to the change in definition of slums. In 2009, a pocket with 25-30 households and lacking basic amenities was considered as slum while for the survey of 2012, a pocket with 10-15 households and without basic amenities was considered as slum. However, it may note that according to this data, while the number of slums has increased, the slum population has decreased.

Since 1980s haphazard mushrooming of industrial units, market places and settlements have made Guwahati a congested city with problems of transportation, water supply, electricity and environmental degradation posing serious health hazards. At the same time, there, is a rapid burgeoning of slum clusters in the city and in the peri-urban areas. The dwelling units in slum areas, mostly unauthorized occupation of government land in the adjoining hilly regions, are built of thatch and they break down during the wind storm months of April-May and again during the heavy monsoons (June-August). The uneven terrain in these areas makes reach difficult. Particularly striking is the absence of water supply and medical facilities. In the plain areas, the slums are distinguished by congested poorly built shelters occupying low-lying land. These areas have near-permanent

clogging of drains due to excessive siltation, and lack proper sanitary and drinking water facilities. Some of these slums have primary health centers in their vicinity but these seldom function and when they do, they operate for two or three hours in the morning when most of the slum dwellers are out working.

The Government of India launched the programme of Environmental Improvement of Urban Slum (E.I.U.S.) in 1986 under point number 15 of the 20 point programme. The Union Ministry of Urban Affairs and Employment is the nodal ministry in this regard. Under this programme the Government of India's schemes for slum improvement are implemented in the states. In Assam the Town and Country Planning (T&C.P.) acted as the nodal organization for implementation of measures for improvement of slum. In this category not preventive or eviction drives are initiated, but positive steps are taken for the betterment of urban poor.

The Town & Country Planning initiated developmental works like construction of drains, improvement and widening of roads, street lighting etc. The schemes were carried on through the Guwahati Municipal Corporation under Environmental Improvement of Urban Slum programme (E.I.U.S.). The infrastructural facilities of the slum areas are not satisfactory. The Town and Country Planning (T& C.P) survey reveals that the housing conditions of the slum pockets are deplorable as the houses are unplanned and there is no adequate air and light. More than half of the houses do not have a strong structure. In the Harijan Colonies there is R.C.C. structures built by Guwahati Municipal Corporation (GMC) but due to lack of maintenance and renovation pose a threat to the occupants. The existing roads, drainage and sanitation systems need proper improvement schemes for better environmental conditions. Town and Country Planning (T&CP) Department suggest installation of deep tube well in each slum pockets as water supply is not adequate in these areas. The dearth of recreational facilities in the areas is quite distinct. With the increase of population in the city more areas have been acquired by people for habitation creating poor environmental condition in many areas. The EIUS programme under the T& CP accordingly has been extended to more areas.

The most recent programme for housing for the urban poor was JnNURM's sub-mission of Basic Services to the Urban Poor (BSUP). Under this, three sites of Guwahati city were proposed for construction of housing for the urban poor: *Fatasil*, *Morasoli* and *Amingaon*. Only the Morasoli site has been completed where Guwahati Municipal Corporation (GMC) built 128 dwelling units. In Fatasil approximately 400 dwelling units have been constructed so far against the proposed 1,104 dwelling units. In Amingaon, where 1,028 dwelling units were to be built, construction work has not even been started. The dwelling units at Morasali and Fatasil have been allotted to the Guwahati Municipal Corporation (GMC) class IV employees who used to earlier live in dilapidated houses and hutments on the same land. Slum free city planning is now being done under Rajiv Awas Yojana (RAY), the flagship scheme of the Ministry of Housing and Urban Poverty Alleviation (MHUPA). The GMC's 2012 slum survey was done with the purpose of preparing a Slum Free City Plan of Action under RAY. However, the very slow progress on RAY so far suggests that it will not help the urban poor much.

The cities in developing countries need special attention in the matters of urban poor residing in slums. In our context there is sufficient scope to address the issue before it takes a serious turn. Urban exclusion process is going to pose a serious threat to the idea of inclusive growth in subsequent generation of urban development policy.

3.32. Housing and infrastructure for the Urban Poor in Guwahati

Limited information has been provided by GMC's JnNURM, OSD on BSUP and other Slum upgradation initiatives. From Government Order No. (Guwahati Development Department) GDD/2006/185 dated February 2009; it has been found that there are 90 identified slum pockets with 27966 households accommodating a population of 167796. The Rajiv Awas Yojana (RAY) cell informs that in 2012, a new profile survey of urban poor was conducted with the help of seven NGOs. A total of 217 slums have been identified in Guwahati. ASCI has been engaged in April 2013 for making a Slum Free City Plan of Action for Guwahati. Overall, the current condition of urban poor in Guwahati city is tainted with poor access to basic services like water supply, sanitation,

solid waste management, roads, drainage etc. The physical progress of providing dwelling units under BSUP is also a mere 18%.

3.33. Organizational Constraints

The organizational structure of an agency is its crucial part by which it performs its task. Within it rest the vital aspects like distribution of authority and responsibility, the reporting relationships and co-ordinating machinery. The Chapter IV of the GMC Act, under clauses 67 to 73 describes the officers and staff of the Corporation. The whole organizational machinery is a complex network. The elaborate structure is divided into 20 branches- personnel, market, store and purchase, water works, planning, accounts, engineering, sanitation and conservation, health, veterinary, education, assessment, tax, license, slow moving vehicle, enforcement, garage, Nazarat, monitoring, co-ordinating and council section. The Commissioner as the Chief Executive Officer of the Corporation holds administrative control over these branches. The branches are headed by different set of officers, as, the Joint Commissioner, Chief Engineer, Additional Chief Engineer (Water Works), Associate Planner, Deputy Commissioner, Collector, Medical Officers etc. The Commissioner as the Chief Executive Officer ensures a centralized control over these branches. However, there is no specific set of rules to select the Heads of these branches. As a result it becomes difficult to ensure efficient and expert administrative leadership in the working of the branches. The GMC Act vests all executive powers and functions on the Commissioner, GMC. He is an officer of sufficient seniority and experience deputed and appointed by the Government. As the executive power for the purpose of carrying out the provisions of the Act is vested in the commissioner, the fulfillment of the estimated hopes depends on his sincerity. He and his assistants must be dynamic to translate the programmes into action as well in eliminating much institutional inefficiency hampering the organization of the GMC.

The State Government need not consult the Guwahati Municipal Corporation while appointing the Commissioner. The usual term of the office of the Commissioner is 3 years, though in recent years frequent changes in the office have been made leading to lack of continuity of services. During the period 1995-2014, 18 Commissioners were

appointed. Among them nine belonged to Assam Civil Service Cadre and nine belonged to Indian Administrative service.⁶⁶ From an analysis of the office and its mode of functioning in several years, it is noticed that the Commissioner as the Chief Executive Officer can perform a significant role in providing an administrative leadership to many day to day business of the city administration. Attempts were made by some of the Commissioners to improve the administrative standard, but none except one was allowed by the State government to complete three years. The Corporation has a strong work force of more than three thousand persons.⁶⁷ However the Corporation does not maintain service rule and it is alleged that the post are created without due consideration to the needs of the Corporation. It is pertinent to note that the Corporation lacks a sound recruitment policy for creation and selection of posts and such it becomes difficult to assess the establishment from a realistic point of view. The Corporation faces a major constraint in its functioning due to the lack of proper trained persons. In the Engineering Section there were instances of lack of fresh recruitment of proper technical persons. Similarly for the employees of non-engineering branches, there is neither a definite training system nor there is any provision of deputation of staff for training in municipal administration.⁶⁸

3.34. Key Urban Governance Challenges in Service Delivery

The key urban governance challenges in service delivery of Guwahati city is discussed under the following heads.

A. Urban Growth

The spatial growth of Guwahati city has been accompanied by growth of population. This in turn has contributed growth of the city revealed through the high density of population and magnitude of function. Guwahati is the largest city in the North Eastern Region and

⁶⁶ Establishment Section, GMC Office, Uzanbazar

⁶⁷ Information collected from the office of the GMC, in July, 2014

⁶⁸ Ibid

enjoys a prime status with broad population base in relation to the other centres of the region. This rapid population growth indicates increased functional efficiency of the city. At the same time demographic attributes in a development process influences the urban condition including the infrastructural facilities to a great extent. Urban Water Supply and Sanitation is one of the essential urban infrastructure services. Presently, Guwahati city is experiencing tremendous influx of population from outside increasing the demand for water and sanitation facilities. Unrestricted expansion of the city areas has kept the water supply system out of reach for a larger section of the city. Even the available water is faced with complaints such as low supply, high leakages, low pressure and poor quality. The rapid growth of urban population in the city has serious implications in terms of urban infrastructures and services. However, there is a big gap between demand and supply of infrastructure facilities in the Guwahati city. As per census reports of India, a large proportion of urban households do not have access to the safe drinking water, are left uncovered by sanitation facilities, proper waste collection services and disposal have reached only a section of the urban population. The drainage system for rainwater disposal covers only a little above half of urban population. This creates a serious situation for urban poor. About 40% of the population living in urban areas has been estimated to comprise people below poverty line. Hence the reality challenges the strategy of inclusive growth in urban development.

B. Institutional Complexity

GMC, GMDA and a host of para-statal play a role in infrastructure and services provision in Guwahati city. GMC's prime responsibility is to grant building permission and provide and maintain urban infrastructure (road, streetlights etc) and services (water supply, sewerage and drainage facilities) in the municipal area through its annual budget. Infrastructure and services like roads and bore-wells are also provided by GMC and the other authorities mentioned below through funds allocated to the MLA (Member of Legislative Assembly) and MP (Member of Parliament) for local area development in their constituency. GMDA provides infrastructure services in the Guwahati Metropolitan area.

Assam Urban Water Supply and Sewerage Board (AUWSSB), which was formed under The Assam Urban Water Supply and Sewerage Board Act, 1985 and Guwahati Municipal Corporation are involved in planning and provision of water supply and sanitation facilities in Guwahati. Public Health Engineering Department (PHED) is also involved in water supply provision. Thus, as of now, three agencies, AUWSSB, GMC and PHED are involved in water supply provision in the city, which covers 30 per cent of the city's residents. The water supply to the rest of the population is through private handpumps or wells and tankers.⁶⁹ The Flood Control Department (FCD) and Public Works Department (PWD) also play role in the planning and design, construction and operation and maintenance of the water, sewerage, drainage, roads and street lighting.⁷⁰

The presence of multiple agencies with similar functions has compounded the problem of service delivery rather than solving them in the city of Guwahati. Though each of agencies in question has a clear demarcation with respect to service delivery in specific locations, for example, the PHED supplying drinking water to State Government installations, many a time, there are duplications of effort. The problem is compounded more so with respect to consumers, who have to deal with a number of agencies for redressal and service delivery.

The need of the hour with respect to the functioning of the various agencies concerning the discharge of civic functions is to bring about accountability of service delivery. In addition, wherever possible, the functioning of the agencies need to be streamlined to bring it under one agency, which will not only help in improving service delivery but also bring about accountability.

Further, some of the specific activities further streamlined with entrustment to individual agencies. For example, the planning and design for drainage could be entrusted to the PHE department and construction could be with the PWD.

⁶⁹ <http://www.guwahati Jal board.gov.in> , accessed on 15.03.2015

⁷⁰ City Development Plan, 2006, Guwahati Municipal Corporation

It is, however, apparent that each of the agencies operating in the city has predefined areas in which they operate, and hence there is a broad clarity on their roles and responsibilities. But it is recognized that the various agencies need to be brought under the ambit of the Guwahati Municipal Corporation, which should have the overall responsibility of providing infrastructure services in Guwahati and shall utilize the services of other agencies on a need basis.

C. Financial Constraints

Municipal bodies are the primary agencies for the operation and maintenance of the urban services, which contribute towards the strengthening of economic and social bases for development of town and cities. It is a widely recognized fact that the major constraint of urban local bodies all over India is financial. The constraints arise due to three distinct sources. One, the insufficient supply of fund from the government; second, failure in augmenting own sources of revenue; third mismanagement of the fund. We attempt to make a synoptic analysis of the existing conditions in the context of financial position of the Guwahati Municipal Corporation.

The provision for the revenue mobilization according to the Guwahati Municipal Corporation Act can be classified into internal and external sources. Internally generated resources include property taxes, fees, rents etc. under section 144(1) and Assign taxes under the section 184 of the Act. Self-financing sources like user charges and fines, penalties etc. are part of its internal sources of revenue mobilization. External sources are the grants from the Central and State Government through Five Year Plans and Annuals Plans and borrowing and loans. The Commissioner who is appointed by the state government, prepares and submits to the Standing Finance Committee the annual estimates of revenue and expenditure. The Corporation remains under the supersession for substantial period and as such the budget estimates require approval of the government. The government plays a major role in determining the size of the Corporation's income available in each year for development functions including provision for regular services.

The GMC has been facing a perennial financial crunch responsible for the dismal picture of the provision for urban basic services. Development works are envisaged in the Budget, but remained unmaterialised for want of fund. The total amount of liability is much higher than the total revenue income of the Corporation as revealed in the budgets in several times.

The administrative expenses are much larger and the usual course is to divert the loan taken for development purposes to administrative purposes. The share of development work varies from 12% to 13% of the total expenditure. Expenditure on development works used to be kept restricted to the fund anticipated to be received from the government and financial institutions as grants and loans.

Functions of the GMC and expenditure incurred on these functions indicate the poor nature of development promotion by the Corporation. The usual coverage of functions by the Corporation is limited. The Guwahati Municipal Corporation faces financial constraints in initiating any major development project.

Hence, the improvement of the financial position of the Corporation is highly necessary for maintaining the basic urban infrastructures.

3.35. Observations and Conclusion

The above discussion lead us to the conclusion that the structural network of urban development management operating in the Guwahati city is the replication of the all India scenario which is fairly diverse and incompatible with the growing demands of speedy urbanization. The study in this chapter reflects a complex institutional framework of overlapping roles and responsibilities. Parastatals have their efficacy but the system should not grow at the cost of democratic decentralization. So, there is a need for undertaking an assessment of the existing institutional structure for urban governance in Guwahati to assess gaps, overlaps and duplication of function between various organizations. A specific institutional study for Guwahati Municipal Corporation (GMC) as an organization covering current situation, capacity gaps, roles and responsibilities etc, would help in overall strengthening of the municipal body such that it is able to

assimilate the organizations and functions being merged into it as per the 74th Constitutional Amendment Act. This will help in making GMC strong enough to assume the role of steering organization for all purposes.