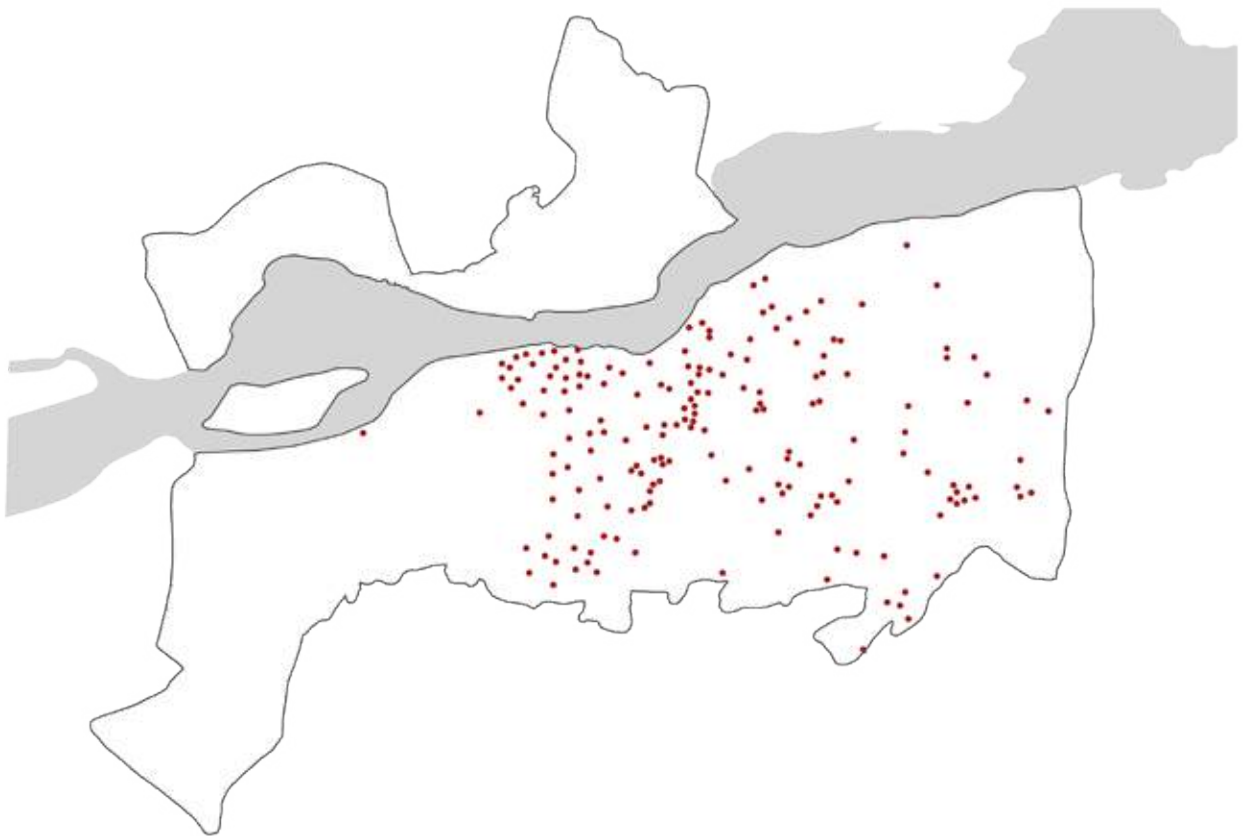


INFORMAL SETTLEMENTS AND URBAN PLANNING:

A STUDY OF GUWAHATI CITY



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A STUDY OF GUWAHATI CITY



Youth for Unity and Voluntary Action (YUVA) is a non-profit development organisation committed to enabling vulnerable groups to access their rights and address human rights violations. YUVA supports the formation of people's collectives that engage in the discourse on development, thereby ensuring self-determined and sustained collective action in communities. This work is complemented with advocacy and policy recommendations on issues.

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TABLE OF CONTENTS

<i>Abbreviations</i>	<i>III</i>
<i>List of Graphs</i>	<i>IV</i>
<i>List of Maps</i>	<i>IV</i>
<i>List of Tables</i>	<i>V</i>
<i>Executive Summary</i>	<i>VI</i>
1. INTRODUCTION	1
1.1 Urbanisation of Assam	1
1.2 Guwahati City	4
1.3 Governance	5
1.4 Urban Morphology	7
1.5 History	8
1.6 Land and Migration	9
1.7 Growth of Informal Settlements	11
2. PLANNING IN GUWAHATI	13
2.1 Master Plans in Guwahati	13
2.2 Planning Units	15
2.3 Other Plans in Guwahati	16
3. RESEARCH OBJECTIVES AND METHODOLOGY	19
3.1 Aim	19
3.2 Objectives	19
3.3 Methodology	19
3.4 Stages of Data Collection	19
4. KEY FINDINGS AND ANALYSIS	23
4.1 Listing of Slum Surveys and Mapping .	23
4.2 Slum Matrix	28
4.3 Settlement Analysis	30
4.4 Understanding Land Use Violations	32

5. CONCLUSION AND RECOMMENDATIONS	47
<i>References</i>	50
<i>ANNEXURE 1: OVERLAY ANALYSIS</i>	52
<i>ANNEXURE 2: HOUSEHOLD SURVEY</i>	57
<i>ANNEXURE 3: TYPOLOGY SURVEY</i>	63
<i>ANNEXURE 4: SLUM MATRIX</i>	66

ABBREVIATIONS

AMRUT	Atal Mission for Rejuvenation and Urban Transformation	PMAY(U)	Pradhan Mantri Awas Yojana (Urban)
BLC	Beneficiary-led Construction	PSU	Planning Sub-unit
CMP	Comprehensive Master Plan	RTI	Right to Information
DPR	Detailed Project Report	SBM(U)	Swachh Bharat Mission (Urban)
ELU	Existing Land Use	ULB	Urban Local Body
EWS	Economically Weaker Sections		
FGD	Focus Group Discussion		
GDD	Guwahati Development Department		
GMA	Guwahati Metropolitan Area		
GMC	Guwahati Municipal Corporation		
GMDA	Guwahati Metropolitan Development Authority		
HH	Household		
ISSR	In-situ Slum Redevelopment		
JNNURM	Jawaharlal Nehru National Urban Renewal Mission		
LIG	Low Income Group		
NRC	National Register of Citizens		

LIST OF GRAPHS

Graphs	Details	Page
1	POPULATION GROWTH IN ASSAM, URBAN AND RURAL	2
2	POPULATION GROWTH IN ASSAM, 1951-2011	3
3	NUMBER OF SLUMS PER WARD WITH LAND OWNERSHIP, PMAY STUDY 2017	29

LIST OF MAPS

Maps	Details	Page
1	LOCATION OF GUWAHATI	4
2	GUWAHATI MUNICIPAL CORPORATION MAP	7
3	PROPOSED WARD MAP, GUWAHATI METROPOLITAN AREA	8
4	EXISTING SLUMS IN GUWAHATI METROPOLITAN AREA, 2001	15
5	LOCATION OF 26 SLUMS, GMC SURVEY 2001	25
6	LOCATION OF 90 SLUMS, GDD SURVEY 2009	26
7	LOCATION OF 216 SLUMS, NGO SURVEY 2012	27
8	LOCATION OF 216 SLUMS BY GMC SURVEY 2001 ON PROPOSED GUWAHATI LANDUSE MAP 2025	33
9	LOCATION OF 90 SLUMS BY GDD SURVEY 2009 ON PROPOSED GUWAHATI LANDUSE MAP 2025	34
10	LOCATION OF 216 SLUMS BY VARIOUS NGO SURVEY 2012 ON PROPOSED GUWAHATI LANDUSE MAP 2025	35
11	OVERLAY ANALYSIS OF BHUTNATH BAGAN	39
12	OVERLAY ANALYSIS OF UZAN BAZAR	40

LIST OF MAPS

Maps	Details	Page
13	OVERLAY ANALYSIS OF LALA BASTI	41
14	OVERLAY ANALYSIS OF BABU BASTI	42
15	OVERLAY ANALYSIS OF SHIV NAGAR BASTI	43
16	OVERLAY ANALYSIS OF CARBON GATE BASTI	44
17	OVERLAY ANALYSIS OF NABAJYOTI NAGAR	45

LIST OF TABLES

Table	Details	Page
1	RANKING OF URBAN POPULATION IN 10 DISTRICTS OF ASSAM	3
2	DECADAL GROWTH OF POPULATION IN GUWAHATI	5
3	POPULATION GROWTH IN GUWAHATI METROPOLITAN AREA	5
4	INSTITUTIONAL FRAMEWORK AND ROLES	6
5	PLANNING UNITS –GUWAHATI METROPOLITAN AREA 2025	16
6	A SUMMARY OF SLUMS IDENTIFIED IN GUWAHATI BY VARIOUS GOVERNMENT, NON-GOVERNMENT ORGANISATIONS AND INDIVIDUAL RESEARCHERS (1986–2017)	20
7	LIST OF SLUMS CHOSEN FOR SURVEY AND MAPPING	22
8	SLUM POCKETS NOTIFIED BY GOVERNMENT OF ASSAM IN GUWAHATI	24
9	CONCENTRATION OF SLUMS IN GUWAHATI, 2017	30
10	INFORMAL SETTLEMENTS SELECTED FOR PRIMARY SURVEY	31
11	LOCATION OF SLUMS ON LAND USE CATEGORY	36
12	INFORMAL SETTLEMENTS SELECTED FOR THE PRIMARY SURVEY, LAND USE CATEGORY AND OTHER DETAILS	37
13	TYPES OF HOUSING	38
14	HOUSING TYPES IN EACH SETTLEMENT	38

EXECUTIVE SUMMARY

Youth for Unity and Voluntary Action (YUVA) has conducted a series of planning studies across Indian cities of which the study in Guwahati is the fourth in the series, following Ranchi, Bhubaneswar and Indore (YUVA & IIHS, 2017a) (YUVA & IIHS, 2017b) (YUVA & IIHS, 2019). The first two studies critically examined the discourse of ‘violations’ in planning, looking at both formal and informal developments and the third study examined ‘slums’ in the formal planning processes to draw implications for urban inclusion. These are envisioned to influence the urban planning discourse in India.

Each of the studies had two components—research and capacity building. The findings of research at every stage were taken back to the community to promote knowledge sharing. These capacity building sessions equipped people to engage with the technicalities of planning and use the same in their struggle for accessing land and adequate housing.

The study in Guwahati follows a similar framework. A preliminary review of literature and secondary data on Guwahati reveal the historical and multifaceted conflicts over land and its implication for housing. The city’s colonial past, migration, nationalist uprisings, land reforms and environmental conservation are some of the broad categories influencing the status of rights and claims on land. An economic and demographic review, on the other hand, shows decreasing growth rates and increasing unemployment (Guwahati Metropolitan Development Authority, n.d.-a). Adding to this, Guwahati has been the site of high rates of development induced displacement since the 1950s. These incidents of displacement are characteristically different from those in other cities, owing to the volatile relationship between communities and a growing concern over rapidly degrading natural areas.

Collectively, these conditions are shaping a unique informality, informed by deep rooted, intermeshed politics. Formal planning processes have an equally historical journey, dating back to pre-colonial land distribution and regulation exercises. Guwahati published

its first post-colonial master plan in 1965. It is currently implementing its third master plan that will be valid till 2025.

Concurrently, the city is receiving central assistance for housing, services and infrastructure under schemes like the Pradhan Mantri Awas Yojana (PMAY), Swachh Bharat Mission and Smart Cities Mission to achieve the vision of Master Plan 2025, which is to make ‘Guwahati city one of the most admired state capitals of India and a gateway to the north-east, with a unique image of its own’ (Guwahati Metropolitan Development Authority, n.d.-b).

In the last couple of years, Guwahati city and the state of Assam has been the focus of discussion and confrontation for updating the National Register of Citizens (NRC) and its possible ramifications. The question of the ‘stateless’ people that it may create has been raised. Thus, Guwahati stands at a crucial junction in its urban development trajectory in between development schemes and a contested citizenship landscape.

Within this context, this study was initiated by YUVA and Office of Emergent Practices, Tezpur (OEP), with the objective to map the city’s informality, particularly informal settlements in the narrative of formal planning processes and review this juxtaposition in the context of the earlier-described influences.

The study was conducted through both primary and secondary data collection methods. Through secondary data the status of planning in Guwahati and mapping of all slums has been undertaken. For primary data, this study used a mixed methodology combining both qualitative and quantitative methods. Qualitative tools included quasi-participant observations through transect walks in sampled settlements, and focus group discussions (FGDs) with residents. Quantitative tools included a semi-structured questionnaire for a sample survey. For the purpose of this study, seven informal settlements were selected as a sample based on diverse locations, zones and geographical conditions in the city.

Focus Group Discussions (FGDs) and household surveys were conducted in these settlements.

In this report, we briefly capture the context of urbanisation and migration in Assam, further looking at the status of informal settlements in Guwahati. The local planning bodies have a big vision to make Guwahati stand out amongst other state capitals and transform Guwahati as a gateway to North East India. In this report we enquire whether these spatial planning strategies, city policies and visions recognise exclusion and inequality to support inclusive growth? Does it focus on the issues of growing informal settlements within the city and does it address the issues of inadequate habitats in informal settlements?

In the Comprehensive Master Plan (CMP) for Guwahati with perspective 2025 pockets of slum settlements are identified and the objectives stated envision Guwahati as a city without slums. We delve deeper into this topic and discuss the following in the report. Firstly, the importance of recognising informal settlements by understanding their historical background and how they have evolved over the period of time. Secondly, analysing the current context of Guwahati's urbanisation and the status of informal settlements by mapping the slums against Guwahati's Master Plan. Thirdly, understanding the typology of the slums by doing a household level study.

1. INTRODUCTION

'Jhuggi-Jhompli' in Delhi, 'Jhopadpatti or Chawls' in Mumbai, 'Ahatas' in Kanpur, 'Cheris' in Chennai, 'Keris' in Bangalore and 'Bustees' in Kolkata and Assam, the concept of slums and their definition might differ considerably across the states depending upon the socio-economic conditions and local perception. But nonetheless the physical traits are usually identified to be an unorganised cluster of hutments, inadequate basic amenities, insufficient arrangement for drainage and for disposal of solid wastes and garbage resulting in subliminal and unhygienic living conditions (Census of India, 2011). The Census (2011) enumeration of a 'slum' is questionable due to its exclusionary nature. Contrast this to the NSSO 65th round (2008-09) definition of the slum as a cluster of 20 or more households, which is nearly a third of the '60-70 household' cut-off that Census 2011 uses (Ministry of Housing and Urban Poverty Alleviation, 2010). This significant shift has led to major under-counting of slums in India. Further, the Census of India 2011 classifies 'slum settlements in India as the following: a) Notified slums are areas in a town or city declared as such under any statute including Slum Acts, b) Recognised slums may not be notified under statutes but are acknowledged and categorised as slums by State or local authorities, c) Identified slums are areas with at least 300 residents or about 60-70 households of poorly built congested tenements, in unhygienic environments usually with inadequate infrastructure and

lacking in proper sanitary and drinking water facilities that are identified by the charge officer and inspected by a nominated officer by the Directorate of Census Operations and d) A non-notified slum is one which is not notified as per the Census definition, and can be regarded as part of the 'non-slum' category.' For the purpose of this report, we will be focusing particularly on non-notified slums. The term 'informal settlement' has been used to describe these settlements throughout the report.

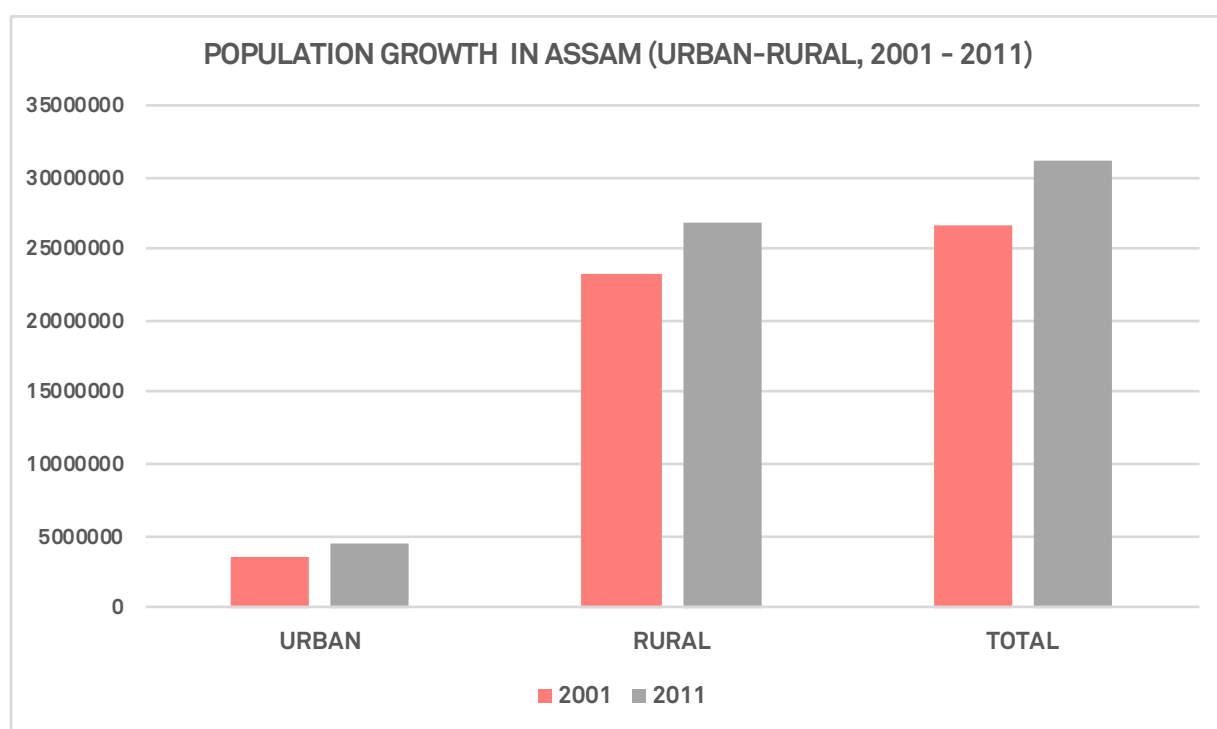
In the past, the concentration of informal settlements was fairly limited to the mega cities and urban agglomerations. They not only dominate the capital cities of the world, but have also emerged in the second and third tier cities, whose growth curves are ascending and income opportunities are soaring (Davis, 1946). YUVA and IIHS' extensive study on slums in Ranchi, Bhubaneswar and Indore focused on planning vis-à-vis informal settlements, urban equity and inclusion in these cities. Through this report, we study the status of various types of slums within the Guwahati Master Plan. Guwahati being the largest city in North-East Region of India is an interesting mix of culture, people and topographies. It is the trade capital of the region and provides economic opportunities to the migrating population. It holds a high concentration of people who have migrated from rural Assam and also neighbouring states.

1.1 URBANISATION OF ASSAM

The state of Assam occupies a land area of 78,438 square kilometers (Census of India, 2011). A 22-kilometre strip of land, known as the Siliguri Corridor, connects the state to the rest of India. Assam has a heterogeneous population with socio-cultural and ethnic diversity. According to the Census of India, 2011 the population of Assam stands at 312.05 lakh of which 159.39 lakh are male and 152.66 lakh are female. The decadal growth of the state's population was 17.07 per cent during the decade 2001-2011 as against 17.68 per cent for the country as a whole. It is the sixteenth largest state in

terms of area and fifteenth in terms of population size.

Out of the total 312.05 lakh population, 86 per cent live in rural areas and 14 per cent live in urban areas of the state. The density of the population of Assam has increased to 398 persons in 2011 from 340 persons in the 2001 Census, or on an average, 58 more people inhabit every square kilometre in the state as compared to a decade ago (Directorate of Economics & Statistics, Govt. of Assam, n.d.)



Graph 1 | Population growth in Assam, urban and rural

Source: Census of India, 2011.

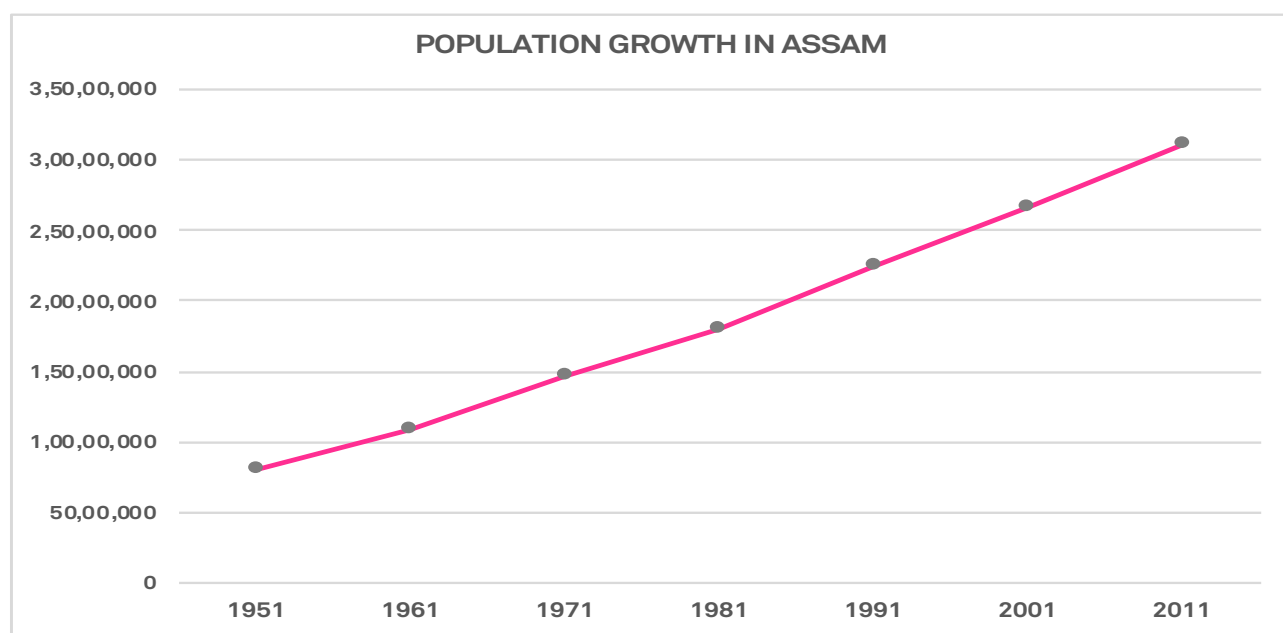
Assam has the largest urban population of 4.3 million (Census 2011) amongst the northeastern States. Guwahati, the biggest city of Assam, has an urban population of about 0.9 million, while the other large cities of the state are Nagaon (population 116,355), Dibrugarh (population 138,661) and Silchar (population 172,709). This indicates that other than the concentration of more than 25 per cent urban population of Assam in Guwahati and the surrounding urban agglomeration, Assam has a well distributed urban population across the state. The state's level of

urbanisation is 14 per cent in Census 2011, which is a 1.2 percentage point increase over the Census 2001 urbanisation level of 12.9 per cent. However, it is lower than the all-India annual rate of urbanisation, which was 2.82 per cent per annum from 2001–2011. The decadal growth rate of the state between 2001–11 was 15.47 per cent for rural areas and 27.89 per cent for urban areas. Additionally, considering the criteria of the definition of urban it is important to note that Assam may be more urban than it seems.

NAME OF DISTRICT	URBAN POPULATION (PER CENT)		RANK IN 2001	RANK IN 2011
	2001	2011		
KAMRUP METROPOLITAN	80.23	82.9	1	1
DIMA HASAO	31.60	28.7	2	2
JORHAT	17.15	20.1	3	5
TINSUKIA	19.47	20.0	4	3
DIBRUGARH	19.28	18.4	5	4
CACHAR	13.94	18.2	6	7
BONGAIGAON	15.87	13.8	7	6
GOALPARA	8.14	13.7	8	15
NAGAON	12.02	13.0	9	9
KARBI ANGLONG	11.30	11.8	10	10

TABLE 1 | Ranking of urban population in 10 districts of Assam

Source: Census of India, 2011.



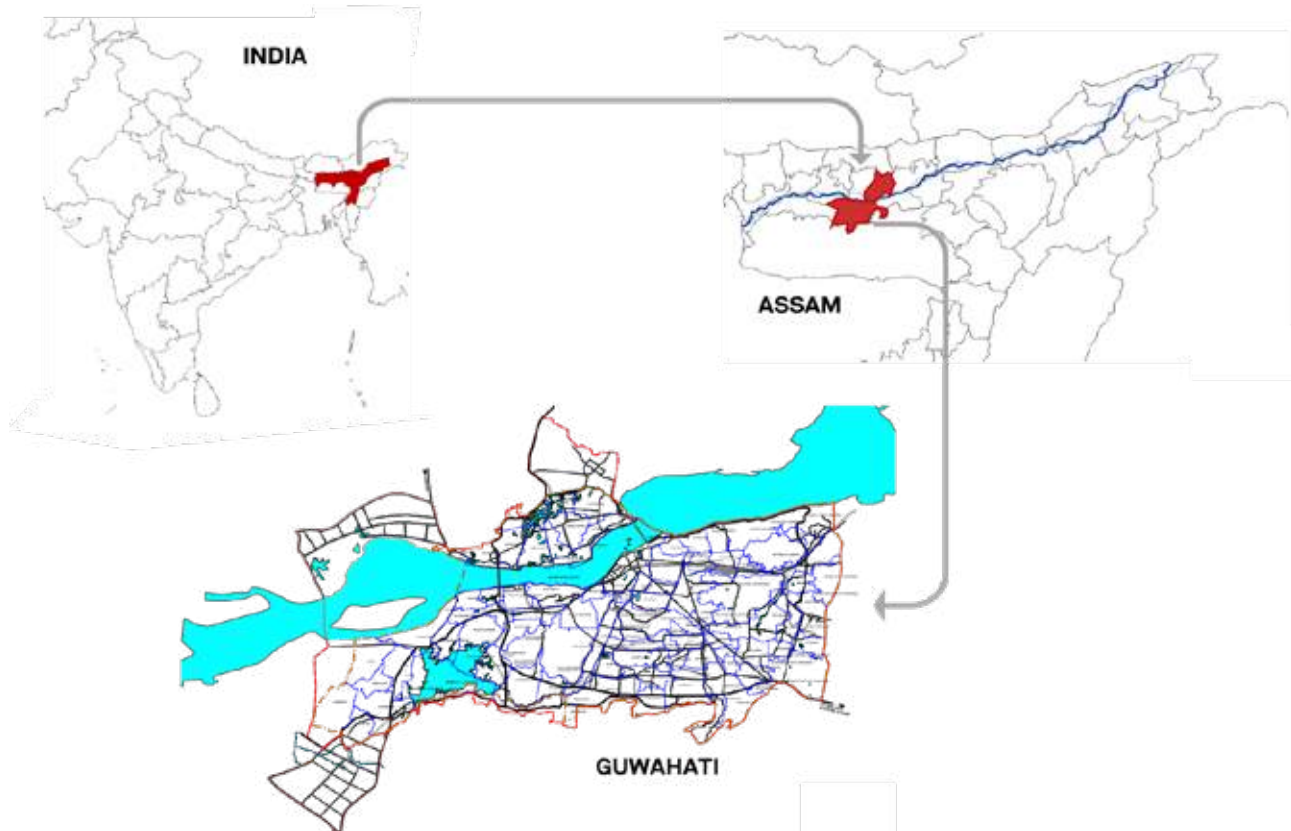
Graph 2 | Population growth in Assam, 1951 - 2011

Source: Census of India, 2011.

1.2. GUWAHATI CITY

Guwahati city is situated between the banks of the Brahmaputra River and the foothills of the Shillong plateau, flanked by Lokpriya Gopinath Bordoloi International Airport to the west and the town of Narengi to the east. It has gradually expanded as North

Guwahati to the Northern bank of the Brahmaputra. The city is situated on an undulating plain with varying altitudes of 49.5 metre to 55.5 metre above mean sea level. Guwahati has a humid subtropical climate. The average annual temperature is 24.2 °C.



Map 1 | Location of Guwahati

The city's population grew from just 2,00,000 in 1971 to more than 5,00,000 in 1991. In the 2001 Census, the city's population was 8,08,021. As per Census 2011, the total population of Guwahati is 12,60,419. The decadal growth rate of the population of Guwahati is 18.95 per cent as represented in Table 2.

The city experienced a massive population increase in 1971–81 and 1981–91. When the capital of Assam shifted from Shillong to Guwahati in 1972, a large number of people migrated into the city from rural Assam and other states of the north-east region of India. The formation of Bangladesh in 1972 also influenced cross-border migration. From 1979–85,

the state of Assam witnessed the anti-government campaign 'Assam Movement', Assam Agitation, or Asom Andolan. It was against the enfranchisement of illegal immigrants. The 1981 Census could not be held due to the political unrest in the state.

Since then, the Guwahati Municipal Corporation (GMC) area has registered a slowing down of population growth rate, from 3.3 per cent per annum in 1991–2001 and 1.8 per cent per annum in 2001–11. 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 per cent per annum. The Guwahati Metropolitan Area (GMA) has registered a population growth that is

even lower than that of the GMC rate from 2001–11. This means that the migration rate to the city has slowed down in the decade of 2001–11 due to either decline in migrants from other north-eastern states and rural Assam or the decline from cross-border migration or both. Therefore, contrary to the expectation, the population of Guwahati city and its metropolitan region has stabilised since 2001 due to economic and geo-political reasons. Nevertheless, all these have created pressure on the existing infrastructure and urban amenities (Desai et al., 2013).

Based on the past population growth trends—low, medium and high—population estimates for Guwahati Metropolitan Area for the period 2005 to 2025 is estimated to vary from a low of 19.10 lakhs to a high of 22.50 lakhs in 2025. According to the Master Plan Report prepared by Guwahati Metropolitan Development Authority (GMDA) the total population of GMA will be 21 lakhs approximately in 2025, as represented in Table 3.

YEAR	TOTAL POPULATION	MALE	FEMALE	SEX RATIO (FEMALES PER 1000 MALES)	POPULATION DENSITY (PER SQ.KM.)	DECADAL GROWTH RATE (%)
2011	12,60,419	6,55,630	6,04,789	922	2010	18.95

TABLE 2 | Decadal growth of population in Guwahati

Source: Source: Census of India, 2011.

YEAR	POPULATION IN GMA
2005	10,33,584
2010	12,44,713
2015	14,98,970
2020	18,05,163
2025	21,73,902

TABLE 3 | Population growth in Guwahati Metropolitan Area

Source: Report on Masterplan for Guwahati Metropolitan Area – 2025; GMDA

1.3 GOVERNANCE

In 1878, the Government of Assam adopted the Bengal Municipal Act 1876, which provided for urban local bodies of four classes. Accordingly, Guwahati was constituted into a firstclass municipality. Guwahati continued to be a municipality till 1969 when it was upgraded to a Municipal Corporation with the enactment of Guwahati Municipal Corporation Act (Guwahati Municipal Corporation, 1969).

Guwahati Municipality was converted into a corporation

in 1974 with 34 wards and 62 villages (Borah, 1985). It is the local body responsible for governing, developing and managing the city. Guwahati Municipal Corporation (GMC) is further divided into 31 municipal wards and 90 Area Sabhas in a 3-tier hierarchy. GMC administers an area of 216 square kilometres, (Refer Map 2).

The Guwahati Metropolitan Development Authority (GMDA) was established in 1992 as per the Guwahati Metropolitan Development Authority Act 1985. It

replaced the erstwhile Guwahati Development Authority constituted in 1962 under the Town and Country Planning Act, 1959 (amended) (Guwahati Metropolitan Development Authority, n.d.-b). It is a developing authority responsible for planning and development of

the Greater Guwahati Metropolitan Area (GMA), (Refer Map 3), and for revising the Guwahati Master Plan and Building Bylaws to cover an area of 3,214 square kilometres by 2025.



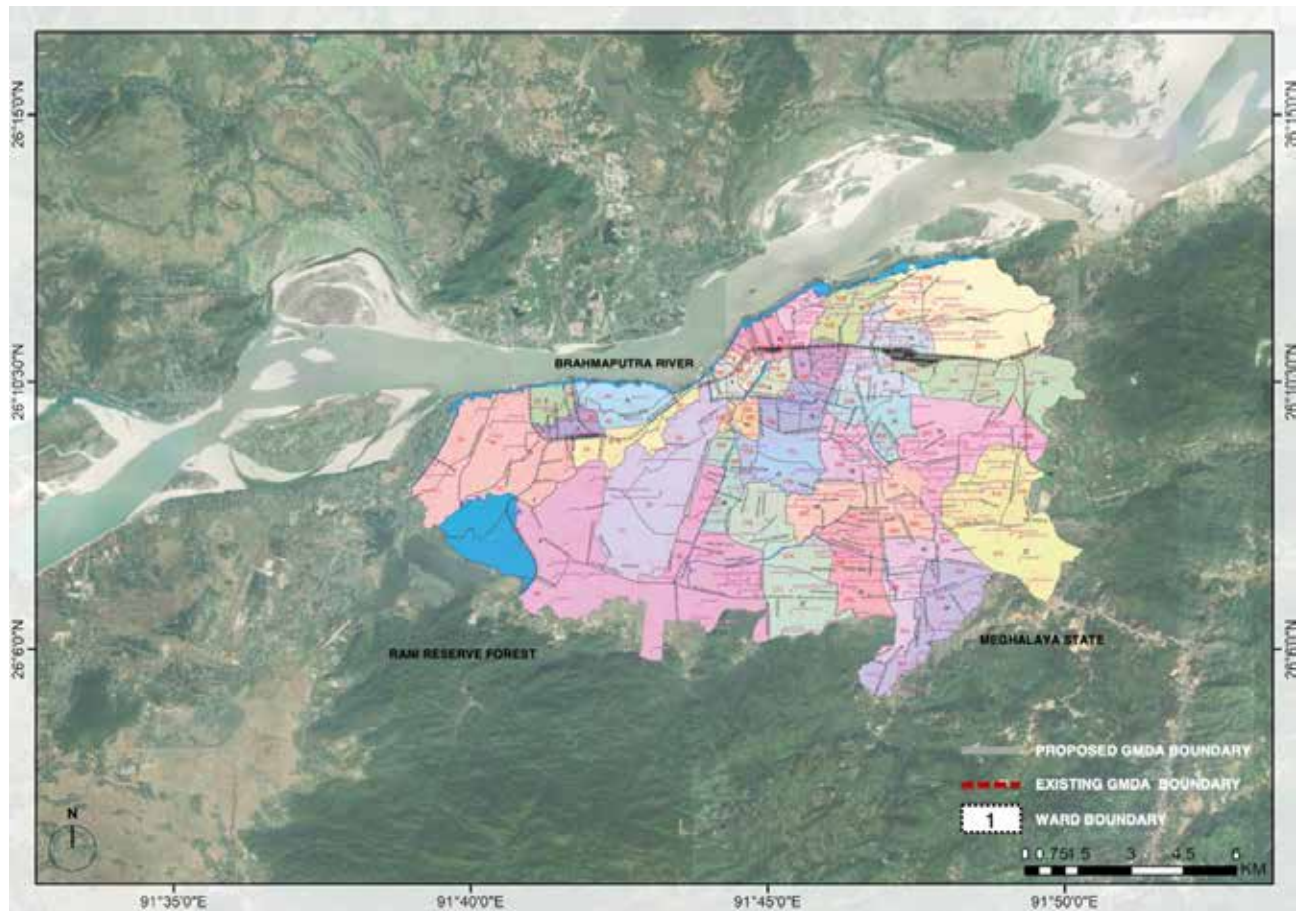
INFRASTRUCTURE	PLANNING & DESIGN	CONSTRUCTION	OPERATION & MAINTENANCE
WATER SUPPLY	PHE/AUWSSD/GMC/FCD	PHE/AUWSSD/GMC/FCD	PHE/AUWSSD/GMC/FCD
SEWERAGE	PHE/AUWSSD/GMC/FCD	PHE/AUWSSD/GMC/FCD	PHE/AUWSSD/GMC/FCD
DRAINAGE	GMDA/GMC/T&CP	GMDA/GMC	GMDA/GMC
STORM WATER DRAINAGE	GMC	GMC	GMC
SOLID WASTE DISPOSAL	PWD/GMDA/GMC	PWD/GMDA/GMC	PWD/GMDA/GMC
MUNICIPAL (INCLUDING FLYOVER)	PWD/GMDA/GMC	PWD/GMDA/GMC	PWD/GMDA/GMC
STREET LIGHT	PWD/GMDA/GMC	PWD/GMDA/GMC	PWD/GMDA/GMC
TOWN PLANNING	GMDA & T&CP	GMDA	GMDA

TABLE 4 | Institutional framework and roles

Source: GMDA

The region delineated under GMA constitutes areas of Guwahati Municipal Corporation, North Guwahati Town Committee, Amingaon Census Town and 21 revenue villages (Abhoypur, Rudreswar, Namati Jalah, Gouripur, Silamohekhaiti, Tilingaon, Shila, Ghorajan, Mikirpara, Kahikuchi, Mirjapur, Jugipara, Borjhar, Garal Gaon, Ajara Gaon, Dharapur, Jansimalu and Jansimalu).

The Guwahati Development Department (GDD) is a special department of the Government of Assam, formed for Guwahati's overall development. Guwahati is one among 100 Indian cities selected for the Smart Cities Mission, under the project launched by the Ministry of Urban Development, Government of India.



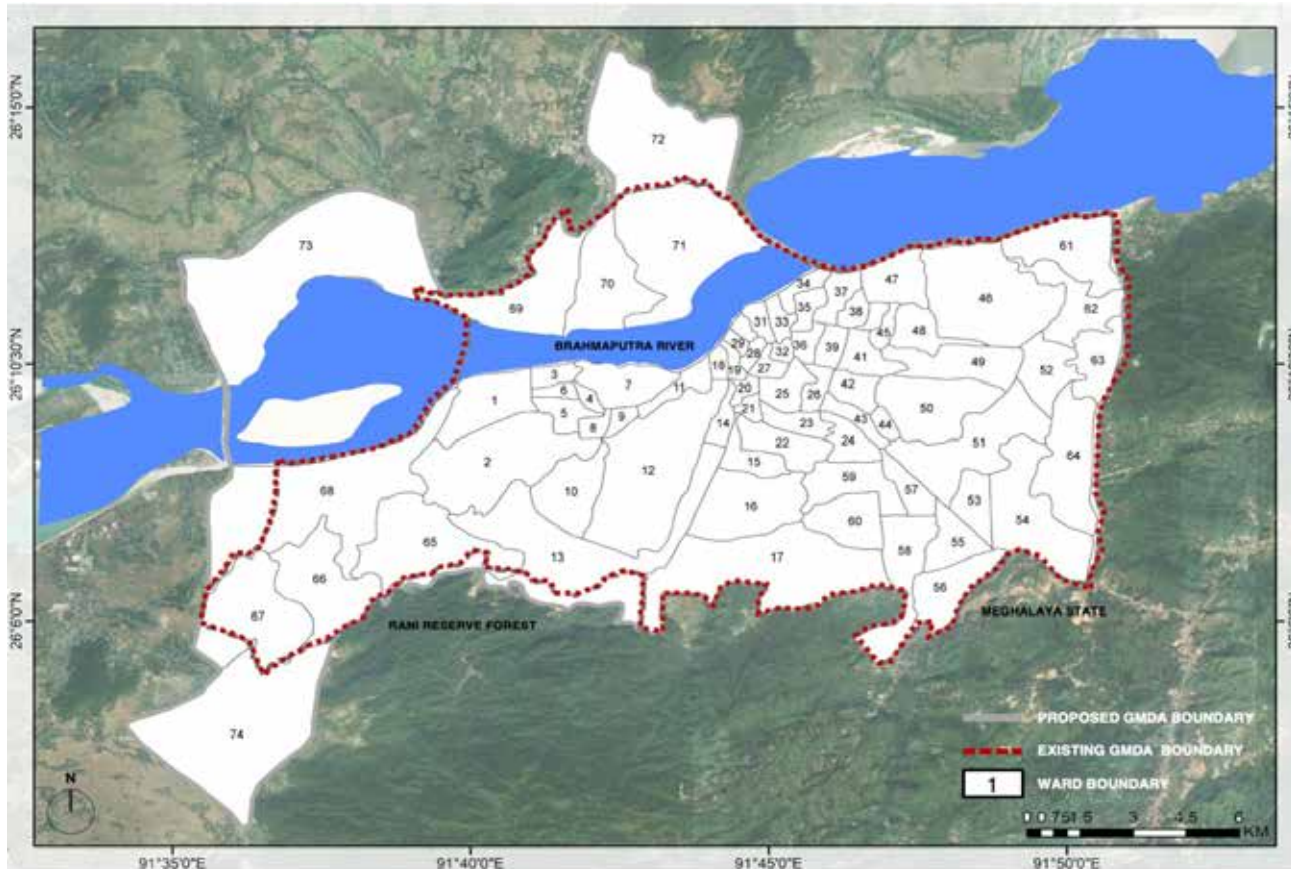
Map 2 | Guwahati Municipal Corporation Map
 Source: Guwahati Municipal Corporation, Prepared by OEP

1.4. URBAN MORPHOLOGY

Guwahati has a mix of plain areas, low-lying marshy lands and hills, with the Brahmaputra River running across the length of the city in the north (Mahadevia et al., 2014). Guwahati's 'urban form' radiates from a central core, with growth corridors radiating and extending towards the south, east and west. The core area consists of the old city with Pan Bazaar,

Paltan Bazaar, Fancy Bazaar and Uzanbazar were the main urban centres of the city. But in the past few decades, southern Guwahati areas such as Ganeshguri, Beltola, Hatigaon, Six Mile and Panjabari began forming a southern sub-centre surrounding the capital complex at Dispur.

While Paltan Bazaar is the hub for hotels and the nodal point for transport services, Pan Bazaar is centred on educational, administrative and cultural activities in addition to offices and restaurants. Fancy Bazaar is the commercial hub for the retail and wholesale market in northeast India and Uzanbazar mainly contains administrative, retail, dining and residential areas. With these bustling areas, the city core is a busy and lively part of Guwahati. Ulubari, Lachit Nagar, Silpukhuri, Chandmari and Zoo Road (R.G. Baruah Road), which have a mix of retail-commercial and residential areas, can be considered as extended parts of the core.



Map 3 | Proposed ward map, Guwahati Metropolitan Area

Source: Guwahati Metropolitan Development Authority, Prepared by OEP

Among the city corridors, the most important is the corridor formed along the Guwahati–Shillong (GS) Road towards the south (almost 15 km from the city-centre). The GS Road corridor is an important commercial area with retail, wholesale and commercial offices developed along the main road. It is also a densely built residential

area in the inner parts. The capital Dispur is situated in this corridor. This corridor has facilitated the growth of a southern city sub-center at Ganeshguri, along with other residential areas to the south developed during the past few decades.

1.5. HISTORY

The history of Guwahati city dates back thousands of years. It has witnessed many ancient kingdoms on its lands. In mythology it is known to be the legendary city—Pragjyotishpur (may mean ‘the city of Eastern Astrology’) (Gait, 1963). The ancient Shakti temple of Goddess Kamakhya located within the Nilachal hill of Guwahati, the unique astrological temple of Navagraha in Chitrachal Hill, archaeological remains in Basistha and other archaeological sites are testimonials to the historical and mythological importance of the place.

According to the Assam *Buranji* (Dutta, n.d.) or *A History of Assam*, the town of Guwahati continued to be the contested land for power between the Ahom Kingdom and the Mughal Emperor till the 16th century. In 1825, Assam was surrendered to the East India Company under the British Raj. The British Annexation of Assam in 1826 was critical in the history of growth and development of Guwahati. The town was connected by railway line with the rest of India in 1890. After the partition of India, Guwahati experienced phenomenal growth and was made the headquarters of the province of the north-east

for several years. In 1972, after the reorganisation of the Assam state, the capital was shifted from Shillong to Dispur (Guwahati) whereby the city gained enough political importance. Since then, the city has grown

enormously in terms of population and development of commercial activities (Guwahati Metropolitan Development Authority, n.d.-a)

1.6. LAND AND MIGRATION

Historically, the Ahom Kings owned all land in Assam. They later made extensive revenue free land grants to temples, priests, and charitable institutions (Sharma, 2013a). But the bulk of land was allotted 'to paiksor corvée labour' (as a parcel of 2.66 acres), in lieu of their services to the state (Das, 1986), which then came to be recognised as private property under the control of the clan that received the grant. The British period saw the transfer of ownership of all lands into the hands of the state and allowed only occupancy rights through the lease to their occupants, which were deemed permanent, heritable and transferable, subject to regular tax payment. The lease rights were initially for a period of one year only, which was extended to 10 years (called periodic lease) if the occupants proved that they had permanent homesteads on or were cultivating the land. Both types of leases, whether annual or periodic, were however renewed at the end of the lease period (Ibid.). The Contemporary Assam Land Policy from 1989 for granting land rights (*pattas*) is based on this historical land transfer policy as we see later. Religious institutions were exempted from paying taxes on the land they had (Saikia, 2012; Sharma, 2013a). The poor peasants who received lands under 'corvée labour' but could not pay the taxes sold their lands and settled on wastelands in remote areas, creating a base for future conflicts with the state. The British government's Bengal Forest Act marked 'reserve forests' for the use of the state, i.e., the British state. This implied that the British could decide on the use of the forestlands, which it began to give away to individual landholders for tea plantations, to the railways and most importantly to the marginal and landless peasants for agriculture. The latter got the land, however, in exchange for their labour in collecting forest resources and other such activities on behalf of the colonial forest department. Such settled villages were known as 'forest villages', which refer not to villages located in the forest, but to villages or colonies of 'coolies' or labourers established by the forest department for assured supply

of labour required for forest work. The tribals, the original occupants of forests, were allowed to settle and use forestland for a temporary period and hence were considered encroachers while the dwellers of the 'forest villages' were given permanent rights, leading to conflicts between the two groups.

Independent India continued with the same forest legislation, with the continuation of conflicts about forestland rights in Assam as well as the rest of India. In Guwahati, the original tribal communities of the region and those who have migrated in the last 50 years too are occupying forestlands while the other populations have purchased lands from those who were granted *pattas* during the British period. Between 1830 and 1870, a significant amount of land was transferred to planters for plantations (Sharma, 2013a). Since the indigenous population refused to work on these plantations, tribal-migrant labour was brought from Odisha, Madhya Pradesh, Bihar and Bengal (Srikanth, 2000). For further commercial exploitation of land resources, the British government, with the support of the Assamese *zamindars*, encouraged the Bengali Muslim peasants from East Bengal to migrate to the Brahmaputra Valley for jute cultivation. During the colonial period, to protect the identity of tribal communities, tribal belts were formed in Guwahati as well as in the rest of Assam. For example, the current Greater Guwahati area was under the South Kamrup Tribal Belt prior to shifting of the state capital to Dispur (Sharma, 2013a). Post-independence, the tribal lands of South Kamrup were acquired through dereservation, leading to evictions of the resident tribals without giving them any alternative. The land mafia too forced some of the tribals to sell their lands (Sharma, 2013a). Both these factors forced these tribals to occupy forestlands in the hills, at the cost of being called encroachers later on. There were also tea estates on the hills that were leased to the planters by the British and had to be returned back to the state if tea plantations

ceased to exist. On expiry of the 99-year lease of the Sunsali tea estate, the state government gave part of it to the Guwahati (Noonmati) Refinery and its colony (Mahadevia et al., 2017).

In the case of Guwahati, the 'encroachments' on wetlands and hills have set the stage for conflict about housing rights, especially for those without legal land tenure. This has led to a cycle of violence and counter-violence. The informal settlers' conflict with the state for land rights on the one hand and resistance against evictions carried out in the name of ecological protection on the other have turned into a political movement and laid the foundations for permanent conflicts in the city. The land rights conflict and its inherent violent nature is embedded in the state's particular land policy history, ethnic conflicts and long drawn violent political movement against the immigrants, particularly from across the border from Bangladesh, labelled as 'Muslim infiltrators', and conflict of indigenous people (tribals) on the land issue. Guwahati's geography has led to restricted land supply and the high value of land has led to continuous process of encroachments (*dakhal*) for accessing land for housing, and the selectivity in the state government's approach to ecological conservation in Guwahati, leading to evictions of the settlements of the poor and denial of their land rights (Mahadevia et al., 2017).

Guwahati city is characterised by numerous hills and highlands scattered all over, along with swamps, beels (water bodies/wetlands) and low-lying areas and reserved forests on the hills. The city is bound by the river Brahmaputra and Khasi–Garo hill ranges to the north and south, respectively. There are five hill ranges, marked as reserved forests, under the Kamrup East district (within which Guwahati is located); the Guwahati, Garbhanga, Sonapur, Rani and Palasbari ranges. The city also has many wetlands, namely, Silsako, Bondajan, Surasola, Borsola and Deepor, among which the last one is protected under the Ramsar convention (Mahadevia et al., 2017). All these *beels* have been notified under the Assam Hill Land and Ecological Sites (Protection and Management) Act, 2006. These natural features have led to an uneven spread of population in the city, on the one hand, and a sprawl along the east-west axis. The sprawl not only adds to increased travel time and costs and

hence greenhouse gas emissions, but also results in high land prices.

The Guwahati Municipal Corporation (GMC) area registered a population growth rate of 8.1 per cent per annum during the 1971–91 period (Mahadevia et al., 2014), following the setting up of the capital at Dispur in 1972. The migrants consisted of those employed in the state administration, students and labour from states such as Andhra Pradesh, Tamil Nadu and Bihar who work in sanitation services. The affluent population from the rest of Assam also bought houses in Guwahati as a measure against long insurgency problems. It goes without saying that the government and public housing was insufficient. All these dynamics have led to large-scale informal developments through a process called *dakhal* (encroachment), however, mainly on ecologically sensitive areas such as hills and wetlands and the lands reserved under the city master plan or Urban Land (Ceiling and Regulation) Act (ULCRA) of 1976, as that was available to the state, private developers and low-income households. The *dakhal* was either by the people themselves, as in the case of the tribals who encroached on the hill lands or by middlemen (Mahadevia et al., 2014; Desai and Mahadevia, 2014) or by the state itself on behalf of various institutions and the private sector. This has led to a differentiated approach by the state government in legalising the *dakhals*, leading to resentment among the low-income population and led to the land rights movement as we discuss later. An estimated 65,900 households were residing on 16 hills in 2009, wherein 71 per cent of all households were living on government land, 18 per cent on reserved forestlands, 7.3 per cent households on *patta* land owned by others, and 3.6 per cent on *patta* land under their ownership (Nielson, 2011).

The Assam Land Policy, 1989 (Government of Assam 1989) gives priority of land allotment (*pattas*) to the indigenous people living in Guwahati or other towns on payment of the prescribed premium. The order of preference is for firstly giving *pattas* to the indigenous people occupying government land for 15 years and not having any land in the rural or urban areas of the state and after that to others with Assam domicile and who have been living in the city for 15 years without owning

any land in rural or urban areas. No priority is given to the households established on railway land. The issue of domicile of Assam has been a point of contention through the last 50 years of the state's history (Mahadevia et al., 2017).

There was also a flow of people from other states to earn their livelihood via different economic activities. There has been migration from Bihar, Andhra Pradesh and Punjab since the colonial period (Desai et al., 2013) for employment; due to floods, river erosion and droughts in their native place destroying sufficient cultivable land; to

escape rural poverty, etc. All these trends in migration help categorise those living in informal settlements as:

1. Those who left their native place on their own accord for employment.
2. Those who were forced to leave their native village due to the natural disasters, poverty and other reasons.
3. Those who have been living in the slum areas through generations. (Ibid.)

1.7. GROWTH OF INFORMAL SETTLEMENTS

Early Settlements

The early informal settlements in Guwahati started in colonial Assam. As the town became the administrative headquarters, initially of the province in the east and later of the district, it grew in size and with growth arose a need to build and maintain a sanitation system to safely dispose of sewage and garbage. This need was further compounded when Guwahati was connected to the Eastern Railway network and with the rise in the shipping industry, which resulted in the enhanced movement of temporary populations in the town. To cater to the demands of sanitation maintenance, the colonial authorities brought people (*safai karmacharis*) belonging to Dalit communities from other states of India as workers. The very nature of their work created a certain stigma and compelled them to live in isolation in small colonies with very poor facilities. These were the first informal settlements of the city, often called 'Harijan colonies', housing the municipal workers and their families.

With the increase in population in these colonies by internal growth and in-migration, the conditions within these confined areas deteriorated. The first Harijan colony as per records was said to be located on M.C. Road. Over time, several such areas sprouted across the city, sheltering people migrating to the city for employment and livelihood opportunities. They are majorly engaged in institutions and organisations like the railways, university, hospitals, government offices, etc. (SsTEP and Action India, 2004–05).

Housing for Low-income Residents

When the capital of Assam shifted from Shillong to Guwahati in 1972, a large number of people migrated into the city. Formal sector housing, which also included the formal sector rental housing, was unaffordable to the poor. The 1824 rental-housing units built by the Assam State Housing Board at various locations in the city was not adequate to fulfil the housing needs of the poor. Based on the research conducted by Centre for Urban Equity–CEPT University, one of the sites revealed that many of the Assam State Housing Board's economically weaker section (EWS), and low-income group (LIG) rental units are taken up by higher income occupants and their families. Due to this disparity and other exclusionary reasons, the low-income residents have turned to the informal land and housing sector, which also included the informal rental sector (Desai et al., 2013).

The location of these informal settlements and its growth and distribution is based on economic activities and the availability of land. The research also categorised the informal housing sector into several housing submarkets created through the land and development processes (Desai & Mahadevia, 2013).

The categories are:

- Through informal occupation, commonly known as '*dakhal*', in public and private lands.

Such *dakhal* is majorly located on:

- Railway lands
- State government's revenue lands (located in the plains, on swampy lands and in the hills)
- State government's reserve forest lands mostly in the hills
- Private lands earmarked for acquisition
- Other private lands
- Through land alienation, majorly located on:
 - Private agricultural lands on the city's periphery.

It is an important observation here that in Guwahati the poor as well as the middle class have engaged with '*dakhal*' to get access to land. Contrasting characteristics of *dakhal* can be witnessed here. While the informal settlements of the middle class can make good quality housing and get access to basic services, the majority of the informal settlements consist of poor quality housing and lack of basic services. The Guwahati Municipal Corporation (GMC) has identified some informal settlements as 'slums' over the years to provide access to government schemes. In Chapter 4, we discuss the details of these informal settlements and their identification over time.

2. PLANNING IN GUWAHATI

2.1 MASTER PLANS IN GUWAHATI

The First Master Plan and Zoning Regulation adopted in 1965, modified in 1986, covered regulation, control and guidance patterns till 2001. The zoning regulation was not followed and over the years the core area of the city was developed densely with intermixing of residential, commercial, public and semi-public activities. The task of the plan implementation was assigned to several agencies, including the development authority, the Guwahati Municipal Corporation (GMC) and some of the government departments (Sharma, 2013b). However, there was no land management policy detailed for the non-conformity to the statutory practice of regulation and control. The Master Plan did not fully consider the broader urban development strategy. It did not stretch beyond the limits of the metropolitan region and as such the question of linking with a regional plan was not dealt with. As a physical development plan, it ignored the potentialities of hillocks in and around the city as viable centres of tourist and recreational spots. In the absence of financially viable investment packages through site development, etc., proposed programmes and projects were implemented in a piecemeal manner.

Guwahati's First Master Plan, 1965 (Perspective 1986)

To deal with rapid urbanisation and related urban issues, the State Government prepared a Master Plan for Greater Guwahati in 1965 under Section 10 of the Assam Town and Country Planning Act, 1959. The Plan had Perspective 1986.

Guwahati's Second Master Plan, 1987 (Perspective 2001)

The Modified Final Master Plan and Zoning Regulations for Guwahati was prepared by the Town and Country Planning Organisation by exercising the powers under section 14 and sub-section (2) of section 10 of the Assam Town and Country Planning Act. It was published in February 1987. The 1987 Master Plan was entrusted to the Guwahati Metropolitan Development Authority

(which was constituted under Guwahati Metropolitan Development Authority Act 1985) for implementation of the Plan with Perspective 2001. The total area covered under the Guwahati Metropolitan Area (GMA) is approximately 262 sq. km.

Guwahati's Third Master Plan, 2001 (Perspective 2025)

The Master Plan and Zone Regulation up to 2025 was adopted in 2009, after a gap of a few years, incorporating more villages with an addition of 66 sq. km. The Guwahati Metropolitan Development Authority (GMDA) in its bid to fulfill one of its statutory obligations to prepare, enforce and execute the Master Plan took initiative since 1995. The existing Master Plan did not include the project for the capital of the state. The capital was established with temporary planning. Increase in traffic load at an alarming rate and the ever expanding traffic nodes added a new dimension to the land use pattern. There was another urgent need of revitalisation of the land development process in the light of increasing settlements on the vacant land, including the Green Belt, which constituted for 37.16 per cent of total planning area. The GMDA Act provided for acquisition of land by the Authority and it was recognised that urban land can be used as a major resource to raise funds by acquiring, developing and providing service plots to the consumers. The office records and public declarations showed such awareness. But till 2009 the Master Plan approach was sidelined. The sprawling growth of the city could not be regulated. 'Development' as defined by the prevailing acts refer to building activities on land. In the city, from this point of view, 75 per cent development activities occur due to housing activities. The construction of parks, roads or beautification constitutes only 25 per cent of total development activity. So, it can be logically perceived that if the development activities of this larger section undertaken mostly by private sector housing activities can be guided in the right perspective, much of the development targets are fulfilled. The non implementation

of the existing Master Plan and the non-existence of a plan for a long period are major constraints in the management paradigm.

The approach of the present Master Plan (2009–2025) touches the question of dispersed urbanisation and reduction of congestion and improvement of inter and intra-regional accessibility. There has also been a change of authority for planning, from the Town and Country Planning Organization to the Development Authority. Besides the shift of authority, the notion of urban planning assumes a crucial turn in the context of the 12th Schedule of the 74th Constitutional Amendment Act. The Act envisaged community participation in the planning process. However, no initiative was taken by the state government in this context. The role of the corporation as a civic body was restrained by the fact that it is dissolved by the Government from time to time. In the last few decades, the elected body could operate only for a few years and this greatly hampered the objectives of city government in a growing city (Sharma, 2013a).

Comprehensive Master Plan, 2025

The 2001 Master Plan was subsequently revised with Perspective 2025 under the GMDA Act, 1985 (Guwahati Metropolitan Development Authority, n.d.-b). The plan is called the Comprehensive Master Plan 2025 (CMP–2025) wherein the proposed Greater Guwahati Area has a total area of 328 sq.km., an increase of 66 sq.km. from the previous plan including 13 planning units and 3 units of three new towns. According to the CMP 2025, the Master Plan envisages to transform Guwahati to one of the most admired state capitals of India and create a unique image of its own as the gateway of north-east India.

Vision and Goals, 2025

To achieve this vision, the necessary goals and objectives are formed as follows:

Goal 1: To conserve Guwahati's sensitive natural environment.

Goal 2: To develop an integrated intra-urban transport system.

Goal 3: To develop well-distributed physical and social infrastructure

Goal 4: To provide space for efficient functioning of economic activities

Goal 5: To create an image befitting that of the state capital

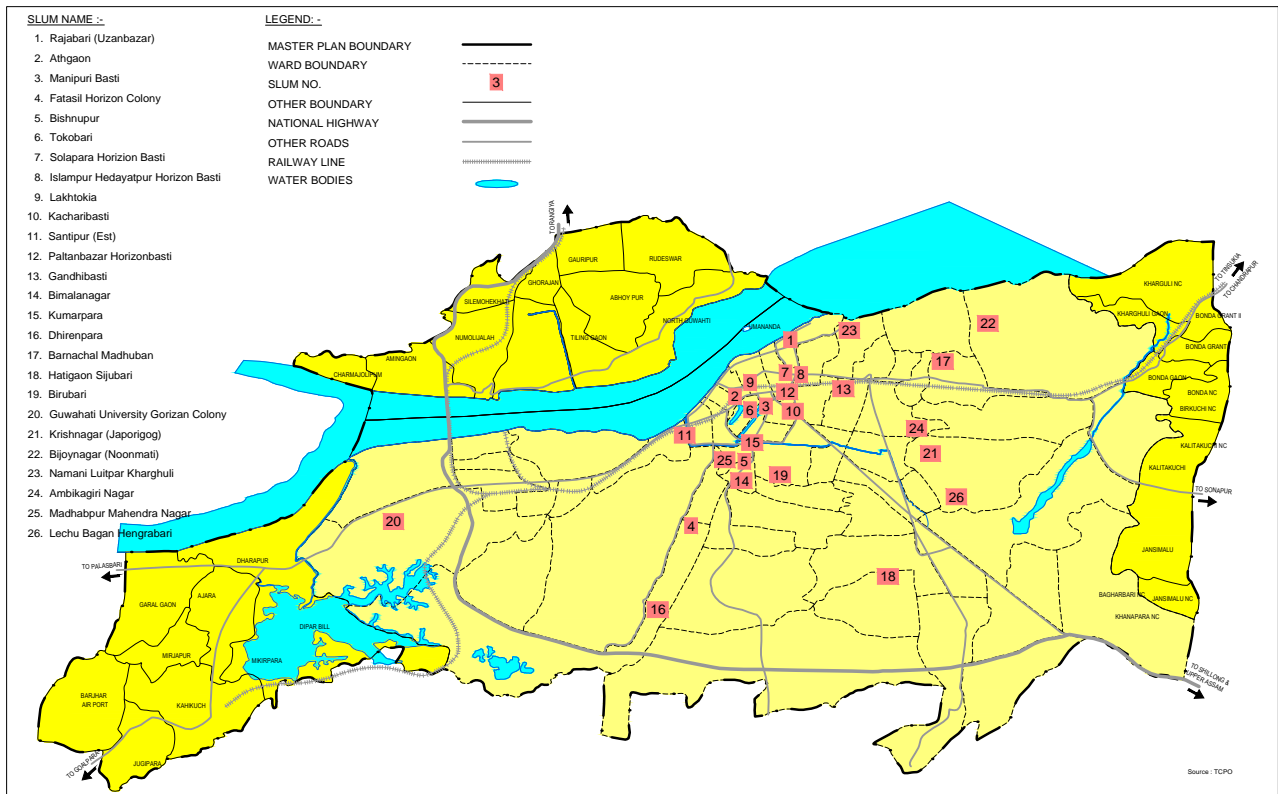
Goal 6: To create affordable housing for all and develop a city without slums

Goal 7: To bring in a system in the land development process

Slums and the Comprehensive Master Plan

Based on the report on the Master Plan for Guwahati Metropolitan Area, Map 4 highlights the locations of slums/informal settlement pockets in the city. According to the information provided by the Town and Country Planning Department, 26 pockets of slum are identified in the GMC area. These pockets house around 0.16 million persons (about 20 per cent of the total population). The following measures will be taken to upgrade/rehabilitate the existing pockets of slums to achieve the vision of a city without slums:

1. In case of existing slums, which are on government lands that are not needed for development of any infrastructure or other urban activities, plans for upgrading of slums may be prepared and implemented.
2. Other slum pockets may be resettled at appropriate areas with due consideration of their distance from workplaces.
3. In all new housing schemes, at least 30 per cent of total housing shall be one-roomed houses, part of which will go to the urban poor generally living in slums. These may be provided with cross-subsidy.



Map 4 | Existing slums in Guwahati Metropolitan Area, 2001
Source: Report on Master Plan for Guwahati Metropolitan Area – 2025; GMDA

2.2 PLANNING UNITS

The Guwahati Master Plan–2001 had divided the Master Plan area into nine spatial units called planning units. In CMP–2025, Planning Unit 1 of the 2001 Plan has been subdivided to distinguish between the

Central Business District and extended areas. Thus, the existing GMA–2025 has 13 planning units (including 3 units of the three new towns).

PLANNING UNIT	AREAS COVERED
PU 1	OLD MUNICIPALITY AREA
PU 2	HATIGAON-BASISTHA-KHANAPARA AREA
PU 3	HENGRABARI-SATGAON AREA
PU 4	NARENGI-BONDA AREA
PU 5	DIPAR BIL-FATASIL HILL AREA
PU 6	PANDU-MALIGAON AREA
PU 7	JALUKBARI-UNIVERSITY AREA
PU 8	AZARA-BORJHAR AREA
PU 9	NORTH GUWAHATI-AMINGAON AREA
PU 10	EXTENDED AREA OF OLD MUNICIPALITY
PU 11	NORTH EAST OF GMA (NEW TOWN I)
PU 12	NORTH WEST OF GMA (NEW TOWN II)
PU 13	SOUTH WEST OF GMA (NEW TOWN III)

Table 5 | Planning units - Guwahati Metropolitan Area 2025

Source: Master Plan for Guwahati Metropolitan Area – 2025, Guwahati Metropolitan Development Authority

The GMA–2025 area is further sub-divided into small spatial units called Planning Subunits (PSU). A total of 74 PSUs has been identified, including three new towns proposed for 2025. The PSUs 1 to 60 are co-terminus

with municipal wards within the GMC area; beyond the GMC area, PSUs 61 to 71 are delineated by grouping villages. PSUs 72, 73, 74 are respectively the new towns I, II and III.

2.3 OTHER PLANS IN GUWAHATI

Guwahati, as the only metropolitan city in the state, has witnessed the introduction of several national flagships programmes like the Pradhan Mantri Awas Yojana (PMAY), Swachh Bharat Mission (SBM) with state rules and regulations, which applies to the informal settlements also. Apart from this, the state has also been undergoing a process of identifying 'citizens' through the National Register of Citizens (NRC). A brief note on all these processes of implementation is explained to provide context on schemes that are implemented in silos, without clear linkages with the Comprehensive Master Plan (CMP).

Pradhan Mantri Awas Yojana Mission (Urban)

PMAY–U is a national flagship programme of the

Government of India and is presently being minutely monitored at the district level by the State as well as Central Government. The cell was formed in Guwahati, Assam, in July 2017, while the scheme was launched in 2015. Using the Guwahati Municipal Corporation (GMC) survey data that states that 163 informal settlements exist in the city, and most of the informal settlements are established on railway land, a survey was to be carried out in all the slums through an intermediary organisation that would conduct participatory research in all the slums. PMAY housing application forms were to be filled accordingly.

However, over a period of time the agenda was changed and Form-A (which is for in-situ slum redevelopment [ISSR]) was distributed to the community leaders of each

slum. They identified a list from the previous Rajiv Awas Yojana scheme, which included 163 slums in Guwahati and their land ownership showed that most of the slums were on railway land, state government land, wetlands and private lands. It was observed that the Beneficiary Led Construction (BLC) component was promoted by PMAY-U as it includes the households who had land leases (*miadi patta*) and could be easily connected to banks for release of loans and building purposes.

A Right to Information (RTI) application response (PMAY, Assam City Mission, 2018), revealed that only 24 slums have been surveyed by the PMAY-U Assam department in the ISSR category, but no datasheet was prepared and no recorded details were found. The PMAY Assam Mission Director, stated that the reason behind the non-implementation of the ISSR component was that none of the slums in Guwahati were notified or regularised by the state, resulting in the non-utilisation of the allocated budget and nor was the Detailed Project Report (DPR) prepared for the same. The primary challenge for rehabilitation and resettlement of slums, according to GMC officials is reservation of revenue land in urban areas by the department for which there is no progress of the scheme or utilisation of funds (Mission Director, Pradhan Mantri Awas Yojana, n.d.).

The central issue for implementation of the ISSR component of PMAY is land. The informal settlements in Guwahati are mostly established on railway land, which needs to be denotified from the central agency owning it. Internal conflicts between the State and Central Government Departments acts as a challenge in implementation. Also, the Additional Commissioner of GMC has mentioned that GMC has no land of their own for any development or to implement any schemes and if the Revenue Department provides them land, it will be kilometres away from the city where the people will not shift (Additional Commissioner, GMC, 2019). Therefore, land is the major question in the city at present.

According to The Assam Slum Areas Improvement and Clearance Act, 1956, Town & Country Planning is the official authority to notify, survey and regularise slums in towns and cities, other than Guwahati. Another reason for non-implementation of the ISSR component is the

non-notification and recognition of informal settlements in Guwahati due to the absence of an official agency responsible for it. The main progress on PMAY (urban) has been made under the BLC component, where 80,554 beneficiaries have been identified for release of the Central and State Subsidy of INR 2 lakh to each beneficiary. Till date, 33,000+ houses are grounded, 2,600+ are completed and 10,000+ are nearing completion (Pradhan Mantri Awas Yojana-U, n.d.).

Swachh Bharat Mission-Urban

A significant population of Assam still does not have access to sanitary latrine systems, causing major environmental and health risks. Majority of the houses in the informal settlements use pit latrines, and due to the absence of drainage systems and linkages to pipelines, it creates an unhygienic and unhealthy environment. Although the Swachh Bharat Mission-Urban Assam, in cooperation with all urban local bodies (ULBs), has identified the prevalence of unsanitary/*kutcha* latrines under the administration of ULBs across Assam, sufficient progress has not been made by the department. From a survey report received from the ULBs, the Mission has sanctioned 68,338 units of household latrines and 2,280 community/public toilets. It is however relevant to state that 'No Latrine' cases rarely exist in Assam due to the presence of pit latrines. On the basis of all these facts and figures, the State Mission Directorate envisaged declaring Assam, 100 percent open defecation free by 2 October 2017 (Swachh Bharat Mission-Urban, n.d.).

Advocacy with SBM on the process of implementation of the schemes through an RTI application (PMAY, Assam City Mission, 2018), reflected the status of its implementation in Guwahati and revealed that no community toilets had been constructed by the department despite being an important vertical. Seven public toilets were constructed but their adequacy remains questionable and crores of rupees were spent on building these toilets. For individual household latrines, the beneficiaries were capped at 6,777 citing budget restrictions. The RTI was able to provide a clear representation of the inadequate implementation of the scheme so far (PMAY, Assam City Mission, 2018)

National Register of Citizens (NRC)

The NRC in Assam is a list of Indian citizens living in the state. The citizens' register sets out to identify foreign nationals in the state that borders Bangladesh. The process to update the register began following a Supreme Court order in 2013, with the state's nearly 33 million people having to prove that they were Indian nationals prior to 24 March 1971. The updated final NRC was released on 31 August 2019, with over 1.9 million applicants failing to make it to the list. In Assam, one of the basic criteria was that the names of the applicant's family members should either be in the first NRC prepared in 1951 or in the electoral rolls up to 24 March 1971. Other than that, applicants also had the option to present documents such as refugee registration certificate, birth certificate, LIC policy, land and tenancy records, citizenship certificate, passport, government issued license or certificate, bank/post office accounts, permanent residential certificate, government employment certificate, educational certificate and court records (Business Standard, n.d.). The urban poor and migrant workers in Guwahati faced a number of hurdles in proving their citizenship through legal documents. Reasons such as change of residence, lack of awareness and dependence on others for filing of applications due to illiteracy resulted in individuals' names not being included in the draft list. First, this section of the population faces difficulty in finding rented houses with their minimum

earnings, forcing them to settle in the existing slums, hills, wetlands and other state bare lands. Second, because of their settling in these lands they are susceptible to forced evictions from the administration from time to time. Frequent evictions or threat of evictions results in compelling them to change their houses at regular intervals of time. Hence, it is common for people not to possess proper legal documents, or to have misplaced them during forced evictions or shifting or for other reasons such as destruction of personal belongings due to floods, erosion and regional conflicts.

Some of the major urban schemes mentioned have no mention in the Comprehensive Master Plan 2025. There is no effort to integrate the Master Plan with major urban schemes as they continue to exist in silos and do not integrate or communicate with the Master Plan and this can be identified as a major gap in the planning practice.

But if we look at the implementations of these centrally sponsored schemes, we will find that due to lack of proper planning and no mention of these particular schemes in the Comprehensive Master Plan, the benefits do not reach to the actual beneficiaries. Though the implementing agencies are different, there should be a connection in between the GR of the schemes and the city planning document. Therefore, this kind of conflict between the departments hinders the way in access to benefits by the people living in informal settlements.

3. RESEARCH OBJECTIVES AND METHODOLOGY

3.1 AIM

The study aims to present the relationship of formal planning processes with settlements categorised as slums

in Guwahati, to both evaluate the oversights and illustrate opportunities for new modes of articulation.

3.2 OBJECTIVES

1. To map and generate a database of settlements categorised as 'slums' in Guwahati, overlaying their status with applicable planning norms.
2. To understand the nature of planning for settlements vis-à-vis formal planning processes.
3. To highlight the implications and influences of urban development processes on informal settlements and make recommendations for inclusive habitats.

3.3 METHODOLOGY

Through secondary data the status of planning in Guwahati and mapping of all slums has been undertaken. For primary data, this study used a mixed methodology combining both qualitative and quantitative methods. Qualitative tools included quasi-participant observations

through transect walks in sampled settlements, and focus group discussions (FGDs) with residents. Quantitative tools included a semi-structured questionnaire for a sample survey. There were two distinct stages of this research.

3.4 STAGES OF DATA COLLECTION

Stage 1: Secondary Data Collection and Analysis

Secondary Data was collected to understand the planning process in Guwahati and create an exhaustive list of slums in the city. This data was collected from reports, surveys, publications, etc. by government authorities, private organisations and NGOs. The collated data was analysed in terms of age of the settlement, location, notification, tenurial rights and services. The following were the main outcomes:

1. Matrix: This was prepared from the collated data to do an in-depth study on the settlement listing, settlement timelines, ward numbers, identification in Master Plan, inclusion in Rajiv Awas Yojana surveys, etc.

2. Spatial Analysis (GIS): Based on the secondary

survey, matrix and Guwahati Municipal Corporation (GMC) identified slum pockets data, the settlements were geo-referenced on the land use Master Plan 2025. This spatial database was used to analyse the deviation in the land use Master Plan 2025 as the informal settlements were not recognised in the same.

3. Overlay Analysis (Google Maps): Based on the secondary database, matrix and GMC identified slum pockets data, settlements were geo-referenced on Google satellite imagery. This overlay along with the timeline was used to analyse the morphological evolution of the settlement from 2003–2019.

This overlay along with the timeline was used to analyse the morphological evolution of the settlement from 2003–2019.

ORGANISATION	YEAR	NO. OF SLUMS	TOTAL SLUM POPULATION	TOTAL HOUSEHOLDS
DEKA & MEDHI (INDIVIDUAL RESEARCHERS)	1986	17	NO DATA	NO DATA
TOWN & COUNTRY PLANNING ORGANISATION (GOVT.)	1997	20	65,450	10,213
OFFICE OF THE MUNICIPAL ADMINISTRATION DEPT.	1997	40	1,13,064	19,558
GMC	2001	26	1,60,000	NO DATA
GMC & GMDA	2009	90	1,67,796	27,966
DEKA (INDIVIDUAL RESEARCHERS)	2012	114	1,85,716	31,166
RUWA ET AL. NGOS	2012	217	1,39,296	26,090
PMAY, KAMRUP (M)	2017	163	NO DATA	NO DATA

TABLE 6 | A summary of slums identified in Guwahati by various government, non-government organisations and individual researchers (1986–2017)

Source: Report on Master Plan for Guwahati Metropolitan Area – 2025; GMDA

Stage 2: Primary Data Collection and Analysis

For the purpose of this study, seven informal settlements (non-notified) were identified and selected for a case-based study. A purposive sampling strategy was used to identify the sampled settlements based on geographical feasibility and YUVA's outreach and intervention. The seven settlements are located in diverse contexts, locations, land occupancy, scale, timeline and planning zones in the city.

1. Transect Walk: This included visits, transect walks across the sampled communities with local residents to explore the location, infrastructure and distribution of resources. The major observations were noted down in the form of field memos and were referred at the time of analysis. Additionally, during these walks a mobile application was used to map the geographical area of the settlements.

2. Focus Group Discussions (FGDs): In conjunction

with the overlay study, FGDs were conducted using a semi-structured questionnaire in each of the sampled seven settlements. The discussion was conducted with the community members to understand the history, growth, occupation, livelihood and amenities available in and around the settlement. Further, to ensure a holistic representation, participants from varying age groups and gender were included. The findings of the discussion gave insight into the evolution of the informal settlements in Guwahati and how they have grown in terms of household and populations.

3. Household Survey: A household survey of two–three houses from each of the seven settlements (14 in total) was conducted. The documentation was done to understand the average size of a household in an informal settlement, the materials used for construction, space requirements and basic facilities. For this purpose, a questionnaire was developed that focused on acquiring information with reference to history of the settlement, land relationship, period of settlement relocation from any

other areas within and outside the city, reason for settling on the present land, ownership of land (*patta*), land tenure, threats of eviction if any, services and amenities available in and around the settlements. During the survey, a basic layout plan of the household was prepared based on measurements and recordings. In each diagram the access street of the *basti* was shown along with the location of the surveyed house, its adjoining houses, yard, community gathering space, and common shared spaces in proximity. This broader layout helps in establishing the context of the house in relation to its surrounding density within the settlement.

4. Housing Typology Study: To understand the form of existing houses within settlements, architectural plans were prepared. Annexure 2 (2.1 to 2.6) shows the sketch of a household of 6 different informal settlements. A sketch of a household from Bhutnath Bagan is shown in Annexure 2.1. The plans highlight observations of the house, the pathway of the *basti*, entry to the house, sizes of rooms, adjoining houses, outdoor toilet/bath area and

common gathering space outside the house. Additionally, to give a comprehensive idea of the condition and materiality of informal housing in Guwahati, a three dimensional figure of a sample/typical house in *basti* was drawn (Refer Annexure 3). The drawing highlights the layout of the house, structural composition, materials used for construction, finishing, roofing and temporary coverings.

5. Limitations: The time constraints for the project and limited resources did not allow for a physical cadastral mapping of all the identified settlements, hence the exercise was conducted digitally. Due to the rasterisation¹ of existing and proposed land use, maps were manually georeferenced and digitised, therefore some deviations may exist in the overlay analysis between the maps and the actual conditions on ground. No new surveys to identify informal settlements were conducted. Due to limited resource persons the sample survey was conducted in only seven settlements.

¹ | Rasterization is the process of computing the mapping from scene geometry to pixels.

NO.	WARD NO.	NAME	GREATER AREA	LISTED IN 2006 (GMC)	LISTED IN 2009 (GMDA)	LISTED IN 2009 (NGO)	OWNERSHIP	LAND USE	TOTAL NOS. OF HOUSEHOLDS (APPROX.)	TOPOGRAPHY
1	5	BHUTNATH BASTI		NO	NO	YES	RAILWAY LAND	TRANSPORTATION (GENERAL)	80	PLAIN AREA
2	11	UZANBAZAR BASTI		YES	YES	YES	RAILWAY LAND	OTHER AREAS	100	PLAIN AREA
3	24	LALA BASTI		-	YES	YES	RAILWAY LAND AND OIL INDIA LIMITED	RESIDENTIAL	85	PLAIN AREA
4	24	BABU BASTI		-	-	YES	RAILWAY LAND AND OIL INDIA LIMITED	TRANSPORTATION (GENERAL)	65	PLAIN AREA
5	23	SHIV NAGAR BASTI		-	-	-	PARTLY RAILWAY	RESIDENTIAL	120	PLAIN AREA
6	24B	CARBON GATE BASTI		-	YES	YES	PRIVATE	INDUSTRIAL (HEAVY)	100	PLAIN AREA
7	31B	NABAJYOTI NAGAR		-	-	-	REVENUE VILLAGE LAND	HILL	350	HILL AREA

TABLE 7 | List of slums chosen for suvey and mapping*Source: Report on Master Plan for Guwahati Metropolitan Area – 2025; GMDA*

4. KEY FINDINGS AND ANALYSIS

4.1 LISTING OF SLUM SURVEYS AND MAPPING

Over the last 25 years, a number of informal settlements' identification surveys have taken place. Both government and non-government organisations and individual researchers have conducted these surveys. The purpose of each survey has been specific to the time it was done. Nonetheless, for the intent of this study we briefly look into the data collected in each of the surveys. The primary data that is beneficial for our study is the timeline of the surveys conducted, organisations involved, number of slum pockets recorded, total population and number of households. With this data we have created a collated data matrix based on timeline surveys which highlight the status of identification of slums in Guwahati city.

Recorded Slum Surveys and Identification

Below is the brief summary of 8 slum identification surveys conducted by various government and non-government organisations between 1986–2017:

- **The Director, Town and Country Planning, Assam**, conducted a survey for detection of slum pockets in 1997. They identified 20 slums pockets in Guwahati City with a total population of 65,450 in 10,213 households.
- **The Directorate, Municipal Administration, Assam**, conducted another survey in 1997 to identify the slum and urban poor population in the Greater Guwahati Region. They listed a total population of 1,13,064 in 19,558 households, distributed over 40 slum pockets.
- **The Guwahati Municipal Corporation** conducted a survey in 2001, identifying 26 slum pockets with a total population of 1.6 lakhs (which was about 18 per cent of the total population of Guwahati City in 2001). Refer Map 5.
- **For the purpose of implementing the Slum Clearance and Resettlement Act**, Guwahati Municipal Corporation conducted a second survey in 2008–09.

(During the same time they also adopted the new definition of slums under Circular No.GCS JS/38/07-08/144, dated 02.05.2008 as mentioned under Para 8.11 of the said notification.), 'a pocket with 25–30 households and lacking basic amenities was considered as slum'. The survey identified 93 slum pockets in 41 wards against the total of 60 municipal wards at the time. The total population recorded was 1.377 lakhs in 28,006 households; which highlights 5 persons per household and constituting 15.33 percent of the total population of Guwahati City at the time.

- **Guwahati Development Department, Assam** (vide their Notification No. GDD.55/2006/185 dated 27th February 2009) notified four categories of slum pockets in Guwahati City to implement reforms agenda at the state level and urban local body level under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) for the all round development of the urban poor in the Guwahati City. The categories are detailed in table 8.

Based on these categories, a field level investigation and survey was conducted in the entire Guwahati City from 2011 to the first part of 2013. This survey identified 90 slums, 27,966 households and 167,796 people living in slums. The data collated is represented in table 8.

- **Guwahati Municipal Corporation and Guwahati Metropolitan Development Authority** under the Guwahati Slum Policy – 2009, identified 90 slum pockets with a population of 167,769 (Guwahati Municipal Corporation, 2009). Refer Map 6
- In addition to GMC/GMDA 2009 survey, an individual researcher Mr. Jatindra Nath Deka in his 2014 publication, '**Informal Sector among slum inhabitants of Guwahati City**' highlighted an increase of 24 slum pockets from 2009–2012. The stated report concluded that total slums identified till

CATEGORY	PARTICULARS	NO. OF SLUM POCKETS	NO. OF APPROX. HOUSEHOLDS	APPROX. POPULATION
1	SLUMS AS PER CENSUS DEFINITION	52	17,056	102,336
2	NOT CONGESTED, SCATTERED HOUSING - MOSTLY ON HILLS SIDE (NEEDS TO ADDRESS INFRASTRUCTURE ISSUES)	24	5,380	32,280
3	RAILWAY QUARTERS (ARE SMALL - AS FAMILY-GROWS; NEED OF SPACE GROWS, MIGRATION, SPACE COVERED WITH TEMPORARY MATERIALS, LOOKS AS SLUMS)	6	2,850	17,100
4	CONGESTED (DEVELOPED SLUMS - BECAUSE MORE THAN 70% HOUSING ARE RENTED)	8	2,680	16,080
TOTAL		90	27,966	167,796

TABLE 8 | Slum pockets notified by the Government of Assam in Guwahati
Source: Report on Master Plan for Guwahati Metropolitan Area – 2025; GMDA

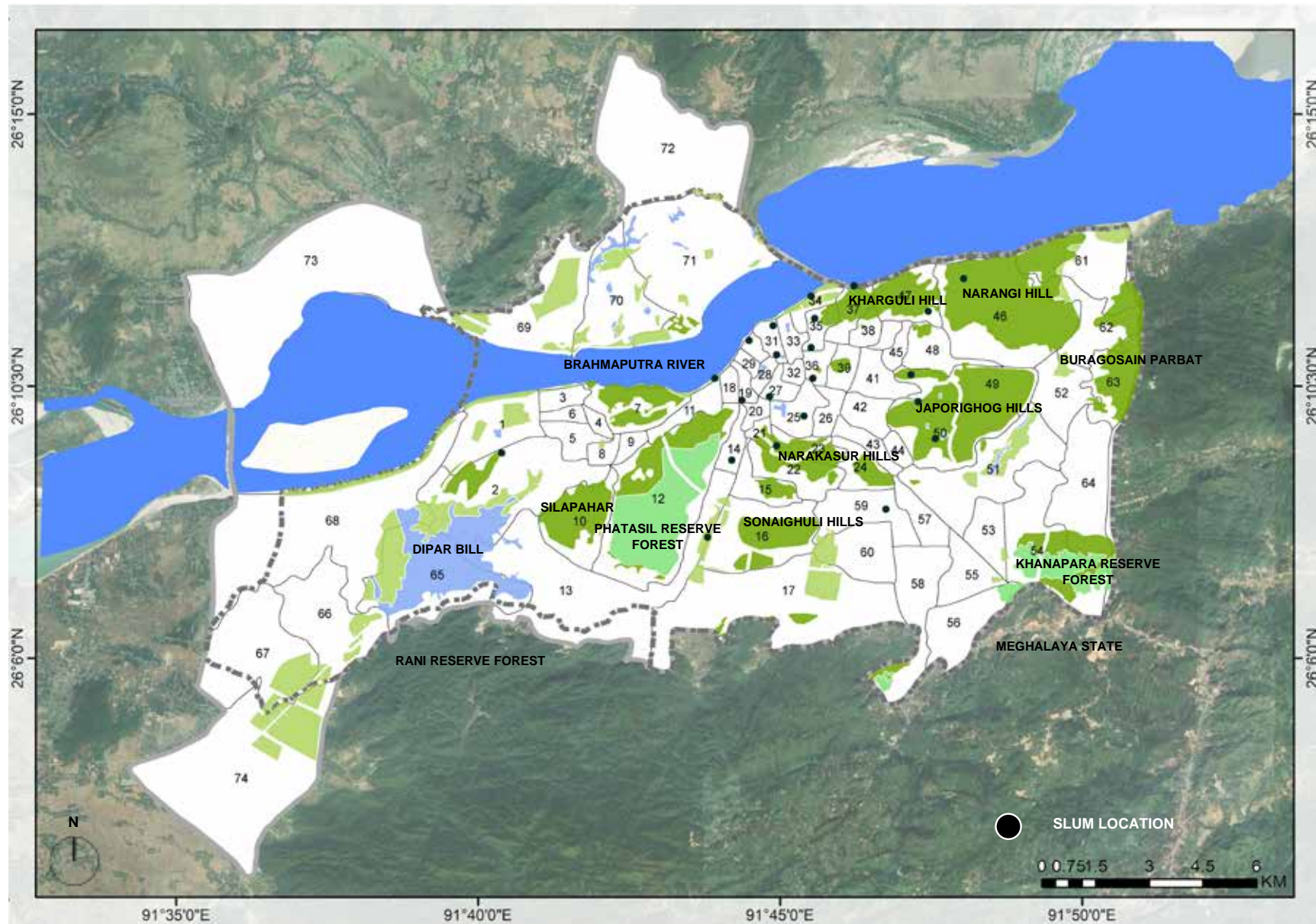
2012 was 114 in number with a population of 185,716 and 31,166 households.

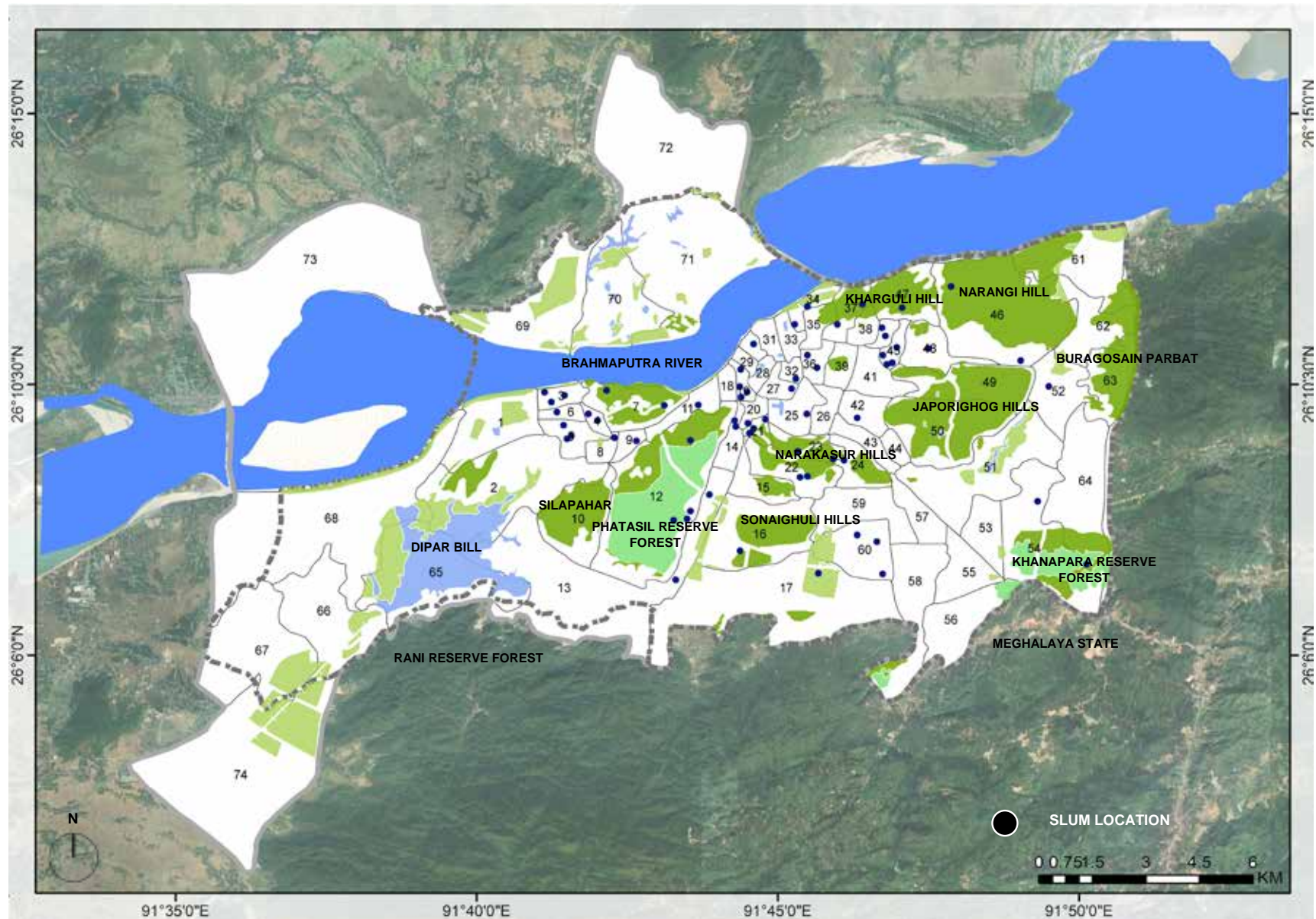
- In 2012 several NGOs like Scorpions, RUWA, ACRD, SAMS, Eight Brothers, SRDC, Usgravika conducted a survey in which they identified 217 slum pockets with a population recorded of 1.39 lakh (Scorpions, RUWA, et al. 2012). Refer Map 7.
- In 2017 under the Pradhan Mantri Awas Yojana, Kamrup Metro another survey was conducted which concluded 163 slum pockets existing in Guwahati.

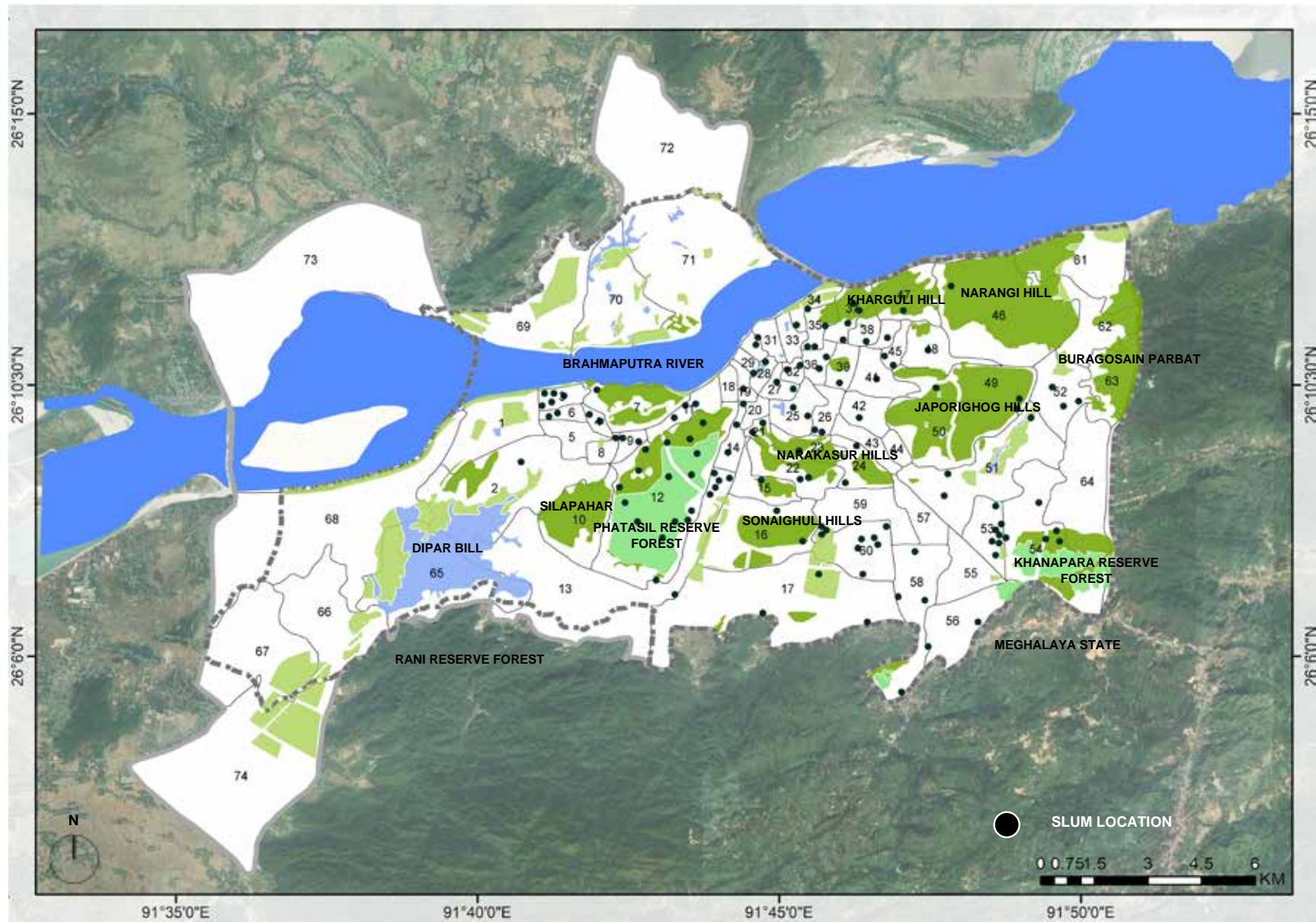
The drastic change in the number of slums is due to the change in the definition of slums. In 2009, a pocket with 25–30 households and lacking basic amenities was considered a slum, while for the survey of 2012 a pocket with 10–15 households and without basic amenities was considered a slum. However, according to the collated data, while the number of slums has increased, the slum population has decreased.

Mapping Undertaken

Based on the datasets referenced for the study, the datasets from 2006, 2009 and 2012 are consistent and conclusive. This is why for a comprehensive understanding of informal settlements in Guwahati City, the timelines 2006, 2009 and 2012 have been used as a base for deliberating the variations in the settlement numbers, households and population of slum dwellers within Guwahati City. A physical mapping exercise of slum settlements identified in the year 2006, 2009 and 2012 onto the GMDA Master Plan 2025 has also been undertaken which adopts the Census definition which identifies 26 slums as per the general definition. (Refer Map 4). The mapping has been done on land-use maps, ecological sensitive zones and reserved land maps. This exercise helps in broadening the perspective to understand the growth pattern, linkage, informal sector corridors and the interrelationship of land, revenue and politics within the city.







4.2 SLUM MATRIX

Existing data on slum settlements from studies was collated, spanning 1986–2012. For purposes of the study, a consolidated matrix was prepared consisting of information collected and recorded throughout the years of research (Refer to Annexure 4 for more).

The organisations and researchers have collected data on slum settlements for various individual and time-bound studies. The categories of recorded information largely include the names of the settlements, ward numbers, total recorded population during the time of survey and total recorded households. During the time of survey, residents in terms of dominance, nature of land on which the settlement is located, ownership of land on which the settlement is located, land-use and zone was also detailed. It is important to note that the categories might not be similar in each study and differ based on the intent of each conducted survey.

The exercise of collating the recorded data in one consolidated matrix has helped to understand certain aspects of slum settlement in Guwahati City which have been divided into the following two categories:

Category 1: Discrepancies in surveys and mapping exercises

The names recorded in surveys of slum settlements tend to vary. This difference in names is due to variation in spelt letters, pronunciation and in some cases the location of the slum. To state an example, Katahbari Garsuk Garopara / Katabari Boro Basti / Katabari Khasiya Ram Boro Path is the same slum that is stated by three different names in three different surveys. Many such similar examples can be found in the matrix.

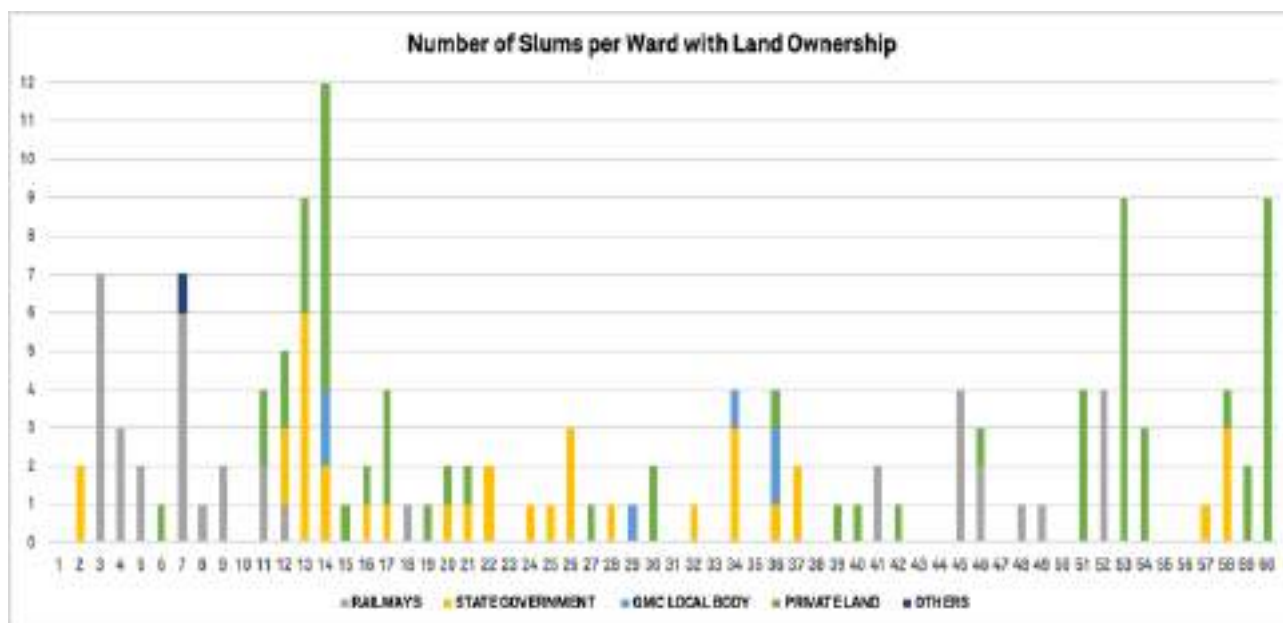
- In certain surveys, a larger area is recorded under a slum name whereas in another survey smaller pockets

of settlements are recorded. To state an example, Dhirenpara Basti is recorded under smaller pockets as Dhirenpara 1, 2, 3, etc. and also recorded based on location as Dhirenpara Milan Path Basti. • Based on analysis of the collated data, it was observed that some of the slum boundaries were not demarcated in any of the earlier conducted surveys. Cadastral mapping of slum boundaries and geo-referencing the actual locations of the settlements therefore emerged important.

- For some of the settlements the population and household data were recorded but ward numbers were missing, making it difficult to identify the exact location.
- The land-use or land-type on which the settlements are located is of prime importance in the case of Guwahati, because of the peculiarity of its topography and ecologically protected areas. From the earlier surveys some settlements' land-types categorised under plains, swampy land and hills can be identified.

Category 2: Evidence based analysis

After collating all the data sets as shown in Table 9 for the slum matrix it was observed that the PMAY survey conducted in 2017 not only records 163 slums in Guwahati but also their ward numbers and specific ownership of land. Graph 3 illustrates the maximum number of slums located ward-wise along with its ownership details. The data highlights that 24 per cent of the slums are located on railway land, 22 per cent on state government revenue land, 4 per cent on Guwahati Municipal Corporation (GMC) land, 1 per cent on others and 13 per cent on unknown ownership of land.



GRAPH 3 | Number of slums per ward with land ownership, PMAY study 2017

Source: PMAY, GMC 2017

Based on the matrix and overlay of slum settlements onto the ward boundary map of Guwahati City, it was observed that Ward 3, 7, 12, 13, 14, 53 and 60 have more than five slum settlements in each ward. The reason for concentration in slum numbers in these wards is primarily due to the location, as detailed below:

- **Location based on ward and zone:** As per the GMC ward boundary, Ward 3, 7, 12 and 14 are located in West Zone, Ward 13 is located in outer Lokhra Zone and Ward 53 and 60 is located in Dispur Zone. Wards 3, 7, 12, 13, 14, 53 and 60 lie in the development corridor of the city, resulting in an increased population density in these wards since 2001. Slums located in Wards 3, 7 and 14 are closer to the central zone of the city with a proximity to commercial areas. Wards 12 and 13 spread from the central zone to the outer zone of the city. Slums located here have access to both the commercial corridor, residential and industrial belt of the city. Wards 53 and 60 situated in Dispur Zone, are an entry point to the city from the south close to the Assam–Meghalaya border and

near the industrial corridor. Hence, slums in these wards have increased due to economic and livelihood opportunities.

- **Location based on ownership of land:** Within Ward 3, 7, 12, 13, 14, 53 and 60, most of the slum settlements are on railway land, spanning across edges of existing and earlier rail-line corridors and railway quarters' land. Other land ownership types in these wards include state-owned revenue land, Guwahati Municipal Corporation land and also on private *miyadi patta* land (refer to Table 9 below). These land types/areas provide the residents of slums with access to economic opportunities in the centre of the city, proximity to schools, amenities and convenience of transportation. Although the residents face multiple threats of eviction and seasonal flooding, the location of the slum provides them direct access to the resources and opportunities of a city, resulting in the concentration of slums in a few particular wards in the city.

WARD NO.	SLUM NOS.	LOCATION/ZONE	OWNERSHIP OF LAND	PROPOSED LAND USE 2025
3	7	WEST ZONE	RAILWAY LAND	RESIDENTIAL, PUBLIC AND SEMI PUBLIC
7	7	WEST ZONE	RAILWAY LAND	PUBLIC AND SEMI PUBLIC
12	5	WEST ZONE	RAILWAY LAND, STATE GOVERNMENT REVENUE LAND	HILL, RESERVE FOREST, RESIDENTIAL, COMPOSITE USE II
13	9	LOKHRA ZONE	STATE GOVERNMENT REVENUE LAND, PRIVATE LAND	OTHER AREAS, PUBLIC AND SEMI PUBLIC
14	12	WEST ZONE	STATE GOVERNMENT REVENUE LAND, PRIVATE LAND AND GMC LAND	RESIDENTIAL, INDUSTRIAL - GENERAL, PUBLIC AND SEMI PUBLIC
53	9	DISPUR ZONE	PRIVATE LAND	RESIDENTIAL, PUBLIC AND SEMI PUBLIC
60	9	DISPUR ZONE	PRIVATE LAND	RESIDENTIAL, GREEN BELT (RECREATIONAL AND OPEN SPACES)

TABLE 9 | Concentration of slums in Guwahati, 2017

Source: PMAY, GMC 2017

4.3 SETTLEMENT ANALYSIS

For the purpose of this study, seven settlements were selected to understand the nature of planning in settlements vis-à-vis formal planning practices. The sampling process for selecting seven settlements (Table 10) was purposive, primarily informed by the analysis from the slum matrix and also based on the following criteria:

1. Settlements where YUVA has been engaged
2. Zone-wise distribution - outer, intermediate and inner zones of the city
3. Ward-wise distribution - administrative and local bodies Guwahati Municipal Corporation (GMC), Guwahati Development Department (GDD), Guwahati Metropolitan Development Authority (GMDA) and other area sabhas
4. Recorded/identified settlements in the surveys conducted in 2006, 2009 and 2012
5. Listed settlements in Rajiv Awas Yojana and Pradhan Mantri Awas Yojana Demand Survey
6. Listed for rental housing scheme (based on CUE Report)
7. Based on the nature of topography - plains, riverbanks, hills, swampy land, etc.
8. Ownership of land - public, private
9. Land-use (Based on the Master Plan)
10. Located in an ecologically protected zone

NO.	WARD NO.	NAME	LISTED IN 2006 (GMC)	LISTED IN 2009 (GMDA)	LISTED IN 2009 (NGO)	OWNERSHIP	LAND-USE
1.	5	Bhutnath Basti	No	No	Yes	Railway land	Transportation (general)
2.	11	Uzanbazar Basti	Yes	Yes	Yes	Railway land	Other areas
3.	24	Lala Basti	-	Yes	Yes	Railway land and Oil India Limited	Residential
4.	24	Babu Basti	-	-	Yes	Railway Land and Oil India Limited	Transportation (general)
5.	23	Shiv Nagar Basti	-	-	-	Partly railway	Residential
6.	24B	Carbon Gate Basti	-	Yes	Yes	Private	Industrial (heavy)
7.	31 B	Nabajyoti Nagar Basti	-	-	-	Revenue village land	Hill

TABLE 10 | Informal settlements selected for primary survey

Settlements on Railway Land and Hills

- Settlements on Railway Land: Based on GMC's 2012 slum survey, 8.3 per cent of slums/informal settlements are located on railway land. In Guwahati, slums on railway land comprise of three types:
 1. Slums on vacant land adjacent to the railway tracks are located on narrow strips of vacant land adjacent to the railway tracks with no access to basic services for the hutments. Evictions take place every year along these railway tracks and the shelters are almost entirely wiped out. E.g. - Lakhtokia gate number 1 to gate number 5, Bhutnath, Santipur
 2. Slums on railway land are located on vacant lands in the railway colonies. These areas are also subjected to periodic eviction. E.g. - Bamunimaidan and Gotanagar
 3. Slums on large parcels of railway land that are not located near any railway track. Evictions have not taken place in these slums for many years, although there is fear amongst residents that evictions might take place some day because of the land ownership. E.g. - Shakuntala Colony, Kailashnagar in the Pandu area In the Assam Land Policy Act 1989, and Land Policy

Amendment Act 2019, there is a provision for those who have done *dakhal* (illegal occupancy) on state government land to apply for *miyadi patta* (land ownership) after 15 years of occupying the land. However, no such policy provision exists for railway lands. As a result, one of the important issues in the context of informal settlements and slums in Guwahati is that of insecurity of many of the railway settlements.

Settlements on Hills:

As Guwahati is a city surrounded by hills, the context of informal settlements on hills and forest lands is inevitable. The threat of eviction is particularly high for those living on reserve forest lands, whose inhabitants include many tribal communities and poor and marginalised migrants.

Among the 90 slums identified under the Guwahati City Slum Policy (Gauhati Municipal Corporation, 2009), over 20 slums (with 5,380 households) are identified as 'scattered hillside housing'. In 2012, out of 217 slums around 47 slums (21.7 per cent) were identified in the hilly region. Since 2009–2012 there has been a definite increase of hill settlements along the fringe of the city and some settlements like Amsang Basti have faced eviction in the recent past. The state has attempted to label the hill settlements as 'hill encroachments' and have plans to evict stating ecological reasons. One such

recent forced eviction by the state was in Yusuf Nagar, Nabajyoti Nagar and Kangkan Nagar, Amsang, where most of the households were destroyed and inhabitants were left stranded, without any clarity on whose land the residents have been settled for years.

In some locations the hills are not occupied by the urban poor and lower-income groups, but have still been recorded and identified as slums. This discrepancy is an added concern.

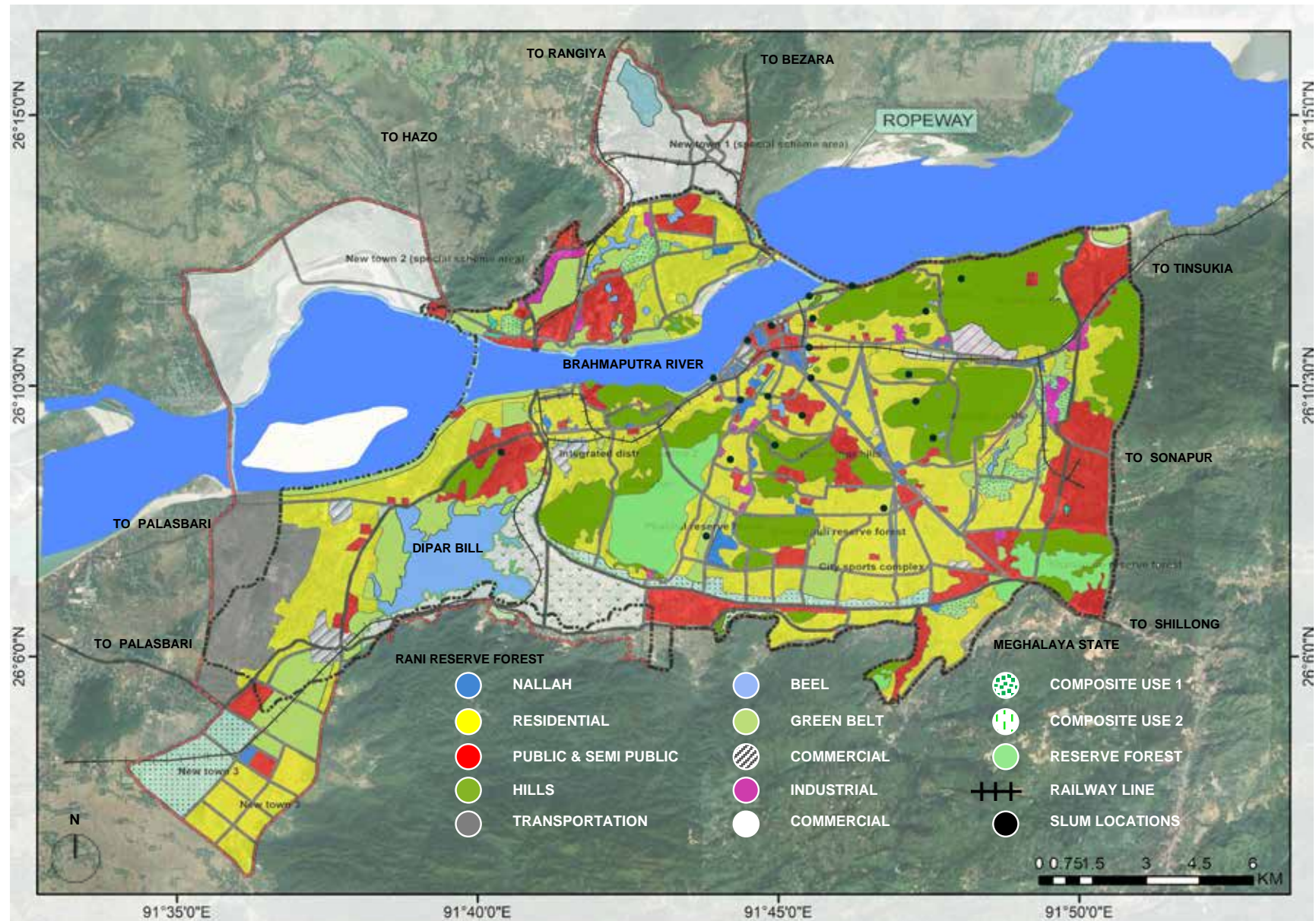
Similar discrepancies emerge and will continue to face irreversible outcomes due to non-inclusion of slum pockets in the Master Plan and land use plan of the city. The accuracy of governance, slum policy execution and slum upgradation plans stand questionable unless the GMC and GMDA conduct a detailed study on the informal settlements in Guwahati and map the same onto the development plans of the city

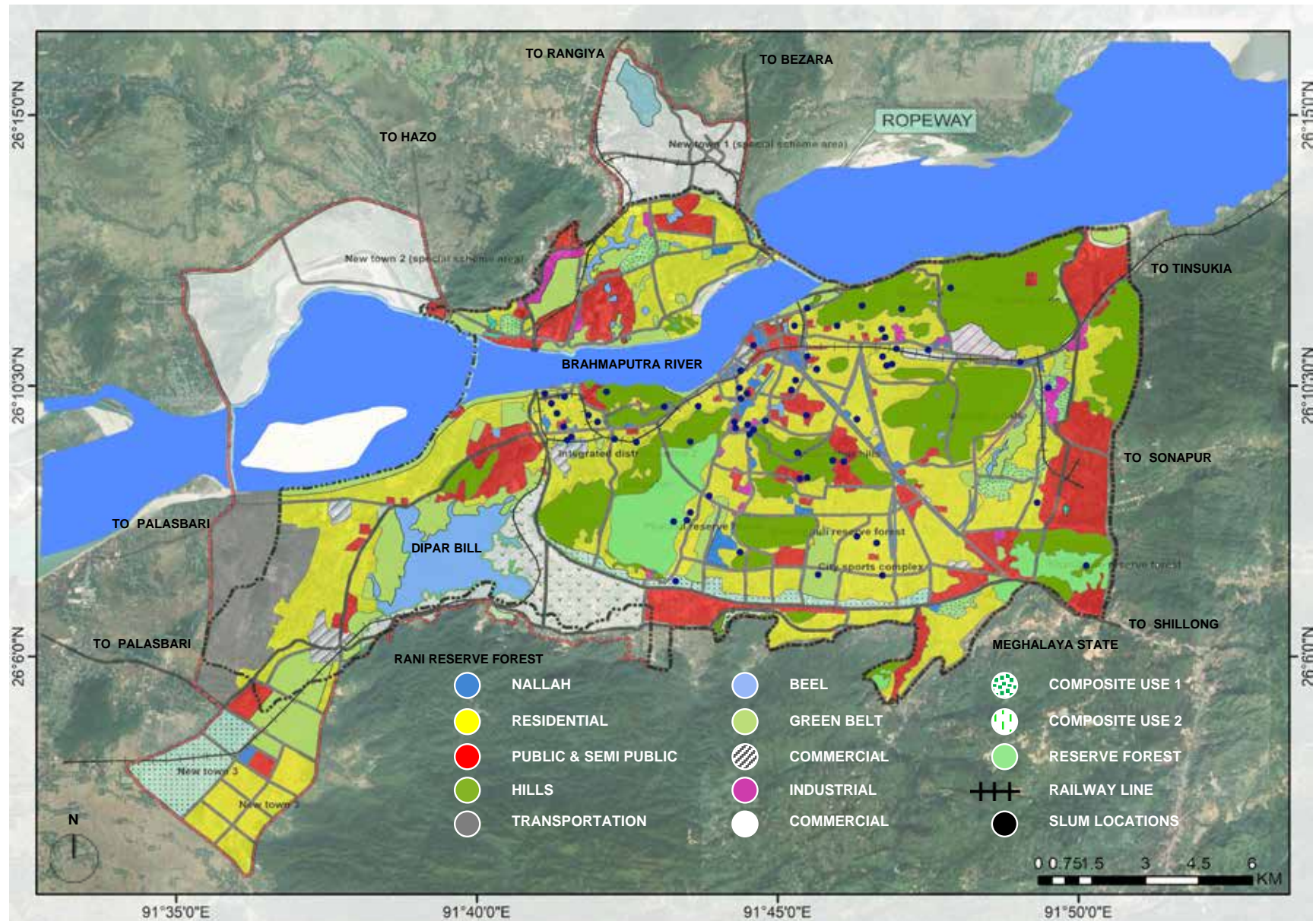
4.4 UNDERSTANDING LAND USE VIOLATIONS

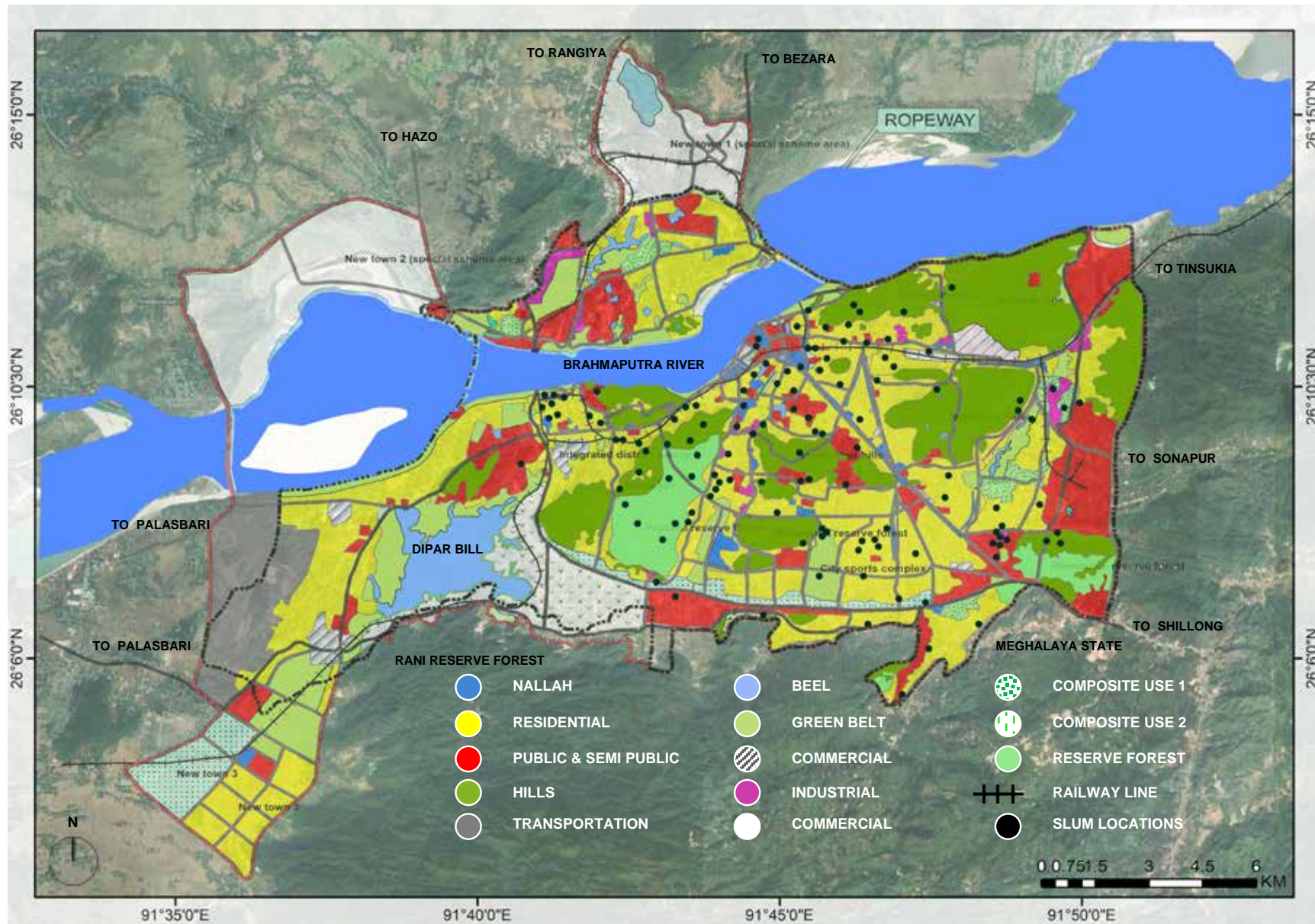
The Guwahati Metropolitan Development Authority (GMDA) Master Plan 2025 for Guwahati envisions the creation of affordable housing for all and developing a city without slums. To achieve this vision, one of the main criteria is identifying and mapping the slums to the Master Plan. The GMDA Master Plan report includes a map showing the locations of slums to be upgraded/rehabilitated (Map 4). For the purposes of this study, we analysed the Master Plan 2025 report to get a better understanding of the slum scenario stated by the authorities. In the report GMDA highlights, 'According to the information provided by the Town and Country Planning Department, Assam, there are 26 slum pockets in the Guwahati Municipal Corporation (GMC) area housing around 0.16 million persons (about 20 per cent of the total population).

The Master Plan 2025 identifies 26 larger areas/pockets where the slums are located and not the individual locations of slums in the city.

Land use zoning is a key factor in a Master Plan that guides urban growth and development. For example, land marked as residential is a broad category under which permitted activities like housing development, combination of housing and commercial development, etc can be proposed. However, when the dataset was geo-referenced and overlaid onto the proposed Master Plan, it was observed that there were several smaller and denser pockets of informal settlements which were spread across the city of Guwahati. The pockets fall under different land use categories as per the proposed Master Plan 2025 (Refer Map 8)







LOCATION OF SLUMS	TOTAL	PERCENTAGE
LOCAL GOVERNING BODY	2	0.9%
PRIVATE PROPERTY	35	16.1%
PLAINS	81	37.3%
HILLS	47	21.7%
RAILWAY LAND	18	8.3%
RESERVE FOREST	29	13.4%
STATE GOVERNMENT LAND	19	8.8%

TABLE 11 | Location of slums on land use category*Source: YUVA-OEP secondary data analysis 2019*

Map 10 shows the Master Plan land use 2025 with an overlay of 216 slums. This overlay analysis highlights slum locations in relevance to land use reservations - 0.9 per cent of slums are located directly on local governing body land, 13 per cent on reserve forest land, 8 per cent on state government land. Table 11 highlights the different percentages of slum locations on land-use master plan. The overlay analysis of the 216 slums shows that almost 37.3 per cent and 21.7 per cent of slums fall on plains and hills. 16.1 per cent of slums falls on private property². Map 8, 9 and 10 overlay slums (as per 3 data sources) on to the land use map 2025. Maps in Annexure 1.1 - 1.5 overlays slum locations (based on the 2012 NGO survey) over various aspects of the city's land use highlighting the existence of slums across the city, on various reservations and land ownership:

- Guwahati city map showing the hills, green belt and reserve forest land with an overlay of location of slums on plain and hill land type (Annexure 1.1)
- Guwahati Master Plan land use map 2025 overlayed with slums on urban local bodies land (Annexure 1.2) on private property land (Annexure 1.3) on hills, greenbelt and reserve forest land (Annexure 1.4) on state government land (Annexure 1.5)

To better understand the development and growth pattern of seven selected settlements, a method of overlay analysis was devised. To begin with, an approximate physical boundary of the seven settlements was marked onto the Google Image. The boundary is based on the existing extent of the settlements as stated by the residents of the slum. In addition to the overlay study, focus group discussions were conducted in each of the selected seven settlements. The discussion was conducted with the community members to understand the history, growth, occupation, livelihood and amenities available in and around the settlement.

The findings of the discussion gave insight into the evolution of the informal settlements in Guwahati and how they have grown in terms of household and populations (Refer Table 12). The discussion also highlighted that these settlements lack basic amenities like access to safe drinking water and sanitation as a consequence of being excluded from all planning exercises in the city. None of the houses have land tenure or patta, whereas they do possess individual holding numbers, khazana³ and have also paid taxes until 2015 in most cases. In terms of livelihoods, the majority of the male population is engaged as daily wage labourers and the female population as domestic workers or small

² | Nallah, Residential, Public & Semi Public, Hills, Transportation, Beel (water bodies), Green Belt, Commercial, Industrial, Composite Use 1, Composite Use 2, Reserve Forest, Railway Line are the categories used in the proposed Master Plan 2025 for Guwahati City. Local Body, Private Property, Plains, Hills, Railway Land, Reserve Forest, State Government Land are broad land classifications based on ownership and functionality that were used for this study as a land use category to quantify the number of slum pockets.

business owners in the vicinity of their homes. The residents of the surveyed informal settlements reported having heard of the Guwahati Master Plan earlier but were not aware of its details. It is important to note here that the boundary of the settlement is not cadastral mapping.

The boundaries assigned in this study are an assumption to capture the growth of the settlement, rather than showing the extent, value and ownership of land. Further three timelines of years (2003, 2010 and 2019) were selected⁴ onto which the settlement boundaries were overlapped. This exercise assisted in determining the pattern of development, direction in which the settlement

has expanded, changes in the typology and overall growth within and surrounding the slum.

On analysing the proposed land-use plan of Master Plan 2025 for Guwahati, a number of deviations were observed. The land-use plan does not consider the locations of the existing slums, their needs or their history. Infact, on overlaying the boundaries of seven selected settlements onto the land-use plan it can be observed that the areas where the slums exist have in five cases been demarcated under various land-uses such as transportation, public area, industrial and other areas. Only two cases record land-use as residential (Table 12).

NO.	WARD NO.	SETTLEMENT NAME	LAND-USE	YEAR OF ESTABLISHMENT	INITIAL NO. OF HOUSEHOLDS	PRESENT HOUSEHOLDS	PRESENT POPULATION	EVICTION
1	5	BHUTNATH BASTI	TRANSPORTATION (GENERAL)	1950s	4-5	105	430	1
2	11	UZANBAZAR BASTI	OTHER AREAS	1960s	3-4	160	800	0
3	24	LALA BASTI	RESIDENTIAL	1960s	3-4	105	430	1
4	24	BABU BASTI	TRANSPORTATION (GENERAL)	1990s	6-7	38	200	2
5	23	SHIV NAGAR BASTI	RESIDENTIAL	1950s	30	100	500	1
6	24B	CARBON GATE BASTI	INDUSTRIAL (HEAVY)	1990s	30-35	250	1,000	0
7	31B	NABAJYOTI NAGAR BASTI	HILL	2001	3-4	350	1,200	1

TABLE 12 | Informal settlements selected for the primary survey, land use category and other details

Source: YUVA-OEP secondary data analysis 2019

In addition to the FGD, an in-depth household survey of 2-3 houses from each of the seven settlements was conducted. Based on our observations, the settlements can be categorised as consisting of three types of

housing (see Tables 13 and 14). Majority shows the exponential growth the slums have witnessed within 10 years.

³ | Khazana is a local term used for property tax in Assam

⁴ | Timeline was decided based on the satellite imagery dataset available.

TYPE 1 PERMANENT TYPE	TYPE 2 SEMI-PERMANENT TYPE	TYPE 3 PURELY TEMPORARY TYPE
LARGE FLOOR AREA	MEDIUM FLOOR AREA	SMALL FLOOR AREA
BRICK AND PLASTERED CONSTRUCTION WITH CORRUGATED (METAL/ASBESTOS) ROOFING, WOODEN DOORS AND WINDOWS AND CEMENT FLOORING	DWELLING CONSISTS OF SEMI-PERMANENT CONSTRUCTIONS LIKE HALF-BRICK WALL WITH NO PLASTERING, CORRUGATED (METAL) ROOFING, BAMBOO CONSTRUCTION FOR DOORS AND WINDOWS AND PARTLY CEMENT AND MUD FLOORING.	THE MATERIAL USED FOR HOUSE CONSTRUCTION IS POLYTHENE, TARPULIN, HARD BOARDS, OR TIN/ZINC SHEETS OR EVEN GUNNY BAGS
DRINKING FACILITIES - INDIVIDUAL WELL OR TUBE WELL	SHARED DRINKING FACILITIES	INADEQUATE DRINKING WATER
PERSONAL SANITARY FACILITIES	SHARED SANITARY FACILITIES	NO SANITARY PROVISION
POWER SUPPLY AVAILABLE	POWER SUPPLY AVAILABLE	NO POWER SUPPLY

TABLE 13 | Types of housing

NO.	WARD NO.	SETTLEMENT NAME	YEAR OF ESTABLISHMENT	PRESENT HOUSEHOLDS	TYPE 1	TYPE 2	TYPE 3
1	5	BHUTNATH BASTI	1950s	105	10%	30%	60%
2	11	UZANBAZAR BASTI	1960s	160	50%	30%	20%
3	24	LALA BASTI	1960s	105	20%	60%	20%
4	24	BABU BASTI	1990s	38	0%	60%	40%
5	23	SHIV NAGAR BASTI	1950s	100	30%	50%	20%
6	24B	CARBON GATE BASTI	1990s	250	30%	50%	20%
7	31	NABAJYOTI NAGAR BASTI	2001	350	5%	25%	70%

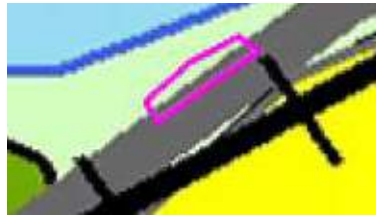
TABLE 14 | Housing types in each settlement

The following section details the overlay analysis of the seven informal settlements with the findings from the primary data.

1 - BHUTNATH BAGAN



2003 IMAGE



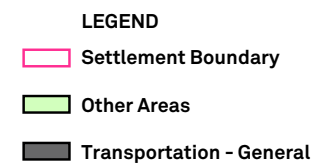
OVERLAY ON LANDUSE



2010 IMAGE



2019 IMAGE



MAP 11 | Overlay analysis of Bhutnath Bagan

Source: YUVA-OEP Primary Survey analysis 2019

From Map 11 we can observe how Bhutnath Bagan grew from 2003–2019, from a small to a dense settlement of almost 100 households. When the settlement boundary is overlaid onto the proposed land use map of Guwahati 2025, it falls under the categorization of Transportation (general).

Bhutnath Bagan is a settlement in Ward no. 5 of the city, established on land belonging to the railways. An elderly woman from the settlement elaborated that people had started to settle there around 60–70 years ago. Initially, there were four or five homes. She moved there when she was around 3-years-old, and now she is 65-years-old. Another woman from the settlement, who used to stay in Athgaon, bought the land there for a sum of INR 200. The land was known as Bagan even back then and was rich in fruit trees such as mango trees, jackfruit, jamun,

etc. She had three children, all daughters, who inherited parts of it. As her daughters gradually started to sell pieces of the land, the trees were cut down to make space for the increasing number of homes.

The residents of Bagan settled there for various reasons. One participant said that she had to pay Property Tax at her earlier place of residence, so she moved to Bagan around 50 years ago. Two participants said that they moved to Bagan after they got married since their husbands lived there. One of them moved there from Silchar and another from Barpeta. Two others moved there from Athgaon and Kumarpara respectively. One participant moved from Bihar to Bhangagarh in Guwahati, and from there she moved to Bagan. From the initial 4–5 houses, the settlement has grown drastically and is now home to about 100 households.

The settlement was also prone to severe flooding back in 1988. Residents coped by living in tents on raised railway tracks, relatively nearer to their place and by taking shelter at educational institutes such as Kaliram School, Sonaram School, and Cotton College (now Cotton University) near the settlement.

In 2015, an eviction process was started in which seven homes were destroyed. No prior notice was given to the residents. According to one participant, an IPS officer was overseeing the eviction and when she presented a Stay Order to the officer, the eviction process was halted. None of the participants were aware of the Guwahati Master Plan before the focus group discussion (FGD) was conducted. No official surveys have taken place in the area either. But according to one participant, a team comprising of a few unidentified individuals had approached some residents around six times for a survey, saying that the construction of a 4 lane-track is being

planned adjacent to the settlement. Most of the residents are dependent on the informal sector for livelihood in the city. The men mostly work as construction workers and street vendors while women are engaged as domestic workers in the neighbourhood.

There is an anganwadi at the Santipur L.P. School (1 km away). A Health Centre is located at Santipur (1 km away) and another at Panbazar (2 kms away). No functional drainage system was observed in the settlement, leading to water gathering and flooding during the monsoons. There is no water supply provided by the municipality and most residents are forced to buy water though some have private handpumps. The houses are semipucca, but with the lack of proper defecation facilities. The residents have arranged for pit latrines by themselves and the current facilities are leading to an unhygienic and unhealthy environment.

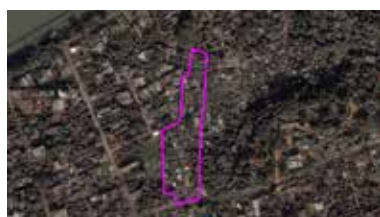
2 - UZANBAZAR BASTI



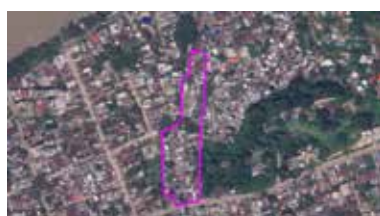
2003 IMAGE



OVERLAY ON LANDUSE



2010 IMAGE



2019 IMAGE

LEGEND

- Settlement Boundary
- Other Areas
- Transportation - General

MAP 12 | Overlay analysis of Uzan Bazar
Source: YUVA-OEP Primary Survey analysis 2019

Uzan Bazar Basti was established around 1962 by 3–4 households and included a few cowsheds along a railway line. It grew from a small settlement to a very dense settlement of almost 160 households in a linear pattern. This is a shallow lying land and a railway line was active during early years of settlement, used for passenger trains as well as goods trains. The railway line was removed around 1984. There was no electricity and water during that time. The place was not so habitable due to the presence of carcasses of foxes and cows which were dumped here, and vultures were a common sight.

The original settlers had to clean up the area by cutting the existing forest, filling the shallow land with new soil and and by building houses. They spent around INR 1,500

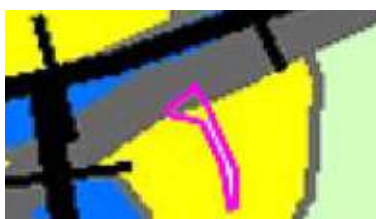
to build a house at that time. Most of the settlers work as daily wage labourers and live in a 10 by 10 square ft house with 4–5 members maximum.

The settlement does not possess any land *patta* or land lease. The residents don't pay any property tax but most of them do pay *khazana* (treasury tax) to the Guwahati Municipal Corporation. They have not faced any forced evictions yet but have received eviction notices several times from the railway department. They have not heard about the Master Plan before nor was any survey done earlier. When the settlement boundary is overlaid onto the proposed land use map of Guwahati, 2025 (Refer Map 12) it indicates that it falls under Other Areas which is a part of eco-sensitive/eco-friendly zone (CMP 2025).

3 - LALA BASTI



2013 IMAGE



OVERLAY ON LANDUSE



2015 IMAGE



2019 IMAGE

LEGEND

- Settlement Boundary
- Residential
- Transportation - General

MAP 13 | Overlay analysis of Lala Basti
Source: YUVA-OEP Primary Survey analysis 2019

Lala Basti is situated along a railway line. It shares the land between the Railway and Oil India Limited. The settlement was established in the 1960s with 3–4 households and now it is home to about 105 households. The slum is named Lala Basti because of a person named Lala who stayed on the land. He did not own the land but merely stayed there for a number of years. The term Lala in Bihar is associated with upper caste communities who lend money to people. As most of the residents in the Basti have migrated from their hometowns in Bihar, the name of the Basti is of similar relevance. Some older residents recall, in March 1988 there was a fire in the Basti in which 30–35 houses were burnt down and no cases of evictions have been faced by them till date. But

the threat to evictions is present among them as none of the households hold any form of *patta* document for the land, whereas a few families do pay holding tax⁵ regularly.

Majority residents are from Bihar, they are predominantly Hindus and belong to the OBC caste. The occupation of most of the residents is daily wage labourers, domestic workers, carpenters, tailors and drivers. The residents also shared that they haven't heard of the Master Plan or any maps before. In the proposed land use map of Guwahati 2025, Lala Basti falls under residential area. Refer Map 13.

4 - BABU BASTI



EARLIER IMAGE NOT AVAILABLE



OVERLAY ON LANDUSE



2013 IMAGE



2019 IMAGE

LEGEND

- Settlement Boundary
- Residential
- Transportation – General
- Other Areas

MAP 14 | Overlay analysis of Babu Basti
Source: YUVA-OEP Primary Survey analysis 2019

⁵ | A property tax or holding tax is levied on the value of a property, usually levied on real estate. The tax is levied by the governing authority of the jurisdiction in which the property is located. This can be a national government, a federated state, a county or geographical region or a municipality.

Babu Basti is an informal settlement located near Lala Basti. It is located on both sides of the railway track. It has grown from 19 households in 2018 to about 36–38 households in 2019. The growth pattern is linear along the railway line. The residents recall that the railline has been on the site since 1940, during which time it was constructed out of wooden sleepers, which was later replaced by iron sleepers in 1985. The rail-line functions only to carry cargo, goods and occasionally army personnel to the army camp located nearby.

Initially there was jungle/dense vegetation on both sides of the rail-line, which was gradually cleared and made habitable. Around the 1990s there were only 6–7 households in the area. Some of the early settlers' family members worked in the army camp. Some occupants in the Basti have migrated from Bihar and Barpeta, Dhubri

district in Assam. The migration is mainly due to soil erosion and the flooding scenario in their villages. Others have relocated from the Narengi area within Guwahati, majorly for livelihood opportunities. The residents faced eviction in 2013 and in 2017 by the authorities of oil. They were also served prior notice for relocating their houses that were built in oil land. Though settled for more than five decades, this settlement has not received electricity till date, which causes severe danger to the children and elderly during the night and also severe crisis during floods. The residents have never heard about the Master Plan of Guwahati and no GMC survey has been conducted in the area till date. In the proposed land use map of Guwahati 2025, Babu Basti falls under residential area as well as other areas (Refer Map 14), which is a part of eco-sensitive/eco-friendly zone (CMP 2025).

5 - SHIV-NAGAR BASTI



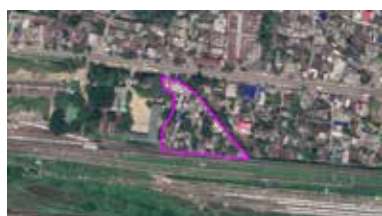
2003 IMAGE



OVERLAY ON LANDUSE



2010 IMAGE



2019 IMAGE

LEGEND

- Settlement Boundary
- Residential
- Transportation – General
- Commercial- wholesale & ware housing

MAP 15 | Overlay analysis of Shiv Nagar Basti

Source: YUVA-OEP Primary Survey analysis 2019

Shiv Nagar Basti is an informal settlement established in 1959 on an existing *beel* (waterbody) beside a railway line. From a Basti of 30 households during 1993 it has grown substantially to house about 100 households in 2019. In the proposed land use map of Guwahati 2025, Shiv Nagar Basti falls under residential area as well as commercial - wholesale and warehousing. It is not included in the Master Plan. (Refer Map 15)

The current rail-line near the Basti was not present when the earlier settlers had built houses in the area. The railway line was extended only as recently as 2007, after which around 10 houses located near the new rail line were evicted and demolished. Ayesha Begum has faced eviction a number of times as her house was only 12

feet from the railline. The eviction in 2007 was done by the railways, after which a committee was formed in the Basti, named Shiv-Nagar Milan Basti Committee.

Recently a *naala* (drain) was constructed, which passes right through the Basti. It has been covered with concrete slabs, which now acts as the major street for the Basti. During the construction of the *naala* a survey was conducted in the area and some of the residents have relocated their houses to accommodate the *naala*. Although, after the construction of the *naala*, during heavy rains water flows into certain areas and causes temporary flooding. None of the residents have *pattas*, although the residents pay municipal taxes.

6 - CARBON-GATE BASTI



EARLIER IMAGE NOT AVAILABLE



OVERLAY ON LANDUSE



2013 IMAGE



2019 IMAGE

LEGEND

- Settlement Boundary
- Industrial - Heavy

MAP 16 | Overlay analysis of Carbon-Gate Basti

Source: YUVA-OEP Primary Survey analysis 2019

Carbon-Gate Basti is an informal settlement established in 1979 on an inhabitable marshy land beside a railway line. It is located on railway land. On either side of the settlement is a major road and the other side is a *naala*/ drain, which was constructed in 2017. Along the *naala* runs the rail-line. Forced evictions have made the people resettle on private land and since then the size of the settlement has grown to about 200–250 households, from a settlement of 30–35 households. The growth pattern is linear along the railway line.

In the proposed land use map of Guwahati 2025, Carbon Gate Basti falls under industrial area - heavy. The name

Carbon Gate has been probably associated with Indian Carbon Company Pvt.Ltd. located near the settlement. In early years, the workers of the company were provided temporary housing in the area. (Refer Map 16)

Some of the residents of the settlement have migrated from Barpeta District in Assam, others came from Bihar in search of job opportunities. Most male residents are daily wage labourers and taxi-drivers. Some females run roadside shops. None of the houses have *patta* of any kind, whereas they do have individual holding no., *khazana* receipts and have also paid taxes until 2015. The residents have not heard of the Master Plan before.

7 - NABAJYOTI NAGAR BASTI



2003 IMAGE



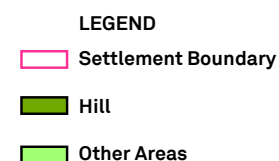
OVERLAY ON LANDUSE



2010 IMAGE



2019 IMAGE



MAP 17 | Overlay analysis of Nabajyoti Nagar

Source: YUVA-OEP Primary Survey analysis 2019

Nabajyoti Nagar, Amsang, is situated on a hilltop and hillside area. The land belongs to the state, designated as a revenue village. The settlement was established with 3–5 households in 2001 but has now swelled to over 350 households. Proximity to the city has increased the migration of people to Amsang from different villages. Due to the natural topography of the area the growth pattern is scattered, following the contours of the hill. In the proposed land use map of Guwahati 2025, Nabajyoti Nagar Basti falls under hill and other areas. (Refer Map 17)

A steep mud path leads to the settlement. Along the path runs a small stream carrying rain water from the hill slope to the foothills. On either side of the path, houses are built in an ascending step-like arrangement. Most of the houses have a smaller court attached to either the front or the back of the house.

The residents of the settlement have faced eviction in 2017. The reason for the eviction was the non-recognition of the settlement on the Master Plan of Guwahati. During the time of eviction in 2017, the location of the settlement in the Master Plan was highlighted under hills and forest land-use, which caused misinterpretation by an organisation, claiming that the residents were occupying forest land. Majority of homes, wells, drinking water facilities and electricity connections were destroyed during the eviction, which caused serious loss for the residents and children alike. After the eviction, the court notified that the settlement was not under forest land, but under state government – revenue village land. The residents have heard about the Master Plan earlier, but were not given proper explanation regarding the same then.

5. CONCLUSION AND RECOMMENDATIONS

While the most recent Pradhan Mantri Awas Yojana (PMAY) survey counts 163 slum settlements, these settlements neither possess any notifications from the government nor any lease or pattas, leaving them susceptible to the threat of forced evictions every year. Guwahati is undergoing rapid development and witnessing a large amount of investment in infrastructural development and commercial growth. It has also been selected in the first phase of Smart City Mission. Various other flagship programmes such as Capital Expansion, Advantage Assam, etc. are being implemented in and around the periphery of the city. As a result, slums within the city face the possibility of forced evictions to implement these ambitious and large-scale projects.

Based on the primary and secondary survey:

1. No clear identification of the total number of informal settlements in the city: A series of slum identification processes were carried out by different agencies including government and non-governmental organisations. However, the total number of slums identified under the Comprehensive Master Plan 2025 are only 26 (in the Guwahati Municipal Corporation [GMC] area) and land allocation is made only for these few informal settlements. The plan suggests either relocation of these slums or their insitu upgradation. There are definitely more than just 26 slum settlements in the city, which becomes evident if we look at the variations in the number of slums identified by different agencies from 1986 to 2017. Our study indicates that the number of slums is much more than what is mentioned in the Master Plan. Many slum settlements, especially the ones located on railway, revenue, private or forest land are not notified by the government and they are prone to forced evictions. Based on our analysis of slum settlements we found that discrepancies continue to exist in slum survey and mapping exercises, residents of the surveyed settlements (by YUVA team) do not have land ownership.

2. No state or city specific definition for slums:

The CMP 2025 has taken into account the generic

Census definition of slums and it has not specified any state or city specific definition or categorisation of informal settlements.

3. Land use discrepancy: On analysing the proposed land-use plan of Master Plan 2025 for Guwahati, a number of deviations were observed. The land-use plan does not consider the locations of the existing settlements. In fact, on overlaying the boundaries of seven selected settlements onto the land-use plan, it can be observed that the areas where the settlements exist have been demarcated under various land-uses such as transportation, public area, industrial and other areas.

4. Lack of access to basic services and tenure rights:

Through focus group discussion (FGDs) we were able to discern that these settlements lack basic amenities like access to safe drinking water and sanitation as a consequence of being excluded from all planning exercises in the city. None of the houses have land tenure or *patta*, whereas they do possess individual holding numbers, *khazana* receipts and have also paid taxes until 2015 in most cases.

5. Development in silos: No efforts have been made in the Master Plan to include implementation strategy or adequate land allocation for affordable housing under schemes like PMAY-U. Further, the scheme is not even prioritised in the Master Plan. As mentioned earlier, housing for the urban poor is not taken as a priority and this becomes evident when we take into account the number of slums which remain non-notified in the Guwahati Metropolitan Area (GMA). The state fails to systematically acknowledge the housing crisis and its plan of action to address the same. It takes the role as a facilitator in case of affordable housing and depends on the private sector to come on board to facilitate the same by granting them additional transfer development rights.

6. Public participation under the 74th Amendment:

Planning units and sub planning units have been created to ensure planning at the ward level, and there

also exists a third level of governance within the urban local body (ULB). However, participation in decisions with regard to planning is only on paper. In February 2020, a piecemeal consultation was proposed by the Guwahati Metropolitan Development Authority (GMDA) regarding any matter/issues related to the GMDA. It was open for any individual, organisation or body who were interested to redress their grievances, and they were asked to submit their demands in writing. But it had no substantial outcome due to the nationwide pandemic and lockdown from the following month and no reports have been published till date.

Based on the study findings, the following recommendations have been arrived at:

1. Removal of current land-use reservations and notification of the slums needs to be prioritised to implement any of the slum improvement schemes that are halted due to the location of slums on railway land, wetlands, hills, etc. and categorisation of being non-notified. Since, the topography of Guwahati is different from other states and most of the informal settlements are established in the hilly areas of the city they are prone to evictions as a consequence of the implementation of developmental schemes. Capital expansion also poses a threat of eviction to informal settlements as industries can apply for land in the middle of Guwahati for their expansion, affecting the slums and hills through this process. The Assam State Capital Region Development Authority Act, 2017, states that for the development and building of multi level logistics parks, requiring several acres of land, departments such as the GMDA have complete authority to identify and allocate land if the plot has not been previously identified. This also poses a threat to informal settlements that can potentially be cleared due to their non-notified or regularised status.

2. The establishment of a Slum Authority within GMC/GMDA that can take the responsibility of matters related to slum improvement and surveys.

An Act that dates back five decades, The Assam Slum Improvement and Clearance Act, 1969 is the only act that mentions the Directorate of Town and

Country Planning as the agency responsible for slum improvement and to address any grievances. But Guwahati, being the municipal corporation, reserves the right to take the responsibility of ensuring development in informal settlements.

Therefore, guidelines should be drawn by the government for the operationalisation of a Slum Authority similar to those existing in other metropolitan cities.

3. Referring to Assam Land Policy, 1989, people living on government land for 15 years are eligible to apply for KOBULA⁶, against which a patta can be provided to the household. The Assam

Government in 1989 drafted a land policy admitting the growth of population in Guwahati and made a public assurance to confer land tenure to people living on government lands, recognising their economic status and landlessness. Additionally, the New Land Policy, Assam 2009 (14.1–14.3 paragraph) mentions the provision of lease for landless indigenous persons in Guwahati. In the New Land Policy, 2019, clause 14.4 mentions that any indigenous landless person, if found eligible who have been under continuous occupation of Government land since or prior to 28th June, 2001 may be considered for settlement of maximum 1(one) Katha 5 (five) Lessa of land in case of Guwahati and 1 (one) Katha 10 (ten) Lessa in case of other towns as one time measure for homestead purpose, if they apply for Kobula. But non-implementation of policies, public assurances and acts has resulted in a huge portion of the city continuing to live in slums on administrative land and under the constant threat of forced evictions. In the last three decades, the city has experienced a series of eviction drives by the administration and a number of people have lost their lives as a result of it.

Therefore, these legal provisions need to be used as a means to ensure right to tenure security and to live with dignity.

4. Definition of slums in context of Guwahati city and survey: The Census definition does not encompass the demographic scenario and settlement

6 | KOBULA is a format to apply before the government or revenue department to allot land and apply for land patta/lease in Assam

pattern of informal settlements in Guwahati and to conduct a rigorous survey on the same a context specific definition is needed. There is a need to conduct a detailed survey of existing slums in the city and map the same onto the forthcoming Master Plan, in order to understand the growth pattern of slums and thereby address the housing challenge. A detailed survey is needed since various discrepancies are present regarding the present data as depicted in the matrix. The survey would facilitate the identification of the exact number of informal settlements along with the demarcation of boundaries, which has often been a common challenge and resulted in the eviction of informal settlements such as the Amsang Basti. The survey would also be beneficial in facilitating state and central welfare schemes.

5. Master Plan 2025: The Master Plan 2025-55 should carry out the following to ensure an inclusive growth of Guwahati city:

- . Slum survey and slum mapping of all existing settlements towards developing a comprehensive Existing Land Use Map.
- . Based on the ELU demarcate settlements that can be reserved for public housing.
- . Within settlements reserve plots for social amenities .
- . Reserve land at the city level for public housing such that settlements currently located on lands that are untenable can be relocated to these areas.

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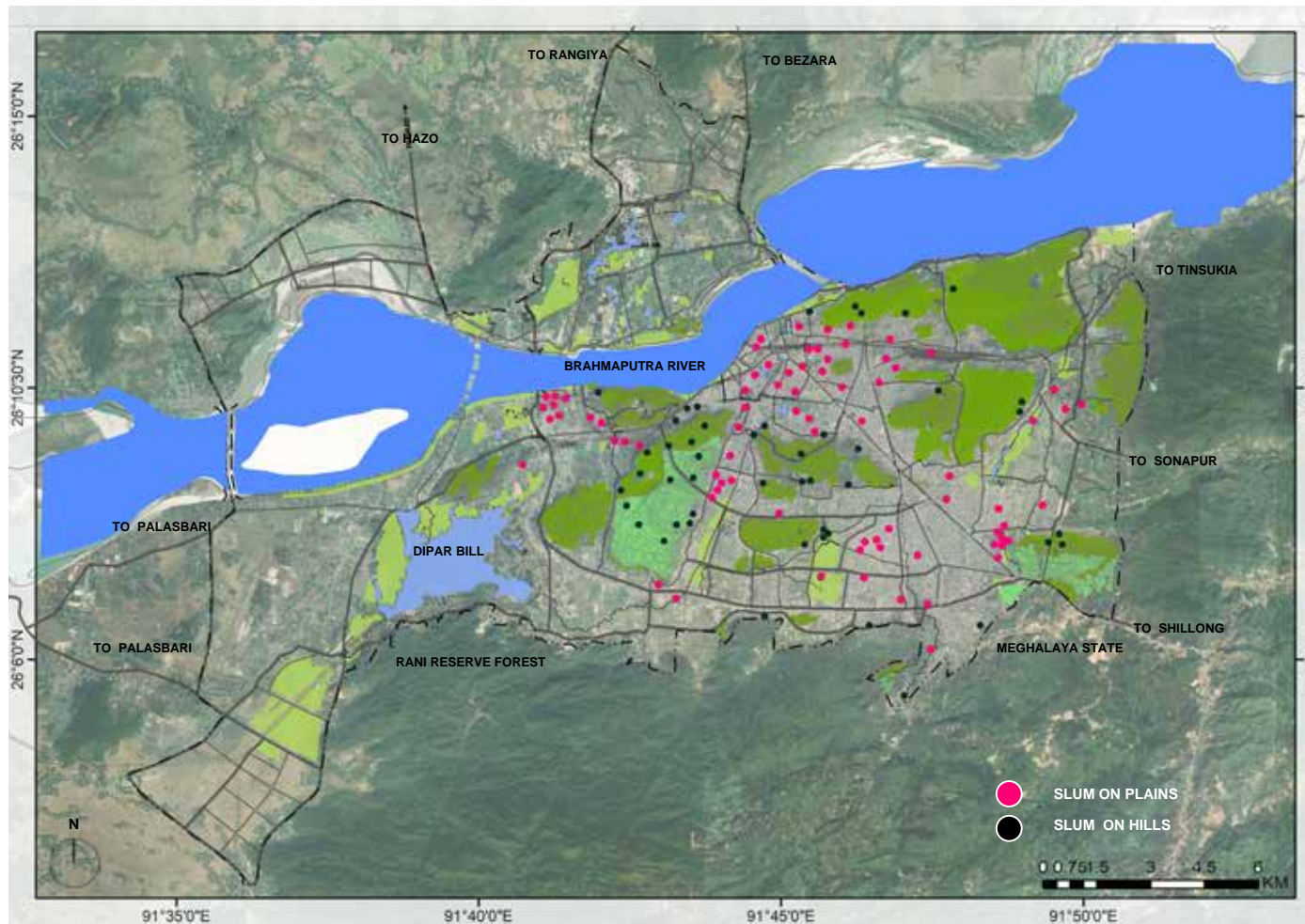
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ANNEXURE 1: OVERLAY ANALYSIS

ANNEXURE 1.1: LOCATION OF SLUMS BY VARIOUS NGO SURVEY 2012 ON HILLS AND PLAINS

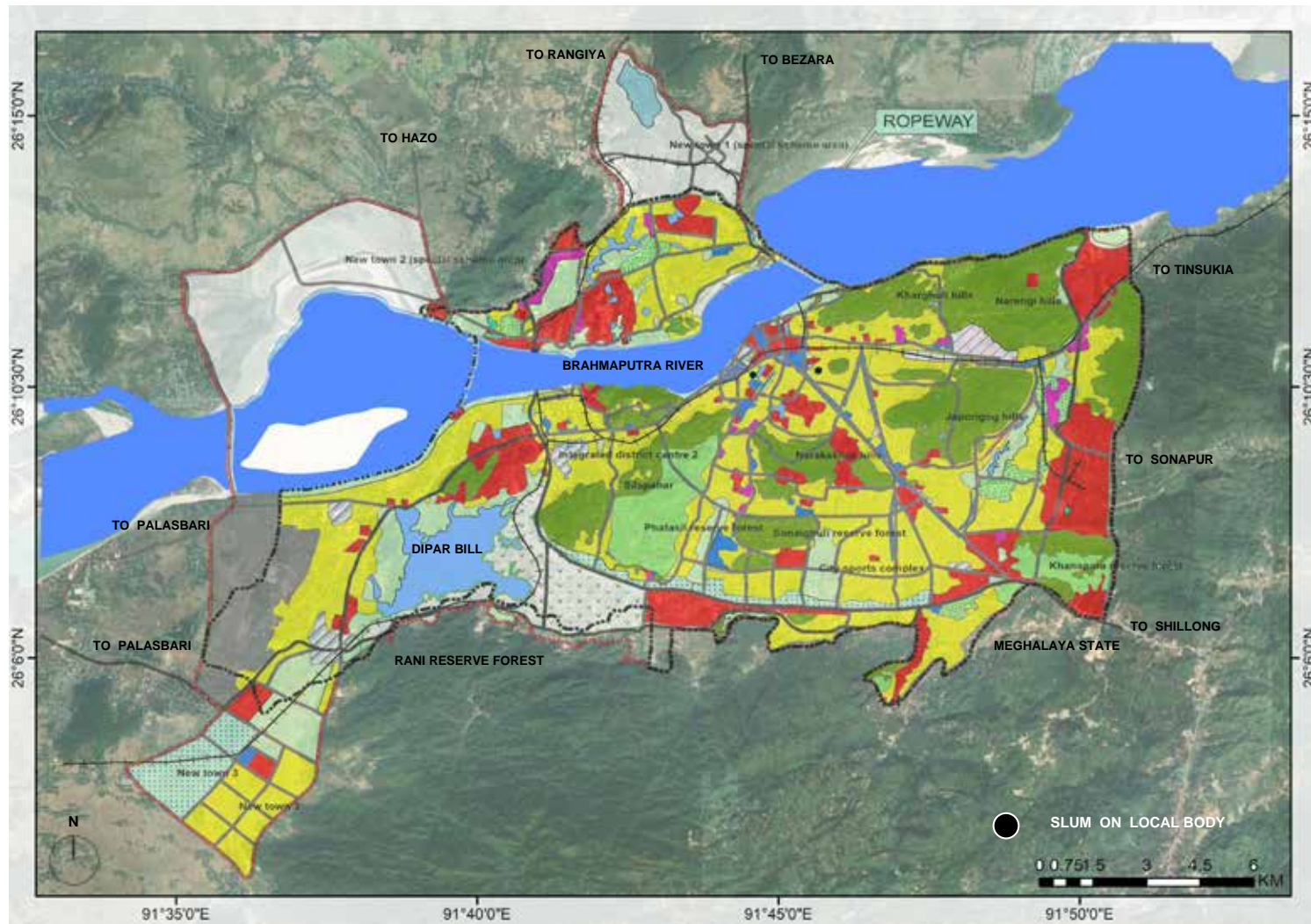


YUVA-OEP / GUWAHATI PLANNING STUDY

SLUM LOCATION_HILLS & PLAINS

MAP PREPARED BY OEP

**ANNEXURE 1.2:
LOCATION OF SLUMS BY VARIOUS NGO SURVEY 2012 ON LOCAL BODY**

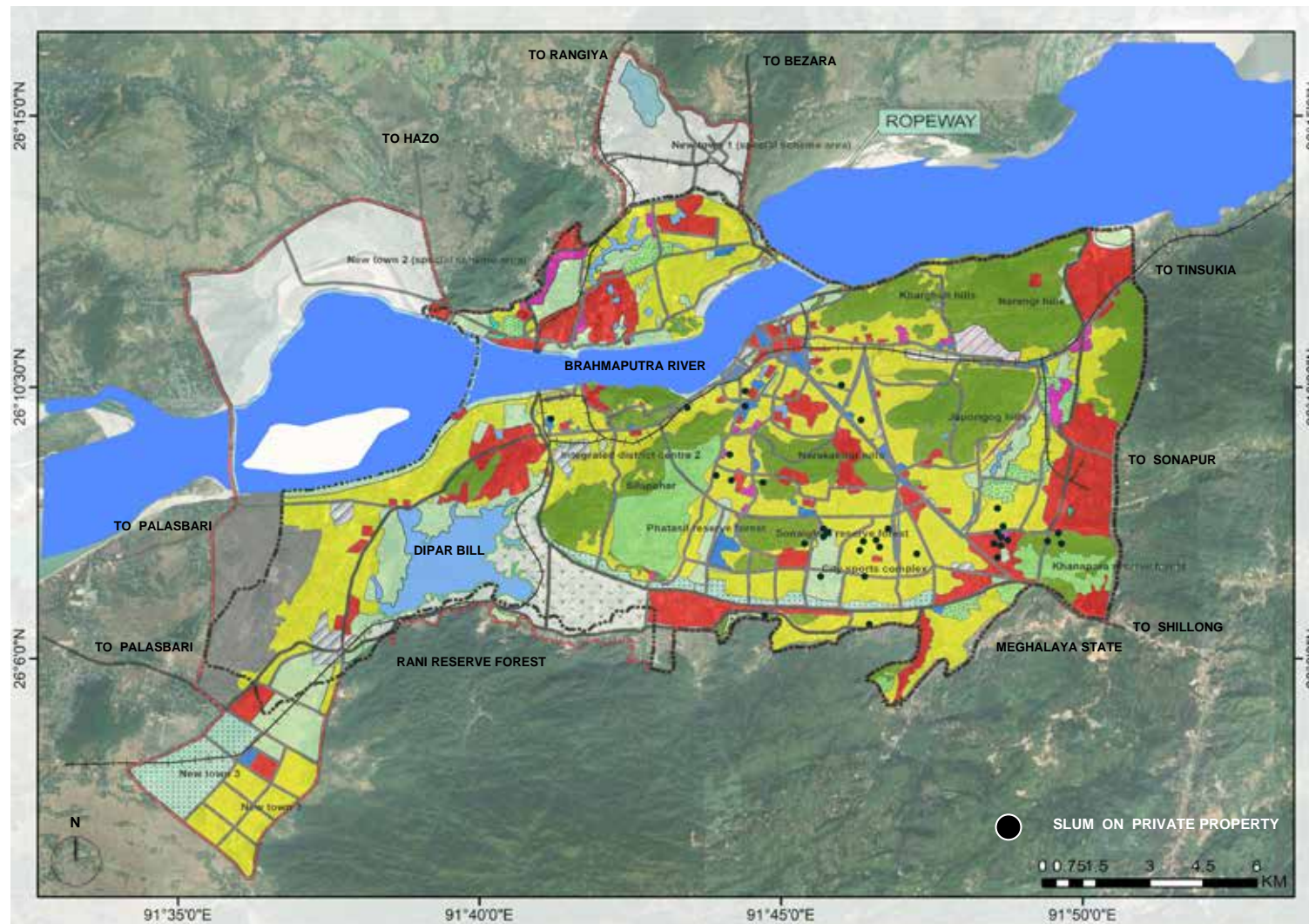


YUVA-OEP / GUWAHATI PLANNING STUDY

SLUM LOCATION_LOCAL BODY

MAP PREPARED BY OEP

**ANNEXURE 1.3:
LOCATION OF SLUMS BY VARIOUS NGO SURVEY 2012 ON PRIVATE PROPERTY**

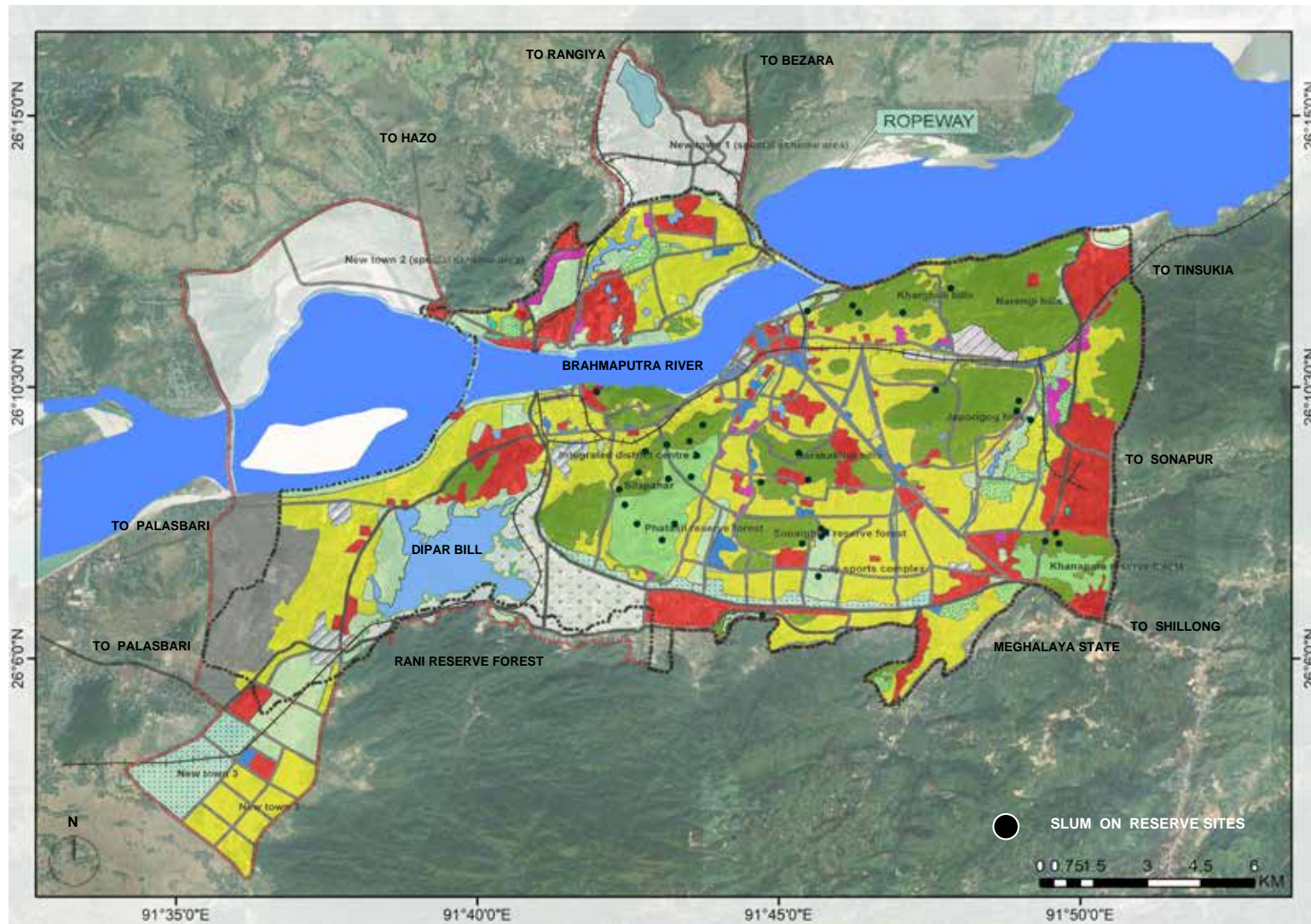


YUVA-OEP / GUWAHATI PLANNING STUDY

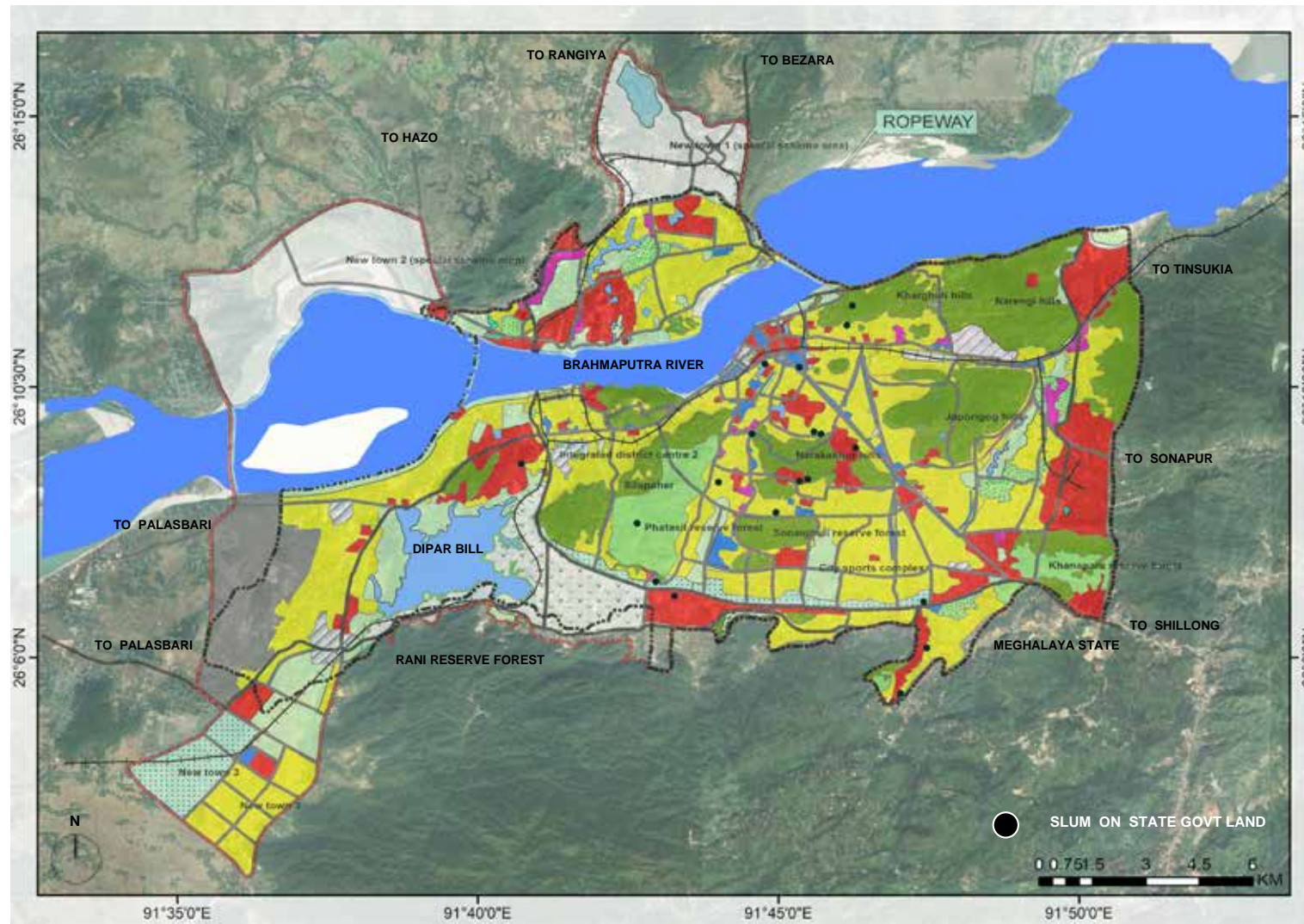
SLUM LOCATION_PRIVATE PROPERTY

MAP PREPARED BY OEP

**ANNEXURE 1.4:
LOCATION OF SLUMS BY VARIOUS NGO SURVEY 2012 ON RESERVE SITES**



ANNEXURE 1.5: LOCATION OF SLUMS BY VARIOUS NGO SURVEY 2012 ON STATE GOVT. LAND



YUVA-OEP / GUWAHATI PLANNING STUDY

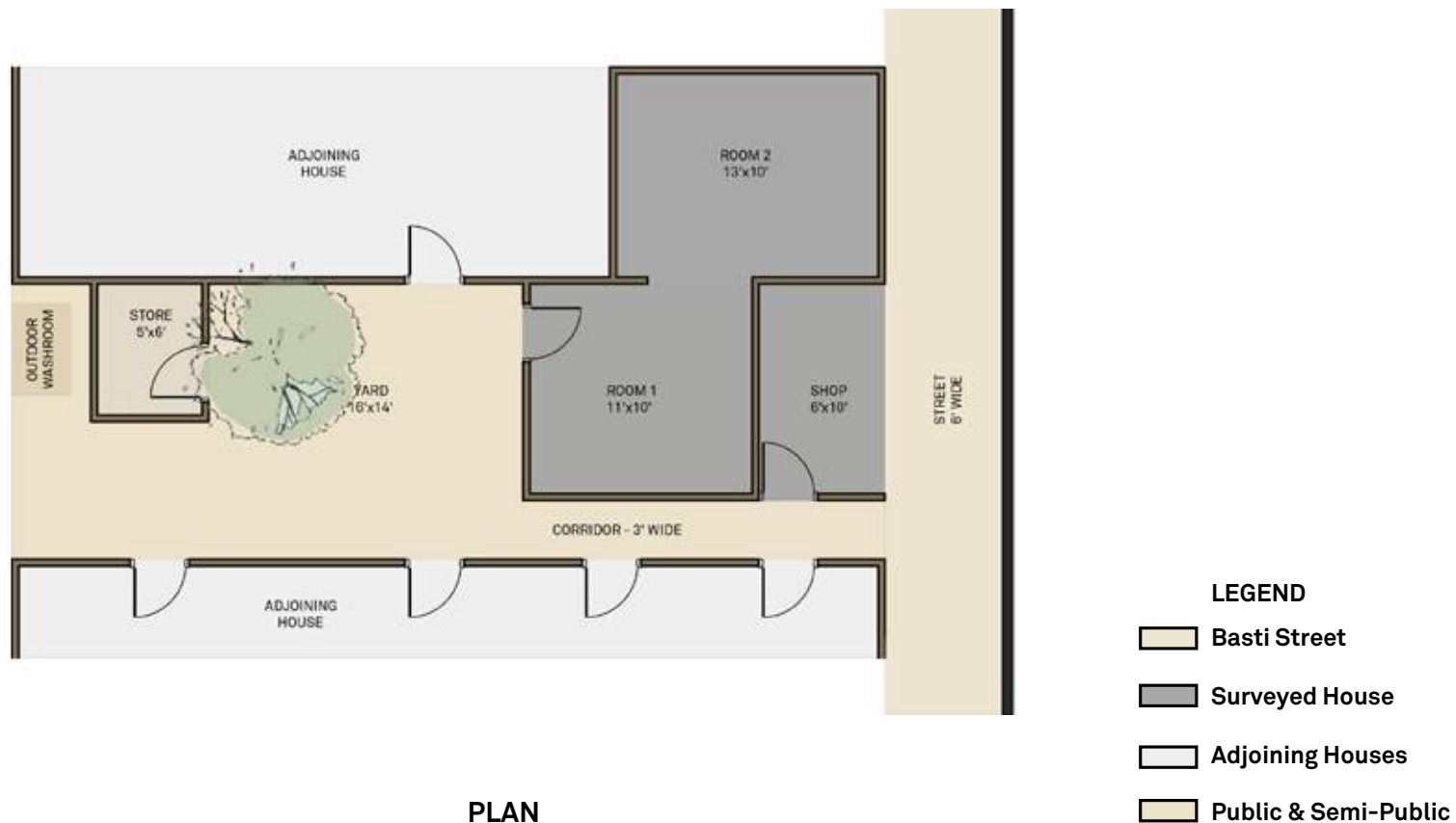
SLUM LOCATION_STATE LAND

MAP PREPARED BY OEP

ANNEXURE 2: HOUSEHOLD SURVEY

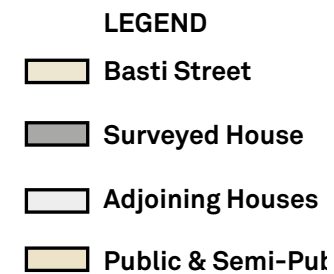
ANNEXURE 2.1: HOUSEHOLD SURVEY OF BHUTNATH BAGAN

1 - BHUTNATH BAGAN



ANNEXURE 2.2: HOUSEHOLD SURVEY OF UZAN BAZAR BASTI

2 - UZANBAZAR BASTI



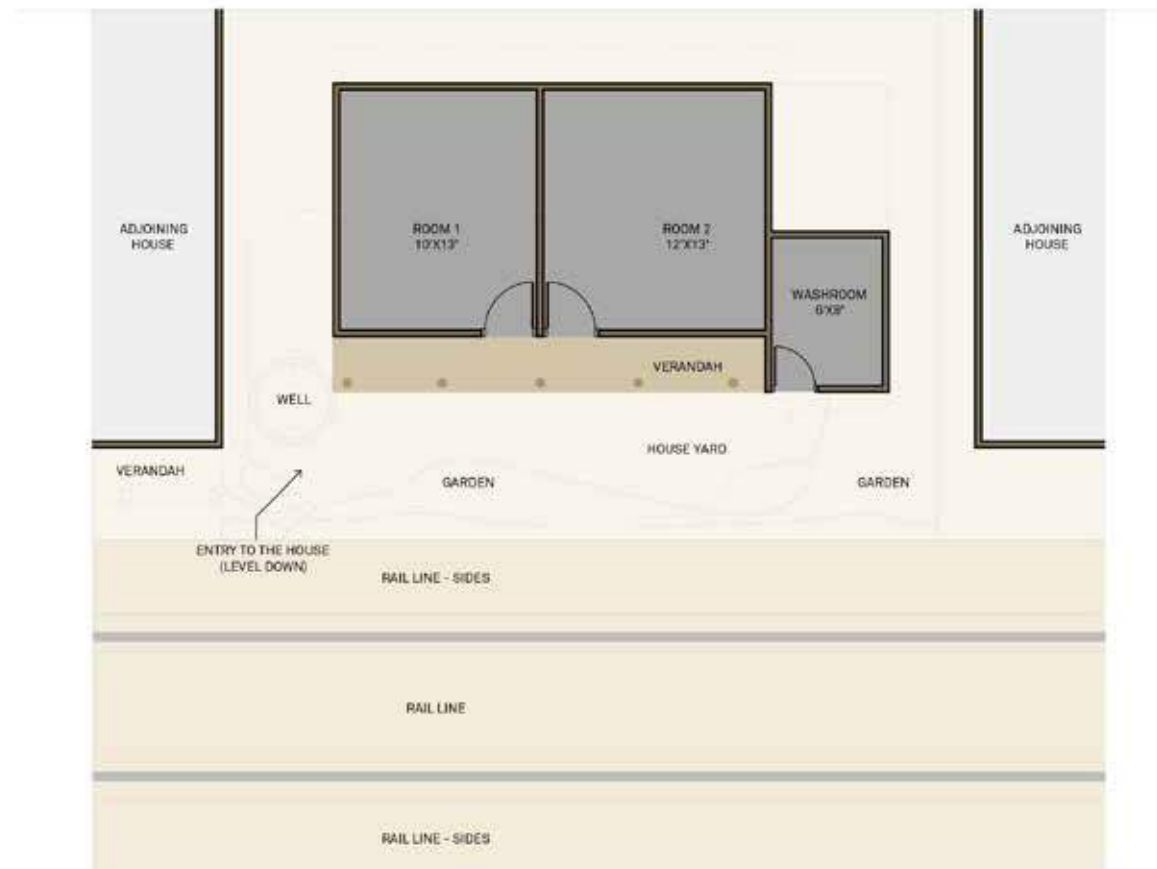
ANNEXURE 2.3: HOUSEHOLD SURVEY OF LALA BASTI

3 - LALA BASTI



ANNEXURE 2.4: HOUSEHOLD SURVEY OF BABU BASTI

4 - BABU BASTI



PLAN

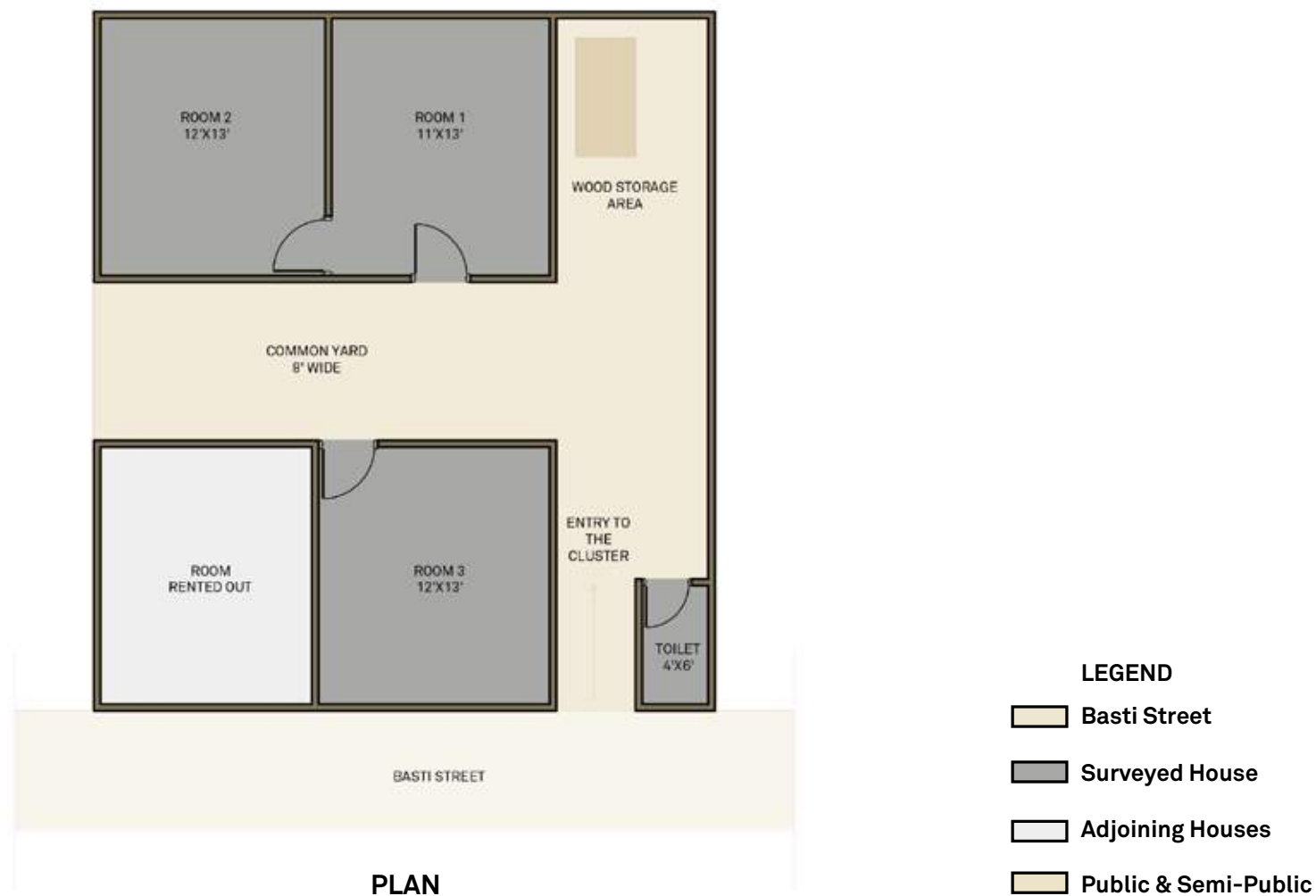
ANNEXURE 2.4

LEGEND

- Basti Street
- Surveyed House
- Adjoining Houses
- Public & Semi-Public

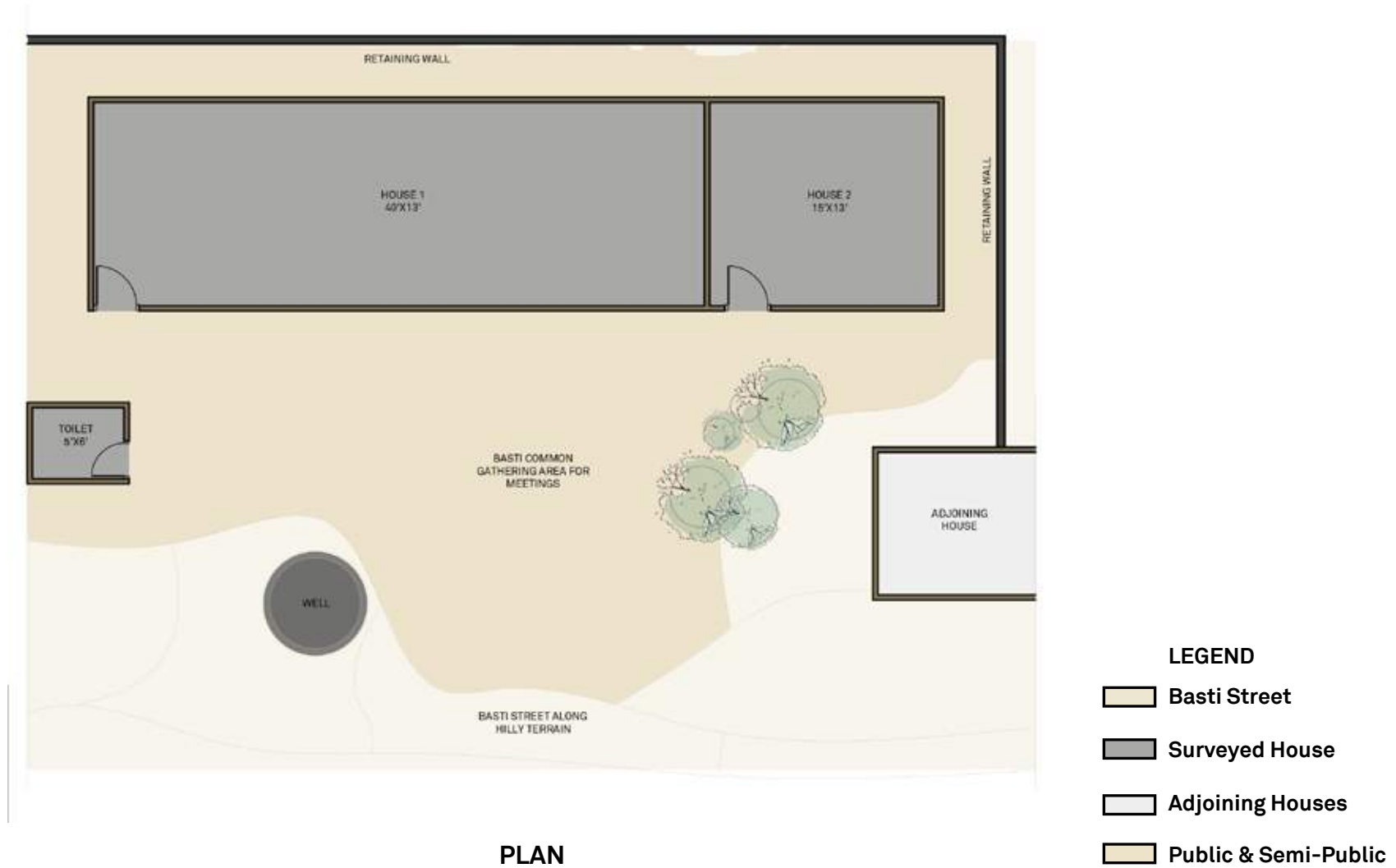
ANNEXURE 2.5: HOUSEHOLD SURVEY OF SHIV-NAGAR BASTI

5 - SHIV-NAGAR BASTI



ANNEXURE 2.6: HOUSEHOLD SURVEY OF NABAJYOTI NAGAR, AMSANG

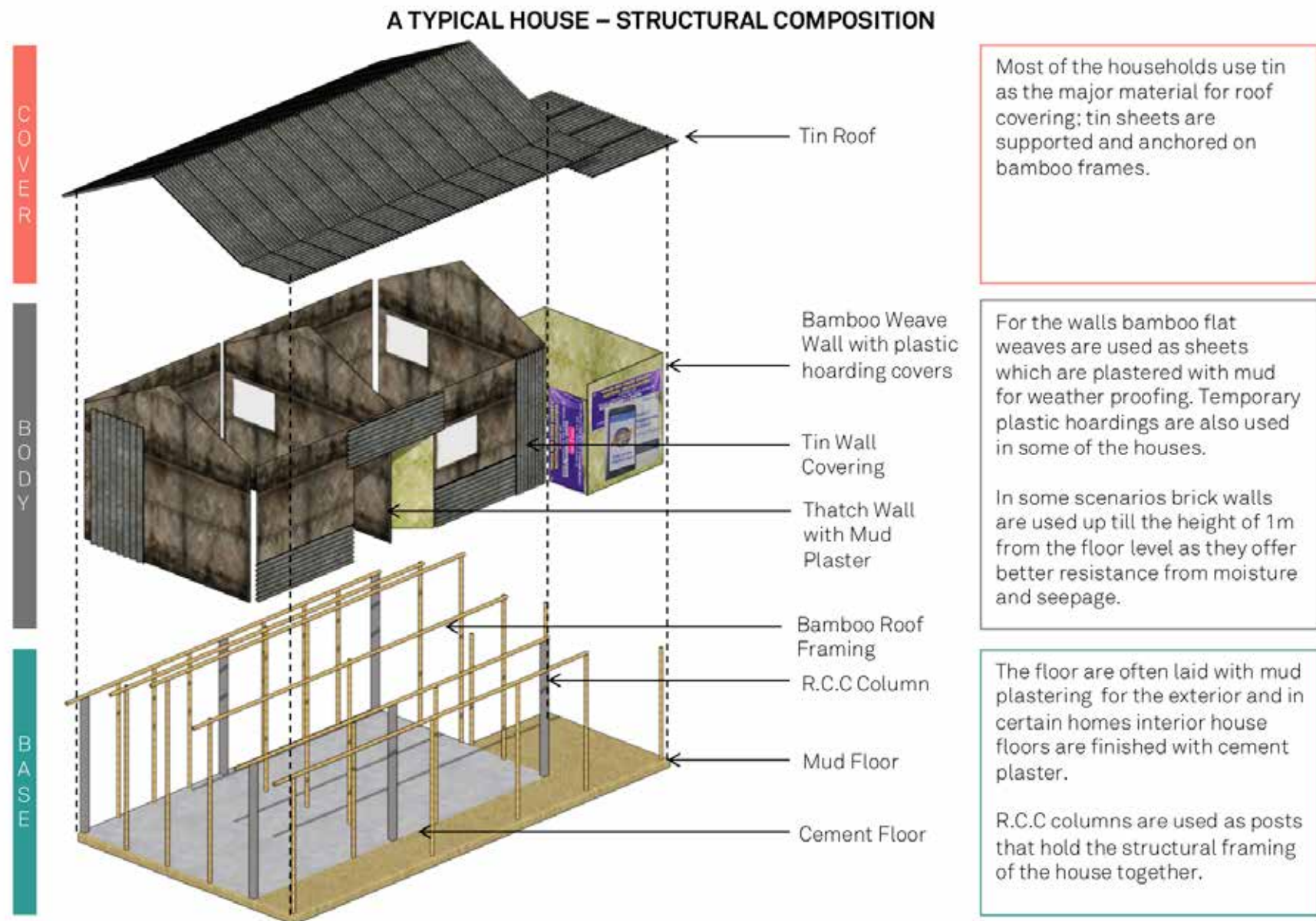
6 - NABAJYOTI NAGAR, AMSANG



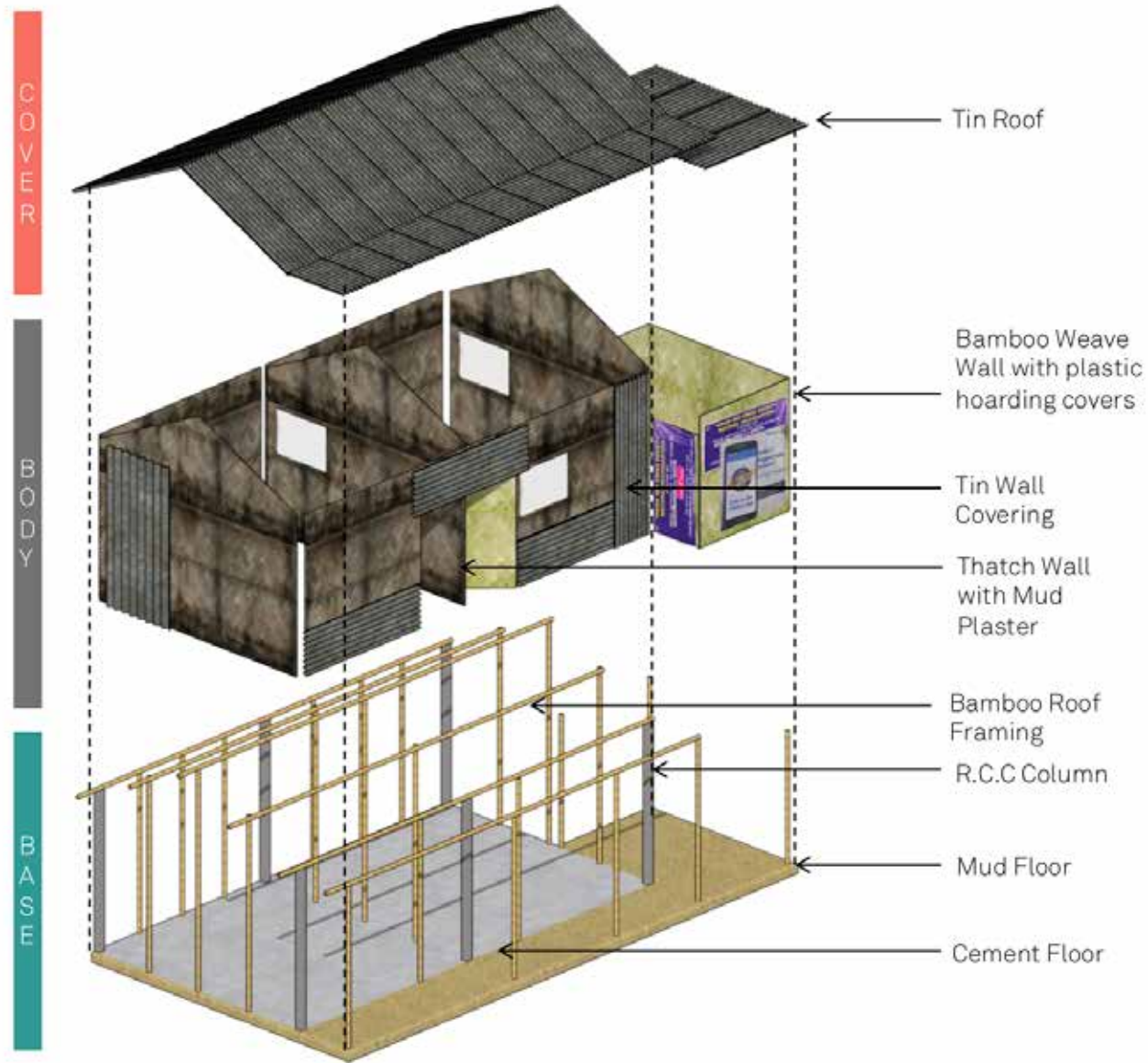
ANNEXURE 3: TYPOLOGY SURVEY

A TYPICAL HOUSE – STRUCTURAL COMPOSITION





A TYPICAL HOUSE – STRUCTURAL COMPOSITION



ANNEXURE 4: SLUM MATRIX

		Deka and Medhi <i>et al.</i> 1986:18-19			The Director, Town and Country Planning, 1997			The Director, Municipal Administration Department, 1997			Guwahati Municipal Corporation	Slum Pockets notified by Government of Assam in Guwahati City														Slums pockets identified by Research Scholar Mr. Deka, during 2011 till March 2013						Slums of Guwahati Doc						
Sr.No.	Slum Name	Slum Location	Type	Recorded in 1986	No. of Population	No. of households	Recorded in 1997	No. of Population	No. of households	Recorded in 1997	Recorded in 2001	Ward No.	No. of households	Recorded in 2009	Ward No.	No. of households	Recorded in 2009	Ward No.	No. of households	Recorded in 2009	Ward No.	No. of households	Recorded in 2009	Ward No.	No. of households	Recorded in 2009	Ward No.	No. of Population	No. of households	Recorded between 2011- 2013	Ward No.	Residents in terms of domination	Nature of Topography	Status of Slum (Notified /Non-Notified)	Slum Population	No.of HHs		
													Category 1		Category 2		Category 3		Category 4																			
													Slums as per Census definition		Not congested, scattered housing mostly on hills side need to address infrastructure issue		Railway quarters, are small, as family grows need of space increases, migration, covered with temporary materials		Congested developed slum because more than 70% housing are rented																			
				N.O. - 17	Total - 65,450	Total - 10,213	N.O. - 22	Total - 113,064	Total - 19,558	N.O. - 40	N.O. - 26		Total - 17056	N.O. - 52	Total - 5380	N.O. - 24	Total - 2850	N.O. - 6	Total - 2680	N.O. - 8	Total - 17920	Total - 3200	N.O. - 24															
													Approx Population - 102,336		Approx Population - 32,280		Approx Population - 17,100		Approx Population - 16,080																			
0																																						
	3 Nos. over bridges & railway station		Smaller Slums																																			
	6- F.G. Colony											3	400																			3						
	4- F.G. Colony Part- one											3	130																			3			Notified	2000	400	
	4- F.G. Colony Part- 2											3	120																			3						
A																																						
	Athgaonpukhuriapar / Athgaon	On Private Land	Permanent		4034	577																																
	Ambikagiri Nagar																															12			Notified	41	13	
	Ambari Satgaon / Ambari Railway Colony							3500	300												33	650	120		33													
	Arkatipur Basti							2802	295																													
	Akashi Nagar							1900	210																													
	Ambedkar Nagar							3000	428																													
	Arikutti Basti (Part -I & II)																																					
	Anil Nagar, Bye lane, near Bharalu river											34	300																					34				
	Anukul Basti, Kenduguri Road											42	100																					42				
	Ananda Nagar Noonmati											46	800			47	130																	46				
	Akashi Nagar, Chanmari, Madhubari																	40	350															47				
	AthgaonKrishnanagar, Rudra nagar, Purbanchal Nagar																			19	200													40				
	Adabari (Temporarily constructed by GMC)																				4	300	55		4													
	Adimgiri path																				12	4000	700		12										Non-Notified	4100	716	
	Anandanagar jabarbasti																																			Non-Notified	600	100
	Adimgiri																																			Non-Notified	59	17
	Adgiri Path																																			Non-Notified	2400	600
B																																						
	Brahmaputra river side		Smaller Slums																																			
	Bishnupur				4907	673																																
	Bimala Nagar / Bimla Nagar, Bishnunagar				2472	412		3000	5000			20	740																					20				
	Barnachal Madhupur				960	160																																
	Birubari / Birubari, Majjid Road / Birubari Hill side											23	140																									
	Bijoy Nagar Noonmati																																					
	Babaj Harijan colony							2200	230																													
	Bhaskar Nagar							2500	268																													
	Bhaskar Giri Nagar							1052	210																													
	Barsapara							3100	620																													
	Borsajai							3600	720																													
	Bhetapara							2000	400																													
	Bangaon							2750	400																													
	Basistha Telegu Harijan Colony / Bar Pather, near Basistha Temple							2000	400						58	240																		58	Hindu	Plain and hillock		
	Bengali Basti, Jaypur, Udaypur											37	140																							37		
	(Pub) Bhaskar Nagar, Part-I Malia Tanki Road											45	300																							45		
	(Pub) Bhaskar Nagar, Part-II Malia Tanki side											45	360																							45		
	Bari Basti, Batahghuli											52	200																							52		
	Bishnu Mandir, Pachim Guwahatigaon														7	140																						

ABOUT YUVA

Youth for Unity and Voluntary Action (YUVA) is a non-profit development organisation committed to enabling vulnerable groups to access their rights. YUVA encourages the formation of people's collectives that engage in the discourse on development, thereby ensuring self-determined and sustained collective action in communities. This work is complemented with advocacy and policy recommendations. Founded in Mumbai in 1984, currently YUVA operates in the states of Maharashtra, Madhya Pradesh, Odisha, Assam and New Delhi.

At the community-level, through an integrated 360-degree approach, YUVA delivers solutions on issues of housing, livelihood, environment and governance. Through research, YUVA creates knowledge that enhances capacity building. Through partnerships in campaigns, YUVA provides solidarity and builds strong alliances to drive change.

ABOUT O.E.P.

O.E.P (Office of Emergent Practices) is a contemporary community of architects & urban designers, who focuses on architecture as a language and planning as a tool to ensure fundamentals of practice are established based on adaptability to local context, culture and identity. O.E.P is laid on the fundamental principles of DESIGN, RESEARCH & DIALOGUE, where -

- DESIGN contributes to build critical infrastructure of our built and unbuilt environment.
 - RESEARCH investigates new methods and techniques of enquiry, documentation and archival of critical indigenous practices.
 - DIALOGUE creates a platform where individuals from diverse background can come together to explore and converse renewed outlook for living better and impacting less.
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