



City profile

City profile: Guwahati

Shruti Hemani*, A.K. Das¹

Department of Design, Indian Institute of Technology (IIT) Guwahati, Guwahati 781039, Assam, India



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ABSTRACT

Guwahati, which enjoyed a strategic position throughout history due to its geographical location along the mighty Brahmaputra River and its defensive topography, has an ancient tradition of urbanisation. The city saw its periods of growth and decline from being an important cultural, religious, economic and political centre to mere a war site. It was rebuilt during the colonial period and within a century, grew from a swampy settlement of 12,000 people (1911) into a vast urban agglomeration of nearly 1.26 million population (2011). Today, while this ancient “City of Eastern Light” has regained its importance as an urban centre, intense growth has led to physical, social and environmental vulnerabilities regardless of numerous planned efforts engaged in city building including adoption of city Master Plans since 1960s. Despite this, Guwahati has been the focus of little research in terms of its morphology depicting both, historic planning paradigms and modern urban visioning to reflect the city's ongoing story. Based on secondary data, this city profile, narrates the growth and morphological evolution of Guwahati from mythology to modern period. It then critically examines the city in its present form and concludes that a convergence between emergence and planning may be a necessary renaissance for Guwahati as it seeks to transform itself into one of the most admired, smart and sustainable cities in India. The theoretical narration is supported with strong visual atlas which provides an empirical strength to this profile.

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1. Urban Guwahati: an introduction

“Gohatti stands on the left bank of the Brahmaputra, on a plain elevated a few feet above the reach of the floods; the land gradually lowers as it retires from the river, till it becomes fit for rice cultivation, or sinks into jeels and marshes. This plain is bounded on the interior by a chain of pretty hills, stretching from N.E. to S.W. in a form of a semi-circle; with its two promontories resting upon the river, while the river itself taking a bend concentric with the hills, cuts it out in the form of a crescent, and nearly at equal distances from its two horns, the town and station are situated. The town is of a very straggling irregular form, and almost every house is built of mats and bamboos....During the splendour of the Assam Dynasty, Gohatti was one of the largest cities in the kingdom; its fortifications constituted the security of the State from the incursions of Moslems, and its Government was committed only to the sons of royalty. A small portion of its extent and grandeur now remains; its brick, its mortar and earthen-ware constitute a large portion of the soil, its numerous spacious tanks, are now choked up with weeds and jungle, or altogether affected by a false though luxuriant soil that floats on the stagnant water concealed beneath; the gateways of some are still standing; and the guns of others still lying upon the ramparts. Almost every hill around Gohatti is crowned with one or two little temples, all still well endowed, and in good repair; and inhabited by all the ministers

and mercenaries of Hindoo religion. In the Zillah of Kamroop there are no less than 37 temples, all endowed”²

Guwahati, the capital city of the Indian State of Assam, is situated at 26° 10' North latitude and 92° 49' East longitude on the banks of the mighty River Brahmaputra. Positioned on an undulating plain with varying altitudes of 49.5 m to 55.5 m above Mean Sea Level (MSL) in the lower Assam Valley, the city is surrounded by hills on either side of the river and has large areas under water bodies. With a long tradition of urbanisation, this ancient “City of Eastern Light” has seen its era of frequent rise and fall. Guwahati enjoyed an eminent position throughout history due to its geographical location serving not only an important religious centre, but also as a vigorous port of trade and commerce, administrative headquarters and political hub. Its topography also made it ideally suited as a site of war especially during the period between the 13th to 17th centuries AD and was completely destroyed during the Burmese War. The city was re-built when Assam came under British occupation beginning a formal planning history of Guwahati whose growth triggered around newly laid transport and communication routes serving the Colonial industries. The city grew from a town of eight municipal wards within an area 6.4 km² in 1874 into a vast urban agglomeration covering an extended boundary of Guwahati Metropolitan Area (GMA) with 328 km² to accommodate 60 municipal wards. Guwahati today has not only regained its importance as a political and administrative centre but is also a premiere city of the entire

* Corresponding author. Tel.: +91 9116 055 224.

E-mail addresses: shruti_arch@yahoo.com, m.hemani@iitg.ac.in (S. Hemani), dasak@iitg.ernet.in (A.K. Das).¹ Tel.: +91 361 2582454.² J. M'Cosh, Topography of Assam (reprinted in 1975), 86–87. Delhi: Sanskaran Prakashak, 1837.

North-Eastern region of India in terms of its location, size, population, and transport connectivity, a major centre for industries, education and medical institutions as well as a potential gateway to South-East Asia. Despite its significance in the current context, intense and accelerated urban development is raising the city's environmental and social vulnerability to an unprecedented extent. This phenomenon continues to occur undeterred by several planned efforts engaged in the post-independence city building including adoption of a number of City Master Plans since the 1960s. As this process of rapid urban change in Guwahati continues to unfold, it becomes critical to put the city's future developments on paths that are sustainable and human centric. However, in order to understand Guwahati as it is today and its future development pathways, it becomes important to understand the forces that shaped the city in the past.

This paper showcases the detailed profile of Guwahati, the aim of which is to comprehensively narrate the story of the city's evolution depicting both, historic planning paradigms and modern urban visioning. To do so, this paper

- Firstly investigates into the dynamics of its growth and characteristics of morphological transformation from mythology to modern periods.
- Secondly, it examines the city as it stands today – a multi-layered, evolving urban agglomeration reflecting the ongoing planning paradigms and future prospects.

This city profile bears importance not only because the urban and planning histories of Guwahati have not been frequently researched despite its ancient existence, but also because at the time when the city faces greater challenges to make its rapid growth and transition sustainable, the exploration of modern day Guwahati is equally sparse. The profile covers a vast topic, and writing about it was not made any easier with a dearth of available literature and documentation on the city. It is based on exhaustive literature review of available secondary information in the form of valuable texts from Kamrup Anusandhan Samiti, District Library Guwahati, Assam State Museum, Guwahati University, Archaeological Survey of India (ASI) as well as primary sources such as interviews with historians, officials at Guwahati Municipal Corporation (GMC) & Guwahati Urban Development Authority (GUDA), Directorate of Town and Country Planning and collection of oral histories from a few selected original settlers of Guwahati. Review of existing policies, governance frameworks and Master Plans for the city also forms a key part of the city assessment in the present context. The theoretical narration is supported with a series of maps depicting the city's morphology and form which gives an empirical strength to this profile.

Following this introduction, in Section 2, the paper discusses the city of Guwahati in its unique physiographic context. In Section 3, it then narrates the story of morphological evolution and growth dynamics of Guwahati in five stages mythological, ancient, mediaeval, colonial and modern periods. Based on the detailed analysis, in Section 4 the paper examines the city in its present context where it focuses on three key aspects 1) Built Form and Density, 2) Street Network and Open spaces, and 3) Land use and Activities. While doing so it describes the past and questions the present urban planning and development in Guwahati. Finally, in Section 5, the paper presents the concluding thoughts while Section 6 presents way forward to climate change adaptation and future prospects as the city prepares its revised Master Plan for the year 2025, seeks to transform itself into one of the most admired state capitals by 2025, competes for the Prime Minister's 100 Future Smart Cities by 2020 in the country, and hopes for a sustainable future (Figs. 1–3).

2. Guwahati in the context of its unique physiographic setting

The origin of Guwahati city dates back to ancient times when it was called Pragjyotishpura, the capital of Pragjyotisha. There are numerous

interpretations associated with the origin and meaning of the name of the city, and it is not easy to dismiss some of them before we discuss the growth and morphological transformations of the place. It also seems critical to begin with an understanding of the unique physiographic setting of Guwahati which is a mix of plains, water bodies, marshes and hills. The evolution of the city has been commensurate with the evolution of these physiographic features and continues to impact the physical growth of the city making habitable land a highly contested entity.

According to Gait³, *Prag* means previous or eastern and *jyotisha* refers to a star, astrology or shining. The word *pura* refers to a city or an urban agglomeration. Hence the word Pragjyotishpura can mean 'the City of Eastern Astrology'. According to K.L. Baruah⁴, the Navagraha (nine planets) temple on the Chitrachala Hill, could have been the origin of the name Pragjyotishpura – the seat of astrology or astronomy in ancient India. Later it was also known as Kamrupnagara, the capital of Kamrupa. While the term Guwahati is also claimed to have derived from 'guva-hatta' which means a market place for areca nut⁵, it is also possible that Guwahati is a Sanskritised form of a pre-Aryan name meaning hill (*goi*) or mountain (*go*) and *hatti* (habitable place), i.e. a row of houses or dwelling place surrounded by hills and mountains⁶. The various interpretations highlight the fact that Guwahati in the past had been a centre of urbanity and astrology with a unique physiography.

Guwahati lies on the banks of Brahmaputra River, which through centuries, has been the region's cultural and economic lifeline as well as a strategic channel of communication during the times of both peace and war^{7,8}. Today, the mighty river is narrowest at the point where the modern city of Guwahati is located. It bifurcates the city into two. The northern bank sits on the flat plain with vast open fields and swamps such as the Rangagara Beel and Phulung Beel. In contrast to the rural landscape of north Guwahati, the area to the south of the river consists of dense, vibrant, fast developing urban quarters. In addition to the river and its tributaries, Guwahati is dotted with a number of water bodies including tanks, wetlands or beels, of which Deepor⁹, Bor-Sola, Sil-Sako, Bondajan are prominent (Fig. 4). While detailing the physiographic evolution of the city is beyond the scope of this paper, it is visually depicted in the maps (Fig. 5) developed from the works of historian Pradip Sharma¹⁰.

[Around the 1st Century AD, possibly the river Brahmaputra had a different channel or did not exist at all. The physiographic reference in the Kalika Purana (51/89, pp. 135–140) describes about a big water body called Brahmabal which later evolved to become the river Brahmaputra. At the time of formation of the river, it flowed in two branches and Guwahati may have been in the form of a number of islands. The branches having dried off with time, the newly formed shallow stream of River Brahmaputra later became the key route of communication and international trade.]

Guwahati forms part of the Shillong Plateau and the isolated crop of hills that break the plains represent portions of this Plateau. There are

³ E. Gait, *A history of Assam*, 15. Calcutta: Thacker, Spink & Company, 1906.

⁴ K. L. Baruah, *Early History of Kamrupa: from the earliest times to the end of the sixteenth century*, 9. Guwahati: Bani Mandir, 2009.

⁵ P. Das, *History and Archaeology of North-East India: 5th Century to 1826 A.D. with special reference to Guwahati*. New Delhi: Agam Kala Prakashan, 2007.

⁶ P. C. Chawdhury, "Guwahati: An Ancient City of the East, Paura Bichitra" 1978. In Sharma, P. *Genesis of a City: Urban Development in Guwahati*, 91–92. India: EBH Publishers, 2014.

⁷ A.C. Sharma, "The Brahmaputra through the ages". *Pragjyotishpur through Ages: collection of papers presented in the seminar on 16th & 17th October 1992 in Guwahati*. Guwahati: Bhartiya Itihas Sankalan Samiti Assam, March, 1996, 62–64.

⁸ P. Das, *History and Archaeology of North-East India*, 84–90.

⁹ 40.1 km² of Deepor was listed as a wetland under the Ramsar Convention in November 2002 of which in 2008, 4.1 km area was notified as a wildlife sanctuary. Bera, S. "The Great Wetland Grab," *Down to Earth*, September 5, 2011. <http://www.downtoearth.org.in/content/great-wetland-grab>. Accessed December 1, 2014.

¹⁰ P. Sharma, "Through Geographical Evolution: From Pragjyotishpur to Guwahati". *Prantik Magazine* March 6, 2006, 29–34.

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