



DHAKA: THE DRAW (& Nearby Nayaranganj)



DHAKA: BASIC INFORMATION		World Rank	Similar to
Urban Area Population (2009)	10,685,000	22	Paris, Dongguan
Projection (2025)	18,900,000	17	Shenzhen, Seoul-Incheon, Los Angeles
Urban Land Area: Square Miles (2009)	110	271	Hannover, Victoria (BC), Bakersfield, Hiroshima, Xiamen
Urban Land Area: Square Kilometers	285		
Density: Per Square Mile (Latest)	97,100	1	Well above Hong Kong and all others
Density: Per Square Kilometer (Latest)	37,500		
*Continuously built up area (Urban agglomeration) Land area & density rankings among the approximately 850 urban areas with 500,000+ population. Data from <i>Demographia World Urban Areas</i> (http://www.demographia.com/db-worldua.pdf)			

22 May 2009

General Description

Dhaka is the capital of Bangladesh and one of the world's newest megacities (A megacity is urban area or agglomeration over 10,000,000 population). Dhaka is also the world's poorest megacity, though two of the next three entrants to the megacity class will be poorer (Lagos and Kinshasa, with Karachi being somewhat more affluent than Dhaka.¹

Traveling to Dhaka

Dhaka is served by international airline flights to Zia International Airport.

¹ See also *The Draw of Dhaka*, <http://www.newgeography.com/content/00778-the-draw-dhaka>.

Traveling in Dhaka

This rental car tour was principally based upon walks, taxicab rides and the special experience being shown around the Dhaka area by two college students. Rajib and Shojib. They drove the author around Dhaka in air conditioned comfort for a day and provided far better commentary and descriptions than one could ever expect from a taxicab driver. They made arrangements for me to enter three slums, which is a very special experience. Previously, I had been able to tour the inside of shantytowns only in Soweto (Johannesburg area) and Rochina (Rio de Janeiro) and these were on organized tours. Only late in the day, after visiting all three, was I to find out that neither of them had ever entered a slum before.

The Location: River City

Dhaka may be the most inconveniently placed urban area in the world, even worse than New Orleans. The urban area sits on the world's largest river delta, the Ganges – Brahmaputra Delta (The Ganges is called the Padma River in Bangladesh). The rivers themselves are among the mightiest in the world.

The Ganges rises in southwestern Tibet, on the southern slopes of the Himalaya Mountains and has the greatest average discharge at its mouth of any river in the world (following the Amazon, which has a discharge five times as great). The Brahmaputra is a tributary of the Ganges meeting that river's main channel approximately 100 miles from the Bay of Bengal (Indian Ocean).

The Brahmaputra has an unusual course, also beginning in southwestern Tibet, however on the northern slopes of the Himalayas, not far from the source of the Ganges. From that point, the river flows east, turning south briefly near the eastern extent of India, then turning west toward Bangladesh. At its mouth, the Brahmaputra's average discharge rate is greater than that of the Mississippi River and among the ten largest in the world.²

Dhaka is surrounded by the rivers and distributaries of the Ganges-Brahmaputra system. The low elevation of the surrounding land is illustrated in Slides 216 and 218. The urban area is protected from the routine and disastrous floods by flood channels and floodwalls.

The main channel of the Ganges is approximately 20 miles away (30 kilometers). Somewhat north of this point is the confluence of the Ganges and Brahmaputra³ Rivers, no more than 50 miles (80 kilometers) from Dhaka. Approximately 40 miles (60 kilometers) to the north is the Old Brahmaputra River, which was the main course of the Brahmaputra River until it changed course more than 200 years ago (Slide 3⁴). The Old Brahmaputra flows into another large river, the Meghna, which merges with the Ganges (Padma) approximately 30 miles (50 kilometers) south of Dhaka. The Meghna flows within 15 miles of Old Dhaka (25 kilometers), approximately

² Based upon information in

http://books.google.com/books?id=HUXrVyUk0RAC&pg=PA99&lpg=PA99&dq=%2Bbrahmaputra+%2Bbraiding&source=bl&ots=Xdgcydvr48&sig=xmf0z1AU6ogsE1QdPlbUwsRIEFw&hl=en&ei=CWcPSq3bL9OFmQe5k5iFC&sa=X&oi=book_result&ct=result&resnum=3#PPA101,M1

³ Also called the Jamuna south of the point where the river was diverted from its previous course (now called the Old Brahmaputra).

⁴ From http://upload.wikimedia.org/wikipedia/commons/0/01/BD_Map_Central_Bangladesh.jpg

three miles south of Naraganganj (5 kilometers). For the final 50 miles (80 kilometers) to the Bay of Bengal, the main course of the Ganges/Padma carries the Meghna name.

Somewhat closer are other distributor rivers of the Ganges-Brahmaputra system, such as the Buriganga River (Slides 161, 162, 165, 166 212-214 & 216-218)), which separates a small western section of the Dhaka urban area from the larger section on the eastern bank. Somewhat north of Zia International Airport and the Uttara Model Town, an east-west distributor channel, the Tairag River, splits the main portion of the urban area from its northern extension into Tongi (Gazipur District). A few miles to the east of the urban area, another is another distributaries, the Balu River, which is met by the rapidly developing Demra section of the urban area (which extends from Old Dhaka to the river). A new bridge is under construction at the eastern end of Demra and development has started to spill over the Balu River. The Balu meets the Sitalankya River, which encloses most of the Naraganganj urban area (below) and completes the inner loop of distributor rivers around Dhaka.

If there ever was a “river city,” Dhaka is it. The Ganges-Brahmaputra River is also home to another of the world’s megacities, Kolkata (Calcutta³). However Kolkata’s geographical challenges are far less, with less of the surrounding land taken up by wetlands and without the relatively dense mesh of distributor channels. At least partially as a result, Kolkata, despite its reputation for density, is at least 50 percent less dense than Dhaka

Most of the Dhaka urban area is located in the Dhaka District of Bangladesh. The urban area also extends into Gazipur District to the north and is in the process of expanding into Naraganganj District to the east. The urban area also extends into Naraganganj District, to the south. Eventually, it is likely that the Dhaka urban area will extend further south and engulf the satellite urban area of Naraganganj (below)

Dhaka: On the Way to 40 Million?

Dhaka is one of the world’s newest megacities, with an urban agglomeration over 10.7 million population (based upon United Nations population growth rate projections). There are few urban areas in the world that are growing faster than Dhaka. Historically, nearly one-third of the urban population increase in Bangladesh has been in Dhaka. This seems likely to continue, since the nation has few other urban centers. The second largest, Chittagong, is just one-third the size of Dhaka. At projected urban population growth rates, Dhaka could have 40 million people by 2050, which is 5 million more than live in Tokyo-Yokohama today.

Dhaka: World’s Most Dense Urban Area

With its strong population growth (based upon the 2008 government estimate and the projected growth to 2009), Dhaka appears to have emerged as the world’s most dense major urban area, displacing Hong Kong. Dhaka has a very small urban footprint, covering only 110 square miles (285 square kilometers), which with its population of nearly 10,700,000 represents a density of 97,000 per square mile (37,000 per square kilometer).

A few examples illustrate the hyper-density of Dhaka.

- The world's largest urban area, Tokyo-Yokohama, covers nearly 30 times as much land area and has a population of approximately 35 million. At Dhaka densities, Tokyo-Yokohama's urban footprint would accommodate nearly 300 million people --- almost as many people as live in the United States.
- The world's largest expanse of urbanization, New York, covers more than 40 times as much land area as Dhaka. If New York were as densely developed as Dhaka it would have 430 million people, a population nearly equal to that of the United States and Japan combined.
- Many urbanologists express admiration for Portland, Oregon's densification policies. Yet, Portland covers nearly more than 4.5 times as much land as Dhaka, while having less than 1/7th the population. If Portland were as dense as Dhaka, it would be home to 46 million people, almost as many people as live in California, Washington and Oregon.

However, due to its large average household size (4.7), Dhaka does not have the most dense housing patterns in the world. That title continues to reside with Hong Kong, which has only 2.9 persons per household. Dhaka's has a density of approximately 20,600 residences per square mile (8,000 per square kilometer), compared to Hong Kong's 24,400 per square mile (9,400 per square kilometer).

Further, Dhaka's residential buildings are far less imposing than those in Hong Kong. Part of the reason is that so many of Dhaka's residents live in slums (shantytowns) that are generally hidden from the view of major streets (below).

However, Dhaka *feels* every bit as dense as the data shows. People are everywhere, whether crowding on sidewalks, crowding in buses or milling around bus stops and stations waiting to be picked up. Further, the large green areas, government facilities military installations and two international airports (one now converted into the National Parade Grounds) consume a large share of Dhaka's land area, making the high density even more imposing.

Poverty

Bangladesh is a poor country. Most recent estimates place the gross domestic product per capita of Bangladesh at under \$1,500 annually (purchasing power parity). Progress is being made, principally from the fruits of globalization. There has been strong growth in garment production and huge numbers of jobs have been created. However, even this progress is threatened by inward-looking anti-trade movements in developed countries whose proponents ignore the likelihood that their policies would drive the poor of Dhaka (and elsewhere) into even more intense poverty. Even if these selfish intentions fail, it will take decades for Bangladesh to join the ranks of middle income nations, much less high income nations. That, nonetheless, should be the objective.

Dhaka's Urban Form

Dhaka has a very small urban footprint, covering only 110 square miles (285 square kilometers), ranking it approximately 270th among the more than 850 urban areas in the world with more than 500,000 population (Slide 2). The urban area is from 5 to 7 miles wide (8 to 11 kilometers), east to west and 15 to 20 miles (25 to 30 kilometers) long, from north to south.

Dhaka is a decentralized urban area. There are at least three cores, the apparent strongest of which is the area around Old Dhaka, to the south of the urban area (Slides 124-199). This area includes considerable green space, most government offices and universities. There is a second core in the middle of the urban area, in the vicinity of the National Assembly Hall Slide 17) or parliament building (Slides 9-123). Finally, there is a newer, more affluent the Gulshan-Banini area, which houses many diplomatic missions (Slides 307-343).

However, large commercial buildings are located all over the Dhaka area. There are significant office and commercial concentrations in the Uttara Model Town (Slides 263-270), north of Zia International Airport as well as in Dhanmondi, also in the central area.

The garment industry is Dhaka's largest employer. Garment factories are located throughout the urban area (Slides 203, 238, 252, 256, 273 & 284) and there are billboard reminders of the urban area's reliance on the industry (Slide 306).

Despite its high density, Dhaka's density is visibly different than that of Hong Kong, which was until recently the world's most dense urban area. There are many mid-rise buildings, at five to 10 floors. There are also a number of taller buildings, but there are none of the more than 50 story residential and office towers that are so common in Hong Kong. Currently, Dhaka's tallest building is less than 40 stories and relatively few buildings exceed 20 floors.

The central sector also includes Bashundhara City, which the owners claim is the largest shopping center in South Asia (Slides 24 & 25). There are approximately 1,500 stores on 8 levels. This center, however, is markedly different than most enclosed shopping malls. Generally, the stores are very small and the usual international stores are few in number. Most stores appear to sell music CDs or apparel. In March of 2009, a fire gutted the upper stories of the office building on top of the shopping center.

Green Dhaka: Despite its unequaled density, Dhaka has considerable amounts of green space, befitting a national capital. The National Assembly Hall is located in a large green area near the center of the urban area. National government offices and ministries and universities are also located in large green areas, in the older center, near Old Dhaka.

Housing

Nearly all housing in Dhaka is multi-unit. Many of the buildings are low-rise, however the area is densifying as property owners develop higher rise buildings (For example, Slides 47-53). Developers often propose building higher rise buildings and sharing the equity (often on a 60:40 basis, with 60% to the developers). This has made it possible for Dhaka to densify significantly, both in the more affluent areas and in areas that house much of the rest of Dhaka's population.

The most affluent areas are Gulshan & Banani (Slides 307-343), the Uttara New Town (Slides 266-269) and Dhanmondi, (Slides 91-103) which have upper middle income and luxury condominium and apartment buildings.

Japan Garden City: Perhaps the most significant new development is the Japan Garden City, located in Mohammedpur, in the central sector of the urban area. This high rise development will have at least 14 high rise residential towers of 16 floors as well as a shopping area. There will be an underground garage as well as a multi-storied auxiliary garage along the main road serving the project. Overall, the site is 9.78 acres and will include 1,803 residential units.

Developers claim that only 43 percent of the site is built upon, with the balance being in “greenway,” in which they include walkways, garden and vacant area. The project is being sold as “pollution free,” though the developer’s website provides no details on the latter claim.

Critics claim that much of the “greenway” is really dedicated to traffic circulation and that little of the property is usable recreation area (a school playground). Further, they note that the high-rise buildings are being built from 8 to 10 feet apart (up to 10 meters apart). The development will be very crowded indeed. The eventual population is estimated at 9,000, which would give it a population density of nearly 590,000 per square mile (more than 225,000 per square mile), which is more than the average Dhaka slum (570,000, see below).

Further, the developers estimate that the project will be supported by approximately 2,500 cars, which will provide a substantial burden to the narrow and already congested roadway (Ring Road) on which the project is located (Slides 77-83).⁵

The Slums (Shantytowns): It is estimated that nearly 40 percent of Dhaka residents live in informal housing or slums (shantytowns).⁶ These settlements tend to be “marbled” throughout the urban area, along the streams, railroads, lakes and ponds and *in* the drainage canals. They are generally hidden from the view of major streets.

However, none of the shantytowns are so expansive as can found in Mumbai. Perhaps that is because commerce is decentralized in Dhaka, with garment factories spread throughout the urban area. People in the shantytowns have to work and many walk to their jobs, both factory and domestic. Their lives are precarious. Population densities in the slums have been reported as high as 4,200 per acre, which converts to more than 2,500,000 per square mile or more than 1,000,000 per square kilometer.⁷ At that density, the population of the world could be accommodated in the Tokyo-Yokohama urban area, leaving 10 percent of the land for open space.

The average density of slums is approximately 570,000 per square mile (220,000 per square mile). Assuming the nearly 40 percent estimate of slum population, it appears that nearly 4,000,000 people live in the slums. They live on little more than 6 percent of the urban land area. However, even with the large share of the population living at these densities, the balance of Dhaka is nearly as dense as Hong Kong (see table).

⁵ Developer’s website: <http://www.jgelbd.com/index1.html>. Report critical of the project: http://www.ti-bangladesh.org/research/ES_Rajuk_Eng.pdf, page 10.

⁶ http://pdf.usaid.gov/pdf_docs/PNADI537.pdf.

⁷ <http://www.rrcap.unep.org/reports/soe/dhaka-soe-05/3-8dhaka-slum.pdf>

More than 95 percent of slum residents have access to electricity and nearly 60 percent have access to natural gas for cooking. More than 90 percent have access to municipal tap water, though nearly 99 percent of these households must share with neighbors (sometimes more than 30 households share the same tap).⁸ Often, this access to municipal utilities is pirated (illegal).

Table Dhaka: Estimated Population Density: Overall and Slums: 2009					
	Population	Square Miles	Density	Square Kilometers	Density
Other than Slums	6,690,000	103.0	65,000	267	25,100
Slums	3,995,000	7.0	570,000	18	220,100
Urban Area	10,685,000	110.0	97,100	285	37,500

Most of the slum dwellings are single story. The Begunbari slum (Slum #1, Slide 6), which we visited, is an exception. Many of the buildings in this slum are two floors, with individual residences confined to a single floor. The buildings are raised by bamboo pilings above the flood channel in which they are located. The government is in the process of condemning this slum (Slide 345-378).

Two other slums were visited. Slum #2 (Slide 6) was along the Buriganga River on the northwest side of the urban area. This small slum has developed on the riverside slopes of the floodwall (Slides 379-385). Slum #3 (Slide 6) was also located in the northwestern sector, adjacent to a pond. This slum was smaller than Begunbari (Slides 379-400). Here, we were able to make a brief visit to an NGO elementary school (Slide 401).

Dhaka: The Ultimate in Rural to Urban Exodus

In recent centuries, the principal migration of the world's population has been from rural areas to urban areas. As late as 1900, less than 20 percent of the world's population lived in urban areas. That figure has now risen to more than 50 percent. Urbanization occurred earliest in the first world, as the increased wealth produced by the industrial revolution attracted people from the countryside. In 1900, 40 percent of the US population was urban, a figure that had risen to 80 percent by 2005. Trends in Europe, Japan and other first world nations are similar.

A similar migration was slower to start in the less developed world. Only in 2005 did China achieve a 40 percent urbanization rate. Urbanization is expected to continue virtually everywhere, with the world rate increasing to 70 percent by 2050. Despite its later start, the rate of urbanization in the developing world far exceeds that achieved decades ago in the developed world.

Nowhere, however, are the trends more stark than in Bangladesh and its capital, Bangladesh is approaching 160 million people, despite having a land area less than that of Wisconsin. Its population density, rural and urban combined, is approximately 3,200 per square mile (1,250 per square kilometer) and is nearly equal to that of the Portland urban (urbanized) area, which had 3,300 per square mile. The nation's population density is more than three times the threshold

⁸ http://pdf.usaid.gov/pdf_docs/PNADI537.pdf.

used by census authorities in the United States, France, the United Kingdom and Canada for delineation of urban areas.

However, most of Bangladesh is not urban. The United Nations puts the urban share of the Bangladesh population at 28 percent, barely two-thirds of the less developed world average. Even this is a stunning increase from the less than 5 percent of 1950. By 2050, the United Nations says that Bangladesh will add 87 million people, 97 million of whom will be added to urban areas. The rural population is expected to decline as the urban population rises to near 60 percent.⁹

Passenger Transport

Dhaka's transportation system is poorly developed. The urban area, as noted above, is elongated, north to south. The centers are generally on a north to south axis, which creates considerable travel demand. Yet, there are only two or three major roads that traverse most of the urban area. The principal road is generally four to six lanes, though expands to eight lanes near Zia International Airport. An unusual feature of Dhaka's roads is the large number of overhead electrical wires that are typical. Many of these wires fall to street level and one must be careful, as a result, to avoid them walking on sidewalks (Slides 21 & 67).

The Inspector General of Police estimates that the main road is blocked for 6 hours per day at railroad crossings. Needless to say, with its density inducing traffic congestion and insufficient road infrastructure, Dhaka's traffic is horrific (Slides 42 & 46).¹⁰

There are no freeways in the Dhaka area, which is the only one of the world's megacities without a freeway. At present, there are plans to build an elevated freeway ring road around the urban area.

Dhaka is the only one of the world's megacities that does not have English or French language road signs along with those in the native language. In the case of Bangladesh, this means that the road signs are in Bangla, which has its own script and is unfamiliar to westerners. As a result, travel by rental car travel by westerners most difficult.¹¹

Public Transport: Public transport is principally by three modes --- the buses, which are hideously crowded (Slide 59 & 65), the auto-rickshaws (Slide 153 & 155) and the human powered rickshaws (Slide 36, 171, 187 & 286). There are also vehicles that carry six to eight passengers sitting laterally in the back, somewhat similar (though smaller) than the "jeepneys" of Manila. There is a large and crowded bus station at Farmgate, in the central area (Slides 8 and the logo for this rental car tour (above and on section dividers in slides).

Local officials have variously talked about improving the limited suburban rail service that operates from Naraganganj through Dhaka to Tongi. There has also been discussion of building

⁹ <http://esa.un.org/unup/index.asp?panel=1>

¹⁰ http://www.amchambd.org/amcham2/all_files/Speech%20on%20Traffic%20Jam%20By%20IGP.doc,

¹¹ In the case of most Rental Car Tours, the author rents a car. However, there are two exceptions. Generally, in lower income countries where driving is on the left, taxis are hired, while in China it is nearly impossible to rent a car without a local drivers license, which also necessitates taxis.

urban rail lines or rapid busways, in the expectation that this would reduce traffic congestion. There is the potential for such rapid transit systems to reduce traffic congestion, but only by attracting passengers from buses and reducing bus traffic. It is unrealistic to expect automobile users to switch to any such rapid transit system and, indeed, the demand for personal transport is rising rapidly. Dhaka's transport problems seem likely to only become worse.

The principal problem is that Dhaka's density is far too high for an urban area to perform productivity. There is some land to the east of the urban area that can be developed, but it seems likely that this land (and more) will be required for the huge projected population increase. In short, Dhaka's transport challenge seems overwhelming in dimensions that are unimaginable even in the world's other most congested urban areas, such as Mumbai, Manila and Jakarta.

Air Pollution: Despite the traffic congestion, the air pollution could be far worse. All of the auto-rickshaws and a large share of Dhaka's cars operate on natural gas.

The Draw of Dhaka

Why do they come to Dhaka? What is the draw of a place that to western eyes could be dismissed as one of the least attractive urban environments in the world? It is the same incentives that drew people to Chicago from the countryside and to Sao Paulo from the sugar plantations. People routinely seek better lives. As with Jakarta and Manila, rural populations did not migrate to Dhaka because they were better off where they came from. Moreover, virtually all of the migrants from rural areas could return home tomorrow. Not surprisingly, few do.

Dhaka: City of Hope

Of course, it is all a matter of perspective. Dhaka may not look pleasing to affluent foreigners. Few residents of Portland, Paris or Perth would willingly make permanent moves to the poverty of Dhaka. But despite the intensity of its challenges, for the rural poor of Bangladesh, Dhaka is a city of hope. but for the rural population of Bangladesh, Dhaka is a city of hope.

APPENDIX: NAYARANGANJ URBAN AREA

NAYARANGANJ : BASIC INFORMATION		World Rank	Similar To
Urban Area Population (2009)	655,000	563	Quebec, Concepcion, Bremen, Okayama
Projection (2025)	Likely to be absorbed by Dhaka	---	Not Applicable
Urban Land Area: Square Miles (2009)	12	763	Magadan, Oxford, Davis (Calif.), Warnambool (Victoria)
Urban Land Area: Square Kilometers	31		
Density: Per Square Mile (Latest)	54,600	8	Mumbai, Macao
Density: Per Square Kilometer (Latest)	21,100		

Nayaranganj is an urban area with 650,000 population, approximately 10 miles (16 kilometers) south of Old Dhaka's historic core (Slides 401-420). Today, Nayaranganj is nearly connected to

Dhaka by a thin strip of urbanization with a gap of between one and two miles (two to three kilometers) and is thus not considered a part of the Dhaka urban agglomeration.

Like Dhaka, Narayanganj is very dense, with nearly 55,000 per square mile (21,000 per square kilometer), ranking 8th in the world out of the more than 850 urban areas with populations exceeding 500,000.

However, it seems likely that the continued growth of both Dhaka and Nayaranganj will result in an eventual consolidation into the larger Dhaka urban area.

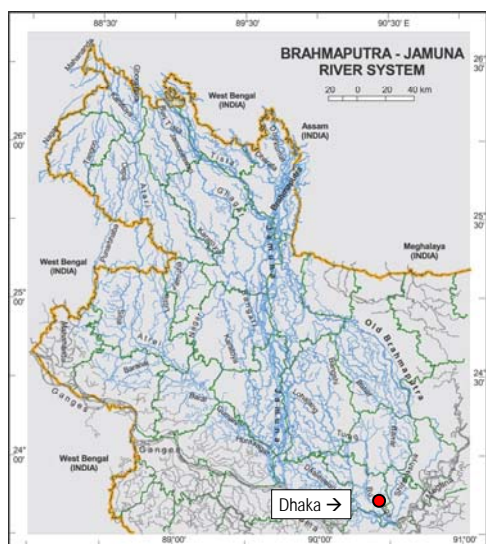
Bangali Hospitality

I spent one of the nights in Dhaka in the Gulshan Club in Gulshan, which was very nice accommodations. I was able to stay there due to the intervention of a friend of an academic colleague in Paris. Moreover, I was invited to have dinner in the house of the friend, which was a very rich experience. Overall, the hospitality in Bangladesh was marvelous.

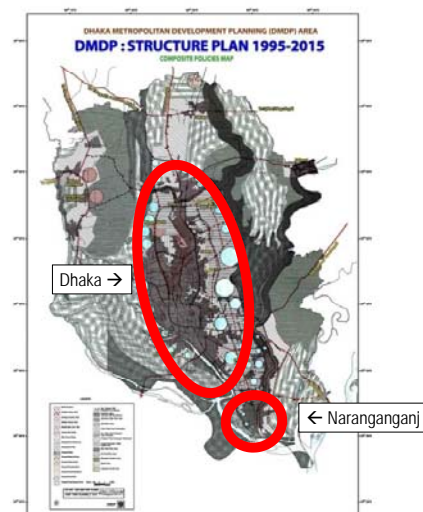
<http://www.rentalcartours.net> <http://www.demographia.com> <http://www.publicpurpose.com>



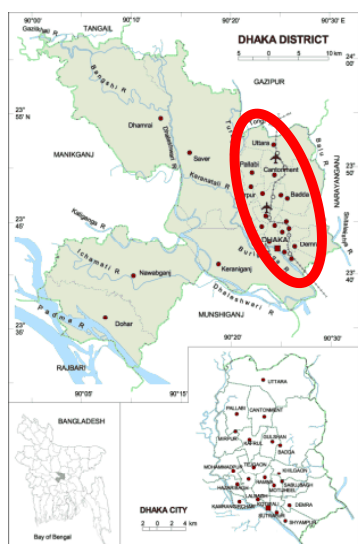
Rental Car Tour: Dhaka



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Dhaka-Chittagong Highway



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Northeast





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Gulshan & Banini





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