

URBAN INDIA USING GEOGRAPHICAL TOOLS

Dr Susan Bliss

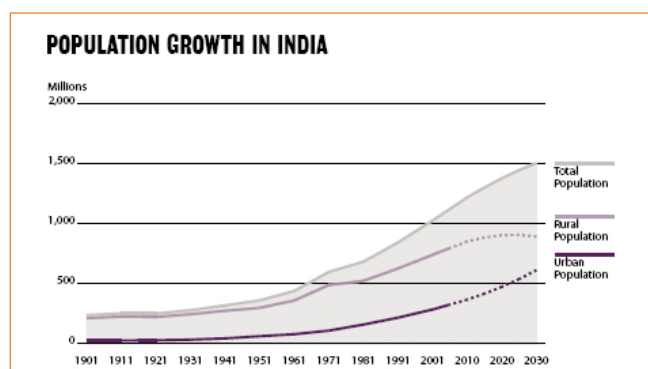


Information Source: Urban India:
Understanding the Maximum City
[http://v0.urban-age.net/0_downloads/
UrbanAgeIndiaNewspaper-web.pdf](http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf)
Photograph: S.Bliss

Asia is experiencing high rates of urbanisation especially cities in China and India. In the 1990s India's population grew by 23% but faster growth was experienced in the main cities. Delhi grew by 70%, Bangalore 38% and Mumbai by 21%. Cities are chronically overcrowded and traffic jams are common. Of India's 300 million urban dwellers 100 million live in slums without access to clean water, sanitation and power. However, Indian cities, such as Mumbai, are linked to the rest of the world through finance, tourism, trade, culture, technology, aid and international agreements.

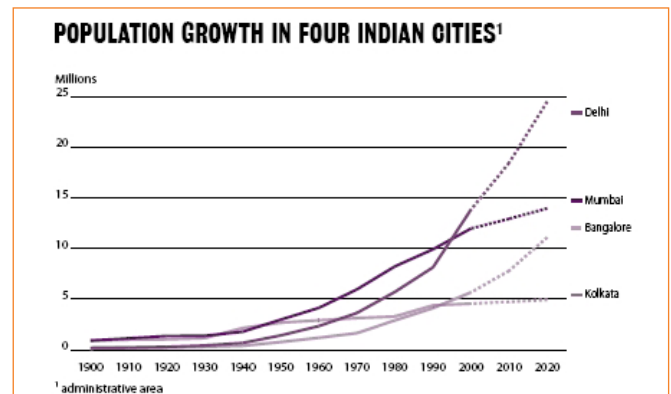
Urbanisation in India 1901–2030

Graph: Urban growth



Source: [http://v0.urban-age.net/0_downloads/
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Graph: Urban growth in four Indian cities 1900–2020



Source: [http://v0.urban-age.net/0_downloads/
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Activities

- Calculate the difference in the total population in India from 1901 to 2030
- What are the percentages of Indians living in urban areas in 1901, 2010 and 2030?
- List the pull forces attracting Indians to move to cities

Activities

- What city had the largest population in 1980?
- What city is expected to contain the largest population by 2020?

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Table: Population growth of urban places

POPULATION GROWTH OF URBAN AGGLOMERATIONS ¹			
	1950	2007	2020
Mumbai	2,857,000	18,963,000	23,931,000
Delhi	1,369,369	16,671,894	23,705,710
Kolkata	4,513,496	14,827,582	18,799,710
Bangalore	745,999	6,963,832	9,531,009
New York	12,338,471	19,040,493	20,369,956
Shanghai	6,066,000	14,986,000	18,464,000
London	8,361,000	8,567,000	8,618,000
Mexico City	2,883,000	19,957,000	22,185,000
Johanneburg	900,000	3,420,000	3,741,000
Berlin	3,351,757	3,405,954	3,435,579

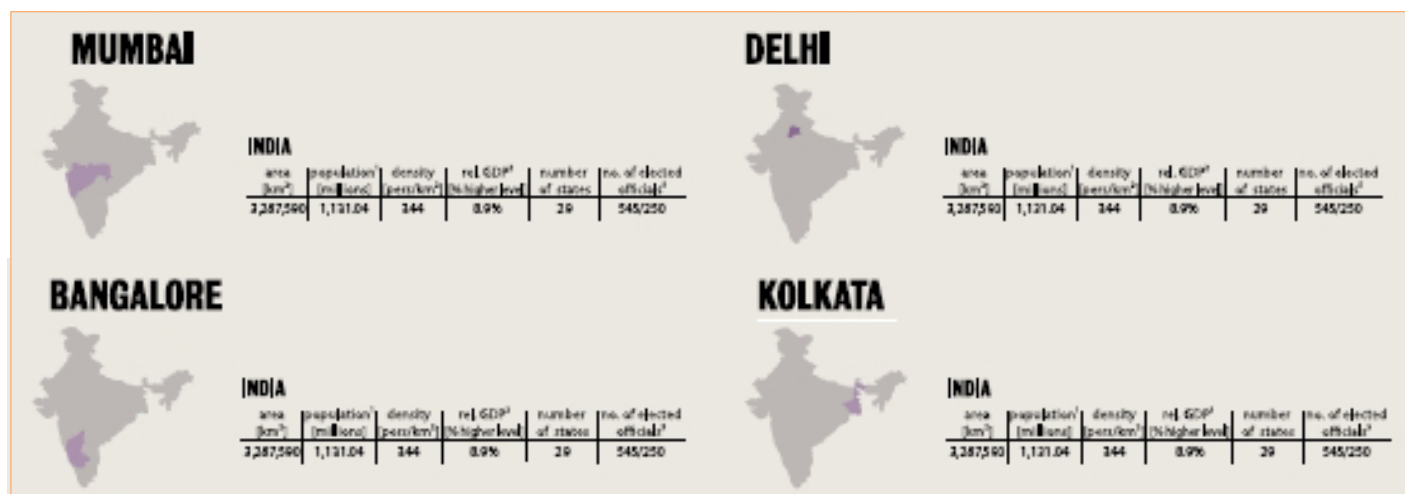
¹ according to the UN Population Division

Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

Activities

- List the four Indian cities in the table.
- Calculate the difference in the populations of Mumbai, Delhi, Kolkata/Calcutta and Bangalore between 1950 and 2020.
- Rank in order from the largest to the smallest population of cities in 2020. List the ranks of the four Indian cities

Table: Comparing cities



*Note these figures are a few years out of date

Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

Activities

Name the city with the:

- Largest area
- Largest population
- Smallest density of population.

Comparing density

High density in Mumbai is indicated in the mountainous peaks in the diagram. Delhi occupies a larger area with less dense areas than Mumbai.

The ability of Indian cities to accommodate high numbers of people is reflected in the huge number of squatter and slum settlements. In some areas in Mumbai such as Dharavi, known for the movie *Slum Dog Millionaire*, accommodates 100,000 residents per Km²

AVERAGE DENSITIES OF CITY AND REGION – PERS/KM²

City	Metropolitan Region	Administrative City	Inner City (10 km radius)	Peak Density
Mumbai	4,080	27,348	34,269	101,066
Delhi	1,227	9,340	19,636	96,460
Kolkata	7,978	24,454	20,483	78,355
Bangalore	1,050	19,040	18,225	75,169
New York	783	9,551	15,361	53,000
Shanghai	2,619	2,619	24,673	96,200
London	679	4,795	7,805	17,200
Mexico City	3,796	5,877	12,541	48,300
Johannesburg	521	1,962	2,270	38,500
Berlin	818	3,810	7,124	21,700

Activities

- Compare density between Mumbai and Delhi.
- Explain why Mumbai contains more people than New York.

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Photograph: Dharavi



Source: <http://ngm.nationalgeographic.com/2007/05/dharavi-mumbai-slum/jacobson-text>

Photograph: Overview of Dharavi



Source: <http://pdsmith.tumblr.com/post/4065873570/radarqnet-dharavi-largest-slum-in-asia>

Activities

- What proportion of Mumbai is built up?
- List the other uses of land in Mumbai

Urban morphology

The spatial structure of Indian cities shows a compact arrangement of buildings.



Old Delhi is located around a circular layout of Connaught Place

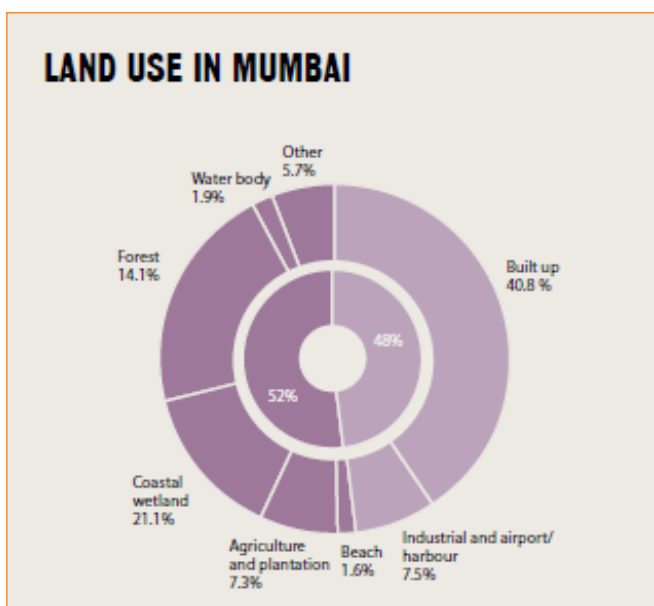


Kolkata or Calcutta shows a 1960s redevelopment of a former wetland. It reveals space and a regular grid pattern



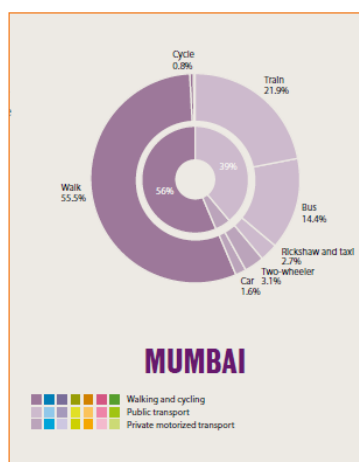
Bangalore surrounds a central park with regular street patterns.

Graph: Landuse in Mumbai



Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

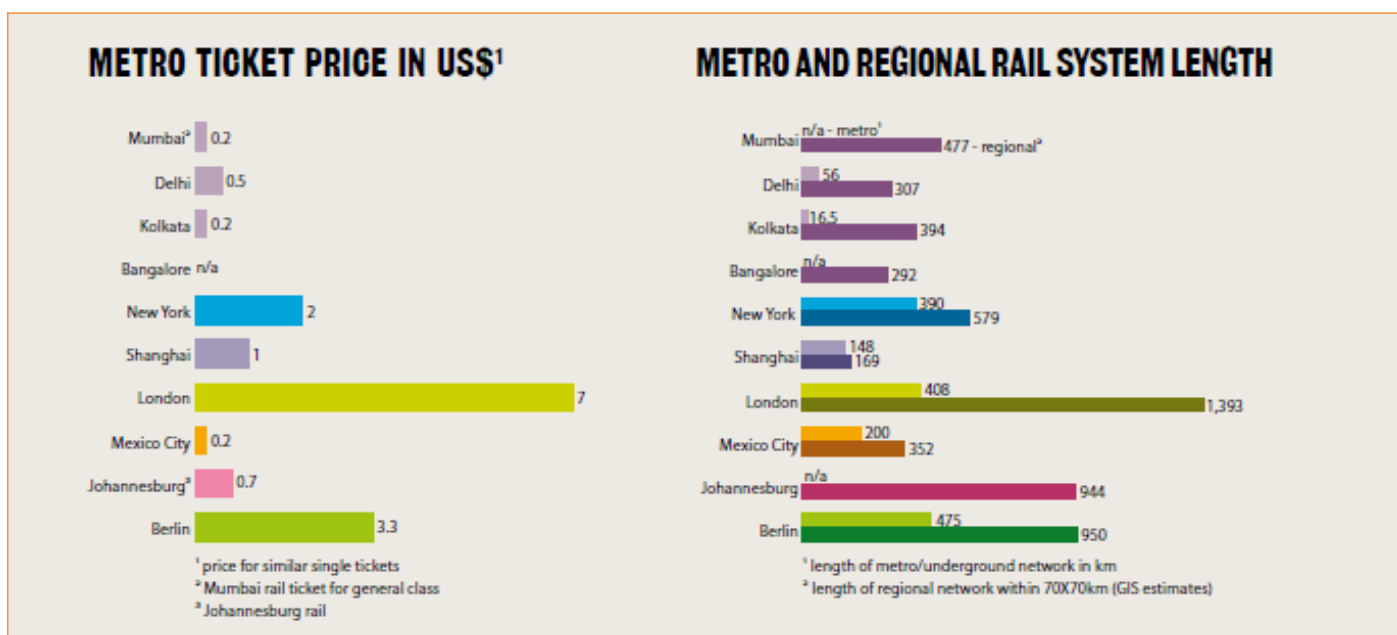
Graph: Mode of transport



High proportion of Indians walk or take public transport as their home and place of work is close. In Mumbai walking makes up 55.5% of all forms of travel with few using cars. This contrasts with Los Angeles where 80% of the workforce drives to work

Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

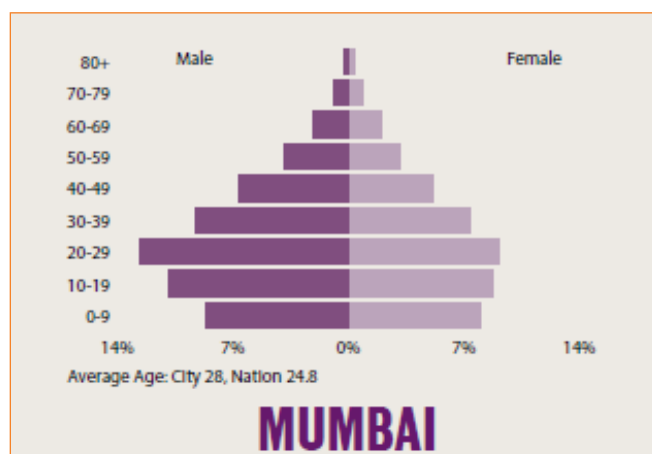
Graph: Cost of public transport



Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

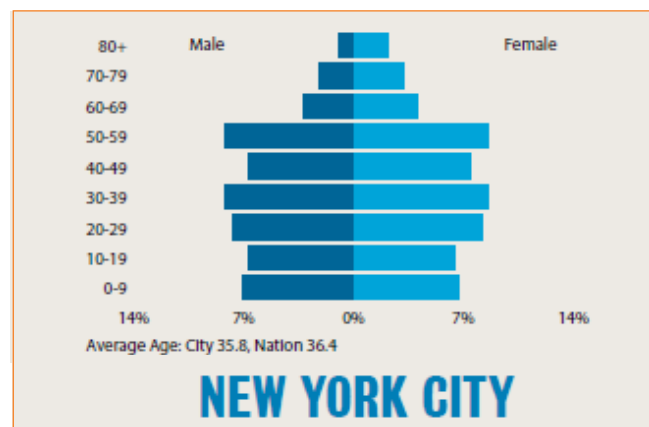
Tickets in Indian cities are 10 to 30 times cheaper than in London and reflect the importance of the metro system as a mode of transport. Also Mumbai contains extensive rail infrastructure

Graph: Population pyramid



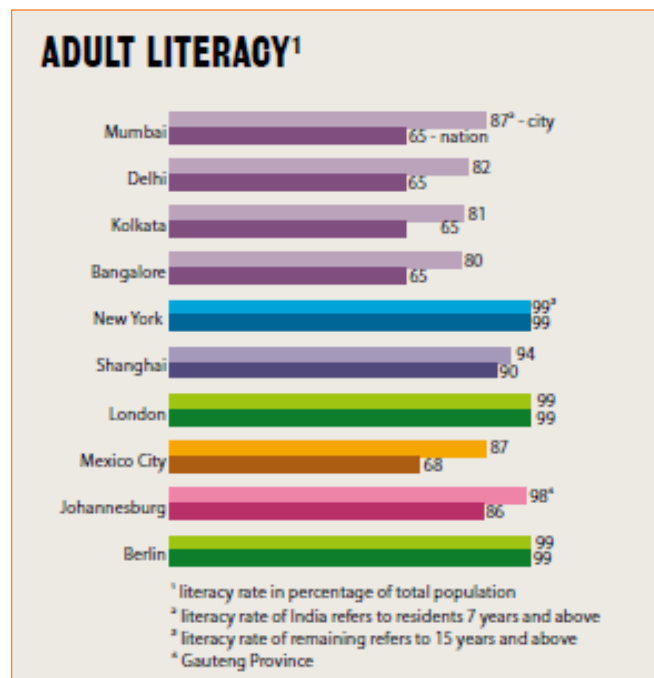
Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

There are more males than females living in Mumbai and more males in the working age group.



Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

Graph: Adult literacy



Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

Adult literacy is higher in all Indian cities compared to the national average. Large cities offer better educational opportunities

Activities

- Calculate the difference between males and females in the 20-29 age group
- What is the difference between the average age in Mumbai and India's average age?
- Compare Mumbai's population pyramid with New York

Photograph: Access to water and electricity



Source: J.Bliss

DVD: Slumming it!

Slums: India

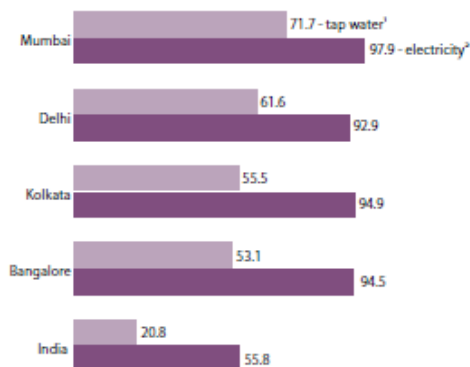


Kevin McCloud immerses himself in one of the most extreme and densely populated places on earth: Dharavi, Mumbai. Over one million people are crammed into 2.6 square kilometres. Living and working with the locals, Kevin explores the 15,000 one-room industries contained within the slum. Despite the hardships of life in the area, Kevin discovers an extraordinary sense of spirit

and community and reflects on the lessons Western cities could learn from its sustainable society.

Cost: \$24.99

HOUSEHOLDS WITH TAP WATER AND ELECTRICITY



¹ percentage of households with tap water within premises
² percentage of households with electricity as source for lighting

Source: http://v0.urban-age.net/0_downloads/UrbanAgeIndiaNewspaper-web.pdf

Activities

- Name the city with greatest access to electricity and tap water
- Explain why there are more facilities in Indian cities than the national average

Photograph: Roadside dwelling, Dharavi



Source: http://getgem.files.wordpress.com/2011/02/img_6826-hut.jpg

YouTube Trailer <http://www.youtube.com/watch?v=sTu5bOrKols> 10.02 min

Mumbai's Slums – the Real Scene Behind 'Slumdog Millionaire' <http://www.youtube.com/watch?v=qtksvNUVF5Y&feature=related> 3.39 min

Dharavi Slum Rehabilitation – <http://www.youtube.com/watch?v=gYa6oolD1ZE&feature=relmfu> 8.57 min