Urbanisation: global patterns and trends

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A unit on the increasing pattern of urbanisation across the world

The unit explores the current statistics about urbanisation, and the location of the world's megacities. It also looks at the causes and subsequent impacts of their growth. Mumbai in western India is used as an example. This megacity is growing at a rapid rate and is likely to exceed 30 million people by 2030. This has led to a huge number of urban challenges for the authorities. The case study on Mumbai covers:

• its location
• plans for the future of the city
• strengths that Mumbai has as a developing world city
• weaknesses and challenges that face Mumbai
• opportunities for its future development
• threats facing its future development.

Key vocabulary

urbanisation, world city, economic development, megacity, push and pull factors, urban challenges, infrastructure, informal economy

Learning outcome

In this unit you will:

• learn about key patterns and trends in urbanisation across the world
• apply this to a key case study of a developing world nation.

Relevance to specifications

Exam board	Link to specification
AQA	Paper 2: Challenges in the human environment, Section A: Urban issues and challenges, see pages 17–18 http://filestore.aqa.org.uk/resources/ geography/specifications/AQA-7037-SP-2016-V0-3.PDF
Edexcel A	Component 2: The human environment, Topic 4: Changing cities, see page 17 http://qualifications.pearson.com/content/ dam/pdf/GCSE/Geography-A/2016/ specification-and-sample-assessments/ Specification_GCSE_L1-L2_Geography_A.pdf
Edexcel B	Component 1: Global geographical issues, Topic 3: Challenges of an urbanising world, see pages 13–15 http://qualifications.pearson.com/content/ dam/pdf/GCSE/Geography-B/2016/ specification-and-sample-assessments/ Specification_GCSE_L1-L2_Geography_B.pdf
OCR A	Component 1: Living in the UK today, 1.2 People of the UK, 1.2.5, see page 7; Component 2: Content of the world around us, 2.2 People of the planet, 2.2.5, see page 11 http://www.ocr.org.uk/Images/207306-specification-accredited-gcse-geography-a-j383.pdf
OCR B	Component 2: People and society, Topic 5: Urban futures, 5.1a, see page 11 http://www.ocr.org.uk/Images/207307-specification-accredited-gcse-geography-b-j384.pdf
Eduqas A	Component 1: Changing physical and human landscapes, Section A: Core theme 2: Rural-urban links, Key idea 2.3, see page 11 http://www.eduqas.co.uk/qualifications/ geography/gcse-a/GCSE-Geog-A-Spec. pdf?language_ id=1&dotcache=no&dotcache=refresh
Eduqas B	Component 1: Investigating geographical issues, Theme 1: Changing places – changing economies, Key idea 1.1 and 1.2, see pages 7–8 http://www.eduqas.co.uk/qualifications/ geography/gcse-b/GCSE-Geog-B-Spec. pdf?language_ id=1&dotcache=no&dotcache=refresh
WJEC A	Unit 1, The Core, A global world, Theme 4 Changing populations, see page 16 http://www.wjec.co.uk/qualifications/ geography/geography-gcse/16128. pdf?language_ id=1&dotcache=no&dotcache=refresh
WJEC B	Theme 1: Challenges of living in a built environment, see page 14 http://www.wjec.co.uk/uploads/ publications/17213.pdf?language_ id=1&dotcache=no&dotcache=refresh
Cambridge IGCSE	Theme 1: Population and settlement, 1.7 Urbanisation, see page 14 http://www.cie.org.uk/images/150857-2016-syllabus.pdf
Edexcel IGCSE	Section B: People and their environments, Topic 6: Urban environments, see page 11 http://qualifications.pearson.com/content/ dam/pdf/International%20GCSE/ Geography/2011/Specification%20and%20 sample%20assessments/UG030050-International-GCSE-in-Geography-master-booklet-spec-SAMs-for-web-220212.pdf

Urbanisation: global patterns and trends

Introduction

We live in an urban world where over 50% of the population live in cities (Figure 1). It is estimated that by 2050 the figure will be over 66%. This pattern across the world is uneven in terms of density and distribution of people, and there are different reasons for the development of some areas over others. Tokyo continues to be the world's largest city on the planet but by the middle of this century it will be closely followed by cities such as Delhi. By 2050 the urban growth will be taking place mainly in Africa and Asia – and that brings its own unique challenges.

North America and Latin America & the Caribbean still lead the way, with 80% of the population living in urban areas, closely followed by Europe above 70%. These regions urbanised many years ago for a variety of reasons. In North America and Europe, resources such as iron ore and coal played an important role in the development of urban areas, as did proximity to the coast for trading which led to the development of cities such as London and New York, two of the world's most important 'world cities'.

In Latin America the pattern has been slightly different, with a few cities dominating the growth, most notably São Paulo and Rio de Janeiro, both located on the coast. Much of Latin America's terrain does not allow for the development of urban areas inland. India and China now have 11 of the top 30 largest cities. This is partly due to their huge populations which encourage large cities to develop. It is also due to their recent rapid
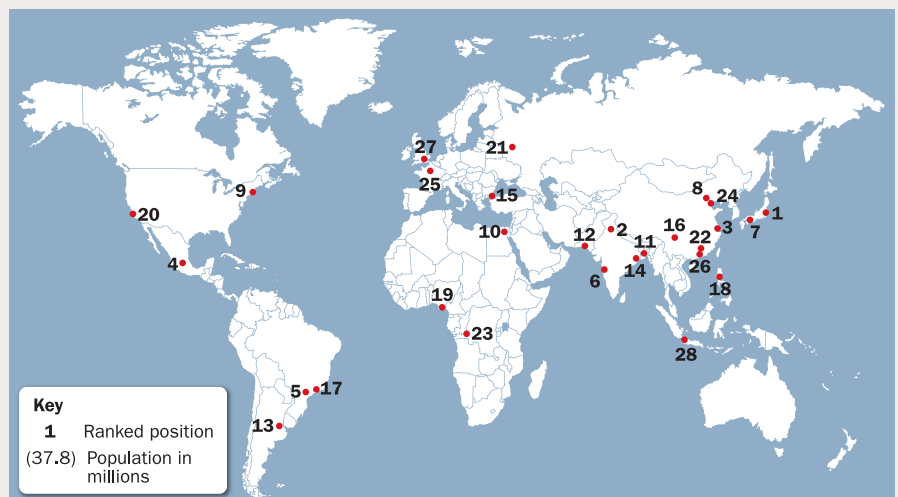
economic development: outsourcing and telecommunications in India, and manufacturing in China. By 2050 a new generation of cities will have developed, with Tianjin, Bangalore and Kinshasa being new important megacities.

The era of the megacity

In 1990 there were 10 megacities – now there are 28 (Figure 2). By 2050 there are expected to be over 40 of these cities. It is not just the number of megacities that has increased but also their size. Shanghai was 20th largest in the world in 1990 with 7 million inhabitants. It is now the 3rd largest,

with over 23 million in 2014. Most notable is Shenzhen in China, which with 10.7 million people is 26th in the world: in 1990 it was 308th with only 875 000 people. Economic growth has triggered mass migration, while natural increase is changing the world's urban make-up. By 2030, places like Dongguan in China will be among the world's top 50 cities – in 1990 they were outside the top 500.

> **In 1990 there were 10 megacities – now there are 28.**

	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2014
Urban population (% of total)	33.6	35.5	36.5	37.7	39.3	41.1	42.9	44.7	46.5	49.0	51.5	53.4
Rural population (% of total)	66.4	64.5	63.5	62.3	60.7	58.9	57.1	55.3	53.5	51.0	48.5	46.6

Figure 1 World rural and urban populations, 1960–2014

Key
1   Ranked position
(37.8) Population in millions

1 Tokyo (37.8)
2 Delhi (25.0)
3 Shanghai (23.0)
4 Mexico City (20.8)
5 São Paulo (20.8)
6 Mumbai (20.7)
7 Osaka (20.1)
8 Beijing (19.5)
9 New York (18.6)
10 Cairo (18.4)
11 Dhaka (16.9)
12 Karachi (16.1)
13 Buenos Aires (15.0)
14 Kolkata (14.8)
15 Istanbul (14.0)
16 Chongqing (13.0)
17 Rio de Janeiro (12.8)
18 Manila (12.8)
19 Lagos (12.6)
20 Los Angeles (12.3)
21 Moscow (12.1)
22 Guangzhou (11.8)
23 Kinshasa (11.1)
24 Tianjin (10.9)
25 Paris (10.8)
26 Shenzhen (10.7)
27 London, UK (10.2)
28 Jakarta (10.2)

Figure 2 World megacities, 2014
Source: United Nations Urbanisation Prospects 2014

It is not only size that is changing. Cities are developing with functions that have social, economic, environmental, political, infrastructural and technological importance. Currently London and New York are the top two world cities with Alpha++ status, meaning they have a leading role in the global economy. Both act as hubs for finance, commerce, production, migration, technology and transport, and have done so for the last century. However, cities such as Mumbai (Alpha) and Bangkok (Alpha–) are now becoming important locations in their own right and certainly will be a challenge to established cities in the future.

Urbanisation and economic development

Urbanisation and economic development go hand in hand (Figure 3). The desire for increased wealth is often found in urban areas where there are perceived advantages, and this often leads to mass rural-to-urban growth. In many cases this has taken a number of years and been accompanied by an industrial revolution. Faster-growing urban nations such as China and India have seen significant urban population increase but with major social and economic consequences. For example, in China there is a huge economic disparity between rural Gansu in northwest China where people earn on average $7400 a year, and urban Shanghai where incomes may be over $29 000.

> " Urbanisation and economic development go hand in hand. "

Country	Income per person ($)	Urban population (%)
Afghanistan	1 933	26
Australia	43 930	89
China	13 206	54
Ethiopia	1 500	19
Germany	45 802	75
India	5 701	32
Indonesia	10 517	53
Russian Federation	25 636	74
Saudi Arabia	51 924	83
South Korea	34 356	82
Sudan	4 069	34
Sweden	45 183	86
Ukraine	8 665	69
United Arab Emirates	67 674	85
UK	39 762	82
USA	54 629	81

Figure 3 Income per person (PPP) and percentage urban population for selected nations, 2014
Source: World Bank Database

Causes of urbanisation

Urbanisation is not a new phenomenon, beginning in the 1850s during the Industrial Revolution, particularly in Europe and North America. However, most urbanisation has been in the last 20 years as a result of large rural-to-urban movements. For example, in China 150 million people moved from rural to urban areas in just 10 years. This was due to both push and pull factors which can be further subdivided into social, economic, environmental and political reasons.

> " In China 150 million people moved from rural to urban areas in just 10 years. "

Push factors are those where people have been forced away from their home locations. Reasons might include:

- conflict and fear of war
- natural disasters such as volcanic eruptions or floods
- food shortages and possible famine caused by an unpredictable climate
- lack of industrialisation and mechanisation leading to low productivity and low wages
- poor-quality and limited healthcare and education services.

Pull factors are the reasons why people might be attracted to the city. Often these are perceived advantages – that is, they are seen as advantages although they may not actually be. These include:

- much less risk of natural disasters and better services to deal with these
- food, shelter and medical provision more widely available
- greater job opportunities, especially in manufacturing industries.

Urban challenges

With this massive urban expansion, cities will have to be able to cope with significant challenges facing their infrastructure. Many cities have already gone some way to solve the problems of their urban populations but many still have significant work to do (Figure 4).
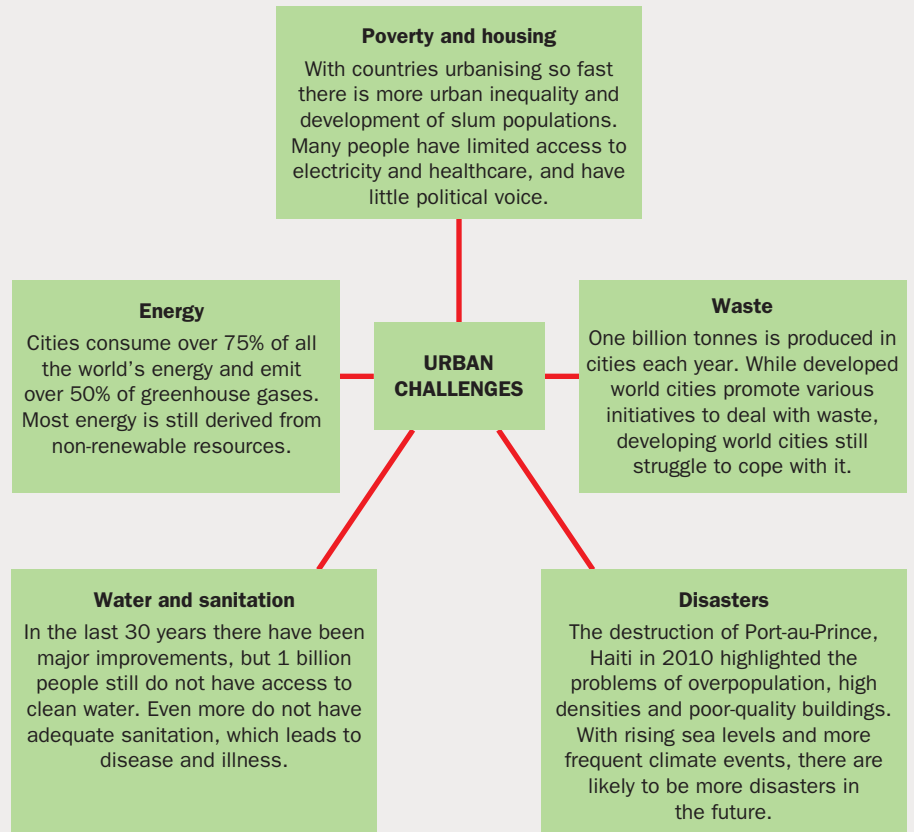
Poverty and housing
With countries urbanising so fast there is more urban inequality and development of slum populations. Many people have limited access to electricity and healthcare, and have little political voice.

Energy
Cities consume over 75% of all the world's energy and emit over 50% of greenhouse gases. Most energy is still derived from non-renewable resources.

URBAN CHALLENGES

Waste
One billion tonnes is produced in cities each year. While developed world cities promote various initiatives to deal with waste, developing world cities still struggle to cope with it.

Water and sanitation
In the last 30 years there have been major improvements, but 1 billion people still do not have access to clean water. Even more do not have adequate sanitation, which leads to disease and illness.

Disasters
The destruction of Port-au-Prince, Haiti in 2010 highlighted the problems of overpopulation, high densities and poor-quality buildings. With rising sea levels and more frequent climate events, there are likely to be more disasters in the future.

Figure 4 Key urban challenges for the 21st century

Case study: a developing world city – Mumbai, India

Some key facts about Mumbai:

- GDP $124 billion
- GDP per capita $5900
- Global city ranking: 12th
- Average growth rate since 1993: 6.2%

Mumbai is just one example of a developing world city that is outgrowing its location and infrastructure (Figure 5). With 12.4 million inhabitants in 1990, Mumbai now has over 20 million. It is estimated that by 2050 its population will be nearly 30 million, making it the 4th largest city on the planet.

The city dates back to 1507 but major population and economic growth started in the 19th century. Since 1995 economic growth has been significant, making Mumbai one of the most
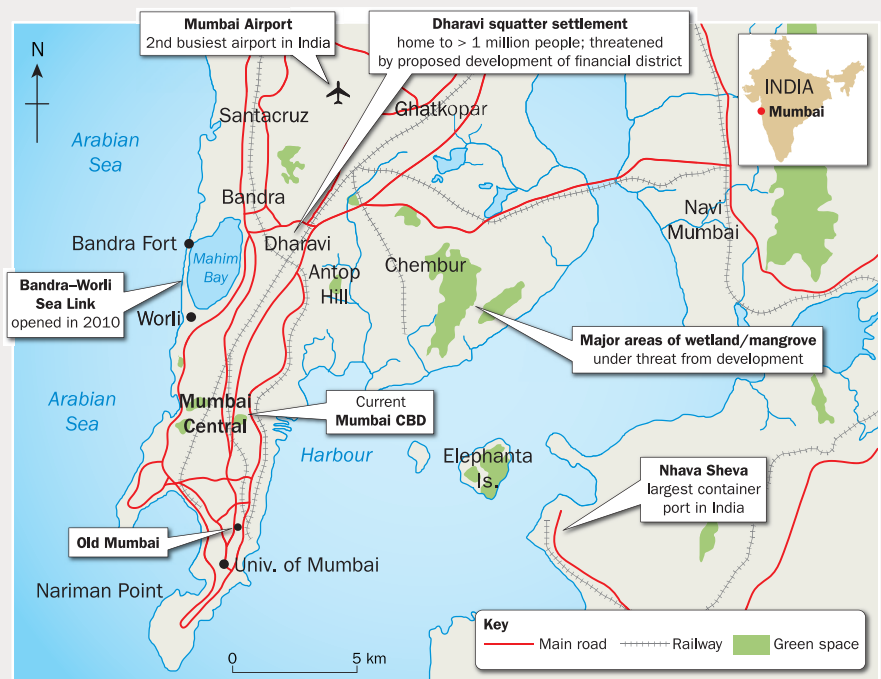

Figure 5 Mumbai

important cities in India and southern Asia (Figure 6).

As a result of massive urban growth, Mumbai is experiencing many urban challenges. More than a thousand people migrate to Mumbai every day. Over 50% live in slums and a further 30% live in makeshift homes on footpaths and under bridges. Less than 20% of the population live in suitable accommodation. Every day over

11 000 tonnes of waste are produced. This goes either straight to landfill or into the rivers that run by the city. Other problems include major transport issues, housing shortages and poor sanitation.

Various strategies have been put in place aiming to solve many of Mumbai's urban concerns. Vision Mumbai is the main scheme put forward by the government. It has several aims:

- to boost economic growth in the city and ensure the city is governed much more effectively
- to expand mass and public transport opportunities

Figure 6 Mumbai skyline
Source: Shutterstock/Kunai Mehta

- to increase housing availability and affordability
- to upgrade important infrastructure across the city.

In response, Mumbai offers strengths and new opportunities as well as facing challenges and significant threats (Figure 7).

Strengths of Mumbai	Challenges facing Mumbai
• Strong geographical location on west coast of India ideal for import and export; well situated for access to Suez Canal. • Mumbai is 12th most interconnected economy in the world. Asian HQs of several global TNCs based here. • Very important financially – HQ of Reserve Bank of India is here. • 30% of India's foreign trade passes through the port. 30 million arrivals a year at the airport. • Cultural importance: Bollywood brings in over $1 billion a year. • Mumbai Indians is a nationally recognised sports team in IPL 2020 cricket league.	• Economic growth is slowing. Mumbai has a huge informal economy (67%) so the government receives less money because workforce does not pay full taxes. • Low economic growth means less money goes towards those areas of the city that need improvement, e.g. in housing, the environment, transport. • Transport is poor: rail transport is overcrowded; only two main motorways in and to the city. • Many people live in cheap slum locations such as Dharavi: poor-quality housing, high rates of disease. • Air pollution: 57% increase in private vehicles since 2007 means high urban pollution levels. • Green space along the coast much reduced, and mangroves removed. Green space per person lowest of any city in the world. • Political decisions are slow, which limits development.
Opportunities for Mumbai	**Threats facing Mumbai**
• Large, well-qualified, young, English-speaking workforce attracts IT companies and TNCs. • Bollywood attracts investment and increases globalisation of the industry. • Plans for $10 billion of land redevelopment for commercial purposes, and to remove the city slums. Alternative plans to remodel the slum areas into sustainable, world-class townships: low-rise developments with all facilities provided – community self-help scheme to engage the local community. • Mumbai has a high-quality education system including 4 of the top 5 universities in India: ideal location for investment. • Plans to develop derelict eastern shore of Mumbai's peninsula. • Road bridge built on the western side has improved transport infrastructure; other areas could be developed and improved.	• Large underemployed population, many in poorly paid, unregulated, dangerous jobs. If these industries are closed down (by government), likely to be high unemployment affecting economic growth. • Slum redevelopment tried in 1995 but failed because new tower blocks were not maintained. New plan is to redevelop the area with 75% of space for commercial purposes and only 25% for residents, with healthcare services, etc. To date only limited progress. • Serious flooding in the city in 2005 (1094 people died). With blocked rivers and coastal development there is likely to be more flooding during the monsoon.

Figure 7 'SWOT' analysis for Mumbai

Activities

1 a Using the data in Figure 1, draw a line graph to show the changes in world urban and rural populations since 1960.

b Describe the changes since 1960 shown by your graph. Why do more and more people on Earth live in urban areas?

2 a Using a blank world map, locate and label the top 10 megacities. Use a proportional size dot (1 mm to 1 million people) to indicate the size of the city on your map.

b Describe the distribution of the largest cities in the world.

c Explain their distribution.

3 Study Figure 8.

a Copy the table and complete the 'Total' row.

b Construct a composite bar chart to show the figures for the three years.

c Describe the changes between 1990 and 2030.

4 a Using information in Figure 3, plot a scatter graph of average income against percentage of urban population for each country. (**Hint:** % urban population on the x axis and average income on the y axis.)

b Describe the pattern (or correlation) shown by your graph. Is this a positive, negative or random correlation? Why do you think this pattern has occurred?

c Explain why the lower-income countries have a lower percentage urban population.

5 Explain why cities are urbanising so rapidly in the 21st century. Try to categorise your ideas into *push* and *pull*. Then further categorise these into social, economic, environmental and political reasons.

6 Write a brief paragraph to outline what you feel is the most important urban challenge facing the world.

Discussion exercises

7 Working in groups, discuss:

- what are the most significant strengths of Mumbai
- the greatest challenges facing the city
- the best opportunity
- the greatest threat facing Mumbai in the future.

8 What would you do to improve Mumbai if you were one of the following?

- An urban slum dweller
- The Minister for the Economy
- The Minister for the Environment
- An urban developer.

	1990	2014	2030
Megacities – 10 million people or more	10	28	41
Large cities – 5 to 10 million people	21	43	63
Medium cities – 1 to 5 million people	239	417	558
Cities of 500 000 to 1 million people	294	525	731
TOTAL			

Figure 8 Size of the world's cities, 1990, 2014 and 2030

Learning checkpoint

- Urbanisation across the world continues to increase: Asia and Africa are the fastest growing regions in the world.
- Megacities are growing in size and number, along with economic development.
- Some key social, economic, environmental and political challenges face cities in the future, needing careful management.
- Mumbai is a good example of a developing world city experiencing mass urbanisation and serious challenges – but with great potential for its future development.

Glossary task

Write glossary definitions of the following:

economic development

informal economy

infrastructure

megacity

push and pull factors

urban challenges

urbanisation

world city

Remember this case study

To help you remember this case study, make notes under the following headings:

Key location aspects of Mumbai

Key challenges facing Mumbai

Aims of Vision Mumbai

Key advantages that Mumbai has for future growth

Key disadvantages that Mumbai has facing its future growth

Try to make your notes fit a single sheet of A4, focusing on at least 15 key facts to help you show detail in your exam.