

# Unit 2 People and the Planet

## Topic 6 The Challenges of an Urban Worlds

### **Global Urbanisation trends**

Urbanisation - the movement of people from rural areas to urban areas like towns and cities.

Urbanisation is happening around the world, and in 2007, for the first time, the number of people living in urban areas was greater than the number of people living in rural areas.

However, the number of people living in urban areas is not the same across the world and it varies between places. In the developed world, 78% of the population live in urban areas while in the developing world, only 46% of the population live in urban areas.

### **Urbanisation in developing countries**

People are still moving to towns and cities because of the lack of jobs in the countryside (push factor)

There are more jobs in the towns and cities attracting more people to move to them (pull factor)

Rate of urbanisation is greater than the rate in developed countries

The increase in the population in urban areas is also down to the high fertility rates in towns and cities

Improving living conditions in towns and cities is resulting the death rate being lower than the birth rate increasing the population.

## World cities & Megacities

### World cities...

have the world's main stock exchanges and major stock markets  
are the centres of huge political power

have the headquarters of TNCs and large influential firms, e.g. financial services

have the centres of the world's media organisations, e.g. BBC,

### Megacities...

cities with more than 10 million people

major centres of economic activity

unlike world cities, they are not the centre of government

they don't have HQs for TNCs

have fewer cultural outlets than world cities

Examples of megacities include New York, Los Angeles, Mexico

## Spatial growth

The spatial growth of a megacity is usually different depending on whether it is developed or not.

### Developed world:

At the centre is the Central Business District (CBD), with its shops and offices

Surrounding the CBD, there is the 'inner city' zone consisting of old decaying housing, factories and brand new developments

Then, outside the 'inner city' zone is the suburbs mostly consisting of residential houses

### Developing world:

Compared to the structure of a developed world megacity, the layout of a developing world megacity is a lot more irregular

The fast rates of growth and poor planning controls means land use is not defined well and people will often take the opportunity to build homes on any patch of land

There is a lot of housing shortages, also leading to people setting up homes on any free piece of land.

## Population of megacities

In developing world megacities, the fertility rate is often very high leading to high population growth and a youthful population.

Developed world megacities are often the opposite to developing world megacities.

They will have relatively low fertility rates and as a result will have a population with more elderly people.

The lack of housing and poverty contribute to the fact that many people in developing world megacities live in squatter settlements

Although developed world megacities don't have the same level of people living in squatter settlements, there is still some areas of poor, slum housing.

### Problems facing developed world megacities

#### Food

Getting food for the 10 million plus inhabitants is a difficult task and food will often have to be imported from other countries. The transportation from far-fetched countries will inevitably add to the cost of the product to the consumer and also the carbon footprint of the city. People living in these megacities are being encouraged to buy more locally produced food

#### Energy

A large megacity is going to use a lot of electricity and gas for the many homes and businesses and getting all the energy needed for the city is no easy task. The city will have to decide how it is going to generate this energy, especially with fossil fuels running out. They could use coal-fired power-stations, but these release a lot of unwanted pollution into our air. Nuclear power is also an option, but this is very dangerous with the potential of radiation being released. Regardless of how it generates its energy, huge amounts of

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of resources will be used.

### Transport

Any large city will face problems with congestion on roads as the large volumes of people all try to get around the city. All the cars will also be polluting the air so the air quality in a megacity will not be very good despite technology helping more modern cars producing less pollution. The rest of the city's transport infrastructure (rail, tube, buses, etc.) will also be under a lot of stress.

### Water

Another major challenge for developed world cities is the supply of safe, clean water. A megacity will often have a demand for water greater than the supply. This means that water needs to be brought in from other areas or other solutions need to be drawn up, such as a desalination plant.

### Waste

Every person and business will produce waste, and the rubbish of a city combined is going to be huge. Much of this waste will end up going to landfill which is both expensive and wasteful.

## **Named Example - London resources used (inputs)**

### **Food**

6.9 million tonnes per year—equivalent to 8 billion meals

81% comes from outside the UK

### **Energy**

All of London's energy is imported

13.2million tonnes of oil equivalent

The use of London's energy has stayed constant since the year 200 despite a rising population

### **Transport**

64 billion passenger km are travelled each year

Use of public transport rising

### **Materials consumed**

49 million tonnes

## **London's waste (outputs)**

44.7 million tonnes of CO<sub>2</sub>

20 million tonnes of waste per year

50% of waste sent to landfill (down from 70% in 2000)

## Challenges facing developing world megacities

### Housing

The level of housing simply cannot keep up with the rate at which the population is increasing. This leads to people resorting to building their own homes on any vacant land using scrap materials like cardboard, corrugated iron and plastic. Using these scrap materials presents serious risks such as fire, flooding and landslides. Also, because these houses aren't built by professionals and because they're built on any empty land, there is also no clean water, electricity, rubbish collection or organised sewage disposal. All these conditions make it a perfect breeding ground for disease. Around 1 billion people or 35% of people in the developing world live in slums and it is estimated that by 2030 this number will double to 2 billion people.

### Transport

Roads in developing cities were never originally built to handle such large volumes of traffic they do today, because of this, the roads will often be very congested. The ownership of cars has also increased significantly adding to the problem of road congestion and air pollution. Serious levels of air pollution can cause various health problems as well such as asthma and bronchitis.

## **Water supply & pollution**

The UN estimates that 1 billion people do not have access to adequate supplies of water and 2 billion do not have adequate access to sanitation facilities. The lack of supply of safe water means that people have to find alternative sources which may mean for some people having to drink from pools of water on the ground. Drinking water like this which is most likely polluted accounts for 2 million deaths worldwide each year. Open water also attracts mosquitoes and provides a breeding ground for malaria.

## **The Informal Economy**

Unemployment and underemployment are both major problems in the developing world. Most people are unable to get permanent, full-time jobs so they often find themselves working on a street corner doing some informal work like shining shoes, giving haircuts, selling water or carrying luggage.

## **Pollution**

Air pollution is a serious problem for the people living in developing world megacities. The use of old cars emitting dirty and harmful fumes and factory pollution not being regulated are just two of the main reasons why pollution is so high. It's not just air pollution, pollution in water ways from sewage and industrial waste is also a problem.

## **Named Example - Mumbai**

### **Housing**

54% of people live in slums. The largest slum, Dharavi, has 800,000 people living in it. On average, people in Mumbai only have 4.5m<sup>2</sup> of living space.

### **Transport**

Mumbai is a fairly compact city, with only 2% of people owning a car and 55% of people walk to work. Despite this, Mumbai is still one of the most congested cities on earth. 3,000 people die crossing railway tracks or falling off packed commuter trains each year.

### **Water supply & pollution**

Mumbai suffers from severe water shortages. Due to the old, leaking pipes, 650 million litres of water is lost each day. Some slum dwellers spend up to 20% of their money on water.

### **The Informal Economy**

The informal sector in Mumbai employs 68% of Mumbai's workforce, the large majority of these workers coming from the slums across the city.

### **Pollution**

The World Health Organisation's recommended limit for PM<sub>10</sub> (a particulate matter which can cause asthma, bronchitis and even cancer) is 20 micrograms per m<sup>3</sup> however in Mumbai, levels of PM<sub>10</sub> are around 132 micrograms per m<sup>3</sup> which is dangerously high.

**Eco-footprint:** the area of land and sea that supplies all of the 'stuff' that you need to live e.g. food or energy.

**Named Example** of a developed country reducing ecological footprint: **London**

1. Reducing energy consumption

- Bed zed in south London is a newly built sustainable community of 100 flats. They have reduced their energy consumption by using less energy for heating through increased insulation, installing water and energy meters at eye level and building homes to get natural light. This has reduced carbon emissions by 56%. Water consumption in Bed Zed has halved as dual flush toilets are used and homes are fitted with bio membrane reactors (recycle kitchen water)
- Public buildings e.g. schools have a target of 40% of buildings to be refitted by 2025. This is achieved through improved insulation, double glazing and energy efficient light bulbs with timers.

These methods are successful– total energy consumption has decreased by 10% since 2000.

2. Reducing waste consumption

Target: reduce waste by 10% by 2020 through improving recycling facilities for homes and by reducing the amount of waste produced. E.g. by burning waste to produce energy in the Olympic Park

London recycles 32% of its waste (National average is 39%)- maybe not successful yet, however waste has reduced by 10% since 2000.

## Named Example of a developed country improving transport: London

1. **Encouraging clean transport:** All new buses planned to be hybrid by 2012. Intention to increase number of electric vehicles to 100 000 within a few years. There are more charging points than petrol stations across the city.
2. **Discouraging high polluting vehicles:** Low emission zone was set up which meant the worst polluting cars had to meet minimum targets or pay a charge to drive in London.
3. **Reducing congestion and pollution:** 2003 the congestion charge was introduced where the money raised was invested into transport networks. It was successful initially however the congestion has increased again to pre-congestion levels.
4. **Encouraging cycling:** Barclays cycle hire was launched in 2010 with 6000 bikes, 400 docking stations . They are coupled with the Cycle Superhighways which include up to 8 cycle routes being created by 2015.

## Improving quality of life in developing countries

**Quality of life:** measure of how wealthy people are but through criteria such as housing, employment and environmental factors, rather than income

**Informal economy:** jobs have no job security and do not pay taxes.

**Slum housing:** Poorly constructed houses, don't own the land and have poor amenities.

Named Examples of Developing countries:

1. Manoshi Project, Dhaka Bangladesh. It is funded by an NGO (Barc) and was launched in 2007. It offers ante natal care and new born care to 3 million female slum dwellers. It has halved the number of maternal deaths, however further challenges are faced such as undernourished mothers. It has reduced poverty by ensuring each new born has sufficient care and mothers are healthy and can return back to work.
2. Old Zimkhana: Dhaka, Bangladesh. It is funded by an NGO (Prodiplan). It has focussed on water projects through building 6 tube wells getting access to water that is too deep for hand dug wells. The charity gave water to a community that had no safe drinking water or toilets. They constructed 2 new sanitation blocks with toilets and water for washing. This meant people had better living conditions and could focus on earning more money rather than collecting water.
3. Rocinha, Rio de Janeiro Brazil. Local Government. Self help schemes were funded by the government to improve live in favelas. Residents were given building materials to make permanent homes, which they made themselves. Quality of life improved as they had better living conditions (wider streets, fewer open sewers, schools were built). However Rocinha's biggest challenge of crime was not challenged.
4. Curitiba, Brazil, funded by the local government. Curitiba is a city with the population of 1.6 million that was growing rapidly. The local government developed a well connected public transport system (80% of population use it). It became the first city to introduce the recycling of domestic waste, and 70% of the cities waste is recycled.

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There are extra incentives to recycle, e.g. food tokens given in exchange for recycling. There is a lot more green space—more than 30 parks and forested areas (from 1m<sup>2</sup> to 52m<sup>2</sup> from 1970-today). This has improved quality of life and prevented the development of favelas.





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