Unit 1: Topic 3 Challenges of an Urbanising World—Mumbai, India case study

Why does the quality of life vary so much within one megacity in an emerging country?

What is Mumbai's background? Mumbai is the largest city in India although New Delhi is the capital. Mumbai is a megacity of global importance because if its strong diverse economy and dynamic creative industries. One significant factor for differences in quality of life is its geography. The **site** of the city developed on a group of islands surrounding a deep natural harbour (**situation**) accessible to large container ships. Space for development and expansion is limited and population densities have become very high affecting the quality of life because it is crowded, traffic is congested and affordable housing is difficult to find. It has grown rapidly since 1947 when it gained independence from the British Empire. Migration of population from poorer rural areas has driven the increase. Whilst some migrants have well paid jobs in engineering, media and IT related industries the majority are unskilled and unemployed. This has created opportunities and challenges for Mumbai's residents some who live in the world's most expensive apartments whilst others are pavement dwellers unable to afford to rent a room in a slum.

What makes Mumbai a megacity?

Facts: 12.5million population, India's biggest docks handling 25% of all India's international trade, generates 1/6 of India's GDP, provides 10% of India's industrial jobs, produces 40% of India's exports, it has 10 universities, India's busiest international airport and is the home of Bollywood.

What is Mumbai's Industrial history?

In the 19th century Britain imported cotton from India which was transported to Mumbai port by a railway. British people also set up textiles factories in Mumbai itself with huge numbers migrating from all over the region to work in the factories during the 19th and 20th century. By the late 20th century the factories started to decline along with the port but at the same time other industrial and commercial activities including banking began to take off. As a financial centre Mumbai has great importance connecting economies around the world with many of the largest companies in India locating their HQ's there. 'Bollywood', the Hindu language film industry. Also developed in Mumbai making it a city of cultural significance.

What are the problems with Mumbai's site?

Mumbai's population grew rapidly in the second half of the 20th century but with little room for expansion, along the narrow peninsula, this created very overcrowded, insanitary and unsafe conditions for its inhabitants. In 1970 'New Mumbai' was proposed on the mainland and during the 1980's/90's the island city declined and the mainland city expanded rapidly.

What is the natural environment of Mumbai like?

The Sanjay Gandhi National Park is the worlds biggest park inside a city - 100KM^2 of forest attracting 2million visitors per year with a population of tigers. It is known by locals as the lungs of Mumbai because it helps reduce air pollution in this highly polluted and highly congested megacity.

What is Mumbai's land use and structure?

CBD

The oldest part of Mumbai including the city centre/CBD are on the southern tip of the peninsula centred on the old banking sector of the city home to the HQ's of companies such as Walt Disney India, Microsoft India and Cadbury India. Housing here is very expensive here right next to shopping malls and retail developments. The port is still very active with thousands working and living here in slums, as many as 25,000 according to estimates.

Inner suburbs

Originally this area was used for housing the textile workers but now is characterised by squatter and slum dwellings making up Mumbai's largest slum settlement—Dharavi.

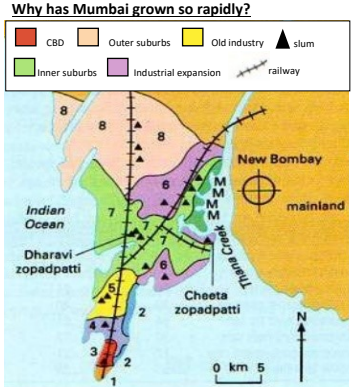
Outer suburbs

Developed post 1970's along the railway lines they allowed commuters to travel into the city each day. New industrial sectors have also set up along the railway lines. New Mumbai was planed as a low density suburb where lower land values would create a better quality of life with less congestion. Over time some industries relocate to New Mumbai due to cheaper land values and the availability of a skilled workforce.

Urban-rural fringe

Mumbai's urban-rural fringe is difficult to identify because the expanse of the conurbation merging into other towns on the mainland with a total population of 22million. Rural areas are generally found where physical factors mean the land is not suitable for construction e.g. river estuary land, and marshland that flood frequently as well as the hills that Sanjay Gandhi National Park occupies.

Why has Mumbai grown so rapidly?



Its population has grown by more than 12x in the last 100yrs although after 1970 the growth didn't take place on the old island centre because it was already too congested so the suburbs have grow the most. The population growth in Mumbai is due to two main factors:
- rates of natural increase
- national and international migration (mostly rural to urban)

From 2001 to 2011 population in Mumbai increased by 3.4million, approximately a 50/50 split migration v's natural increase. In the old city about 3/4million due to natural increase but over 250,000 moved out of the old city to the suburbs which increased by 500,000 mostly due to inward migration.

What are the levels of population density like in Mumbai?

At 20,692 people per km2 population density is very high, one of the highest in the world potentially driving up real estate prices and increasing traffic congestion. Initially people move to areas that are cheap to live in and those businesses that are able to relocate move to less congested locations. Some migrants have nothing and can't afford to rent so they live in the city's slums where accommodation is very cheap. Often the slums are right next to expensive accommodation which is often a feature of Urban India.

What are the push and pull factors affecting Mumbai's population growth?

PULL factors	PUSH factors
Employment opportunities, high level of pay, entertainment and culture such as theatres, services e.g. transport, healthcare and education	Lack of employment opportunities, low pay, corrupt political systems, civil unrest, lack of entertainment, poor services e.g. healthcare, water supply etc

What are the opportunities of living in India?

Is working in the service sector an opportunity?

In the early years of Mumbai's development, manufacturing was the main opportunity bringing rural-urban migrants, firstly cotton then latterly car production. However, since the 1980's these industries centred around the port have declined with the economic growth switching to the service sector. Finance and IT services employed highly skilled 'Mumbaikars'. Through the process of globalisation foreign companies have invested in Mumbai bringing international migrants to work in this dynamic city. During this time there was also a boom in the service sector for Mumbai's low-skilled workers providing services such as taxi drivers, cleaners, street vendors, repair work and recycling. Employment is the main opportunity for people moving to Mumbai from rural areas and despite the very basic living conditions unemployment rates are usually lower than other parts of the country.

What are the Dharavi industries?

As Mumbai's biggest slum (rent £2 per month) and the biggest in Asia it has a population of over 1million living in 1.5km^2 giving it a density 11x that of Mumbai. There are 5000 small-scale businesses and 15,000 single room factories and it is estimated that these are worth £350 million per year.

What are the Infrastructure benefits?

Six million people live in the slums of Mumbai of which more than 1 million earn less than £10 per month with an average income, for the whole of the conurbation, of £100 per month. Media companies realised earning £1 or £2 per month from 1million people would be profitable so they developed special low-cost satellite dishes so that TV can be watched. With so many people living in the area there is a huge market for people requiring services and therefore creates jobs and this number of people also attract large companies taking advantage of low-skilled workers.

What are the challenges of living in Mumbai?

Rapid expansion and population growth creates many challenges for the people living in Mumbai.

What problems has Rapid expansion caused?

Population growth has often been faster than infrastructure and services e.g. housing in areas without shops, schools or health care and has increased the challenge of providing electricity and adequate water supplies. Waste disposal is also an issue for the local government to organise so is run by small-scale businesses using low-paid people to collect, sort, resell or dispose of Mumbai's waste products. Issues still remain such as 800million tonnes of untreated sewage, metals, oil and industrial waste dumped in the polluted river Mithi.

What are the problems with Traffic congestion?

There are currently over 1.8millionn cars in Mumbai and with bullock carts and pedestrians this leads to gridlocked roads. 90% of Mumbaikars travel by rail (8million every day) which puts the rail network under huge strain.

What are the problems facing Housing (Chawls & Squatter settlements)?

Affordability is a problem in Mumbai (some of the highest rents in the world), space is limited, population densities are high and new areas have also become congested creating the problem of slum settlements. **Chawls** are overcrowded 100yr old, unsafe tenement buildings likely to collapse with conditions often worse than the slums. **Squatter settlements** are makeshift huts on public or private land (50%) close to railway lines or swamps. The poorest (est. 20,000) live on the streets, on roof tops or under bridges and these are not rent free. Rent is payable to local bosses for their stretch of pavement.

What problems does living in Dharavi create?

The slums occupy land that has become more and more valuable so the land owners want to clear the slums for new more permanent housing to be built.

Water supply - standpipes are available for 2hrs per day from 5.30am provide rationed water for the 1million people.

Sanitation - streams and rivers running through the settlement are used to dispose of toilet waste. The same rivers are used to wash clothes due to the shortage of clean water each day.

What are the Working conditions like in Dharavi?

The 'informal sector' accounts for the majority of employment (60%) meaning poor working conditions with no ventilation and toxic fumes, little protection for the workers, long hours, poor pay and no safety equipment.

Why are there differences in the quality of life in Mumbai?

Quality of life in a megacity is measured using some of the following: levels of air and water pollution, transport congestion, access to healthcare and education, access to affordable housing and income.

What is the quality of life like in Mumbai?

Although classified as a megacity it is underachieving in quality of life as it is a more difficult city to live in than other Asian megacities. 40% live in squatter settlements, 20% in Chawls, 10% on the streets and 30% in apartments. Its **bureaucracy** slows down developments in housing and associated services. 'Rent controlled' properties also discourages property owners to make improvements because they won't get any more rent than they currently do. **Corruption** means that old textile mills for example that were planned to be affordable housing were sold to developers who created expensive apartment blocks that only the rich could afford.

What are the reasons for quality of life differences in Mumbai?

A lack of government control over the city's expansion, access to affordable housing, informal employment and a lack of employment law and regulations as well as a lack of services provided to the poorest areas are amongst the main causes of inequalities.

What are the political and economic challenges of managing Mumbai?

Squatter settlements are on valuable land which developers would pay a lot for if the government moved residents out. Residents want improved services and don't want to move so politically it's difficult to move them but economically expensive to let them stay. Traffic congestion is politically unpopular but new transport infrastructure is economically very expensive. No taxes are gained from the 'informal' employment sector so if everyone worked in the 'formal' sector the workers would get better pay and conditions and the government would gain taxes but politically it would be difficult to convince people that they weren't losing money.

Can top-down strategies improve Mumbai?

Could Mumbai realistically become a 'sustainable city' with good public transport, health and education, waste recycling and environmentally sound waste disposal as well as affordable housing? Top-down approaches managed by the city's government and imposed on the people could influence this.

Example 1: What is The Gorai Garbage Site Closure Project?

For around 40yrs 1200tpnnes of solid waste were dumped into Gorai landfill site. Toxic run-off and unpleasant smelling methane gas made this an unhealthy place to live. The government re-shaped the hill, lined it to prevent leaching, planted trees and grass to create an urban park and then used methane capture technology to use the gases released to produce power.

Example 2: What is the Mumbai monorail?

Opening in 2014 and costing £310million it aimed to reduce transport congestion by taking people of the road. Around 15,000 passengers take the 10p trip per day many of whom are tourist as it currently only goes through industrial areas not the old city.

Can bottom-up strategies improve Mumbai? Working with the local people to develop community based solutions is an alternative approach to the imposed top-down system.

Example 1: What are SPARC and community toilet blocks?

City Government run toilet blocks were too expensive to pay per use, poorly maintained and without running water. SPARC, an Indian NGO, built toilets with the help of the community and were connected to the sewage and water systems, had electricity for night-time safety and unlimited use monthly permits could be bought for 25p.

Example 2: What is the Hamara foundation?

The Hamara provides social-work services for street children to improve their health and education including vocational training in computing etc for 16-18 yr olds

How can the quality of life in Dharavi be improved?

The land is currently worth $4billion on which the government is keen to redevelop Dharavi through their top-down strategy. Affordable housing (1.1million new homes), water and sanitation service improvements as well as education and healthcare. Residents are strongly opposed to the plan due to the loss of premises for small businesses and the loss of community spirit. One developer wants to give the residents of Dharavi ownership rights and involve them in finding solutions to improve the quality of life.