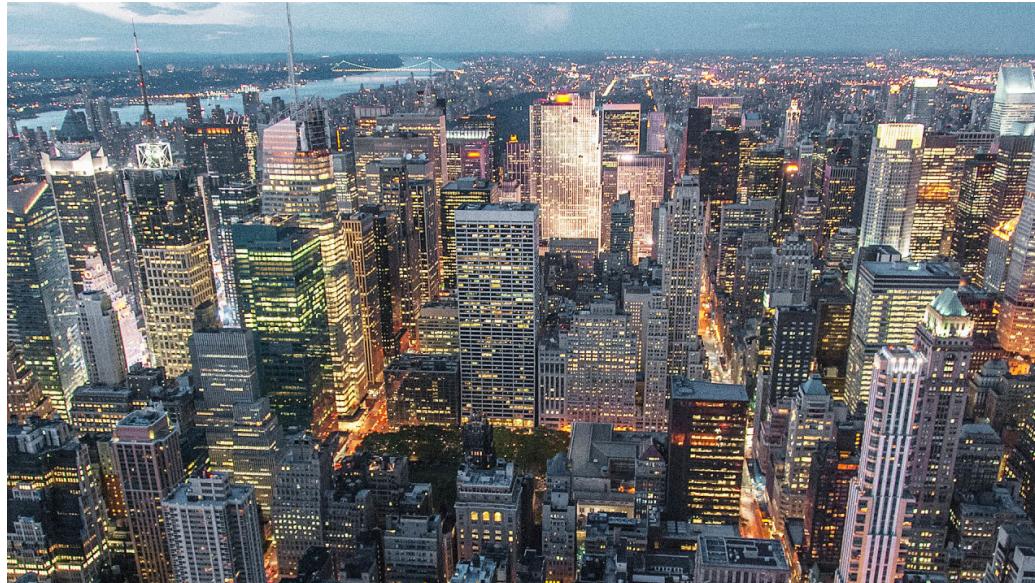


Module V

Urbanization and Environment_II



Lecture 6 (16 July 2024)
Dr. Asib Ahmed



**Department of Social Relations
EAST WEST UNIVERSITY**

Topic covers:

1. Process of urbanization
2. Positive and negative consequences

Process of Urbanization

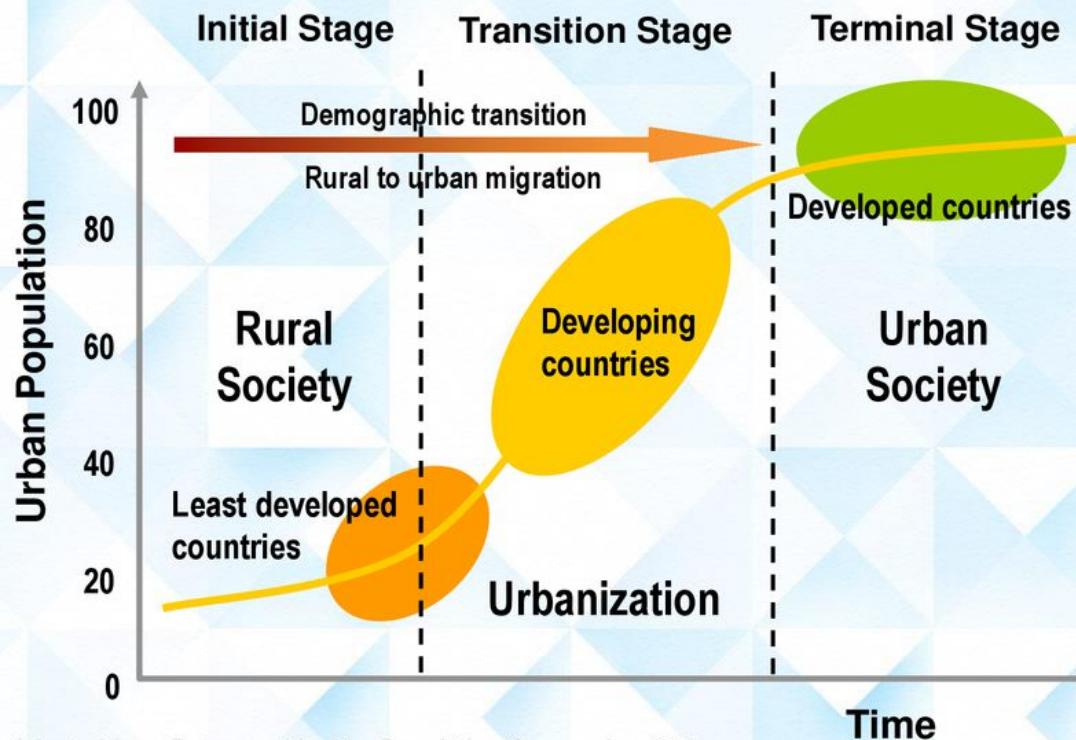
Five driving forces of urbanization, which are:

1. industrialization
2. modernization
3. globalization
4. marketization
5. administrative/institutional power

Process	Driving forces	Visible outcomes
Rural urban migrants and urban natural population increase	• The 'push' of rural areas and 'pull' of the urban centres	• Demographic change
Opportunities in the city		
Acute shortage of urban land and housing	• Overheated urban land market • Breakdown of socio-cultural networks and ties	• Increased land values - mainly fuelled by speculative pressure • Land use changes • Leap-frog development
Acquisition of peri-urban land		
Engage in legal/ illegal* Peri-urban land development processes	• Opportunities for survival in an urban setting	• Absence of clear regulations and administrative authority over land use. • Proliferation of informal settlements. • Lack of infrastructural facilities and utilities.

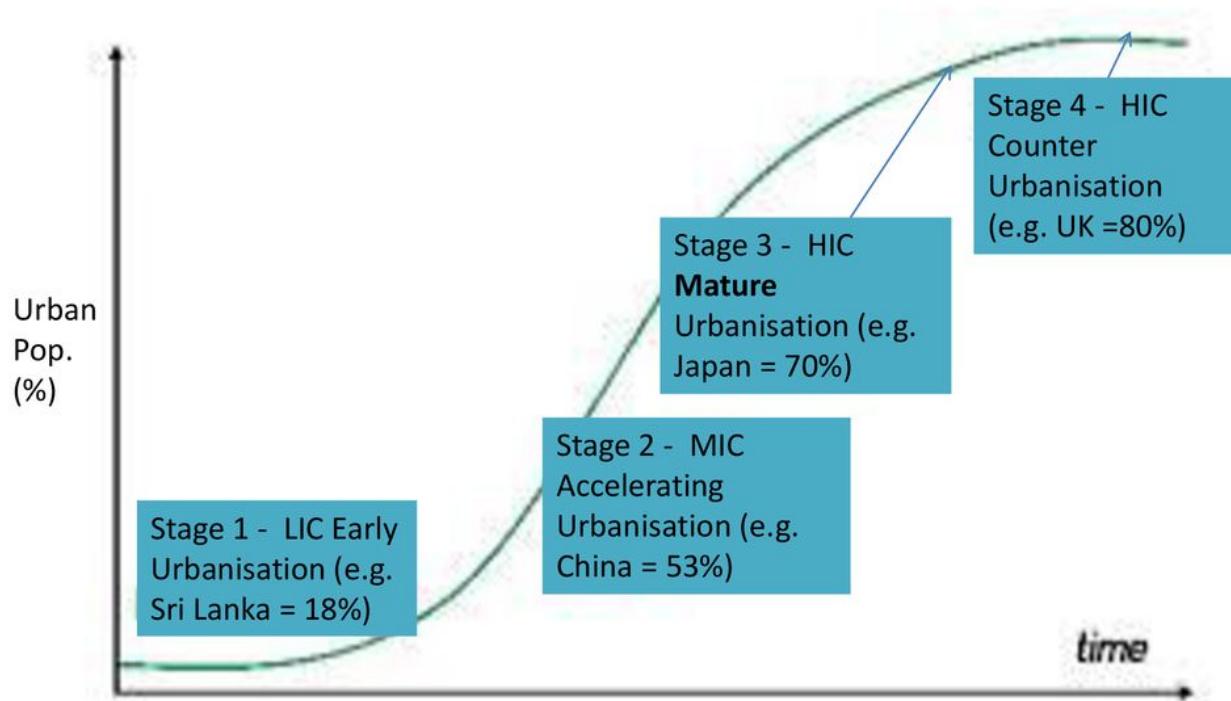
The urbanization process and the resultant changes in land tenure and land use

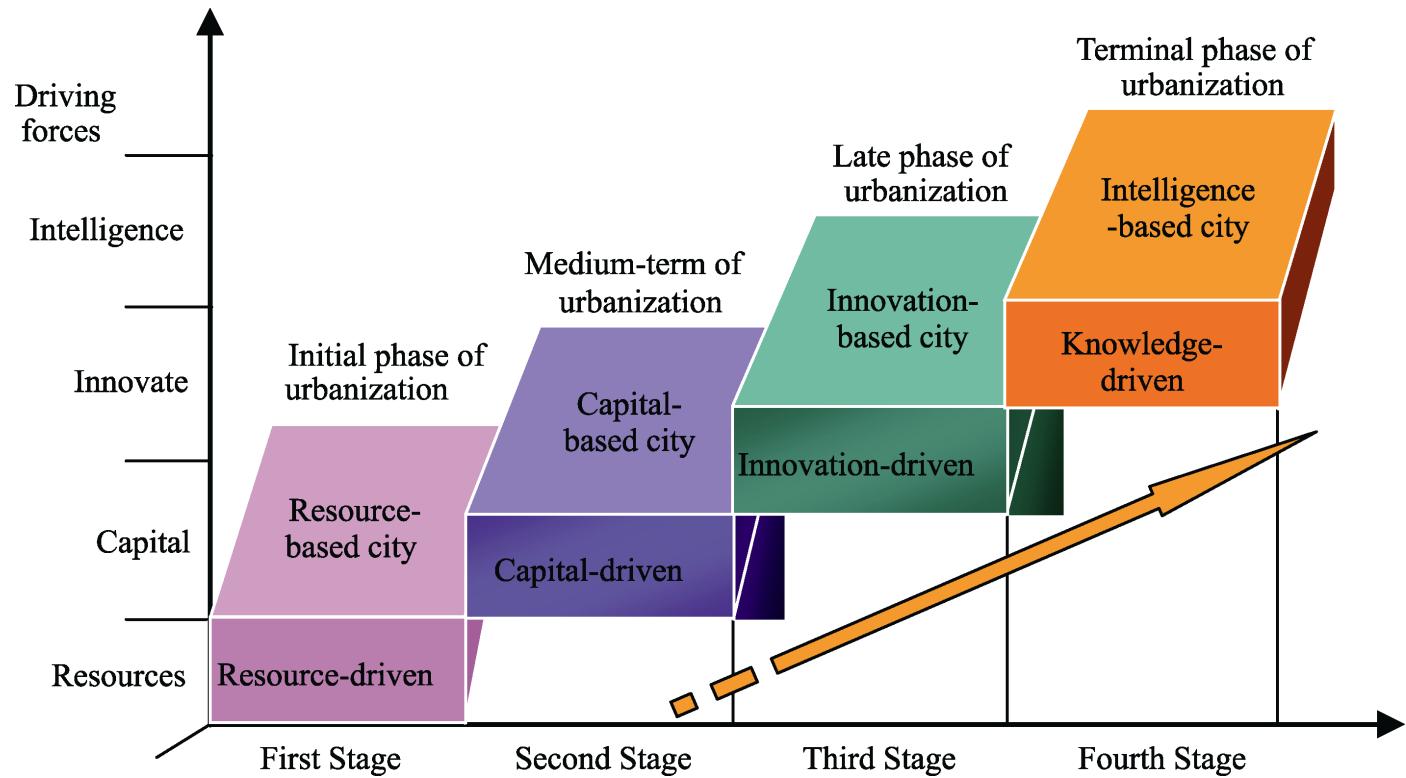
Stages of Urbanization



Source: Adapted from Peters and Larkin, Population Geography, 1999.

The Urbanisation Pathway





Positive Consequences of Urbanization

The rise of cities is not all doom and gloom. Packing a lot of people into relatively small areas offers an unprecedented opportunity to improve efficiency. For instance, city dwellers can use less energy, per person, than rural residents, if the right policies and infrastructure are in place.

Urbanization can contribute to sustainable growth if managed well by increasing productivity, allowing innovation and new ideas to emerge.

Positive Consequences of Urbanization

Urban areas are the effective engine of economic growth and contributes significantly to the national economy.

More than 80% of global GDP generated in cities.

In Bangladesh Urban contributes to more than 65 percent of the GDP. Dhaka's share in GDP for the whole country was more than 40% in 2022.

Positive Consequences of Urbanization

Urbanization ensures social development in terms of higher literacy rate as the quality of education is better in cities

Cities also ensure better healthcare and other basic human rights

Cities work as hub of political and cultural movements

Negative Consequences of Urbanization

Our urban centres are grappling with the effects of our current take-make-waste economy.



Negative Consequences of Urbanization

Immense Ecological Footprint

Cities consume vast amounts of food, energy, water, and materials. Cities consume over 75% of natural resources, two-thirds of global energy consumption, produce over 50% of global waste, and emit between 60-80% of greenhouse gases.

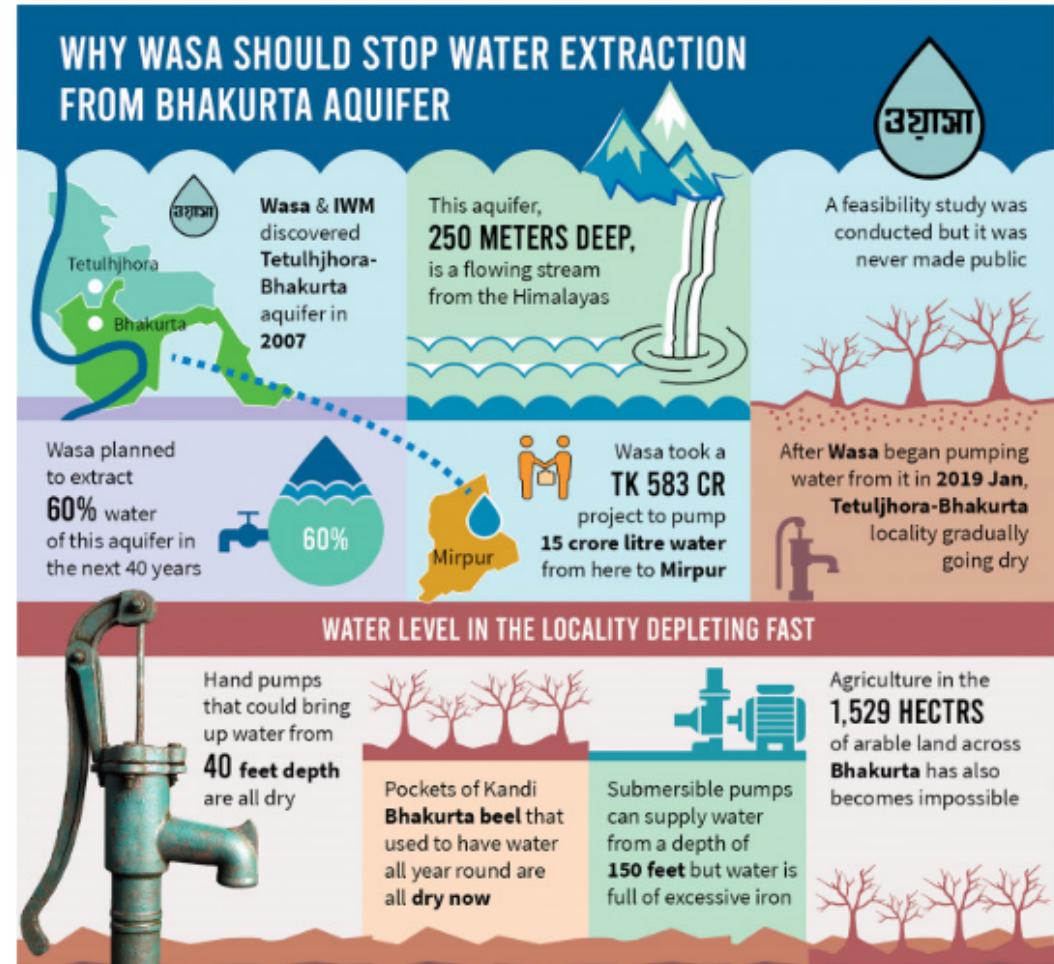
The land area needed to provide these essentials is immense: A city's "ecological footprint" is often 200 times greater than the area of a city itself (or more).

Negative Consequences of Urbanization

Immense Ecological Footprint

To keep Dhaka taps flowing, a village is dried up

As groundwater level depletes, farming in the 1,529 hectares of arable land across Bhakurta has also become impossible



<https://www.tbsnews.net/environment/keep-dhaka-taps-flowing-village-dried-47597>

Negative Consequences of Urbanization

Encroaching Lands and Resources

Many urban areas are **sprawling outward** even faster than they are adding people, swallowing up both farm- and wildlands.

And because people often like to live in the same areas favored by wild plants and animals—such as river valleys and coastal lowlands—**cities are encroaching on many of the world's biodiversity hotspots.**

Poverty is one of the major feature

Throughout the low-income world, poverty is increasingly becoming an urban phenomenon. **Today approximately half of the world's poorest people** are living in urban settlements and the **World Bank predicts that by 2025 most people in low-income world cities will be living in poverty**

Negative Consequences of Urbanization

Poor Public Health Situation, Particularly in Slums



Negative Consequences of Urbanization

Poor Public Health Situation, Particularly in Slums

The rapid growth of urban populations in low-income countries has profound public health implications, particularly for residents of the informal settlements and shantytowns. Although city dwellers in the developing world generally tend to enjoy a “health advantage” compared to rural villagers, those living in urban slums are often no better off—and sometimes worse—than their country cousins in terms of health risks. Inadequate access to safe drinking water and sanitation services constitute major problems affecting the health and well-being of millions of poor urban residents in the developing world.

Negative Consequences of Urbanization

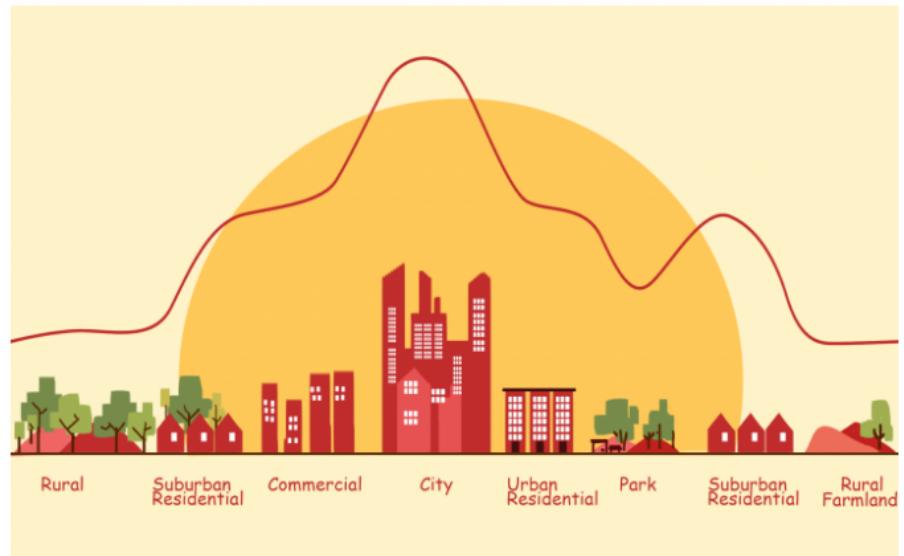
Cities are in the frontline of combating pandemic and geopolitical (war, refugee) crisis



Negative Consequences of Urbanization

Pollution of all types increases

Cities alter the environment in many ways, from creating air and water pollution to producing extra noise and artificial light. One dramatic change is that cities can become "heat islands" that are warmer than surrounding rural suburban areas. Tons of concrete and asphalt soak up and then radiate heat, making city centers hotter by day—and by night.



Negative Consequences of Urbanization

- Over population
- Terrible transport system
- Extreme air pollution

The dark side of Dhaka's urbanisation



Dhrubo Alam

Tue Feb 19, 2019 12:00 AM Last update on: Tue Feb 19, 2019 12:00 AM



<https://www.thedailystar.net/supplements/28th-anniversary-supplements/avoiding-urban-nightmare-time-get-planning-right/news/the-dark-side-dhakas-urbanisation-1703425>

Future of Cities

Whether cities are seen as a problem or as part of the solution, one thing is clear: Our urban planet is here to stay, and the decisions we make today about how we build and live in cities will affect generations to come. As urbanization speeds up, particularly in Asian and African countries, here are five of the biggest challenges confronting the future of cities:

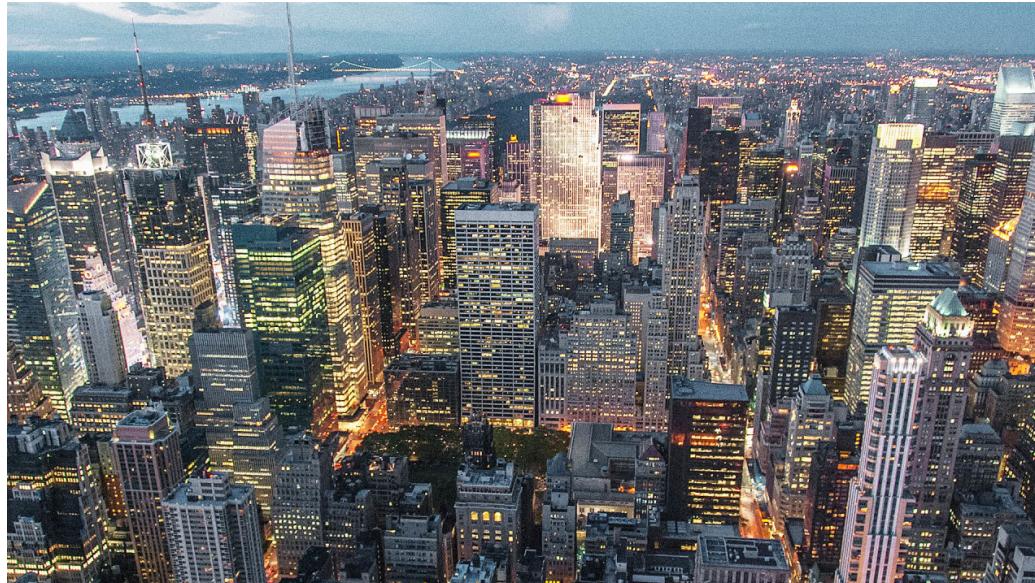
- 1. Environmental threats**
- 2. Resources**
- 3. Inequality**
- 4. Technology**
- 5. Governance**

<https://www.weforum.org/agenda/2018/10/the-5-biggest-challenges-cities-will-face-in-the-future/>



Module V

Urbanization and Environment_III



Dr. Asib Ahmed

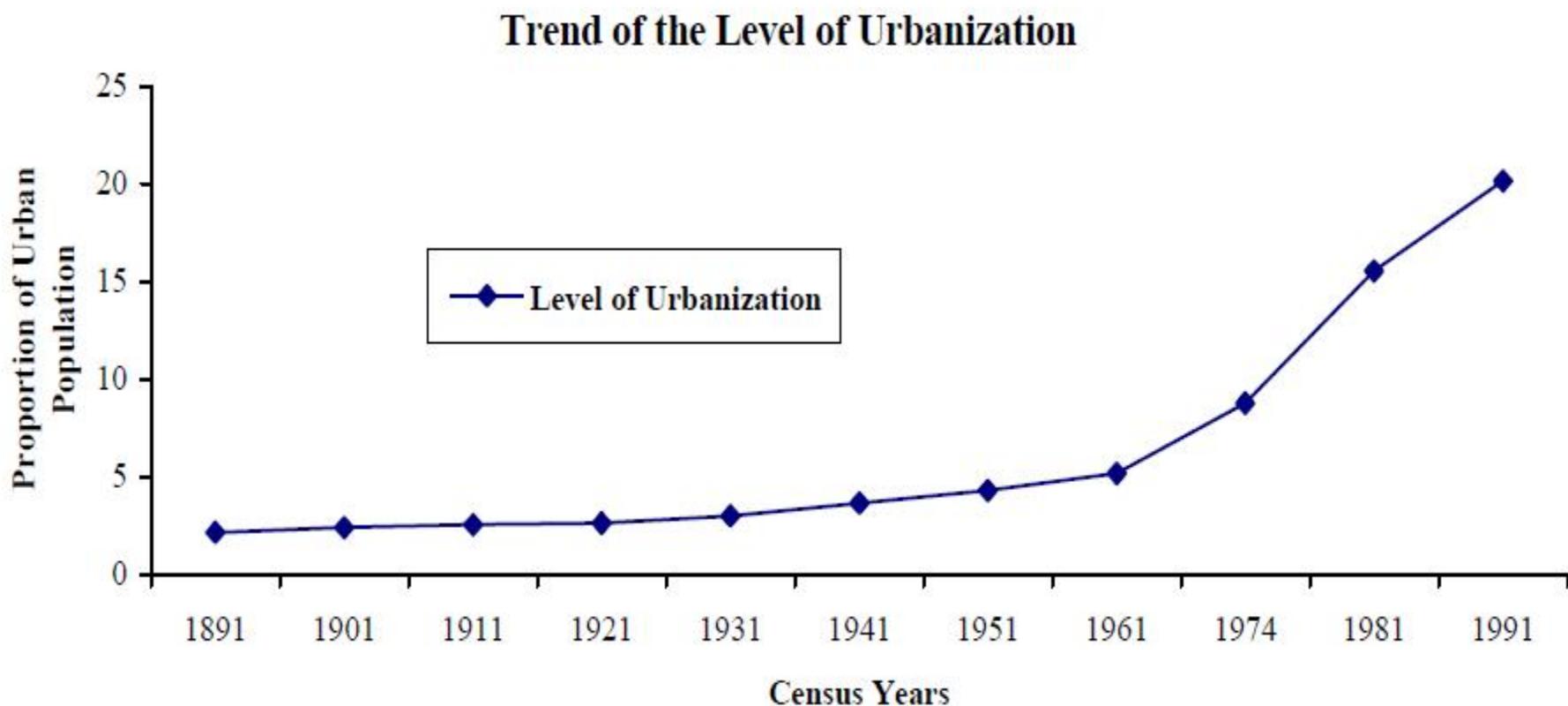


**Department of Social Relations
EAST WEST UNIVERSITY**

Topic covers:

1. Process of urbanization in Bangladesh
2. Consequences of urbanization in Bangladesh

Patterns of Urbanization: Bangladesh Perspective



Processes of Urbanization: Bangladesh Perspective

- **Urban migration:** The main reasons urbanization in Bangladesh is rural to urban migration. Poor economic conditions, landlessness and natural hazards along with many other socio-economic reasons causes this migration
- **Physical growth of urban centers:** Urbanization happens due to the territorial expansion of urban areas and growth of new urban centers. In Bangladesh the number of urban centers is 506 (BBS, 2011), it was 48 in 1901, 108 in 1974, 492 in 1981. Currently it is 570.

Processes of Urbanization: Bangladesh Perspective

- **Redefinition of urban boundary:** The government of Bangladesh establishes rules that permit municipalities to annex territory. This annexation determines the size and boundaries of the local urban territory by the acquisition of adjacent rural areas.
- **Growth of the urban native population :** It refers to natural increase of native population occurs within urban boundary.

Urbanization in Bangladesh: Characteristics

- 1. High rate, but low level of urbanization:** Urban population in Bangladesh is growing at a faster rate, around 3.5 percent per annum, but at the same time its level of urbanization is still low, about 30 percent.

- 2. Geographical or spatial variation:** The level of urbanization varies by region. Dhaka alone portrays 38% of urban population. The level and rate of urbanization are also high in Dhaka. Three major cities i.e. Dhaka, Chittagong and Khulna share over 50% of urban population in Bangladesh.

Urbanization in Bangladesh: Characteristics

- 3. Greater contribution in economy:** In Bangladesh Urban contributes to more than 60 percent of the GDP. Dhaka's share in GDP for the whole country was 12% in 1995 and more than 35% in 2017-18.
- 4. Growth and dominance of the so-called informal sector:** *Informal sector are termed as “unregulated”, “irregular”, “unauthorized” and “popular” sector.* This approach is contrast to modern urbanization in the developed societies. Dhaka's informal sector contributes to 60-80% of urban employment.
- 5. Unemployment rate is also very high in major cities,** in Dhaka the rate is around 40%.

Urbanization in Bangladesh: Characteristics

- 6. Rise of slums and squatter settlements:** In Dhaka and Chittagong more than 35% people live in urban poor areas known as slums and squatter settlements showing social, economic, residential and environmental segregation.
- 7. Poverty is one of the major feature:** In Bangladesh on an average poverty level is 45%. In 1990 Dhaka's poverty was 50% with those poor people had less than Tk 2600 HH income which was decreased to 35% in 2005 with HH income less than Tk 5000.
- 8. Urbanization creates demand of infrastructure and service facilities**
- 9. Environmental degradation is common feature**
- 10. Increased prevalence of crime and violence**

Consequences of Urbanization in Bangladesh

Positive Consequences

1. Effective engine of economic growth and contributes significantly to the national economy. In Bangladesh total population is 28% but contribution of 28% population to GDP is 65%. Dhaka city consists of 9% of total population of Bangladesh but its contribution to GDP near about 35%.
2. Urbanization ensures social development in terms of higher literacy rate as the quality of education is better in cities
3. Cities also ensure better healthcare and other basic human rights
4. Benefits in cultural and political development. Cities work as hub of political and cultural movements

Consequences of Urbanization in Bangladesh

Negative Consequences

1. Creates regional or geographical imbalance (increasing spatial variation of urban development and income even within large metropolitan areas, particularly in Dhaka)
2. Agriculture and forests get converted to built-up areas. Wet lands are encroached upon and hills cut down
3. Urban growth has made heavy demands on urban utilities and services like electricity, gas, water, sanitation, sewerage, garbage disposal, transport, telephone, cables, and
4. Degradation of the urban environment, of the kind which we now experience in Dhaka. Its air, water, and soil have already been polluted to a dangerous level



Module V

Urbanization and Environment_IV



Dr. Asib Ahmed



**Department of Social Relations
EAST WEST UNIVERSITY**

Topic covers:

1. Nexus between urbanization and environment

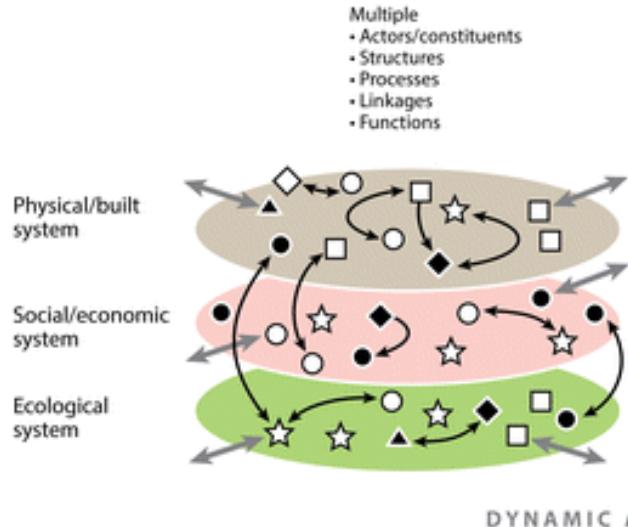
Urbanization and Environment

Driven by migration as well as indigenous growth within cities, by 2050, a 2.5 billion increase in urban population is expected, with 90% of the increase concentrated in Asia and Africa.

The environmental implications of rapid urbanization are profound and far reaching, with the impacts often outpacing the population growth.

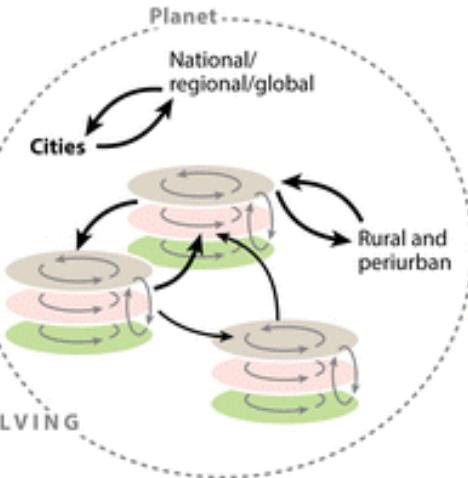
Carbon emissions from urban areas increased even faster than urban land expansion, resulting in a significant increase in the carbon intensity of built-up areas.

a Urban system



b Cities as open systems

Cities are open systems, influencing and influenced by the external world via complex linkages and feedbacks.



Bai X, et al. 2017.
Annu. Rev. Environ. Resour. 42:215–40

Complex interactions in an urban system.

SIX MAJOR URBAN ENVIRONMENTAL CHALLENGES

- 1. Air Pollution**
- 2. Biogeochemical Cycles and Water Pollution**
- 3. Land Use**
- 4. Ecosystems**
- 5. Solid Waste Management**
- 6. Climate**

1. Air pollution

Air pollution has been the major environmental concern in cities around the world.

Air pollution in cities mainly comes from the emissions from intensive human activities. However, cities at different stages of development may have very different emission sources of air pollutants.

The dominant source of pollution among European and American megacities is transport emissions, whereas in the rest of world, cities have very diversified emissions sources, including industry, power generation, transport, construction, and household emissions

2. Biogeochemical Cycles and Water Pollution

Urbanization has profound impacts on biogeochemical cycles. First of all, urban ecosystems have elevated fluxes (and thus emission) of nutrients and chemical contaminants per unit of land.

For example, in China, urban built-up areas, which make up less than 1% of the country's total land area, harbor more than 50% of its population. This means a much higher concentration of nutrient fluxes in urban areas than elsewhere.

In addition, both biogeochemical cycles in urban areas are highly engineered and directed through various infrastructures and changed hydrological cycles such as increased impervious surfaces and the associated increase of stormwater.

3. Land Use

Even though cities are holding the majority of the world's population, urban areas represent less than 1% of the Earth's land cover. Compared to the area it occupies, the impact of urban land change is disproportionately large.

Understanding urban land-use change requires careful attention not just to the extent and location of change, but to spatial patterns of growth and fragmentation. Urban centers have a tendency to agglomerate, forming urban clusters or urban corridors, along which transportation and other forms of development typically occur. Such spatial clusters can act as nodes that influence land-use patterns of entire regions

4. Ecosystem

Cities and urbanization processes modify environments, often causing impaired ecology of urban riparian zones, affecting local and regional climate, and driving losses of native biodiversity and increases in non-native species.

Urbanization can also exacerbate abiotic stresses such as fragmentation and the suppression of natural disturbances, which hamper the regeneration of the ecosystems through early succession stages.

These modifications driven by urbanization, which degrade functions of ecosystems and further increase the impacts of natural hazards and climate change on urban ecosystems, can have reverberating impacts throughout other domains of urban systems.

5. Solid Waste Management

As the by-product of urban lifestyle, the amount of municipal solid waste (MSW) is growing much faster than the rate of urbanization. In 2012, 3 billion urban residents worldwide generated approximately 1.3 billion tons of waste (that is 1.2 kg per person per day—almost doubled since 2000).

The volume and composition of waste has changed over time and varied from place to place due to different lifestyles, leading to a variety of waste management practices throughout human history.

Serious environmental issues are predicted if the growing MSW is dumped without proper separation and disposal, including contamination of land and water bodies due to discharge of leachate hazardous materials, air pollution due to emissions from burning and release of methane from anaerobic decomposition, and risks to human health and spreading of disease in areas near landfill sites.

6. Climate

The linkages between urbanization and climate are multifaceted and span multiple scales.

