

Chapter 13: Urban Patterns

The Cultural Landscape: An Introduction to Human Geography



Key Issues

- Why do services cluster downtown?
- Where are people distributed within urban areas?
- Why are urban areas expanding?
- Why do cities face challenges?

KI #1 Why Do Services Cluster Downtown?

- CBD Land Uses

- The *central business district* takes up less than 1 percent of the urban land area, yet contains a large percentage of the services offered in the city.
- Services offered in the CBD can be divided into three types:
 1. Public Services
 - Examples: city hall, courts, county and state agencies, and libraries..
 - Centrally located for ease of accessibility to all residents
 - Sports centers and conventions centers are often downtown to stimulate commerce in the CBD.

Why Do Services Cluster Downtown?

- CBD Land Uses

- Services offered in the CBD can be divided into three types cont' d:

- 2. Business Services

- Examples: advertising agencies, banks, financial institutions, and law firms.

- Proximity to other service providers for businesses promotes collaboration and face-to-face meetings.

Why Do Services Cluster Downtown?

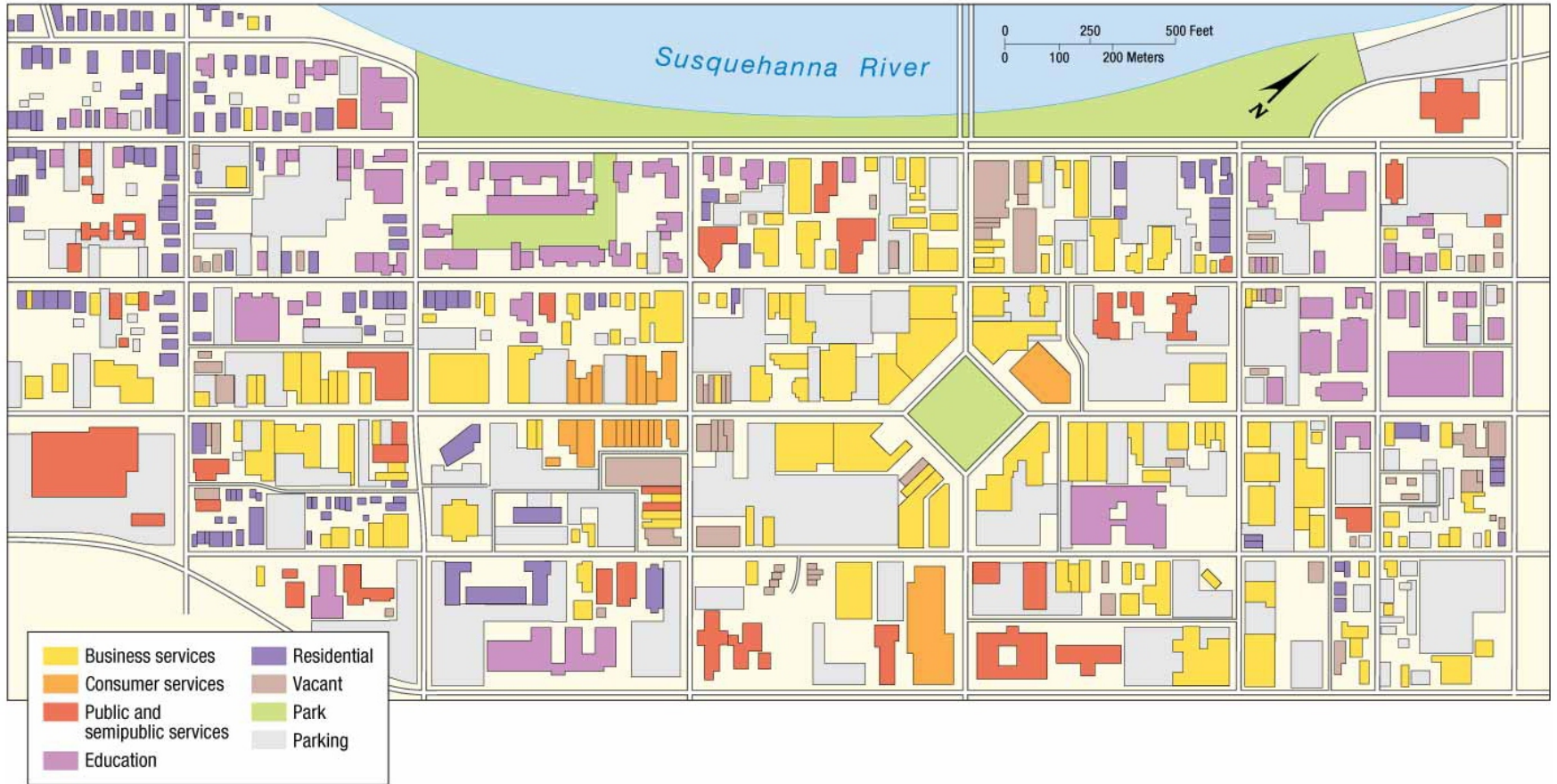
- CBD Land Uses

- Services offered in the CBD can be divided into three types cont' d.:

- 3. Consumer Services

- Historically, three types of retail services clustered in a CBD.
 - » Retailers with a high threshold
 - » Retailers with a high range
 - » Retailers that served people who worked in the CBD
 - Changing shopping habits and a shift of the more affluent to the suburbs have reduced the importance of retail services in the CBD.

Insert fig. 13-2



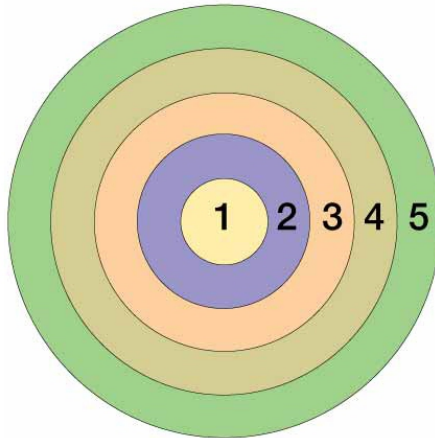
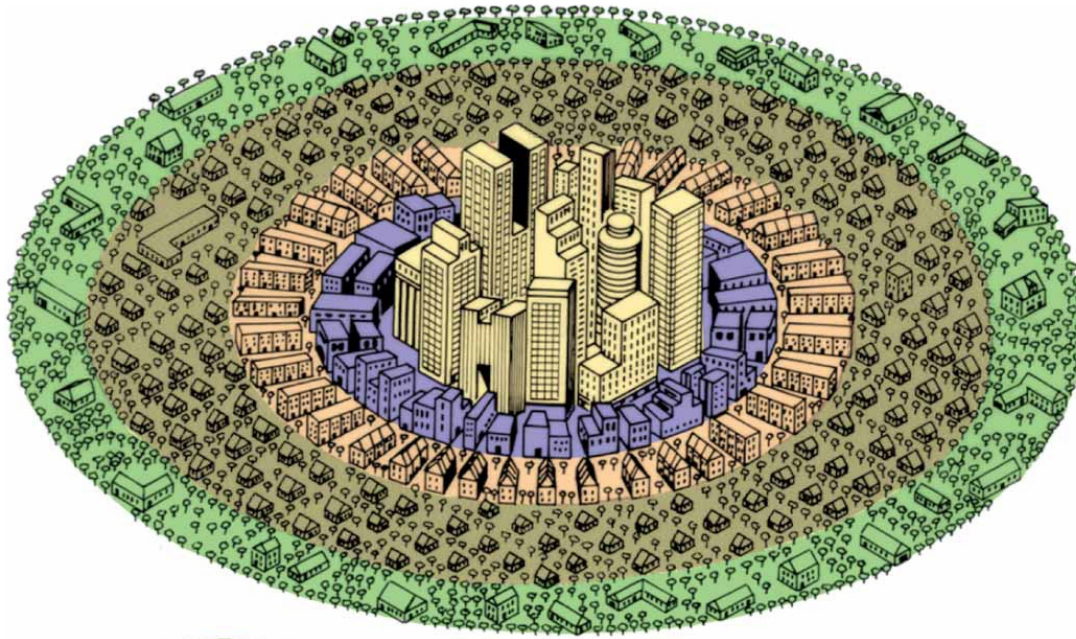
Why Do Services Cluster Downtown?

- **Competition for Land in the CBD**
 - High demand for the limited space in the CBD has encouraged vertical development.
 - **Underground CBD**
 - Inadequate space exists above ground for the needed dense network of telephone, electric, and broadband cables, thus they are placed underground and out of sight.
 - Underground passages can segregate pedestrians from motor vehicles and shield them from harsh winter weather.
 - **Skyscrapers**
 - Demand for space in CBDs has made high-rise structures economically feasible.

KI #2 Where Are People Distributed Within Urban Areas?

- Models of Urban Structure
 - Burgess Concentric Zone Model
 - Created in 1923 by sociologist E.W. Burgess
 - First model to explain the distribution of different social groups within urban areas
 - Model suggests that a city grows outward from a central area in a series of concentric rings.
 - CBD: innermost ring where nonresidential activities occur
 - A Zone in Transition: area eventually consumed by CBD
 - Zone of Working-Class Homes: modest, older houses
 - Zone of Better Residence: newer, larger houses for middle-class families
 - Commuter Zone: beyond the continuous built-up

Fig. 13-9

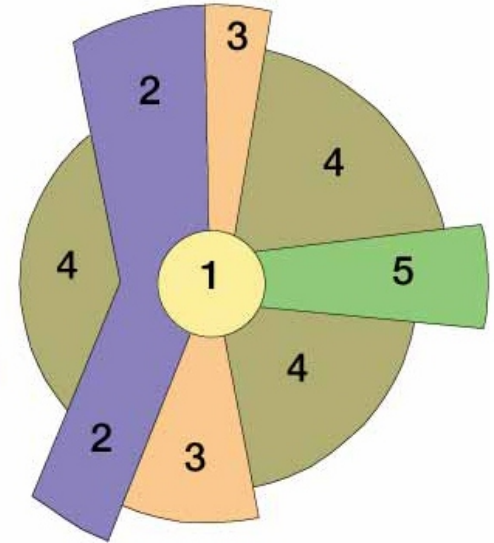
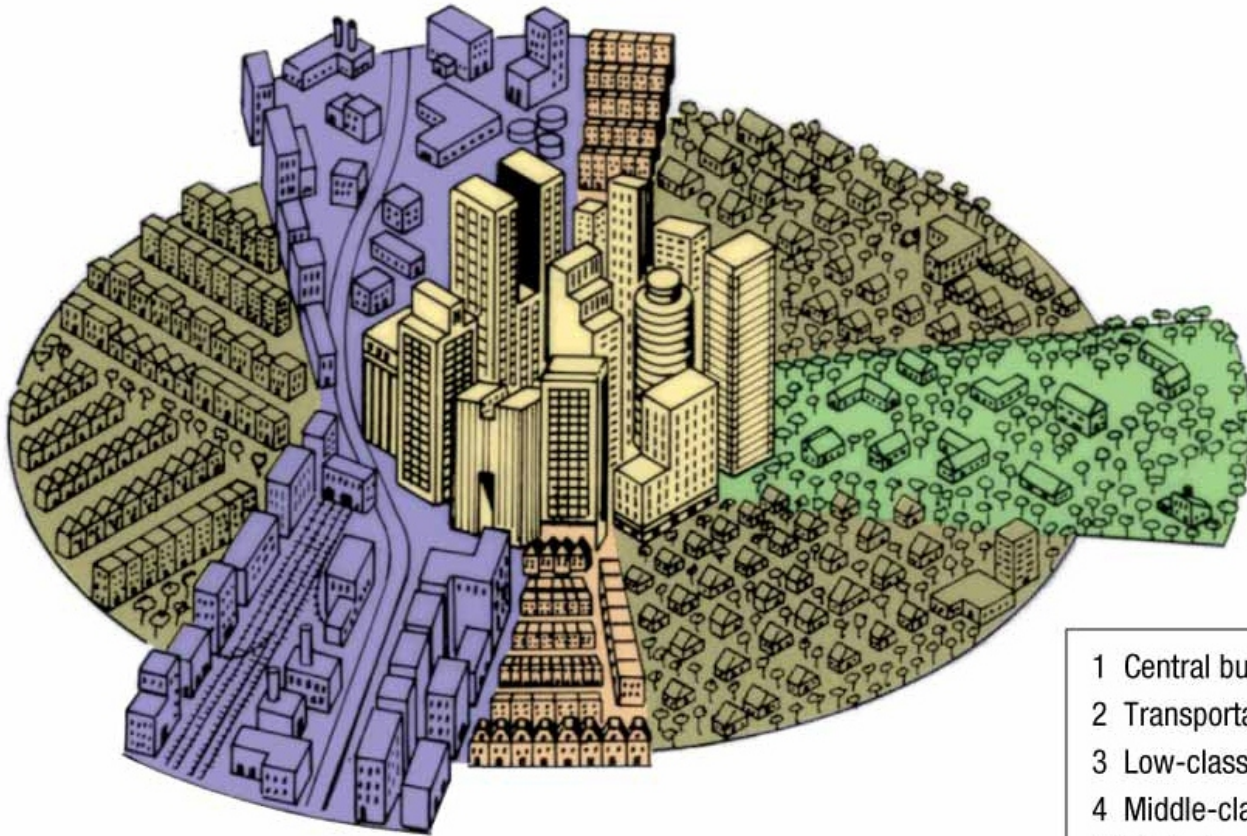


- 1 Central business district
- 2 Zone of transition
- 3 Zone of independent workers' homes
- 4 Zone of better residences
- 5 Commuter's zone

Where Are People Distributed Within Urban Areas?

- Models of Urban Structure
 - Hoyt Sector Model
 - Created by land economist Homer Hoyt in 1939.
 - Model that posits a city develops in a series of sectors, not rings.
 - As a city grows, activities expand outward in a wedge, or sector, from the center.
 - **City grows outward from the center, so a low-rent area could extend from the CBD to the city's outer edge**
 - **The same is true w/ highrent, transportation, and industry**

Fig. 13-10

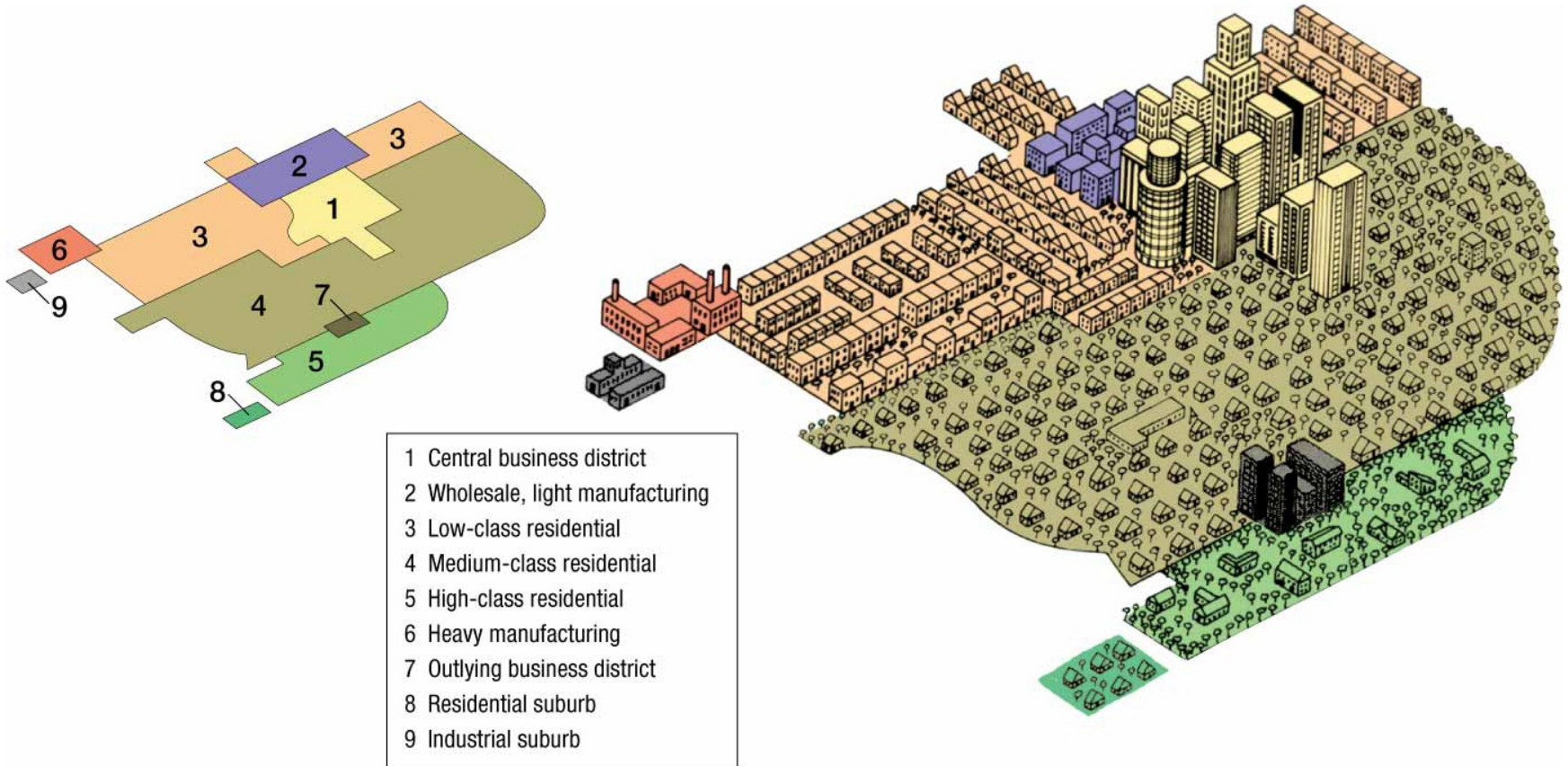


- 1 Central business district
- 2 Transportation and industry
- 3 Low-class residential
- 4 Middle-class residential
- 5 High-class residential

Where Are People Distributed Within Urban Areas?

- Models of Urban Structure
 - Ullman/Harris Multiple Nuclei Model
 - Created by geographers C. D. Harris and E. L. Ullman in 1945
 - Model posits that a city is a complex structure that includes more than one center around which activities revolve.
 - Examples
 - » Ports
 - » Universities
 - » Airports
 - » Parks

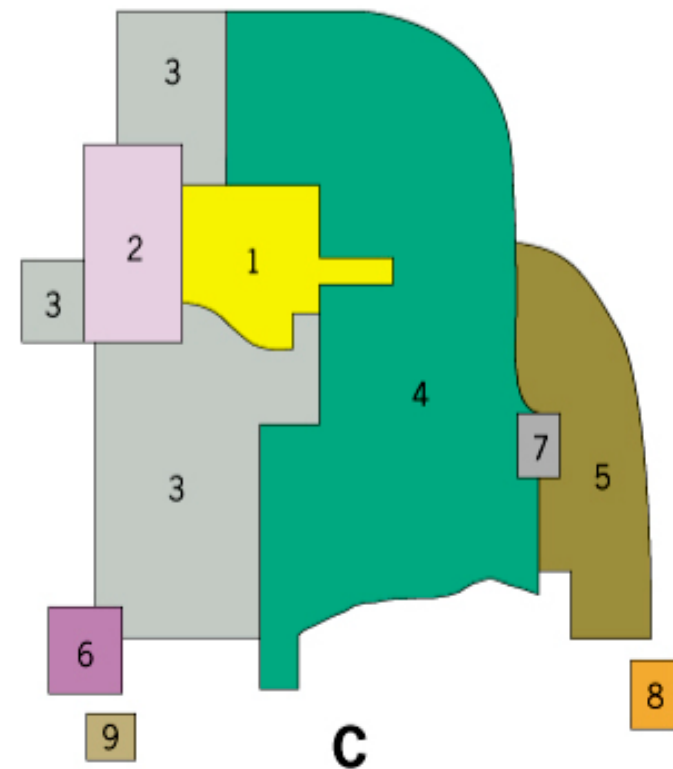
Fig. 13-11



MULTIPLE NUCLEI MODEL

– CBD was losing its dominant position as the single nucleus of the urban area.

– Separate nuclei become specialized and differentiated, not located in relation to any distance attribute



- 1 Central business district
- 2 Wholesale, light manufacturing
- 3 Low-class residential
- 4 Middle-class residential
- 5 High-class residential
- 6 Heavy manufacturing
- 7 Outlying business district
- 8 Residential suburb
- 9 Industrial suburb

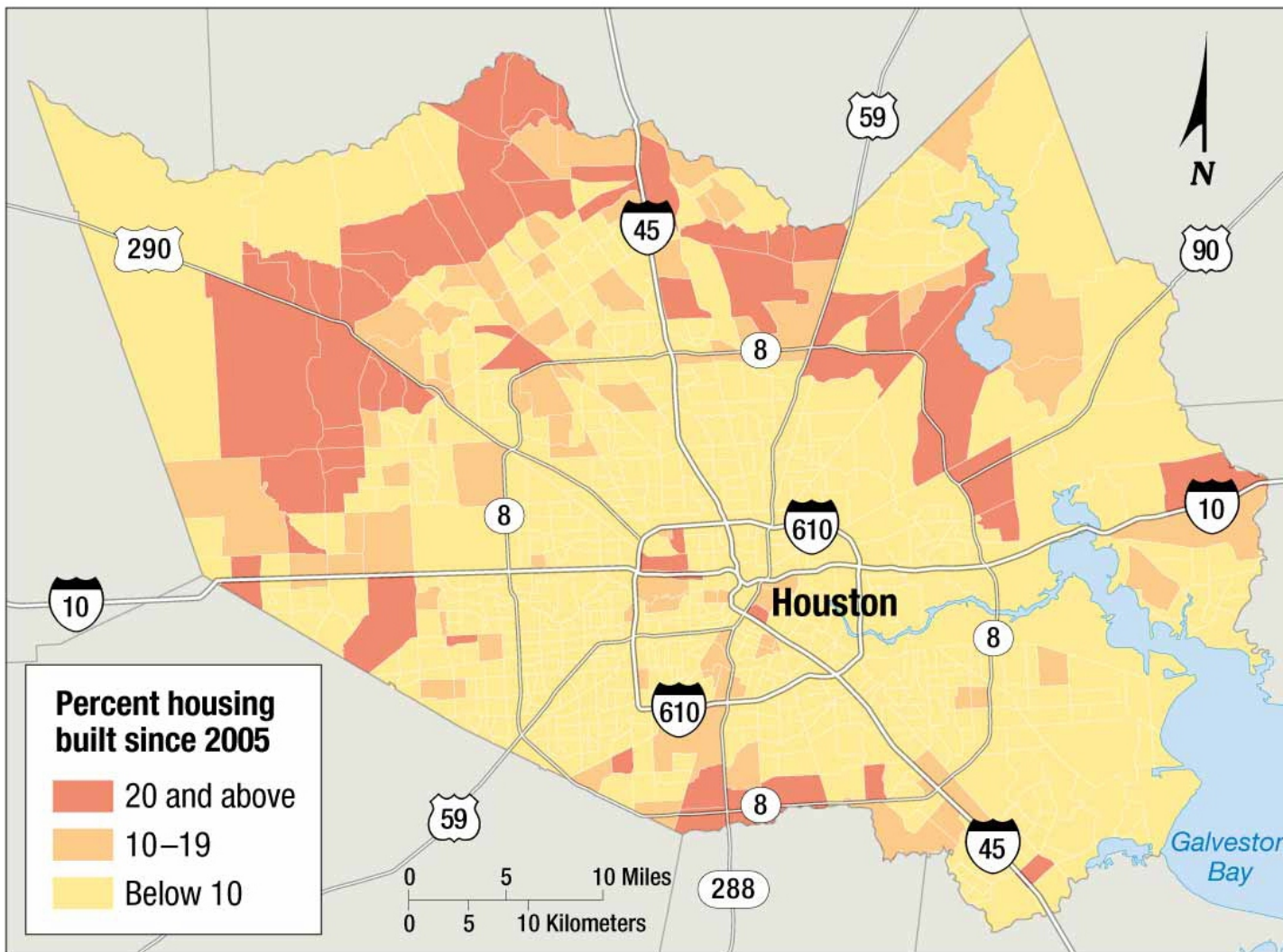
Where Are People Distributed Within Urban Areas?

- Geographic Applications of the Models
 - The models of urban structure help us understand where people with different social characteristics tend to live and why.
 - Critics point out that the models are too simple and may be too dated to explain contemporary urban patterns in the U.S. or in other countries.
 - Combining the models help geographers explain where different types of people live in a city.
 - They suggest that most people prefer to live near others who have similar characteristics.

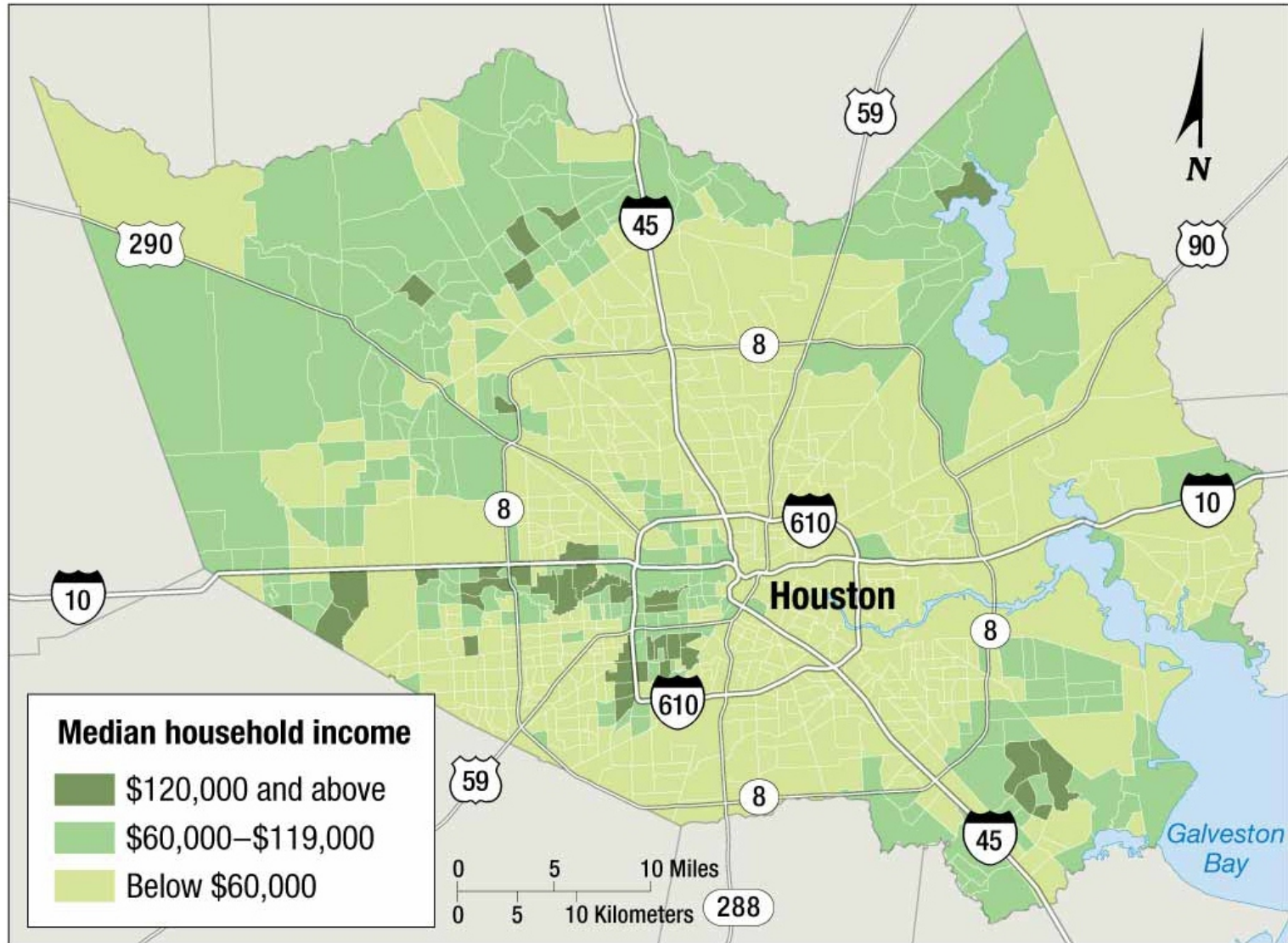
Where Are People Distributed Within Urban Areas?

- **Geographic Applications of the Models**
 - **Examples**
 - **Concentric Zone Model**
 - Families in newer houses tend to live in an outer ring
 - Families in older houses tend to live in an inner ring
 - **Sector Model**
 - Given two families who own their homes, the family with the higher income will not live in the same sector as the family with a lower income.
 - **Nuclei Model**
 - People with same ethnic background are likely to live near each other.

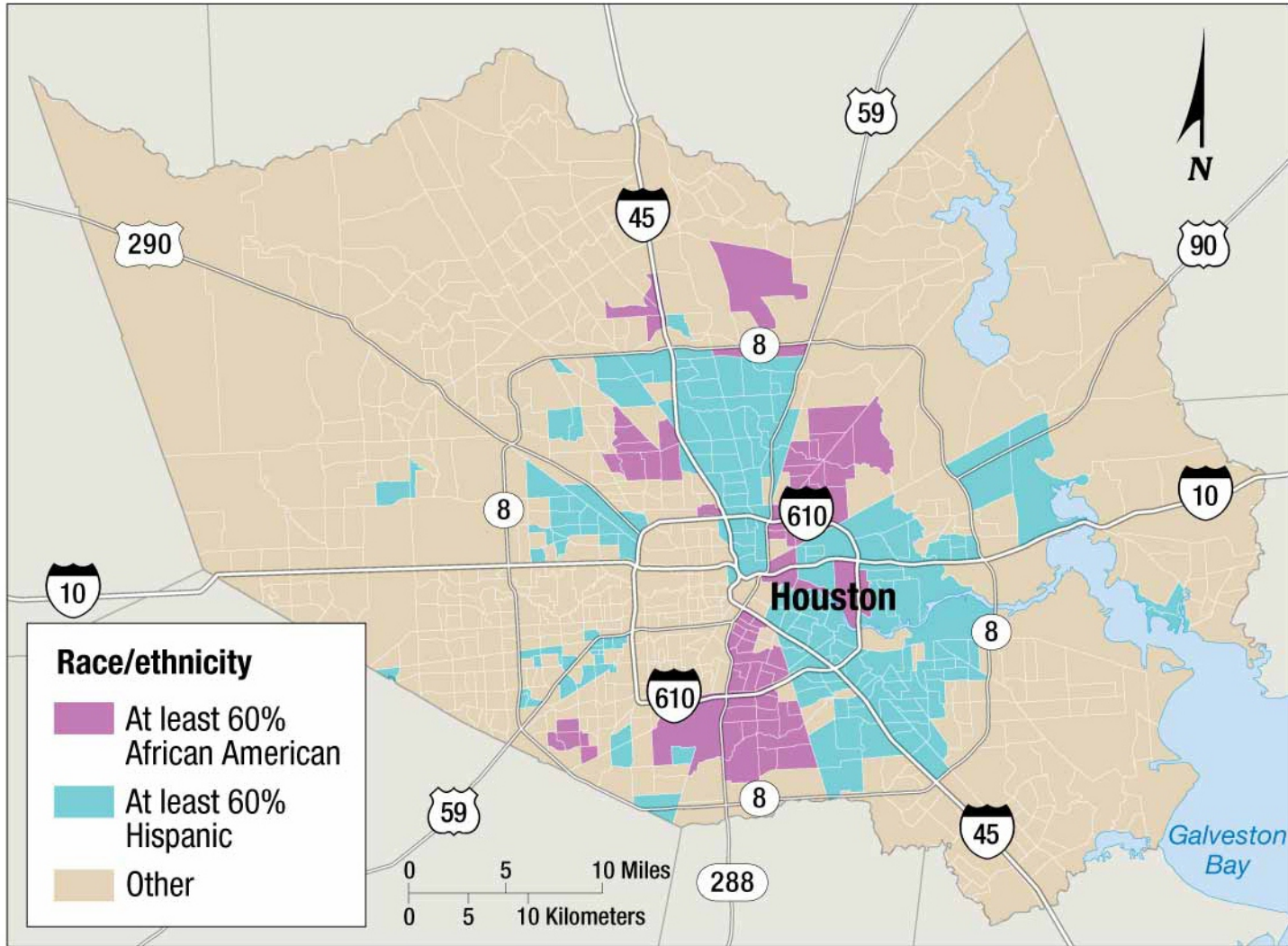
Figs. 13-12 – 13-14 on separate slides



Figs. 13-12 – 13-14 on separate slides



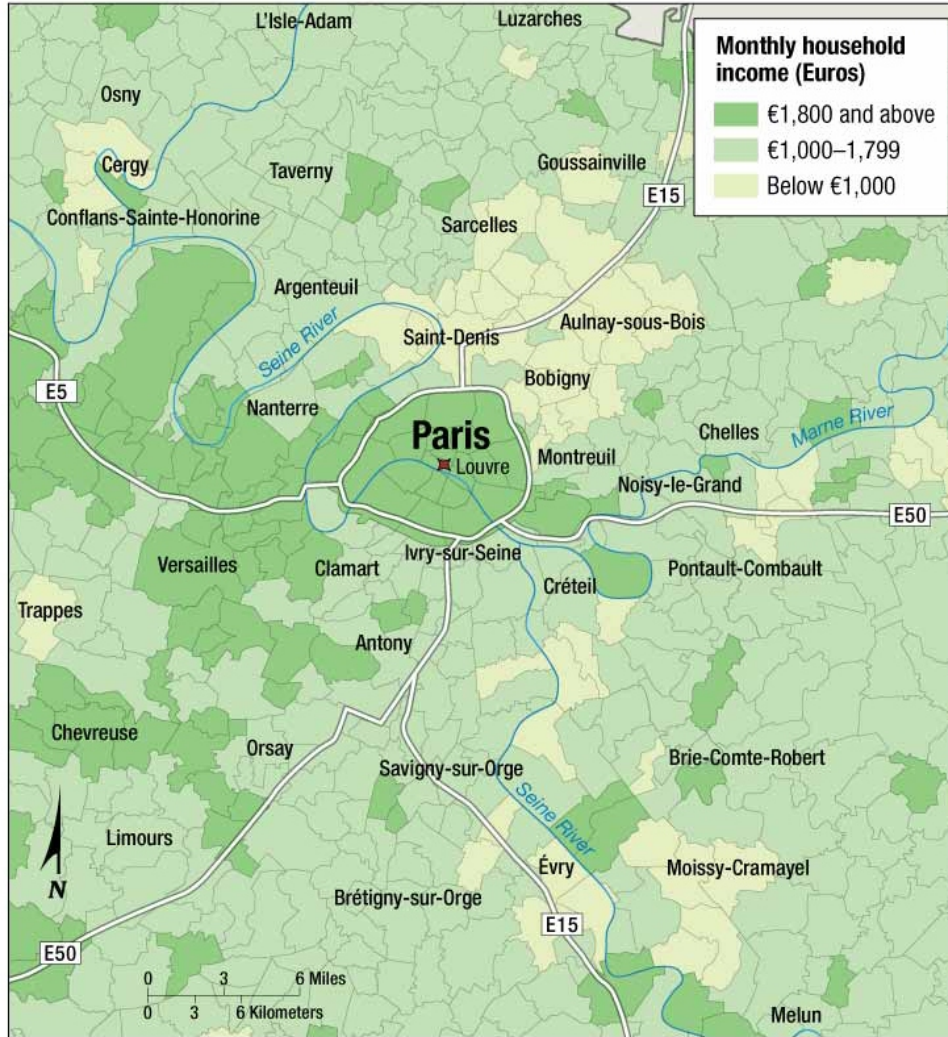
Figs. 13-12 – 13-14 on separate slides



Where Are People Distributed Within Urban Areas?

- Applying the Models Outside North America
 - Applying the Models in Europe
 - Sectors
 - In Europe, the wealthy still live in the inner portions of the upper-class sector, not just in the suburbs like most of the affluent in the U.S.
 - Concentric Zones
 - In Europe, most of the newer housing built in the suburbs is high-rise apartment buildings for low-income people and recent immigrants, unlike the U.S.

Figs. 13-17

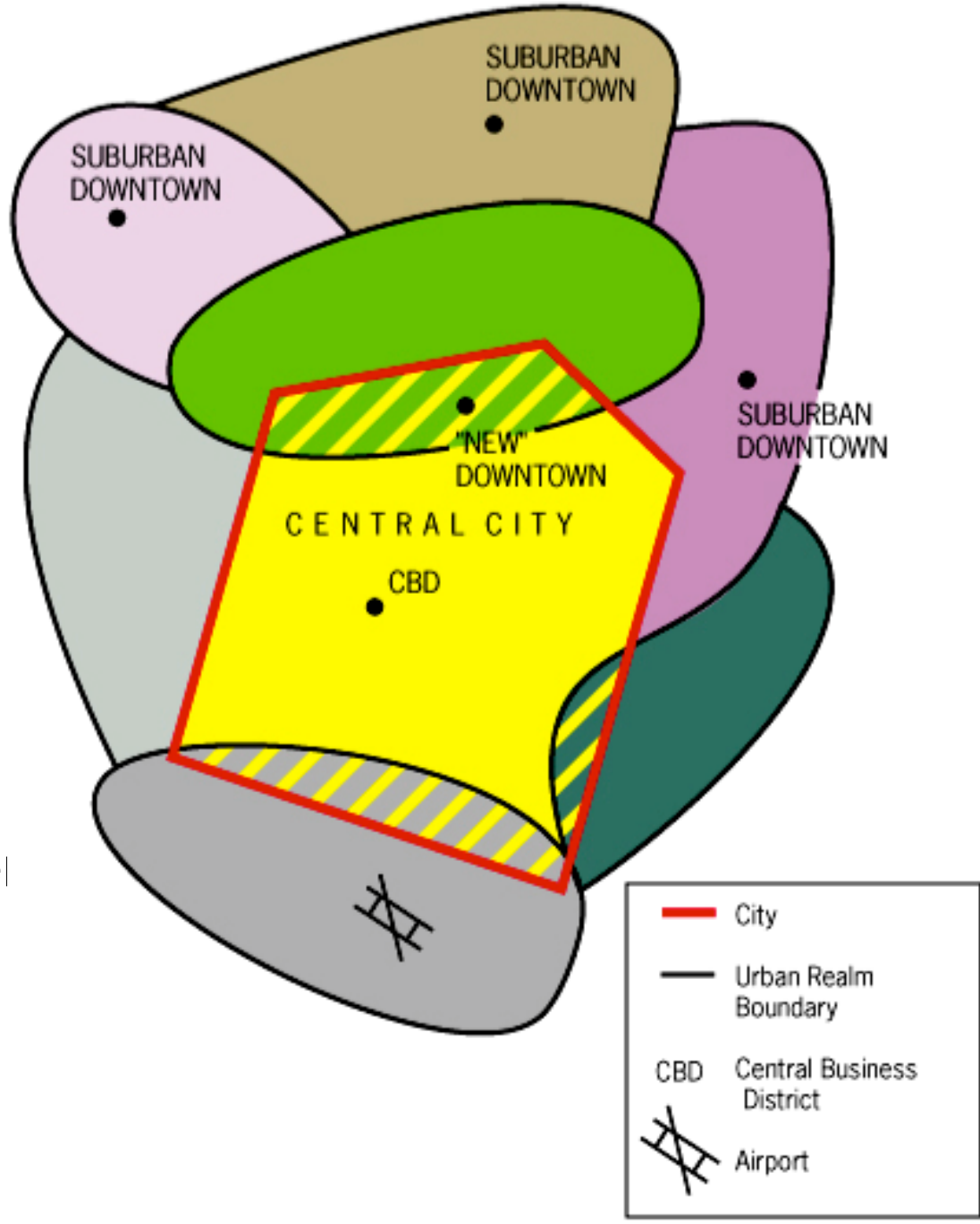


Where Are People Distributed Within Urban Areas?

- Applying the Models Outside North America
 - Applying the Models in Developing Countries
 - The poor are accommodated in suburbs.
 - The wealthy live near the center of the city, as well as in a sector extending from the center.

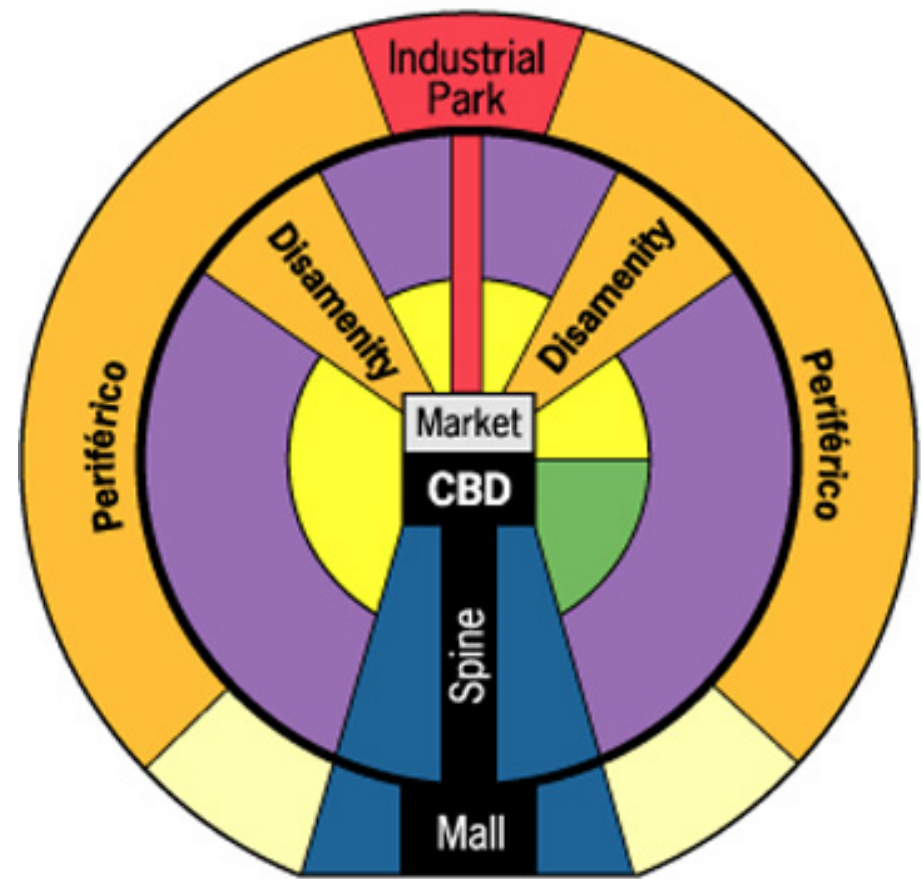
- Urban realms – parts of giant conurbations; self-sufficient suburban sectors (focused on their own independent CBD) – San Francisco Bay Area, Phoenix (Tempe, Scottsdale)

Conurbation - region comprising a number of cities, large towns, and other urban areas that, through population growth and physical expansion



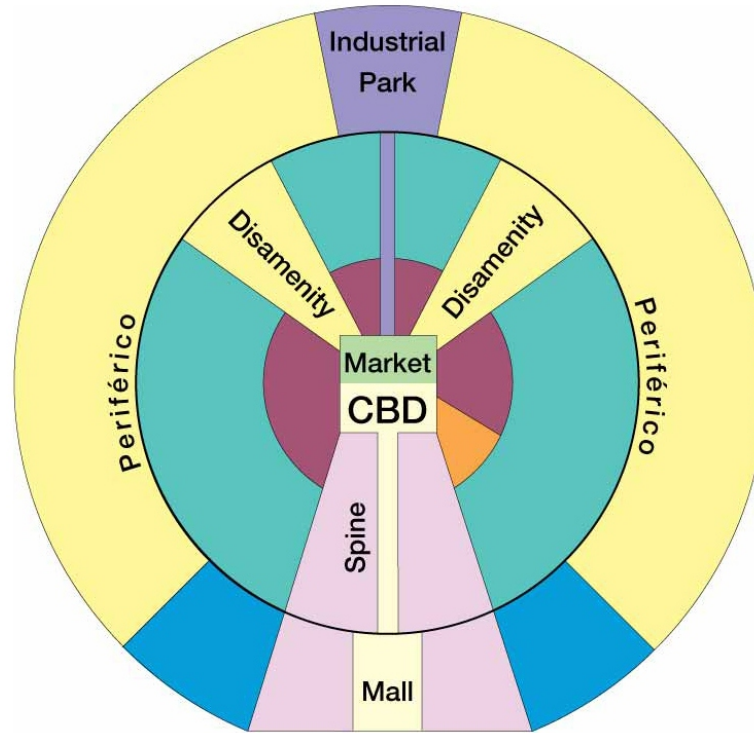
**A NEW AND IMPROVED MODEL
OF LATIN AMERICAN CITY STRUCTURE**










Latin
American City
(Griffin-Ford
model)



- | | |
|---|---|
|  Commercial |  Zone of peripheral squatter settlements |
|  Market |  Elite Residential Sector |
|  Industrial |  Gentrification |
|  Zone of Maturity |  Middle-Class Residential Tract |
|  Zone of In Situ Accretion | |

Figs. 13-18

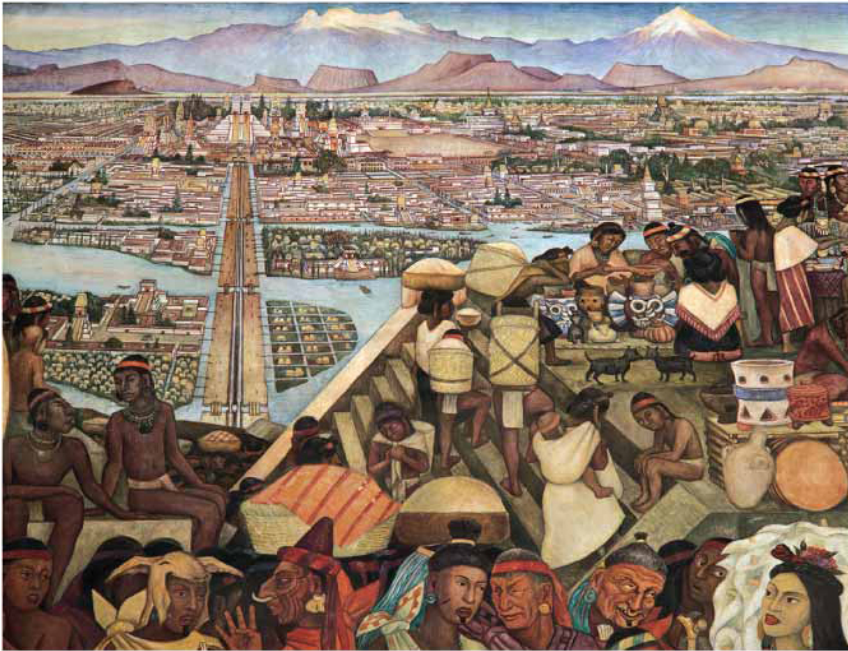


	Commercial		Zone of in situ accretion
	Market		Zone of peripheral squatter settlements
	Industrial		Gentrification
	Elite residential sector		Middle-class residential
	Zone of maturity		

Where Are People Distributed Within Urban Areas?

- Stages of Cities in Developing Countries
 - Precolonial Cities
 - Before the Europeans established colonies, most people lived in rural settlements.
 - There were but a few principal cities in Latin America, Africa, and Asia.
 - Examples
 - In present-day Mexico, the Aztecs built the city Tenochtitlan, where present-day Mexico City is located.
 - Colonial Cities
 - When European colonization gained control of Latin America, Asia, and Africa, they expanded the existing cities to provide colonial services.

Figs. 13-21



Where Are People Distributed Within Urban Areas?

- Stages of Cities in Developing Countries
 - Colonial Cities cont' d.
 - Examples include:
 - » Administration
 - » Military Command
 - » International Trade
 - » Housing for European Settlers
 - Cities Since Independence
 - Following independence, cities have become the focal points of change.
 - Millions of migrants have arrived to them in search of work.
 - In some cities, such as Mexico City, previous social patterns from the previous century were reinforced.

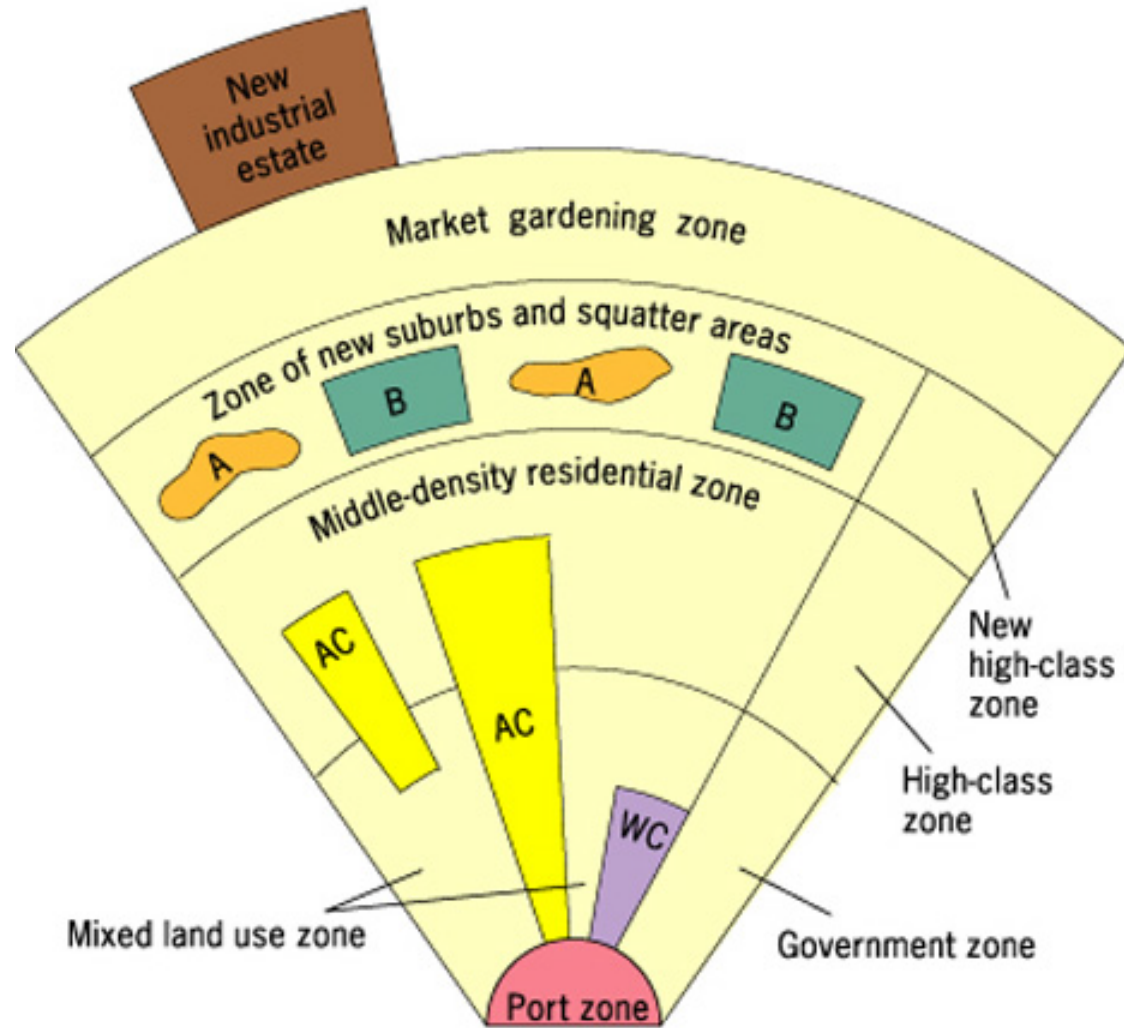
Figs. 13-22



**A GENERALIZED MODEL OF
LAND USE AREAS IN THE LARGE
SOUTHEAST ASIAN CITY**

Southeast Asian City (McGee model)

* not in book

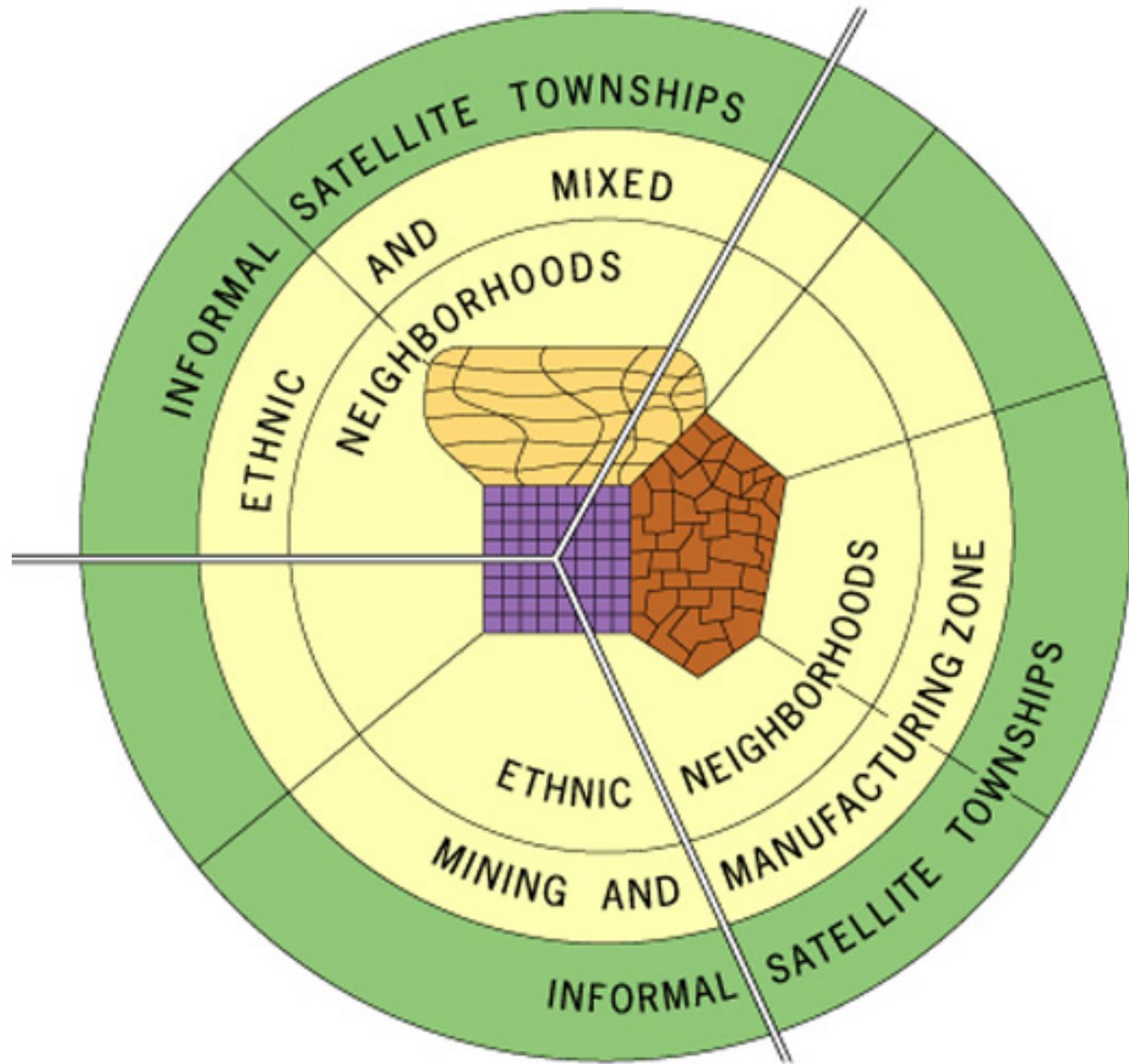


A	Squatter areas	AC	Alien commercial zone
B	Suburbs	WC	Western commercial zone

A MODEL SUBSAHARAN AFRICAN CITY

The African City (de Blij model)

* not in book



Colonial CBD Traditional CBD Market Zone

Major road Local street

KI #3 Why Are Urban Areas Expanding?

- Harris Peripheral Model of Urban Areas
 - an urban area consists of an inner city surrounded by large suburban residential and business areas tied together by a beltway or ring road. Around the beltway are nodes of consumer and business services called **edge cities**. The edge cities originated as suburban residences for people who worked in the central cities and then shopping malls were built near the residents. Many edge cities now contain manufacturing centers and office parks.

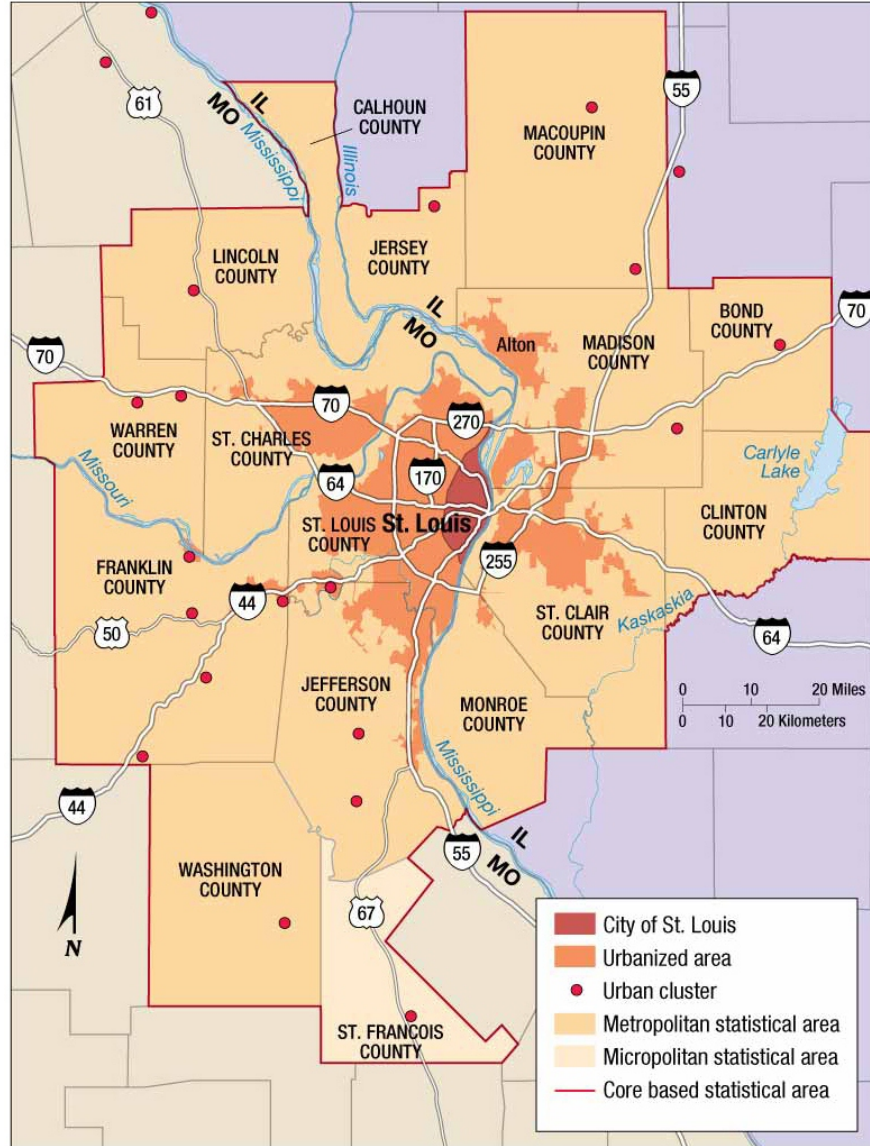
- **Kansas City is an Edge City**

- College Boulevard–Overland Park area
- Country Club Plaza area
- Crown Center area
- Kansas City International Airport area

Why Are Urban Areas Expanding?

- Defining Urban Settlements
 - Several definitions have been created to characterize cities and their suburbs.
 1. The term *city* defines an urban settlement that has been legally incorporated into an independent, self-governing unit.
 - In the U.S., these urban settlements are sometimes known as a *central city*.

Figs. 13-26



Why Are Urban Areas Expanding?

- Defining Urban Settlements cont' d.
 2. An *urban area* consists of a dense core of census tracts, densely settled suburbs, and low-density land that links the dense suburbs with the core. The census recognizes two types of urban areas:
 1. An *urbanized area* is an urban area with at least 50,000 inhabitants.
 2. An *urban cluster* is an urban area with between 2,500 and 50,000 inhabitants.

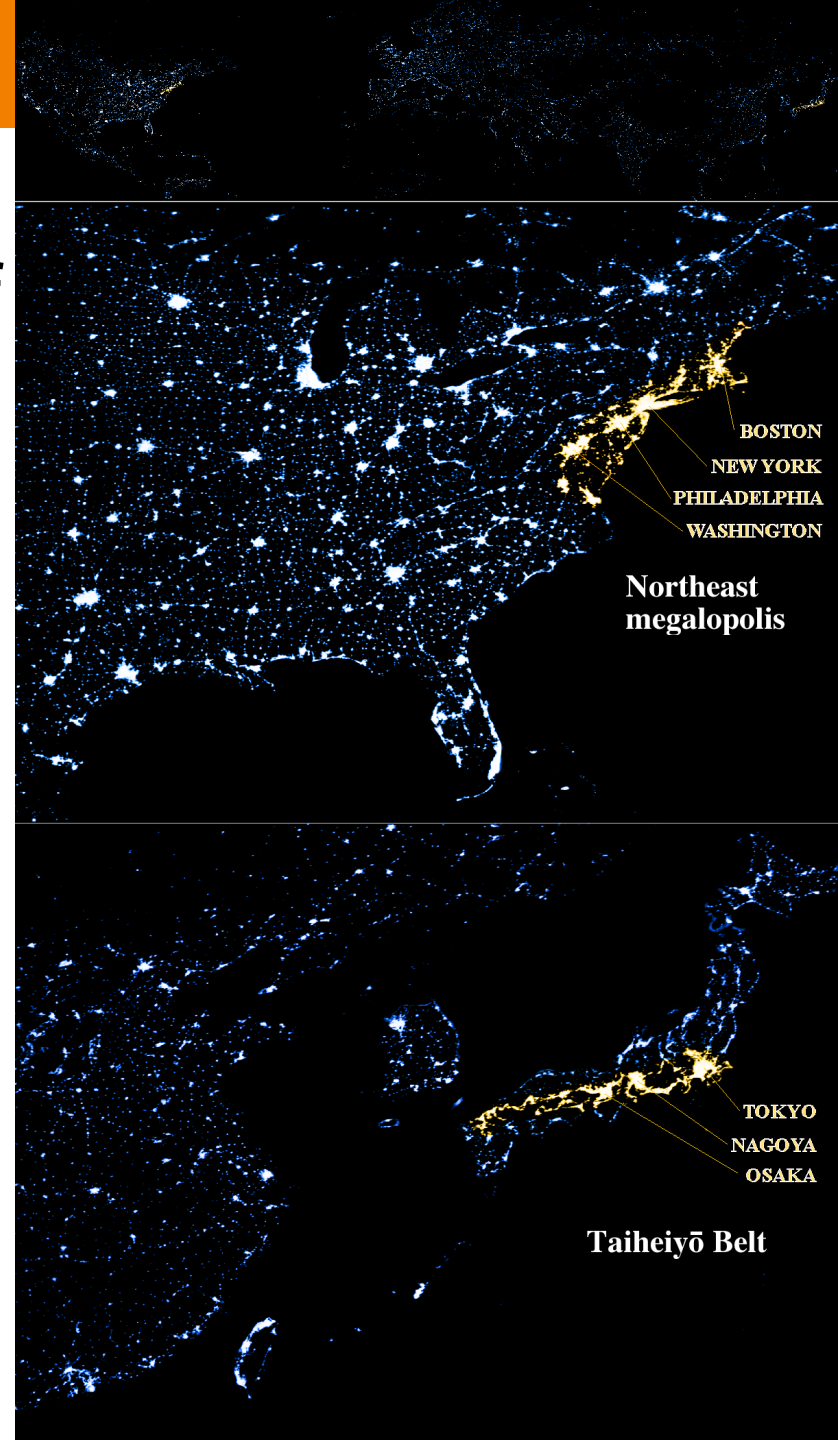
Why Are Urban Areas Expanding?

- Defining Urban Settlements cont' d.
 3. The U.S. Bureau of the Census has created a method of measuring the functional area of a city, known as the *metropolitan statistical area (MSA)*. It includes:
 - An urbanized area with a population of at least 50,000
 - The county within which the city is located
 - Adjacent counties with a high population density and a large percentage of residents working in the central city's county.

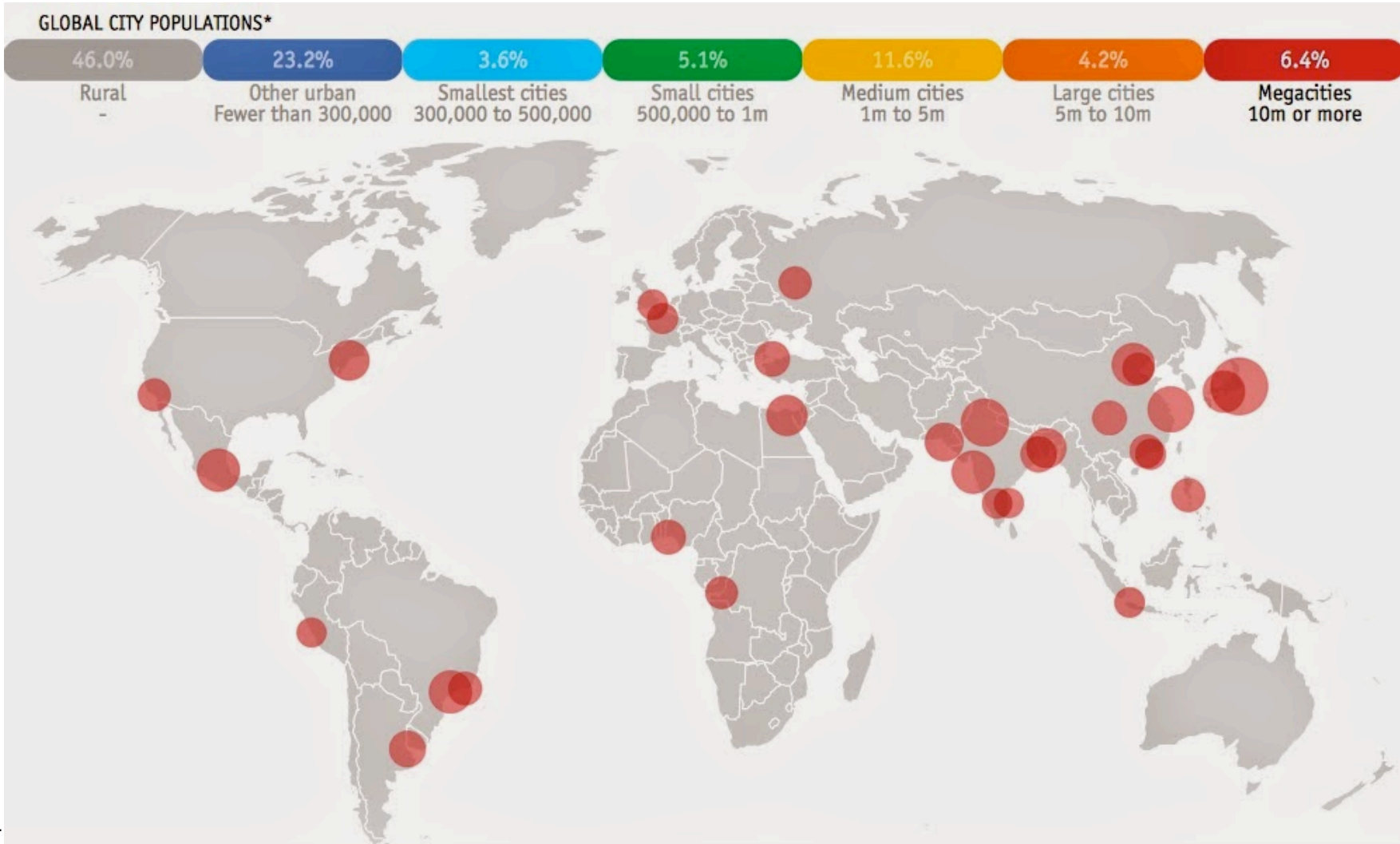
Why Are Urban Areas Expanding?

- Overlapping Metropolitan Areas
 - Some adjacent MSAs overlap so that they now form one continuous urban complex.
 - Example: Extending north of Boston to South of Washington D.C., geographer Jean Gottmann named this region *Megalopolis*, a Greek word meaning “great city”.
 - Local Government Fragmentation
 - Most U.S. metropolitan areas have a *council of government*, which is a cooperative agency consisting of various local government representatives.
 - Purpose may be to do some overall planning for the area that cannot be performed by a single local government.

- Megalopolis - an extensive concentration of urbanized settlement formed by a coalescence of several metropolitan areas. The term is commonly applied to the urbanized northeastern seaboard of the U.S. extending from Boston, MA to Washington, D.C.



- Megacities - A city with a population of greater than 10 million.

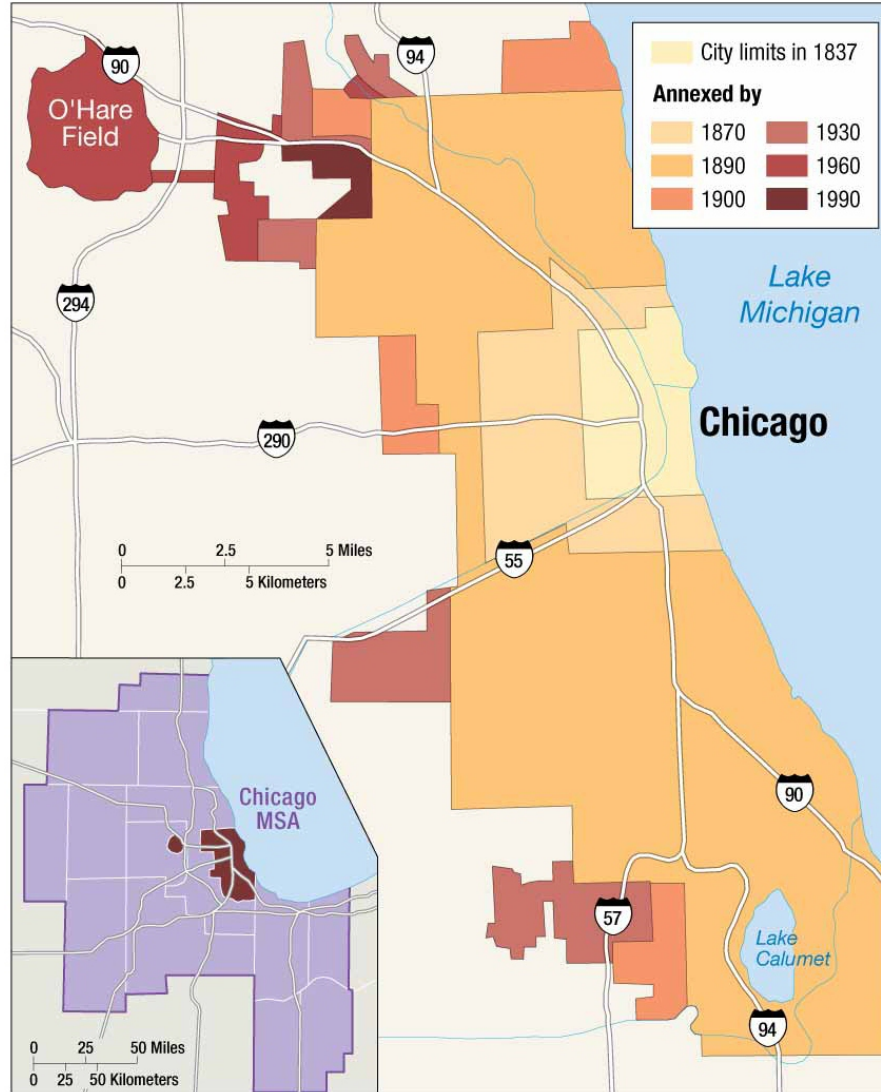


- Here is the list of world's most populated cities as reported by the UN.
- **1. Tokyo, Japan** : 38 million.
- **2. Delhi, India**: 25 million
- **3. Mexico City, Mumbai and São Paulo**: Each around 21million.
- **4. Osaka, Japan**: just above 20 million
- **5. Beijing, China**: just below 20 million
- **6. New York-Newark area and Cairo**: around 18.5 million dwellers each.

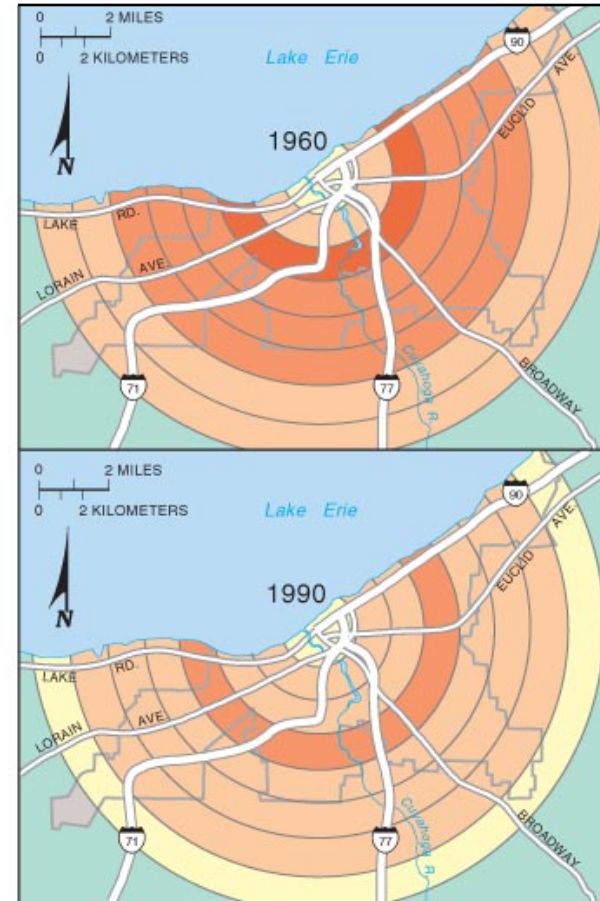
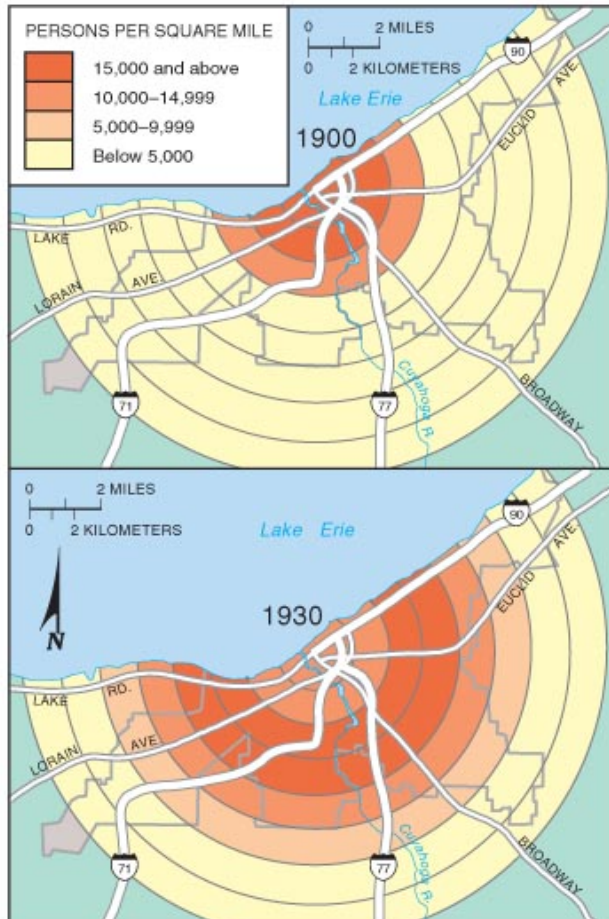
Why Are Urban Areas Expanding?

- Annexation
 - The process of legally adding land area to a city is *annexation*.
 - Many U.S. cities grew rapidly in the 19th century, because they offered better services than available in the rural countryside (e.g. water supply, sewage disposal, etc.)
- Density Gradient
 - U.S. tend to become less and less dense as one ventures farther from the city' s center; this phenomenon is known as the *density gradient*.

Figs. 13-29

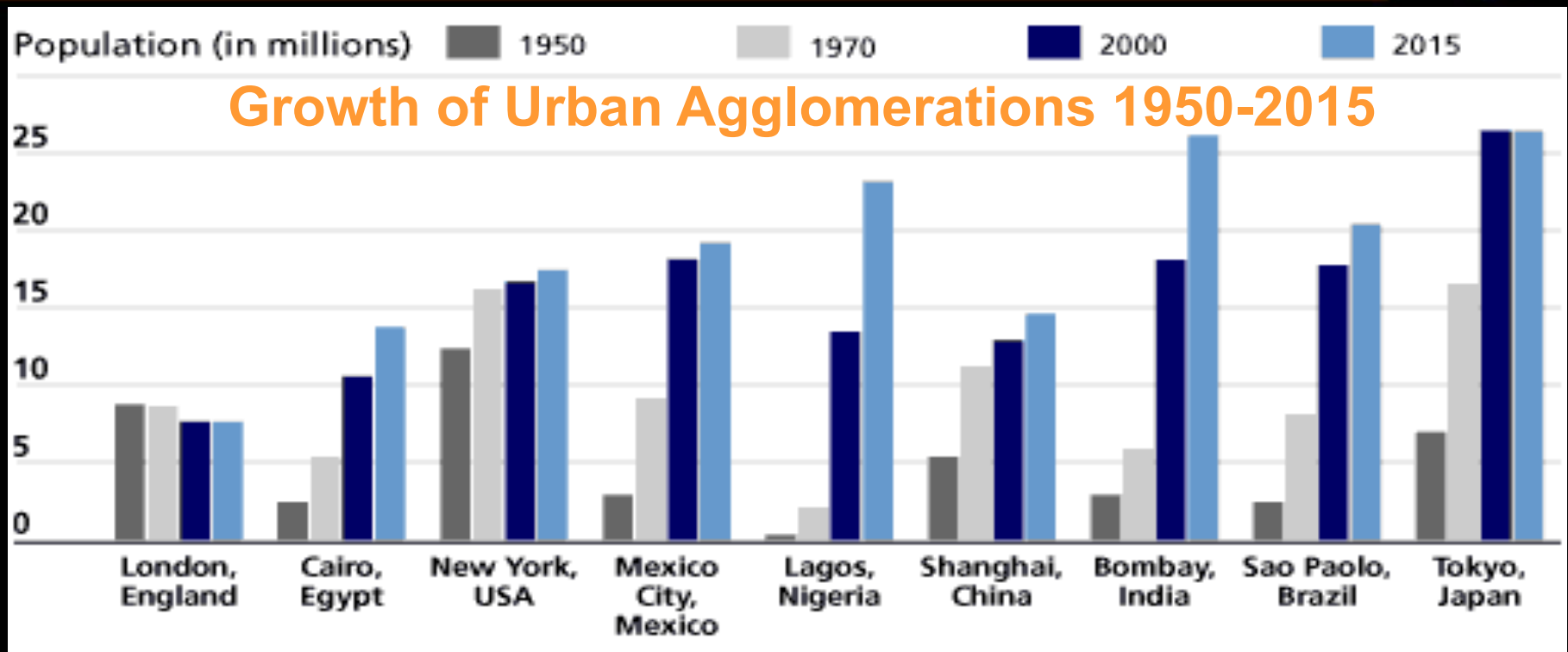


Density Gradient



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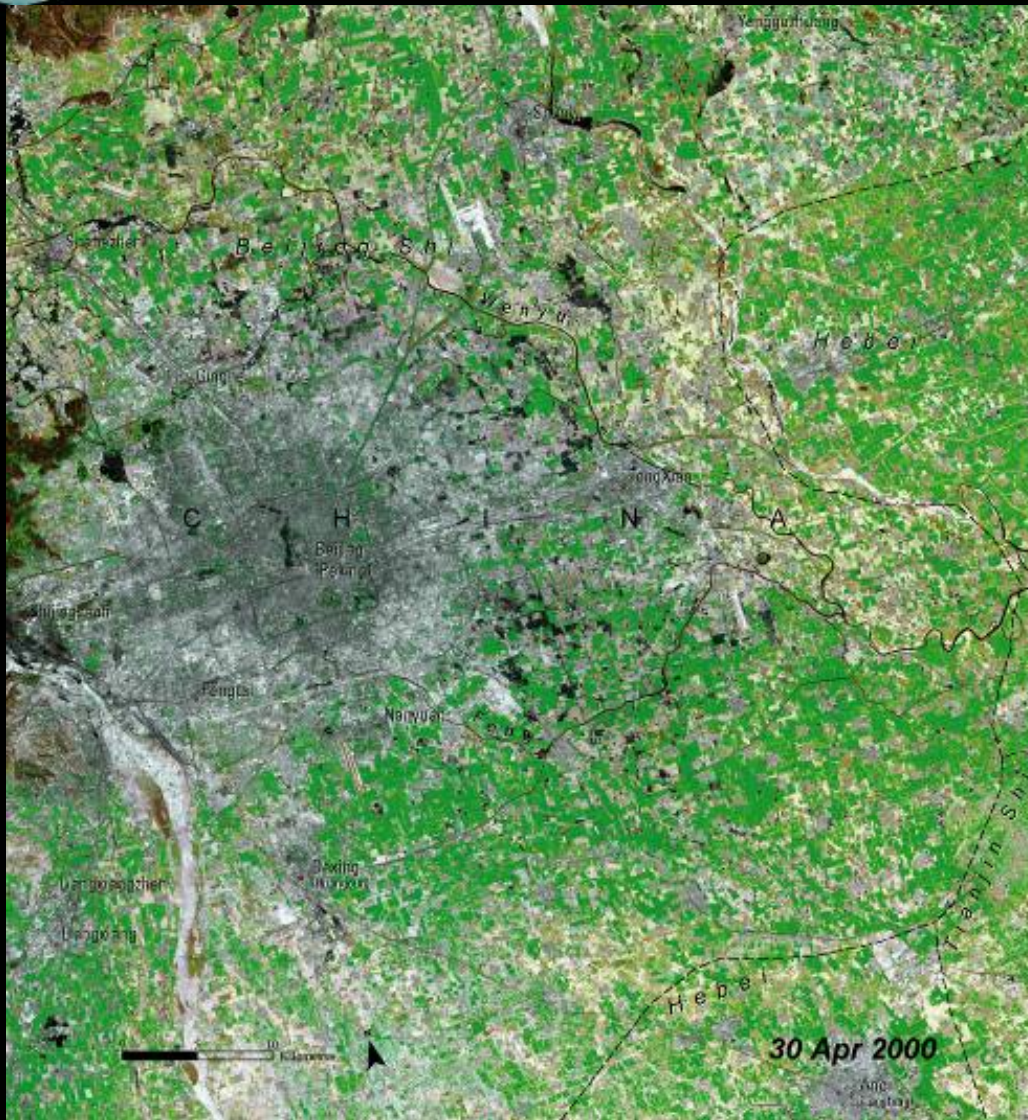
World Population Growth 1750-2150



- About 3 billion people, or 50 per cent of the global population, already live in urban areas; over the next 25 years, more than 2 billion people are predicted to be added

Source: UN- HABITAT Report 2005; United Nations, World Urbanization Prospects, The 1999 Revision

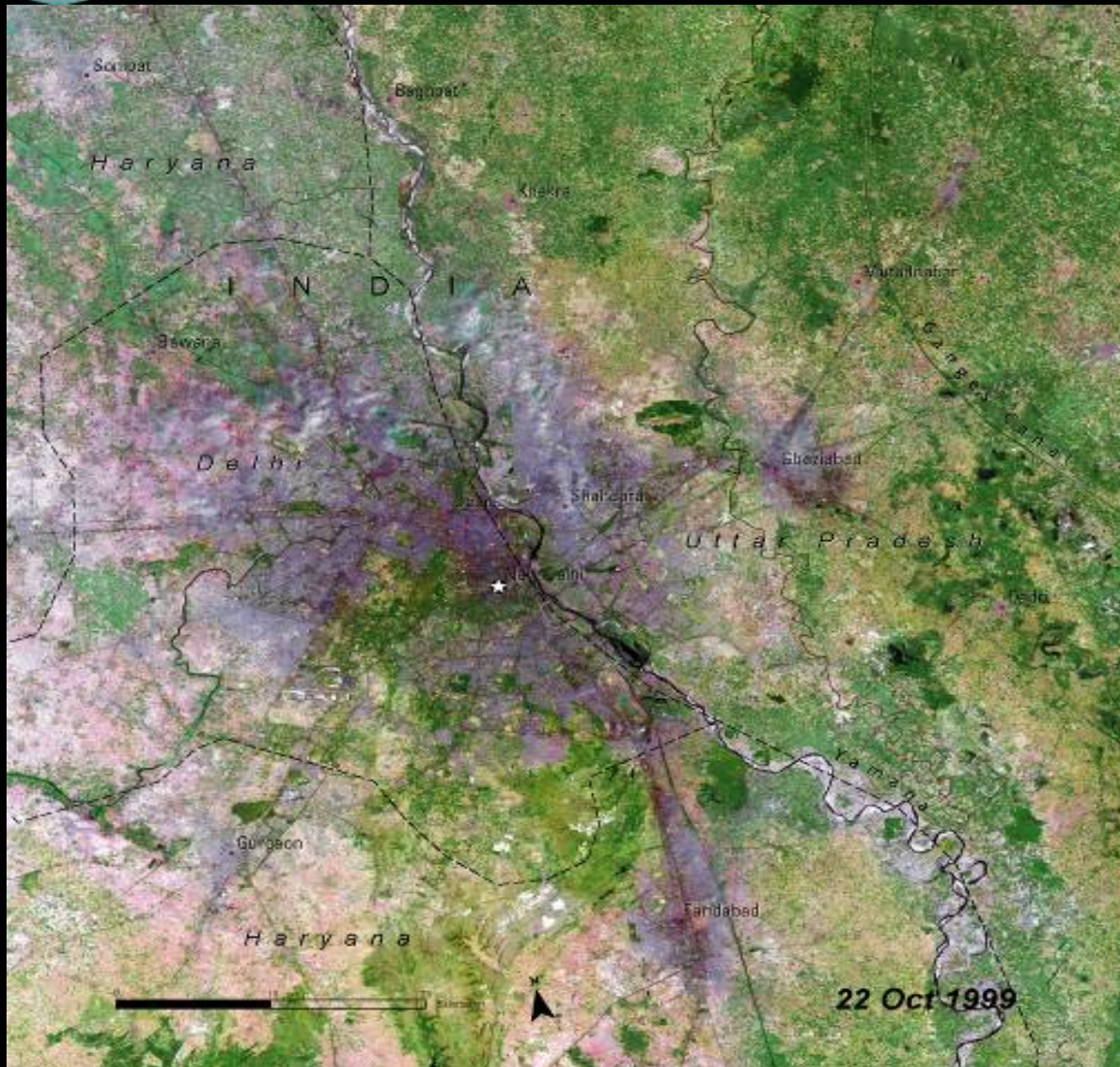
Explosive growth in Beijing China



Beijing, the capital city of China, has experienced explosive growth since economic reforms in 1979

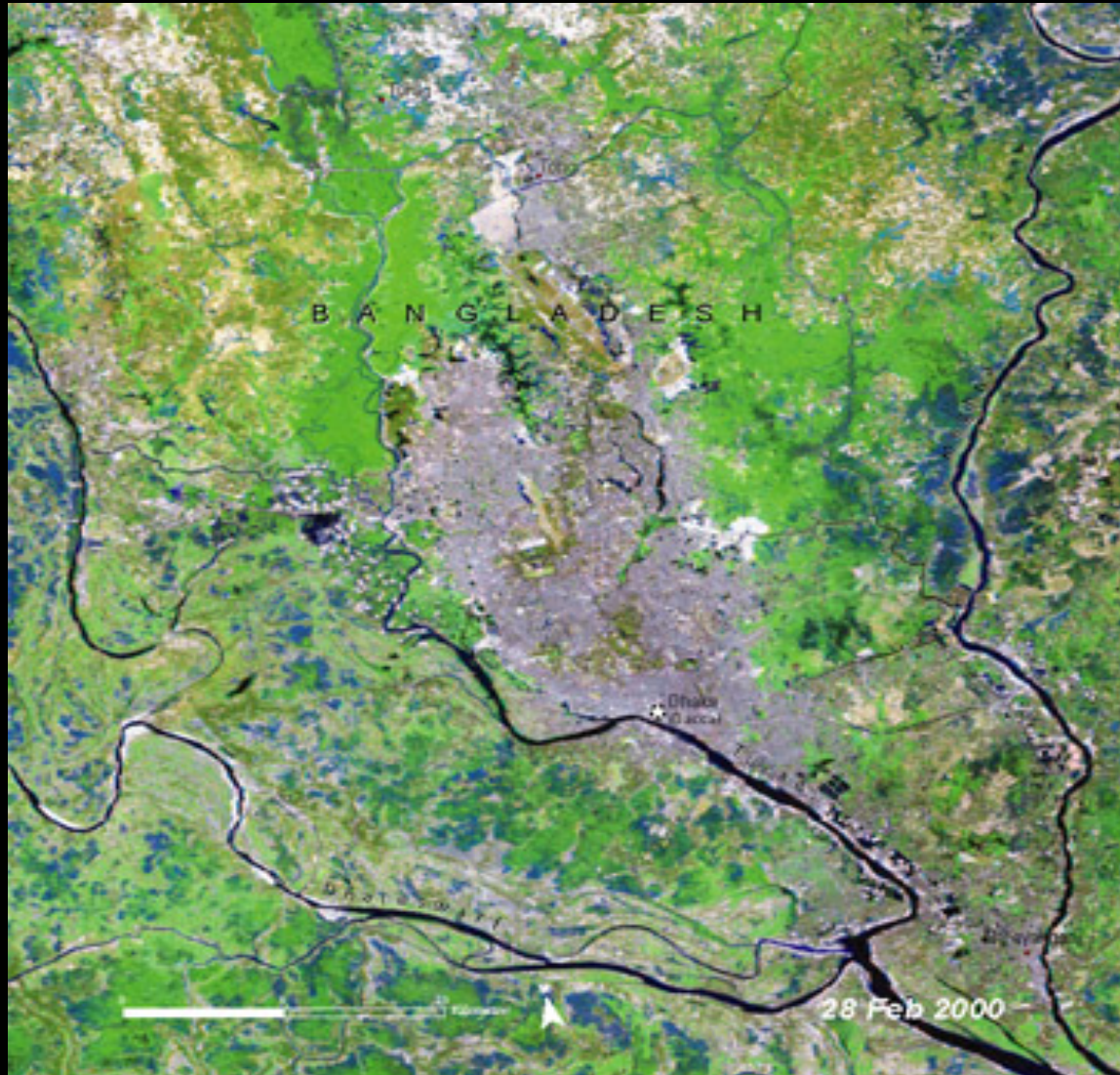
- 1978: Beijing in 1978
- 2000: Extent of urban expansion is clearly visible

Growing Delhi and its suburbs India



1977-1999: The population of Delhi was at 4.4 million in 1975 and grew to 12.4 million in 2000

Phenomenal growth in Dhaka Bangladesh



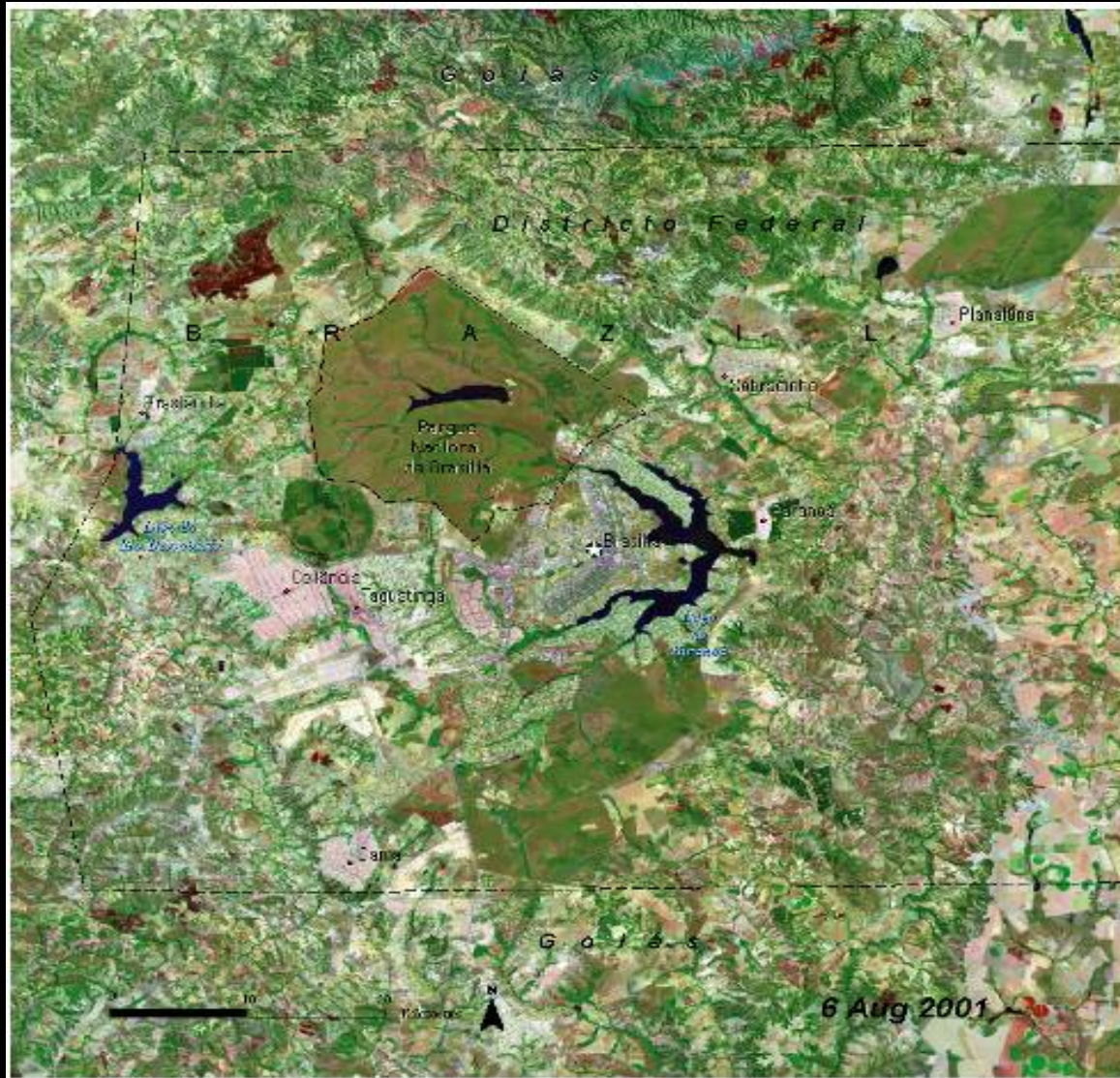
1977-2000: the capital of Bangladesh has grown from a city of 2.5 million more than 10 million

Growing London city United Kingdom



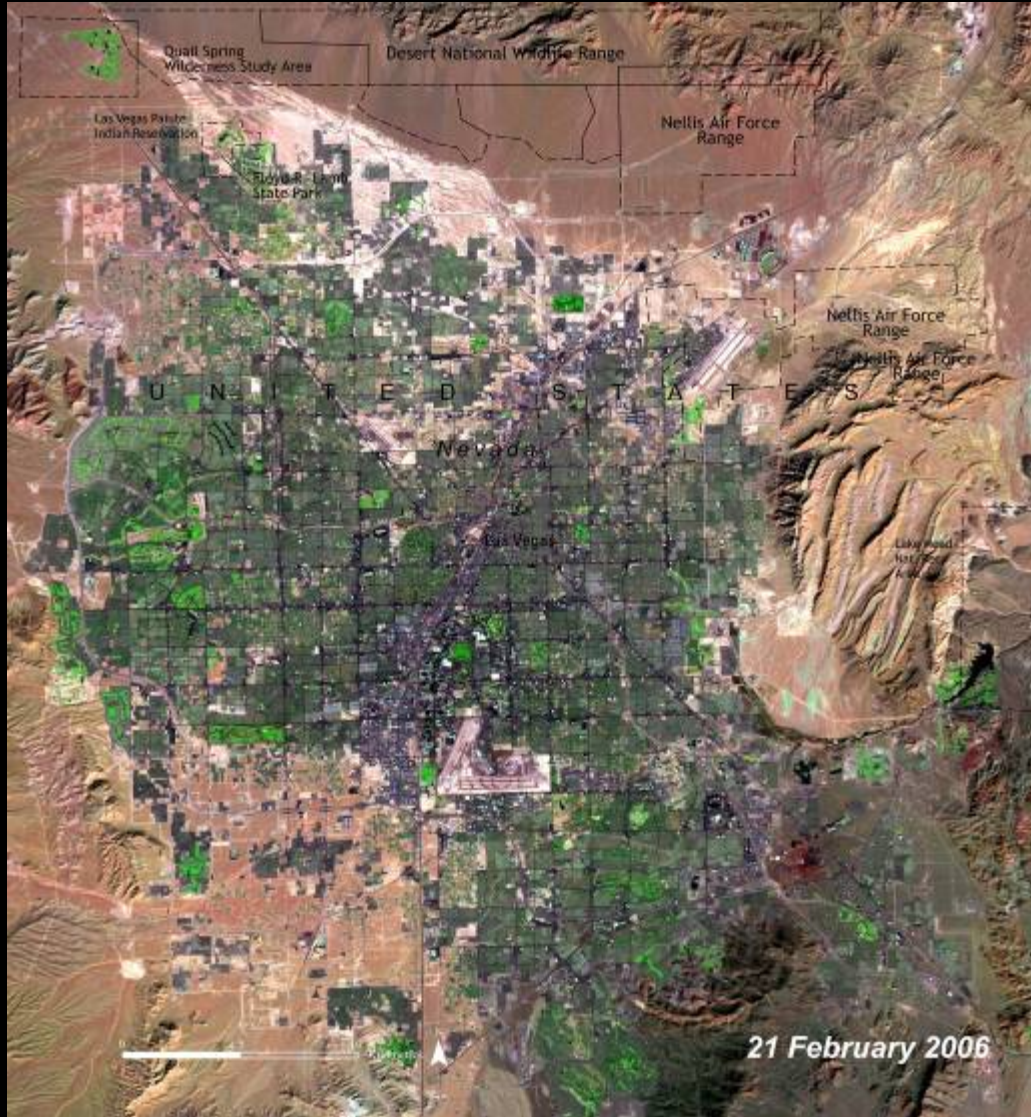
- Over 7 million residents
- Population projected to approach 8 million by 2021

Unplanned urban developments in Brasilia Brazil

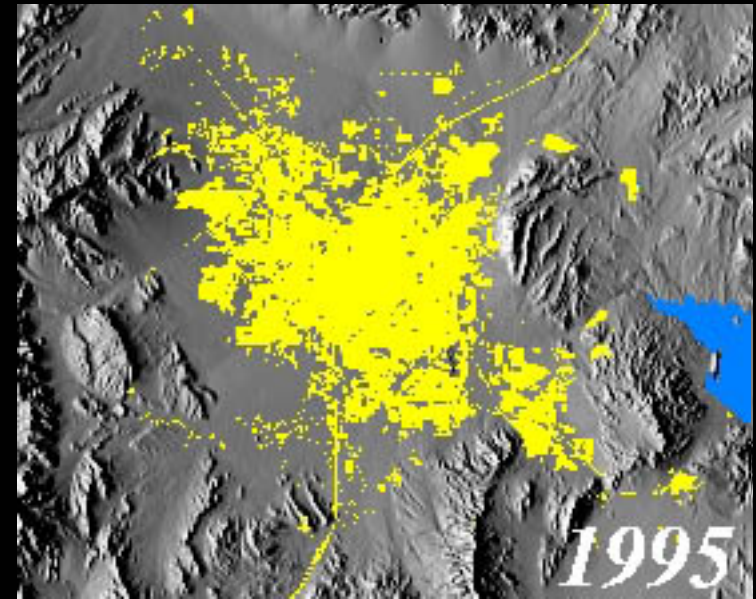


- 1973-2001:
Unplanned urban
development
resulted in a
collection of urban
“satellites” around
the city

Las Vegas – Fastest growing metropolitan area in the United States



- 1973: A small settlement
- 2000-2006: The landscape is now dramatically modified



Images courtesy USGS



Expanding Las Vegas, United States





Drought in the Western United States



2000

Lake Mead



2004

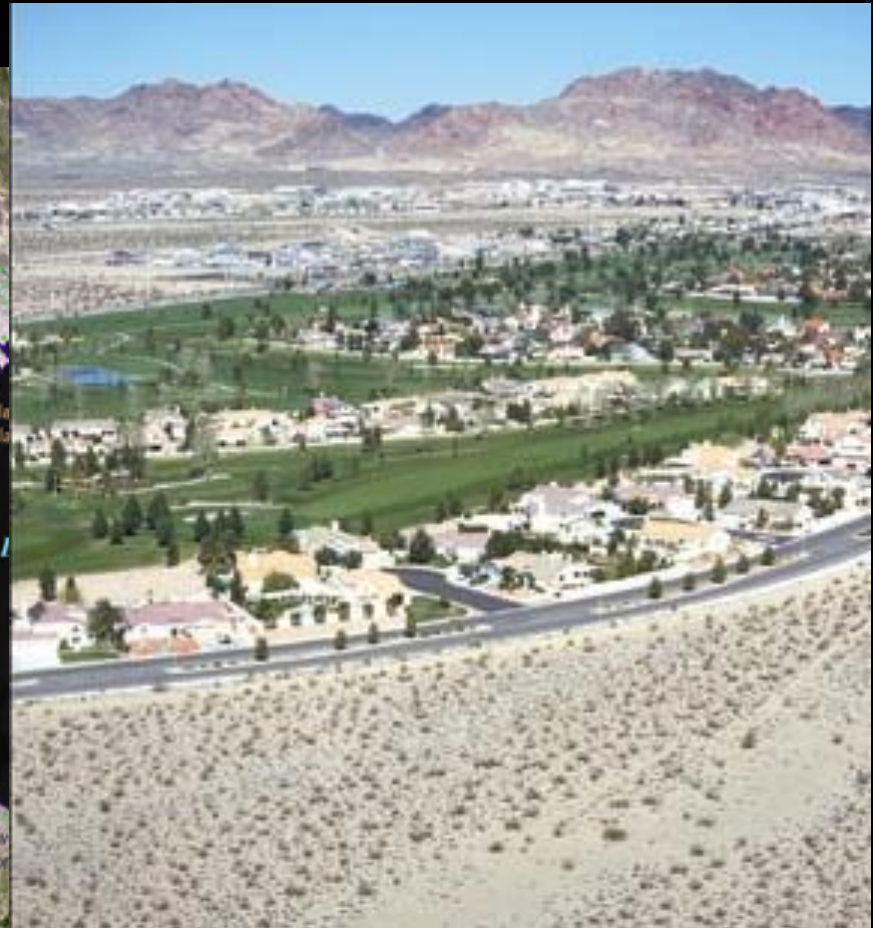
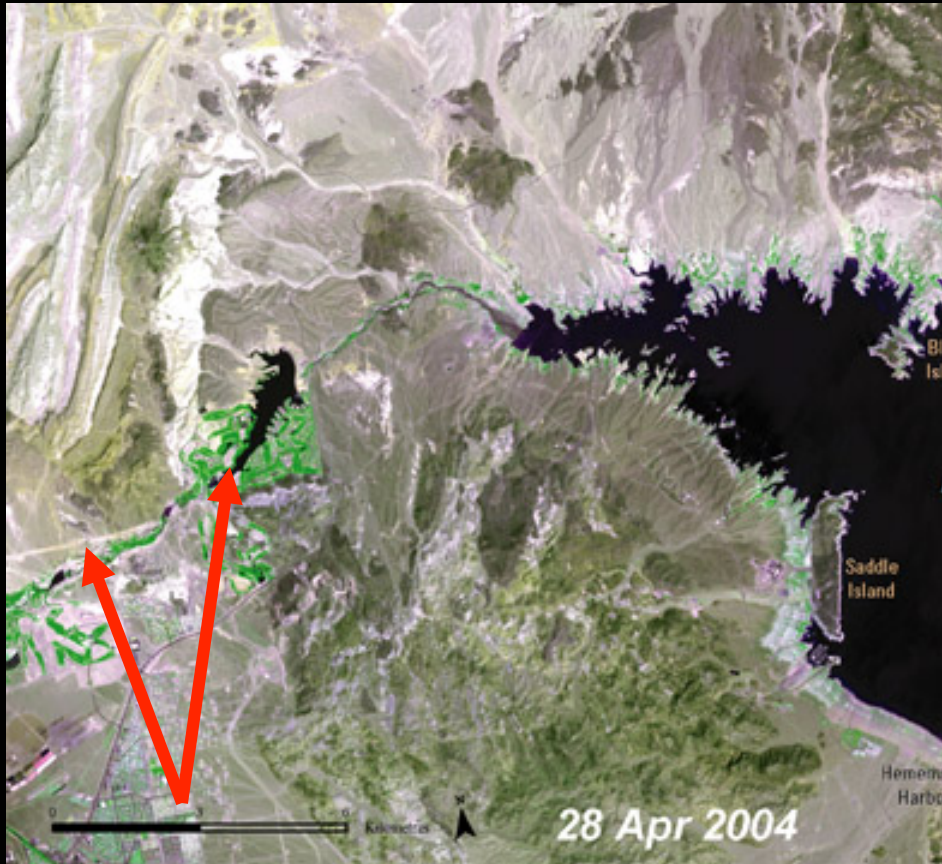
Photo View

18 meters

Hoover Dam and Lake Mead



Golf courses springing up around Lake Mead United States



New Golf Courses since 2001

**Expansion of Golf Courses
around Lake Mead**

Why Are Urban Areas Expanding?

- The Cost of Suburban Sprawl
 - A flattening of the density gradient for a metropolitan area means that its people and services are spread out over a larger area.
 - U.S. suburbs are characterized by *sprawl*, the progressive spread of development over the landscape.
- Suburban Segregation
 - The modern residential suburb is segregated in two ways:
 1. Social Class
 - Similarly priced houses are typically built in close proximity to one another, thus attracting a specific range of income earners.

Figs. 13-32



Why Are Urban Areas Expanding?

- Suburban Segregation

- The modern residential suburb is segregated in two ways cont' d.:

- 2. Land Uses

- Residents are separated from commercial and manufacturing activities that are confined to compact, distinct areas.

- » Zoning ordinances enacted in the early 20th century have contributed most notably to the segregation of land uses associated with suburban areas.

Why Are Urban Areas Expanding?

- Urban Transportation

- Motor Vehicles

- Cars and trucks permitted large-scale development of suburbs at greater distances from the city center.
 - Motor vehicles use a considerable amount of space in U.S. cities.
 - An average city allocated about $\frac{1}{4}$ of its land to roads and parking lots.
 - Multilane freeways cut a 23-meter (75-foot) path through the heart of a city, and elaborate interchanges consume even more space.
 - Valuable land in the central city is devoted to parking cars and trucks.

Why Are Urban Areas Expanding?

- Urban Transportation

- The Car of the Future

- Motor vehicles are one of the greatest challenges to reducing pollution in congested urban areas.
 - Automakers are scrambling to bring alternative-fuel vehicles to the market.
 - Diesel
 - » Diesel engines burn fuel more efficiently.
 - » Biodiesel fuel can be produced partly with vegetable oils or recycled restaurant grease.
 - Hybrid
 - » Energy that would be otherwise wasted when coasting and braking is reduced, because an electric engine takes over during those instances.

Why Are Urban Areas Expanding?

- Urban Transportation

- The Car of the Future

- Ethanol

- » Fuel made by distilling crops, such as sugarcane, corn, and soybeans.
 - » Critics question whether the amount of energy put into growing the crops is not equal to, if not more than, the amount of energy derived from them as fuel.

- Plug-In Hybrid

- » Electric motor supplies the power at all speeds.
 - » Gas engine can recharge the battery, as well as plugging the car into an electrical outlet.

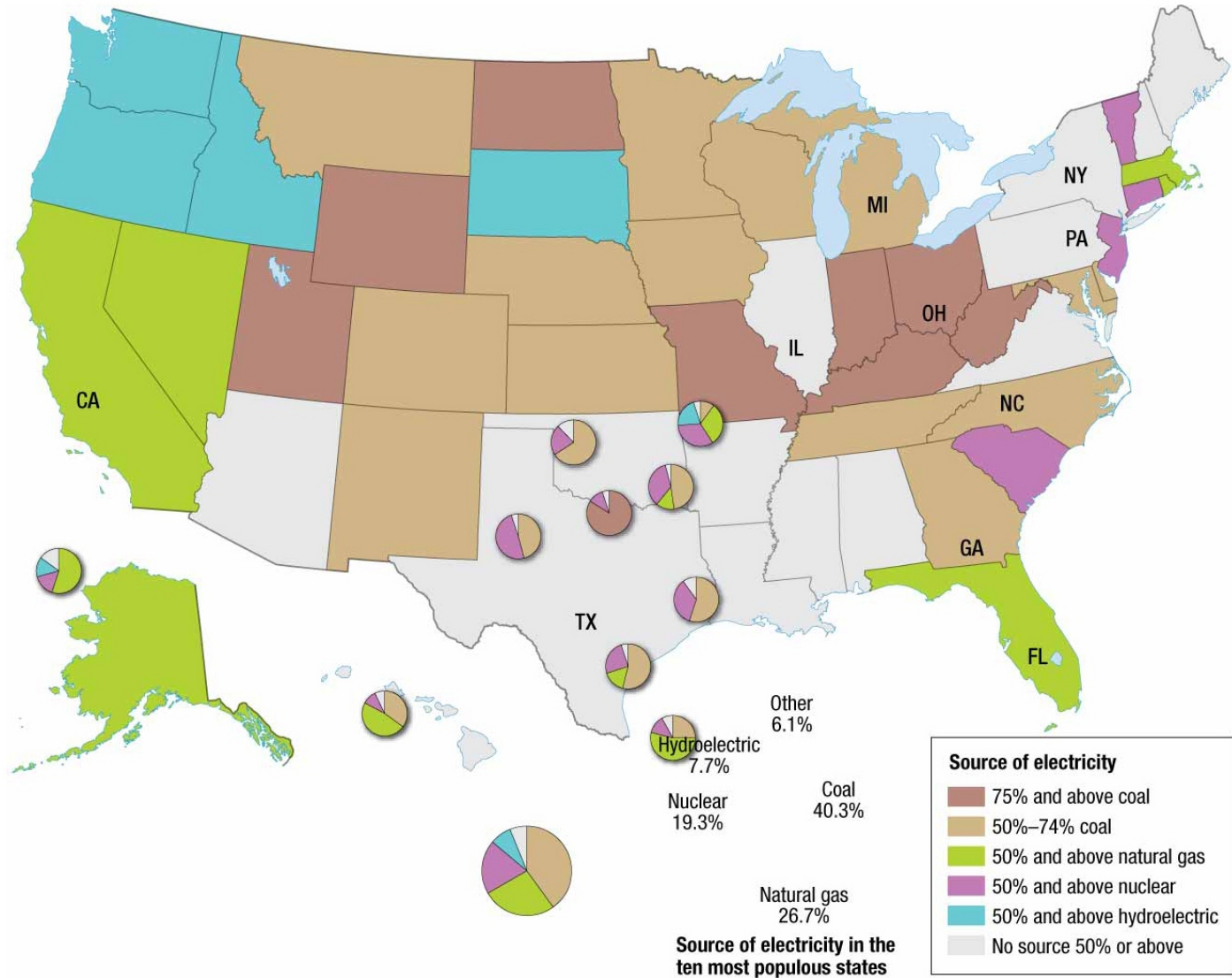
- Hydrogen Fuel Cell

- » Hydrogen forced through a PEM (polymer electrolyte membrane or proton exchange membrane) combines with oxygen from the air, producing an electric charge.

Fig. 13-37



Fig. 13-38



Why Are Urban Areas Expanding?

- Urban Transportation
 - Public Transit
 - Benefits
 - In larger cities, public transit is better suited than motor vehicles to move large numbers of people, because each transit traveler takes up less space.
 - More cost effective than privately operated vehicles
 - Emits relatively less pollutants than privately operated vehicles
 - More energy efficient than privately operated vehicles
 - Limitations
 - Most people in the U.S. overlook the benefits of public transit, because they place higher value on the privacy and flexibility of schedule offered by a car.
 - Not offered in most U.S. cities

Fig. 13-39



KI #4 Why Do Cities Face Challenges?

- Changing Urban Physical Geography
 - The Process of Deterioration
 - Filtering
 - Large houses in older neighborhoods are subdivided into smaller dwellings for low-income families, through a process known as *filtering*.
 - Over time, landlords cease maintaining the properties when they are no longer economically feasible.
 - Redlining
 - Some banks engage in *redlining*- drawing lines on a map to identify areas in which they will refuse to loan money to purchase or to fix up a house.
 - Redlining is illegal but difficult to enforce

Why Do Cities Face Challenges?

- Changing Urban Physical Geography
 - The Process of Deterioration
 - Public Housing
 - During the mid-twentieth century, many substandard inner-city houses were demolished and replaced with *public housing*- housing reserved for low-income households, who must pay 30 percent of their income for rent.
 - A housing authority, established by the local government, manages the buildings, and the federal government pays for all expenses not covered by rent.
 - Most of the high-rise public housing projects built in the U.S. and Europe at this time are now considered unsatisfactory for families with children.

Fig. 13-41



Why Do Cities Face Challenges?

- Changing Urban Physical Geography
 - Gentrification
 - *Gentrification* is the process by which middle-class people move into deteriorated inner-city neighborhoods and renovate the housing.
 - Most U.S. cities have at least one substantially renovated inner-city neighborhood where middle-class people live.
 - Middle class-families attracted by some of the following:
 - » Houses may have more architectural character than those in the suburbs.
 - » Proximity to cultural and recreational activities
 - » Commuting time reduced to CBD

Fig. 13-42



Why Do Cities Face Challenges?

- Changing Urban Social Geography
 - Underclass
 - Inner-city residents are frequently referred to as permanent *underclass*, because they are trapped in an unending cycle of economic and social problems.
 - Suffers from relatively higher rates of unemployment, alcoholism, drug addiction, illiteracy, juvenile delinquency, and crime.
 - Children often attend deteriorated schools
 - Affordable housing is difficult to secure
 - Tend to ignore good learning habits, regular school attendance, and completion of homework; the tendencies needed to elevate one's self out of the underclass.

Why Do Cities Face Challenges?

- Changing Urban Social Geography
 - Culture of Poverty
 - Inner-city residents are trapped as a permanent underclass, because they live in a culture of poverty.
 - Characterized by:
 - Unwed mothers giving birth to $\frac{3}{4}$ of the babies in the U.S. inner-city neighborhoods
 - $\frac{3}{4}$ of children in the inner city live with only one parent
 - Relatively higher usage of drugs.

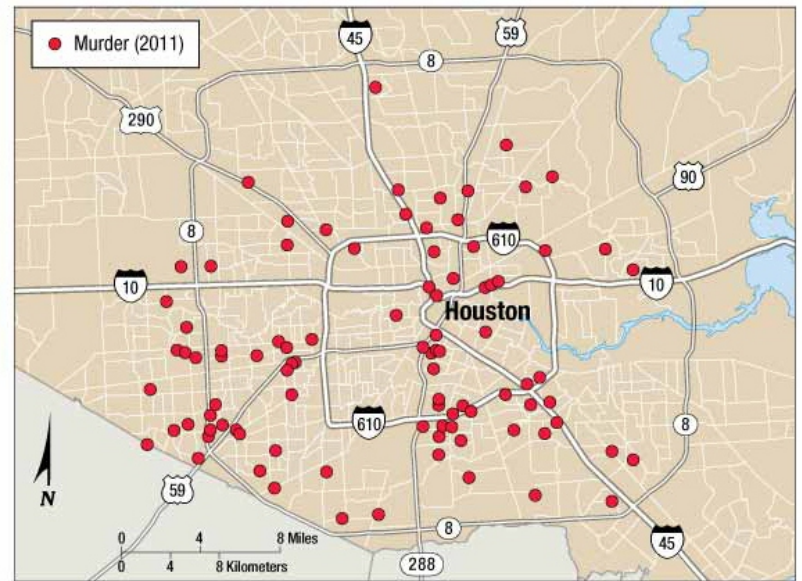
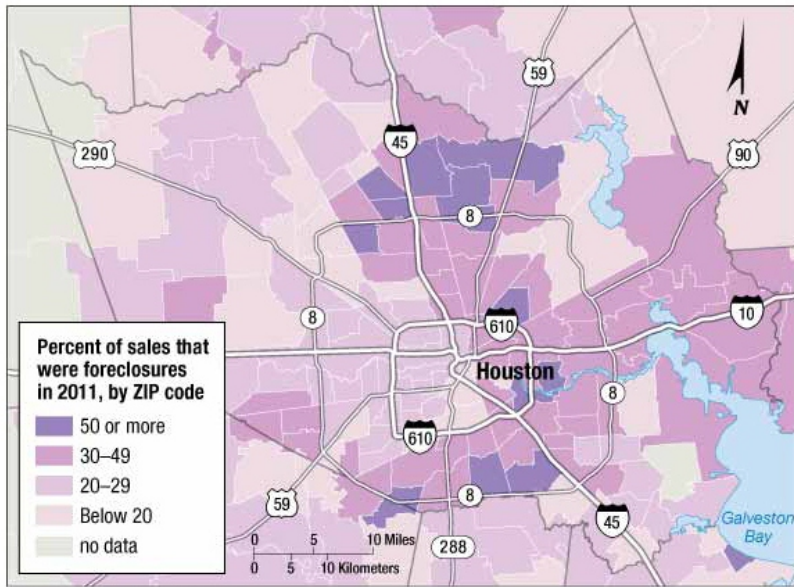
Why Do Cities Face Challenges?

- Urban Economic Challenges
 - The Eroding Tax Base
 - Low-income inner-city residents require public services, but they pay little of the taxes needed to fund the public services.
 - Cities have two choices to close the gap between the cost of operating public services and the funding made available by taxing.
 1. Reduce Services
 2. Raise Tax Revenues

Why Do Cities Face Challenges?

- Urban Economic Challenges
 - The Impact of the Recession
 - Housing market collapse in 2008 was one of principal causes of the severe recession.
 - Lower assessed values of houses led to lower tax revenues acquired from property taxes.
 - When borrowers cease paying their mortgages, lenders can take over the property in what is called a *foreclosure*.

Fig. 13-47



Summary

- Services, especially public and business services, cluster in the CBD; some consumer services, especially leisure, are in the CBD.
- Three models help to explain where different groups of people live within urban areas.
- Urban growth has been primarily focused on suburbs that surround older cities.
- Cities face physical, social, and economic difficulties, but some improvements also occurred.