Chapter 22

URBANIZATION

AND

SUSTAINABLE CITIES
OUTLINE

- Urbanization
  - Causes of Urban Growth
    - Push and Pull Factors
  - Current Urban Challenges
    - Developing World
    - Developed World
    - Urban Sprawl
  - Smart Growth

ADDITIONAL READING

CASE STUDY  pg. 497
CURITIBA: A Model Sustainable City
URBANIZATION – increase in city populations

- Historically, the vast majority of people lived in rural areas where they subsisted on natural resources (hunters/gatherers)
- Since the Industrial Revolution cites have grown rapidly in size and power
  - Currently 50%+ of people live in urban areas
  - Over next 3 decades, 3 billion people will crowd into cities
  - Huge urban agglomerations or MEGACITIES (mergers of multiple cities) are appearing around world. 10 million+ population size
**Other Megacities:** Mexico City, Sao Paulo, Buenos Aires, Cairo, Calcutta, Osaka,
WHAT IS A CITY?

- U.S. Census Bureau considers any incorporated community a city, and any city with more than 2,500 residents as urban.
  - In **RURAL AREAS**, most residents depend on agriculture and other natural resources for their livelihood.
  - In **URBAN AREAS**, most people are not directly dependent on natural resource-based occupations.
- Countries undergoing demographic transition have people moving from rural to urban areas
WHAT IS A CITY?

- A **VILLAGE** is a collection of rural households linked by culture, customs, family ties, and association with the land.

- A **CITY** is a differentiated community and has a large enough resource base to allow residents to specialize in arts, crafts, services, or professions other than resource-based occupations.

  - A **MEGACITY** is an urban area with more than 10 million inhabitants.
CITIES

- As urban areas merge into nearly continuous megacities, some geographers have begun to refer to them as an urbanized **CORE REGION** or **MEGALOPOLIS**
WORLD URBANIZATION

• In 1900, only 13 cities had populations greater than 1 million.

• By 2007, there were 300 such cities.

• None of the top 13 are in Europe and only 4 (New York, Los Angeles, Tokyo and Osaka) are in a developed country.

• China represents largest demographic shift to cities. Already half the concrete and 1/3 of steel used in the world are consumed in China’s buildings.
CITIES LARGER THAN 1 MILLION IN 2025
CAUSES OF URBAN GROWTH

- Two main avenues of urban growth:
  - **NATURAL INCREASE**
    - Birth rate > Death Rate
    - Fueled by improved food supplies and better sanitation, medical advancements
  - **IMMIGRATION FROM RURAL AREAS**
    - Caused by **PUSH FACTORS** forcing people out of the country, and **PULL FACTORS** drawing them into cities
IMMIGRATION PUSH FACTORS

- Overpopulation in rural areas
- Economics – lack of jobs, low pay
- Racial or Religious Conflicts/War
- Environmental degradation
- Land Ownership by wealthy
- Changes in Agriculture
  - Large Monoculture Farms
  - Modern machinery – fewer people needed
IMMIGRATION PULL FACTORS

- Excitement and Vitality of Cities
- Jobs – possible upward mobility
- Housing – larger variety / pricing
- Entertainment
- Social Mobility and Power
- Specialization of Professions
- More freedom from “tradition” & “culture”
- More government money spent in urban areas
  - Schools, transportation, infrastructure
GOVERNMENT POLICIES

- Government policies often favor cities over rural areas in push and pull factors.
  - Developing countries often spend majority of budgets on improving urban areas.
    - Major cities gain a monopoly on new jobs, education, and general opportunity, which attracts more people.
    - Governments manipulate exchange rates and food prices to benefit the more politically powerful urban populations.
URBAN CHALLENGES IN THE DEVELOPING WORLD

- Uncontrollable Growth
  - Increase in Poor from rural areas
  - Traffic and Congestion – lack of air quality standards causes air pollution
  - Air Pollution - leads to respiratory disease and photochemical smog
  - Sewer Systems and Water Pollution
    - Many cities lack modern waste treatment facilities
    - 65% of urban residents in the developing world do NOT have satisfactory sanitation.
URBAN CHALLENGES IN THE DEVELOPING WORLD

- Sewer Systems and Water Pollution
  - In Latin America only 2% of sewage is treated
  - 33% of world population does NOT have safe drinking water.
- Waterborne diseases: cholera, hepatitis A, typhoid, dysentery, are rampant in these areas
CURRENT WORLD PROBLEMS - HOUSING

• 20% of people live in **SLUMS** (legal but inadequate multifamily tenements) of cities or in **SHANTYTOWNS** (settlements created when people build their own shacks on the outskirts of cities on undeveloped land).

• Or, sometimes people simply occupy land that they neither own nor rent without the owners permission, creating **SQUATTER TOWNS** which can have thousands.

• These areas are often near garbage dumps, in industrial or contaminated areas

• Around 100 million people are homeless.
URBAN CHALLENGES IN THE DEVELOPING WORLD

❖ Rapid growth of cities that accompanied industrialization has slowed or reversed
  - Many of the environmental problems have been reduced. Improved sanitation and medical care reduce infectious diseases
  - Government policy controls air & water pollution
  - Older cities have aging infrastructure, bridges, streets, schools, sewers, etc.
  - As residents move to suburbs cities lose their tax base (URBAN FLIGHT)
Many of major industries have moved to developing countries.
- Detroit, Philadelphia – lost population

In U.S., businesses and people have moved west and south.

Automobiles and computers enable workers to live outside cities – commuting to work, adds to **URBAN SPRAWL**.

Fewer jobs as industry/businesses leave which leads to increased poverty, loss of opportunity
DEVELOPED WORLD

• URBAN SPRAWL - dispersed cities with low population densities
  - Caused by cheap rural land, automobiles, cheap gasoline, and poor urban planning
    - Consumes about 200,000 ha of U.S. agricultural land annually, damaging habitat & loss of biodiversity
    - General lack of mass transit results in high levels of air pollution due to commuting.
    - Creates dependence on personal autos
URBAN SPRAWL

- Developers claim that growth benefits the suburbs, but opposite is often true because the new sites must build roads, water, sewers, schools, etc. This is a big expense.

  - In Atlanta, the population grew 32% between 1990 and 2000, but the land area it occupied grew 305%.
URBAN SPRAWL

- Because many Americans live far from work, they consider a private automobile essential
  - Average U.S. driver spends the equivalent of one 8 hr day/week behind the wheel
  - In some metropolitan areas, it is estimated one-third of all land is devoted to automobile infrastructure (roads, lots, gas stations)
    - Traffic congestion costs U.S. $78 billion annually in wasted fuel and time
URBAN SPRAWL

• With a reduced tax base and fewer civic leaders living or working in downtown areas, the city is unable to maintain its infrastructure.

• Poor who are left behind when upper and middle classes move to suburbs, have no jobs and no way to commute to suburbs.
  
  ❖ One third of Americans too young, too old, or too poor to drive. Car oriented development causes isolation.

• Sprawl promotes sedentary lifestyle. Increasing diseases like heart disease, diabetes, etc.
Mass transit could make cities more livable.

- Model of Curitiba, Brazil where high speed buses carrying 270 passengers each & travel on roadways closed to all other traffic.
  - Everyone in city is within walking distance of a bus stop and entire system is handicapped accessible and equally priced.
  - City was able to construct this system for 10% the cost of light rail or freeway and 1% the cost of a subway.
SMART GROWTH

- SMART GROWTH – planned development that makes efficient and effective use of land resources & existing infrastructure.
  - Minimizes wasted space and money
  - Makes land-use planning democratic
  - Mixes land uses
  - Encourages diversity
  - Preserves natural spaces
NEW URBANIST MOVEMENT

- Recapture small town feel in big city
- Organize city into modules of 30,000 to 50,000 people
- Determine in advance where development will take place
- Locate everyday services more conveniently
- Increase jobs in a community by locating offices and commercial centers near suburbs
- Encourage walking and low-speed vehicles
- Promote diversity in housing designs
- Create housing “superblocks”
GREEN CITIES - GREEN URBANISM

- GREEN URBANISM redevelops existing cities to be ecologically sound.
  - **IN-FILL** - filling in the inner city
  - **BROWNFIELD DEVELOPMENT** - building on reclaimed industrial sites
  - Build high density, low-rise, mixed income housing near city centers
  - Provide incentives for alternative transportation (carpools, bikes)
  - Encourage ecological building techniques: green roofs, solar panels, water conservation systems, etc.
  - Provide recycling & compost centers
DESIGNING FOR OPEN SPACE

- Traditional suburban development divided land into a checkerboard layout of nearly identical parcels with no designated open space.
  - Consumed agricultural land and fragmented wildlife habitat
- CONSERVATION DEVELOPMENT preserves at least half of a subdivision as natural area, farmland, or other form of open space
- People want a view of interesting landscape with wildlife and walking paths.
- By clustering homes, a conservation subdivision can have the same number of lots, but more open space.
DESIGNING FOR OPEN SPACE

Individual homes have less “land” but there is more open, natural area