**Chapter 22 Summary**

1. Almost half of the world’s population lives in urban areas and half in rural areas. Government policies, poverty, lack of land to grow food, declining agricultural jobs, famine, and war that force people out of rural areas are all factors that determine how urban areas develop.

2. Urban areas are rarely self-sustaining, threaten biodiversity, destroy and damage ecosystems, lack trees, grow little of their own food, concentrate pollutants and noise, spread infectious disease, and are centers of poverty, crimes, and terrorism.

3. Urban areas relying on mass transportation spread vertically and urban areas relying on automobiles spread horizontally. Advantages of automobiles include convenience, personal benefits, and boosted economies, Disadvantages include air pollution, promotion of urban sprawl, increase in death rate, and time- and gas-wasting traffic jams. Advantages of bicycles and motor scooters include low cost, little to no air or noise pollution, require little space, and are energy efficient. Disadvantages include little accident protection, impractical for long distances, can be tiring, little parking, and gas scooter engines emit high air pollution. Mass transit rail systems are more energy efficient than cars, produce lower air pollution, require less land, cause fewer injuries and deaths, and reduce car congestion. Disadvantages include high cost to build and maintain, rigid schedules, noise pollution, and they are cost effective only in densely populated areas. Buses are more flexible than rail systems, can easily be rerouted, cost less to develop, and can reduce car use. Disadvantages include rigid schedules, noise pollution, and they are not always cost efficient. Rapid rail systems can reduce car and plane travel, are ideal for long trips, and are more efficient than cars and planes. Disadvantages include high operation and maintenance cost, noise pollution, and they are not always cost efficient.

4. Land-use planning, zoning, and smart growth can be used for planning and controlling urban growth.

5. Cities can be made more sustainable and more desirable places to live by creating parks, greenbelts, urban growth boundaries, cluster developments, mixed-use villages, greenways, and ecocities.