Why Do Services Cluster in Settlements?

- Services in Rural Settlements
- Urbanization

Learning Outcome 12.4.1
Describe the difference between clustered and dispersed rural settlements.

Services are clustered in settlements. Rural settlements are centers for agriculture and provide a small number of services. Urban settlements are centers for consumer and business services. One-half of the people in the world live in rural settlements and the other half in urban settlements.

Services in Rural Settlements

Rural settlements are either clustered or dispersed. A **clustered rural settlement** is an agricultural-based community in which a number of families live in close proximity to each other, with fields surrounding the collection of houses and farm buildings. A **dispersed rural settlement**, typical of the North American rural landscape, is characterized by farmers living on individual farms isolated from neighbors rather than alongside other farmers in settlements.

CLUSTERED RURAL SETTLEMENTS

A clustered rural settlement typically includes homes, barns, tool sheds, and other farm structures, plus consumer services, such as religious structures, schools, and shops. A handful of public and business services may also be present in a clustered rural settlement. In common language, such a settlement is called a *hamlet* or *village*.

Each person living in a clustered rural settlement is allocated strips of land in the surrounding fields. The fields must be accessible to the farmers and are thus generally limited to a radius of 1 or 2 kilometers (1/2 or 1 mile) from the buildings. The strips of land are allocated in different ways. In some places, individual farmers own or rent the land. In other places, the land is owned collectively by the settlement or by a lord, and farmers do not control the choice of crops or use of the output.

Farmers typically own, or have responsibility for, a collection of scattered parcels in several fields. This pattern of controlling several fragmented parcels of land has encouraged living in a clustered rural settlement to minimize travel time to the various fields. Traditionally, when the population of a settlement grew too large for the capacity of the surrounding fields, new settlements were established nearby. This was possible because not all land was under cultivation.

Homes, public buildings, and fields in a clustered rural settlement are arranged according to local cultural and physical characteristics. Clustered rural settlements are often arranged in one of two types of patterns: circular or linear.

CIRCULAR RURAL SETTLEMENTS. Circular rural settlements comprise a central open space surrounded by structures. The following are examples:

- Kraal villages in sub-Saharan Africa were built by the Maasi people, who are pastoral nomads. Women have the principal responsibility for constructing them. The kraal villages have enclosures for livestock in the center, surrounded by a ring of houses. Compare *kraal* to the English word *corral* (Figure 12-27).

- Gewandorf settlements were once found in rural Germany. von Thünen observed this circular rural pattern in his landmark agricultural studies during the nineteenth century (refer to Figure 10-52). Gewandorf settlements consisted of a core of houses, barns, and churches, encircled by different types of agricultural activities. Small garden plots were located in the first ring surrounding the village, with cultivated land, pastures, and woodlands in successive rings.

LINEAR RURAL SETTLEMENTS. Linear rural settlements comprise buildings clustered along a road, river, or dike to facilitate communications. The fields extend behind the buildings in long, narrow strips. Long-lot farms can be seen today along the St. Lawrence River in Québec (Figure 12-28).

In the French long-lot system, houses were erected along a river, which was the principal water source and means of communication. Narrow lots from 5 to 100 kilometers (3 to 60 miles) deep were established perpendicular

▼ FIGURE 12-27 CIRCULAR RURAL SETTLEMENT A kraal village, Kenya.

▲ FIGURE 12-28 CLUSTERED LINEAR RURAL SETTLEMENT Québec long lots.

to the river, so that each original settler had river access. This created a linear settlement along the river. These long, narrow lots were eventually subdivided. French law required that each son inherit an equal portion of an estate, so the heirs established separate farms in each division. Roads were constructed inland parallel to the river for access to inland farms. In this way, a new linear settlement emerged along each road, parallel to the original riverfront settlement.

CLUSTERED SETTLEMENTS IN COLONIAL AMERICA.

New England colonists built clustered settlements centered on an open area called a common (Figure 12-29). Settlers grouped their homes and public buildings, such

▼ FIGURE 12-29 CLUSTERED COLONIAL AMERICAN SETTLEMENT
Newfane, Vermont, includes a courthouse and church buildings clustered around a central common.

as the church and school, around the common. In addition to their houses, each settler had a home lot of ½ to 2 hectares (1 to 5 acres), which contained a barn, a garden, and enclosures for feeding livestock. New England colonists favored clustered settlements for several reasons:

- They typically traveled to the New World in a group. The English government granted an area of land, in New England perhaps 4 to 10 square miles (10 to 25 square kilometers). Members of the group then traveled to America to settle the land and usually built the settlement near the center of the land grant.

- The colonists wanted to live close together to reinforce common cultural and religious values. Most came from the same English village and belonged to the same church. Many of them left England in the 1600s to gain religious freedom. The settlement's leader was often an official of the Puritan Church, and the church played a central role in daily activities.

- They clustered their settlements for defense against attacks by Native Americans.

Each villager owned several discontinuous parcels on the periphery of the settlement to provide the variety of land types needed for different crops. Beyond the fields, the town held pastures and woodland for the common use of all residents. Outsiders could obtain land in the settlement only by gaining permission from the town's residents. Land was not sold but rather was awarded to an individual when the town's residents felt confident that the recipient would work hard. Settlements accommodated a growing population by establishing new settlements nearby. As in the older settlements, the newer ones contained central commons surrounded by houses and public buildings, home lots, and outer fields.

The contemporary New England landscape contains remnants of the old clustered rural settlement pattern. Many New England towns still have a central common surrounded by the church, school, and various houses. However, quaint New England towns are little more than picturesque shells of clustered rural settlements because today's residents work in shops and offices rather than on farms.

Pause and Reflect 12.4.1
How might the presence of clustered rural settlements in New England have contributed to the region's distinctive dialect of English noted in Chapter 5?

DISPERSED RURAL SETTLEMENTS

Learning Outcome 12.4.2
Explain the types of services in early settlements.

Dispersed rural settlements were more common in the American colonies outside New England. Meanwhile, in New England and in the United Kingdom, clustered rural settlements were converted to a dispersed pattern.

DISPERSED RURAL SETTLEMENTS IN THE UNITED STATES.
The Middle Atlantic colonies were settled by more heterogeneous groups than those in New England. Colonists came from Germany, the Netherlands, Ireland, Scotland, and Sweden, as well as from England. Most arrived in Middle Atlantic colonies individually rather than as members of a cohesive religious or cultural group. Some bought tracts of land from speculators. Others acquired land directly from individuals who had been given large land grants by the English government, including William Penn (Pennsylvania), Lord Baltimore (Maryland), and Sir George Carteret (the Carolinas).

Dispersed settlement patterns dominated in the American Midwest in part because the early settlers came primarily from the Middle Atlantic colonies. The pioneers crossed the Appalachian Mountains and established dispersed farms on the frontier (Figure 12-30). Land was plentiful and cheap, and people bought as much as they could manage. In New England, a dispersed distribution began to replace clustered settlements in the eighteenth century. Eventually people bought, sold, and exchanged land to create large, continuous holdings instead of several isolated pieces.

The clustered rural settlement pattern worked when the population was low, but settlements had no spare land to meet the needs of a population that was growing through natural increase and net in-migration. A shortage of land eventually forced immigrants and children to strike out alone and claim farmland on the frontier. In addition, the cultural bonds that had created clustered rural settlements were weakened. Descendants of the original settlers were less interested in the religious and cultural values that had unified the original immigrants.

DISPERSED RURAL SETTLEMENTS IN THE UNITED KINGDOM.
To improve agricultural production, a number of European countries converted their rural landscapes from clustered settlements to dispersed patterns. Dispersed settlements were considered more efficient for agriculture than clustered settlements. A prominent example was the **enclosure movement** in Great Britain, between 1750 and 1850. The British government transformed the rural landscape by consolidating individually owned strips of land surrounding a village into a single large farm owned by an individual. When necessary, the government forced people to give up their former holdings.

Owning several discontinuous fields around a clustered rural settlement had several disadvantages: Farmers lost time moving between fields, villagers had to build more roads to connect the small lots, and farmers were restricted in what they could plant. With the introduction of farm machinery, farms operated more efficiently at a larger scale.

The enclosure movement brought greater agricultural efficiency, but it destroyed the self-contained world of village life. Village populations declined drastically as displaced farmers moved to urban settlements. Because the enclosure movement coincided with the Industrial Revolution, villagers who were displaced from farming moved to urban settlements and became workers in factories and services. Some villages became the centers of the new, larger farms, but villages that were not centrally located to a new farm's extensive land holdings were abandoned and replaced with entirely new farmsteads at more strategic locations. As a result, the isolated, dispersed farmstead, unknown in medieval England, is now a common feature of that country's rural landscape.

▼ **FIGURE 12-30 DISPERSED RURAL SETTLEMENT** Wisconsin.

SERVICES IN EARLY SETTLEMENTS

Before the establishment of permanent settlements as service centers, people lived as nomads, migrating in small groups across the landscape in search of food and water. They gathered wild berries and roots or killed wild animals for food (see Chapter 10). At some point, groups decided to build permanent settlements. Several families clustered together in a rural location and obtained food in the surrounding area. What services would these nomads require? Why would they establish permanent settlements to provide these services?

▲ FIGURE 12-31 **EARLY SETTLEMENT** Karain Cave, Turkey. Evidence of human settlement has been found in the cave dating back 150,000–200,000 years.

No one knows the precise sequence of events through which settlements were established to provide services. Based on archaeological research, settlements probably originated to provide consumer and public services. Business services came later.

EARLY CONSUMER SERVICES. The earliest permanent settlements may have been established to offer consumer services, specifically places to bury the dead (Figure 12-31). Perhaps nomadic groups had rituals honoring the deceased, including ceremonies commemorating the anniversary of a death. Having established a permanent resting place for the dead, the group might then install priests at the site to perform the service of saying prayers for the deceased. This would have encouraged the building of structures—places for ceremonies and dwellings. By the time recorded history began about 5,000 years ago, many settlements existed, and some featured temples. In fact, until the invention of skyscrapers in the late nineteenth century, religious buildings were often the tallest structures in a community.

Settlements also may have been places to house families, permitting unburdened males to travel farther and faster in their search for food. Women kept "home and hearth," making household objects, such as pots, tools, and clothing, and educating the children. These household-based services evolved over thousands of years into schools, libraries, theaters, museums, and other institutions that create and store a group's values and heritage and transmit them from one generation to the next.

People also needed tools, clothing, shelter, containers, fuel, and other material goods. Settlements therefore became manufacturing centers. Men gathered the materials needed to make a variety of objects, including stones for tools and weapons, grass for containers and matting, animal hair for clothing, and wood for shelter and heat.

Women used these materials to manufacture household objects and maintain their dwellings. The variety of consumer services expanded as people began to specialize. One person could be skilled at repairing tools, another at training horses. People could trade such services with one another. Settlements took on a retail-service function.

EARLY PUBLIC SERVICES. Public services probably followed religious activities into the early permanent settlements. A group's political leaders also chose to live permanently in the settlement, which may have been located for strategic reasons, to protect the group's land claims.

Everyone in a settlement was vulnerable to attack from other groups, so for protection, some members became soldiers, stationed in the settlement. The settlement likely was a good base from which the group could defend nearby food sources against competitors. For defense, the group might surround the settlement with a wall. Defenders were stationed at small openings or atop the wall, giving them a great advantage over attackers. Thus settlements became citadels—centers of military power. Walls proved an extremely effective defense for thousands of years, until warfare was revolutionized by the introduction of gunpowder in Europe in the fourteenth century.

EARLY BUSINESS SERVICES. Everyone in settlements needed food, which was supplied by the group through hunting or gathering. At some point, someone probably wondered: Why not bring in extra food for hard times, such as drought or conflict? This perhaps was the origin of transportation services.

Not every group had access to the same resources because of the varied distribution of vegetation, animals, fuel wood, and mineral resources across the landscape. People brought objects and materials they collected or produced into the settlement and exchanged them for items brought by others. Settlements became warehousing centers to store the extra food. The settlement served as neutral ground where several groups could safely come together to trade goods and services. To facilitate this trade, officials in the settlement provided producer services, such as regulating the terms of transactions, setting fair prices, keeping records, and creating a currency system.

Through centuries of experiments and accidents, residents of early settlements realized that some of the wild vegetation they had gathered could generate food if deliberately placed in the ground and nursed to maturity—in other words, agriculture, as described in Chapter 10. Over time, settlements became surrounded by fields, where people produced most of their food by planting seeds and raising animals rather than by hunting and gathering.

Pause and Reflect 12.4.2
Infer what functions caves might have served for early humans, in addition to burying the dead.

Urbanization

Learning Outcome 12.4.3
Identify important prehistoric, ancient, and medieval urban settlements.

Settlements existed prior to the beginning of recorded history around 5,000 years ago. With a few exceptions, these were rural settlements. As recently as 1800, only 3 percent of Earth's population lived in urban settlements. Two centuries later, one-half of the world's people live in urban settlements.
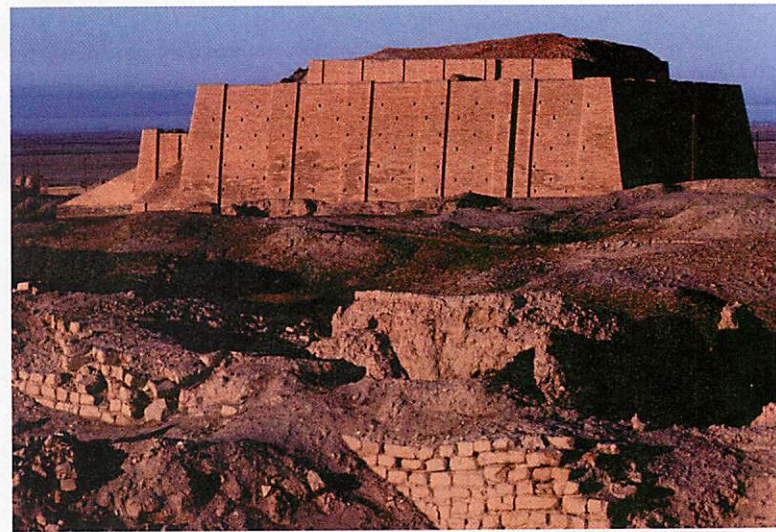
EARLIEST URBAN SETTLEMENTS

Settlements may have originated in Mesopotamia, part of the Fertile Crescent of Southwest Asia (see Figure 8-10), and diffused at an early date west to Egypt and east to China and to South Asia's Indus Valley. Or settlements may have originated independently in each of the four hearths. In any case, from these four hearths, settlements diffused to the rest of the world.

PREHISTORIC URBAN SETTLEMENTS. The earliest urban settlements were probably in the Fertile Crescent of Southwest Asia and North Africa (Figure 12-32). Among the oldest well-documented urban settlements is Ur in Mesopotamia (present-day Iraq). Ur, which means "fire," was where Abraham lived prior to his journey to Canaan in approximately 1900 B.C., according to the Bible. Archaeologists have unearthed ruins in Ur that date from approximately 3000 B.C. (Figure 12-33).

ANCIENT URBAN SETTLEMENTS. Settlements were first established in the eastern Mediterranean about 2500 B.C. The oldest settlements include Knossos on the island of Crete, Troy in Asia Minor (Turkey), and Mycenae in Greece. These settlements were trading centers for the thousands of islands dotting the Aegean Sea and the eastern Mediterranean and provided the government, military protection, and other public services for their surrounding hinterlands. They were organized into **city-states**—independent self-governing communities that included the settlement and nearby countryside.
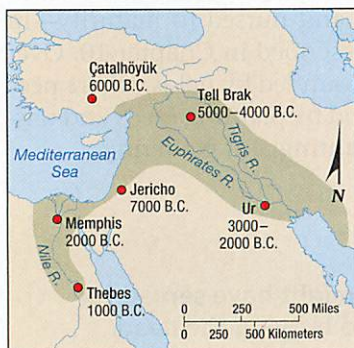
◀ **FIGURE 12-32 LARGEST URBAN SETTLEMENTS IN PREHISTORIC TIMES** The earliest known large urban settlements were in the Fertile Crescent of Southwest Asia and Egypt.

▲ **FIGURE 12-33 PREHISTORIC URBAN SETTLEMENT: UR** The remains of Ur, in present-day Iraq, provide evidence of early urban civilization. Ancient Ur was compact, perhaps covering 100 hectares (250 acres), and was surrounded by a wall. The most prominent building, the stepped temple, called a *ziggurat*, was originally constructed around 4,000 years ago. The ziggurat was originally a three-story structure with a base that was 64 by 46 meters (210 by 150 feet) and the upper stories stepped back. Four more stories were added in the sixth century B.C. Surrounding the ziggurat was a dense network of small residences built around courtyards and opening onto narrow passageways. The excavation site was damaged during the two wars in Iraq.

Athens, the largest city-state in ancient Greece (Figure 12-34), made substantial contributions to the development of culture, philosophy, and other elements of Western civilization, an example of the traditional distinction between urban settlements and rural. The urban settlements provided not only public services but also a concentration of consumer services, notably cultural activities, not found in smaller settlements.

The rise of the Roman Empire encouraged urban settlement. With much of Europe, North Africa, and Southwest Asia under Roman rule, settlements were established as centers of administrative, military, and other public services, as well as retail and other consumer services. Trade was encouraged through transportation and utility services, notably construction of many roads and aqueducts, and the security the Roman legions provided.

The city of Rome—the empire's center for administration, commerce, culture, and all other services—grew to at least 250,000 inhabitants, although some claim that the population may have reached 1 million. The city's centrality in the empire's communications network was reflected in the old saying "All roads lead to Rome."

With the fall of the Roman Empire in the fifth century, urban settlements declined. The empire's prosperity had rested on trading in the secure environment of imperial Rome. But with the empire fragmented under hundreds of rulers, trade diminished. Large urban settlements shrank or were abandoned. For several hundred years, Europe's cultural heritage was preserved largely in monasteries and isolated rural areas.

MEDIEVAL URBAN SETTLEMENTS. Urban life began to revive in Europe in the eleventh century, as feudal

▲ FIGURE 12-34 ANCIENT URBAN SETTLEMENT: ATHENS Dominating the skyline of modern Athens is the ancient hilltop site of the city, the Acropolis. Ancient Greeks selected this high place because it was defensible, and they chose it as a place to erect shrines to their gods. The most prominent structure on the Acropolis is the Parthenon, built in the fifth century B.C. to honor the goddess Athena. The structure in the foreground is the Herodes Atticus Odeon, a theater built in 161 A.D. Behind the Odeon is the Propylaea, which was the entrance gate to the Acropolis. To the right of the Parthenon, in the background, is the Chapel of St. George, built in the nineteenth century atop Mount Lycabettus, the highest point in Athens.

▲ FIGURE 12-35 MEDIEVAL URBAN SETTLEMENT: CARCASSONNE Medieval European cities, such as Carcassonne in southwestern France, were often surrounded by walls for protection. The walls have been demolished in most places, but they still stand around the medieval center of Carcassonne.

lords established new urban settlements. The lords gave residents charters of rights with which to establish independent cities in exchange for their military service. Both the lord and the urban residents benefited from this arrangement. The lord obtained people to defend his territory at less cost than maintaining a standing army. For their part, urban residents preferred periodic military service to the burden faced by rural serfs, who farmed the lord's land and could keep only a small portion of their own agricultural output.

With their newly won freedom from the relentless burden of rural serfdom, the urban dwellers set about expanding trade. Surplus from the countryside was brought into the city for sale or exchange, and markets were expanded through trade with other free cities. The trade among different urban settlements was enhanced by new roads and greater use of rivers. By the fourteenth century, Europe was covered by a dense network of small market towns serving the needs of particular lords.

The largest medieval European urban settlements served as power centers for the lords and church leaders, as well as major market centers. The most important public services occupied palaces, churches, and other prominent buildings arranged around a central market square. The tallest and most elaborate structures were usually churches, many of which still dominate the landscape of smaller European towns. In medieval times, European urban settlements were usually surrounded by walls even though by then cannonballs could destroy them (Figure 12-35). Dense and compact within the walls, medieval urban settlements lacked space for construction, so ordinary shops and houses nestled into the side of the walls and the large buildings. Most of these modest medieval shops and homes, as well as the walls, have been demolished in modern times, with only the

▲ FIGURE 12-36 LARGEST SETTLEMENTS SINCE 1 A.D. The largest cities have been in China for most of the past 2,000 years.

massive churches and palaces surviving. Modern tourists can appreciate the architectural beauty of these medieval churches and palaces, but they do not receive an accurate image of a densely built medieval town.

After the collapse of the Roman Empire, most of the world's largest urban settlements were clustered in China (Figure 12-36). Several cities in China are estimated to have exceeded 1 million inhabitants between 700 and 1800 A.D., including Chang'an (now Xian), Kaifeng, Hangzhou, Jinling (now Nanjing), and Beijing. London grabbed the title of world's largest urban settlement during the nineteenth century, as part of the Industrial Revolution. New York held the title briefly during the mid-twentieth century, and Tokyo is now considered to be the world's largest urban settlement.

Pause and Reflect 12.4.3
Medieval walled cities were constructed near political boundaries. How far is the medieval walled city of Carcassonne, France, from an international boundary?

RAPID GROWTH OF URBAN SETTLEMENTS

The process by which the population of urban settlements grows, known as **urbanization**, has two dimensions: an increase in the *number* of people living in urban settlements and an increase in the *percentage* of people living in urban settlements. The distinction between these two factors is important because they occur for different reasons and have different global distributions.

INCREASING PERCENTAGE OF PEOPLE IN URBAN SETTLEMENTS. The population of urban settlements exceeded that of rural settlements for the first time in human history in 2008 (Figure 12-37). The percentage of people living in urban settlements had increased from 3 percent in 1800 to 6 percent in 1850, 14 percent in 1900, 30 percent in 1950, and 47 percent in 2000.

The percentage of people living in urban settlements reflects a country's level of development. In developed countries, about three-fourths of the people live in urban areas, compared to about two-fifths in developing countries. The major exception to the global pattern is Latin America, where the urban percentage is comparable to the level of developed countries. The higher percentage of urban residents in developed countries is a consequence of changes in economic structure during the past two centuries—first the Industrial Revolution in the nineteenth century and then the growth of services in the twentieth. The world map of urban percentages looks very much like the world map of percentage of GDP derived from services (see Figure 12-2).

The percentage of urban dwellers is high in developed countries because over the past 200 years, rural residents have migrated from the countryside to work in the factories and services that are concentrated in cities. The need for fewer farm workers has pushed people out of rural areas, and rising employment opportunities in manufacturing and services have lured them into urban areas. Because everyone resides either in an urban settlement or a rural settlement, an increase in the percentage living in urban areas has produced a corresponding decrease in the percentage living in rural areas.

INCREASING NUMBER OF PEOPLE IN URBAN SETTLEMENTS. Developed countries have a higher percentage of urban residents, but developing countries have more of the very large urban settlements (Figure 12-38). Eight of the 10 most populous cities are currently in developing countries: Cairo, Delhi, Jakarta, Manila, Mexico City, São Paulo, Seoul, and Shanghai. New York and Tokyo are the two large cities in developed countries. In addition, 44 of the 50 largest urban settlements are in developing countries. That developing countries dominate the list of largest urban settlements is remarkable because urbanization was once associated with economic development. In 1800, 7 of the world's 10 largest cities were in Asia. In 1900, after diffusion of the Industrial Revolution from the United Kingdom to today's developed countries, all 10 of the world's largest cities were in Europe and North America.

In developing countries, migration from the countryside is fueling half of the increase in population in urban settlements, even though job opportunities may not be available. The other half results from high natural increase rates; in Africa, the natural increase rate accounts for three-fourths of urban growth.

# DIFFERENCES BETWEEN URBAN AND RURAL SETTLEMENTS

A century ago, social scientists observed striking differences between urban and rural residents. Louis Wirth argued during the 1930s that an urban dweller follows a different way of life than does a rural dweller. Thus Wirth defined a city as a permanent settlement that has three characteristics: large size, high population density, and socially heterogeneous people. These characteristics produced differences in the social behavior of urban and rural residents.

LARGE SIZE. If you live in a rural settlement, you know most of the other inhabitants and may even be related to many of them. The people with whom you relax are probably the same ones you see in local shops and at church.

In contrast, if you live in an urban settlement, you can know only a small percentage of the other residents. You meet most of them in specific roles—your supervisor, your lawyer, your supermarket cashier, your electrician.
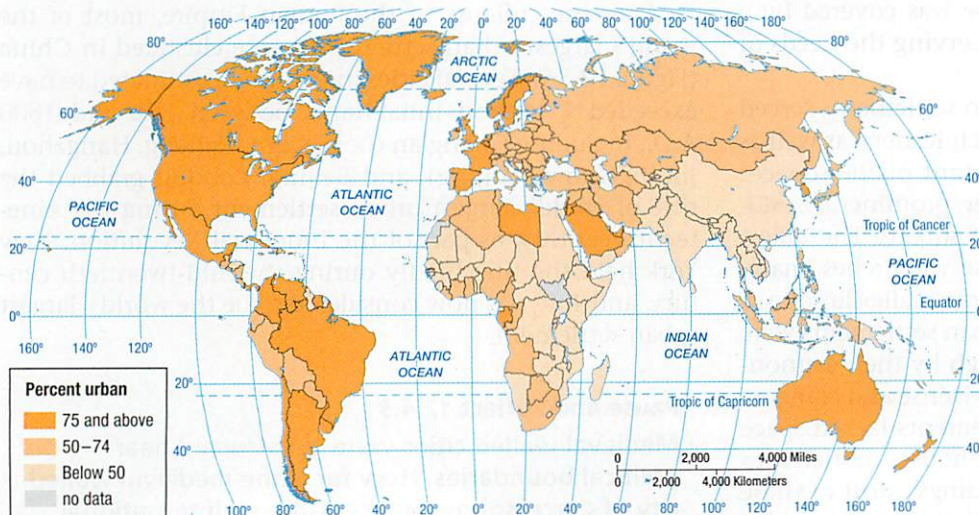
▲ **FIGURE 12-37 PERCENTAGE LIVING IN URBAN SETTLEMENTS** Developed countries have higher percentages of urban residents than do developing countries.
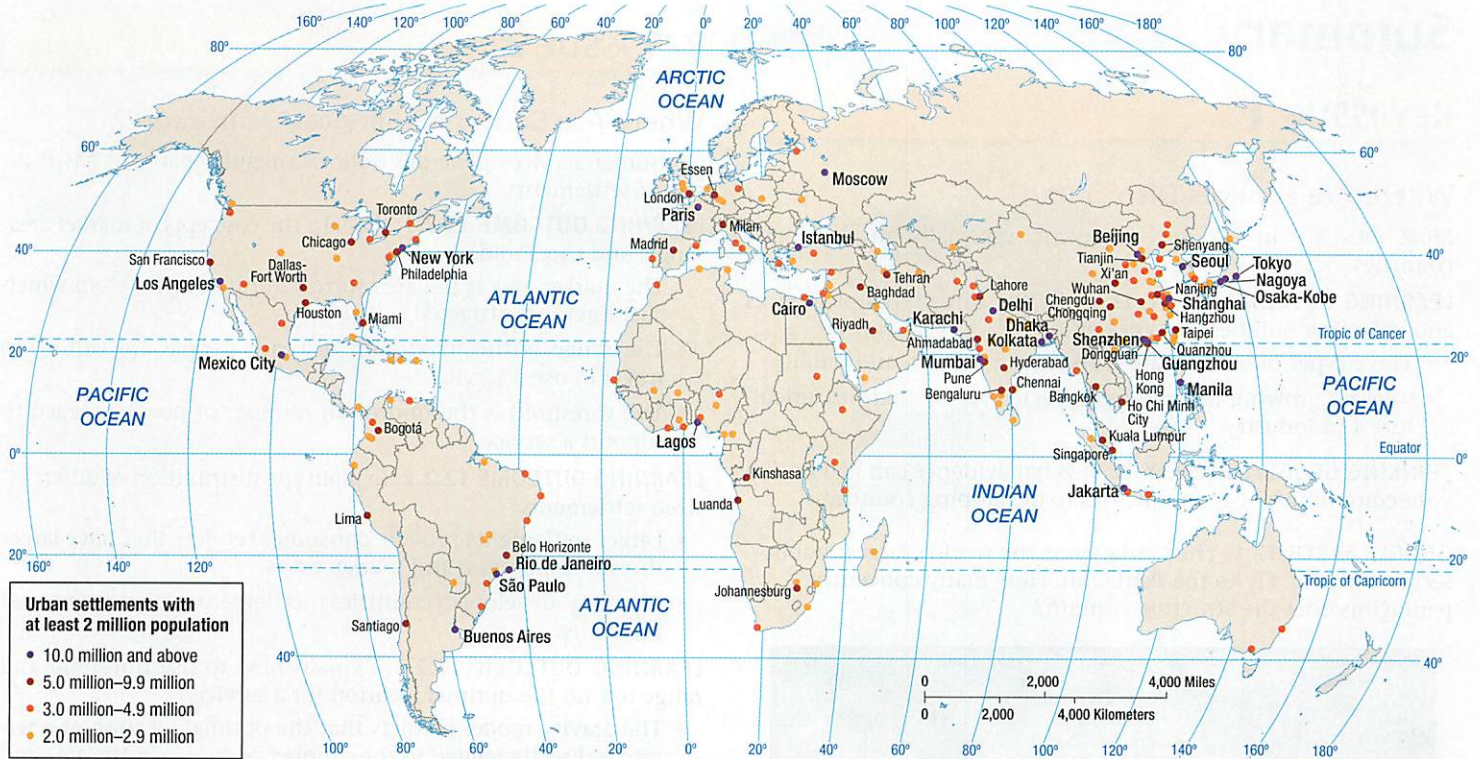
▲ FIGURE 12-38 **URBAN SETTLEMENTS WITH AT LEAST 2 MILLION INHABITANTS**
Most of the world's largest urban settlements are in developing countries, especially in East Asia, South Asia, and Latin America.

Most of these relationships are contractual: You are paid wages according to a contract, and you pay others for goods and services. Consequently, the large size of an urban settlement produces different social relationships than those formed in rural settlements.

HIGH DENSITY. High density also produces social consequences for urban residents, according to Wirth. The only way that a large number of people can be supported in a small area is through specialization. Each person in an urban settlement plays a special role or performs a specific task to allow the complex urban system to function smoothly. At the same time, high density also encourages social groups to compete to occupy the same territory.

SOCIAL HETEROGENEITY. The larger the settlement, the greater the variety of people. A person has greater freedom in an urban settlement than in a rural settlement to pursue an unusual profession, sexual orientation, or cultural interest. In a rural settlement, unusual actions might be noticed and scorned, but urban residents are more tolerant of diverse social behavior. Regardless of values and preferences, in a large urban settlement, individuals can find people with similar interests. But despite the freedom and independence of an urban settlement, people may also feel lonely and isolated. Residents of a crowded urban settlement often feel that they are surrounded by people who are indifferent and reserved.

Wirth's three-part distinction between urban and rural settlements may still apply in developing countries. But in developed countries, social distinctions between urban and rural life have blurred. According to Wirth's definition, nearly everyone in a developed country now is urban. All but 1 percent of workers in developed societies hold "urban" types of jobs. Nearly universal ownership of automobiles, telephones, televisions, and other modern communications and transportation has also reduced the differences between urban and rural lifestyles in developed countries. Almost regardless of where you live in a developed country, you have access to urban jobs, services, culture, and recreation.

CHECK-IN: KEY ISSUE 4

Why Do Services Cluster in Settlements?

✓ Settlements are either rural or urban; rural settlements, which specialize in agricultural services, may be clustered or dispersed.

✓ Few humans lived in urban settlements until the nineteenth century.

✓ Developed countries have higher percentages of urban residents, but developing countries have most of the very large cities.