

World Regional Geography

World Regional Geography

*BOB HALL, WEST HILLS COLLEGE
LEMOORE*



World Regional Geography Copyright © by Lumen Learning is licensed under a Creative Commons Attribution 4.0 International License, except where otherwise noted.

Contents

IMPORTANT NOTICE	vii
Part I. Faculty Resources	
1. Request Access	3
2. Europe Take-Home Exam	5
3. Middle-East Take-Home Exam	7
4. ADOPT-A-COUNTRY PROJECT	9
5. Final Examination	12
6. I Need Help	21
Part II. Introduction to Geography	
7. Basics, Environment, Humans	25
Part III. Europe	
8. The Realm, Regions, & Development	55
Part IV. Russia	
9. The Realm & Regions	75
Part V. North Africa/Southwest Asia	
10. The Realm & Regions	89

Part VI. Sub-Saharan Africa

- | | |
|---------------|-----|
| 11. The Realm | 115 |
|---------------|-----|

Part VII. South Asia

- | | |
|-------------------------|-----|
| 12. The Realm & Regions | 121 |
|-------------------------|-----|

Part VIII. East Asia

- | | |
|-------------------------|-----|
| 13. The Realm & Regions | 143 |
|-------------------------|-----|

Part IX. Southeast Asia

- | | |
|-------------|-----|
| 14. Regions | 169 |
|-------------|-----|

Part X. North America

- | | |
|-------------------------|-----|
| 15. The Realm & Regions | 183 |
|-------------------------|-----|

Part XI. Middle America

- | | |
|-------------------------|-----|
| 16. The Realm & Regions | 189 |
|-------------------------|-----|

Part XII. South America

- | | |
|-------------------------|-----|
| 17. The Realm & Regions | 209 |
|-------------------------|-----|

IMPORTANT NOTICE

Dear users,

We regret to inform you that the Achieving the Dream Pressbooks library will be closing permanently at the end of September 2025. We sincerely appreciate the engagement and support this resource has received from our community. To ensure continued access to materials you currently use, we strongly recommend downloading copies of any texts before the closure date.

Multiple download formats are available to accommodate your needs.

Additionally, we encourage you to seek out alternative repositories of OERs such as OpenStax, Creative Commons, and more.

Should you have any questions or concerns regarding this transition, please contact us at OER@achievingthedream.org.

Thank you for your understanding and continued support.

Achieving the Dream

PART I

FACULTY RESOURCES

I. Request Access

This text is openly licensed and is accessible to all by navigating using the “Contents” menu in the upper left hand corner.

To preserve academic integrity and prevent students from gaining unauthorized access, we have hidden faculty resources and assessments.

Please contact oyer@achievingthedream.org to request access to the faculty resources for this course.

Once you have been given access, you'll be able to use the resources provided through the drop down in the upper left hand corner.

Overview of Faculty Resources

This is a community course developed by an Achieving the Dream grantee. They have either curated or created a collection of faculty resources for this course. Since the resources are openly licensed, you may use them as is or adapt them to your needs.

Now Available

- Project
- Exams

Share Your Favorite Resources

If you have sample resources you would like to share with other

faculty teaching this course, please send them with an explanatory message and learning outcome alignment to oor@achievingthedream.org.

2. Europe Take-Home Exam

This is a take-home examination, which means that this assignment is to be completed outside of the normal class hours. Of course you will be allowed to use your text and class notes. Your responses should reflect your understanding and insight of the subject material and demonstrate your ability to prepare a well-written (word processed of course), thoughtful, and polished product. Projects of this type are very common in the “real world”. There is a total of 100 points possible for this examination.

Please select TWO (2) of the following questions to write a short (no more than one page each) essay on. Be sure to note which question you are answering. Each response will be worth a maximum of 50 points.

1. Please explain what we mean when we say that Europe is one of the most culturally complex regions on earth. For example, how do the history, religions, philosophies, politics, wars, psychologies (group and individual) and physical settings come together to form the complex mosaic of the region? Why do many Americans tend to over simplify the cultural complexities of Europe?

2. From what we have discussed in class, plus your readings of the textbook, describe what life would be like in a “typical” European village in the region. What would it look like, how are people’s lives structured socially, where to they shop, what are some of the patterns and rhythms of daily life like? How does life in the villages differ from that of the large cities?

3. Discuss the physical and cultural diversity of Europe. In what ways do people and places vary as you travel around Europe? Imagine that you are driving across Europe (for example North to South or East to West) what would you see? (Include the diversity of the landscapes and cultures).

4. Briefly discuss the impacts that the Pleistocene era (Ice Age) had upon the landscapes and cultures of Europe. How do the

current climatic patterns influence the agriculture, economic, and lifestyles of the people of Europe? Include specific examples.

5. Discuss the impacts and contributions of the Ancient Roman culture relative to the last two thousand years of European civilizations. How did their architecture, literature, politics, economics, technology, and philosophies influence Europe over the ages.

6. Please select one European country that you would like to visit or live in. Include in your discussion what the places people and places look like. Topics should include food, dress, weather, landscapes, housing, entertainment, music, etc. Include specific places you want to visit and things you want to do there. What are some things you would want to avoid?

3. Middle-East Take-Home Exam

This is a take-home examination, which means that this assignment is to be completed outside of the normal class hours. Of course you will be allowed to use your text and class notes. Your responses should reflect your understanding of the subject material and demonstrate your ability to prepare a well-written, thoughtful, and polished product. Projects of this type are very common in the “real world”. There is a total of 100 points possible for this examination.

Please select THREE (3) of the following questions to write a short (no more than one page each) essay on. Each response will be worth a maximum of 33 points.

1. Please explain what we mean when we say that Europe is one of the most geographically (culturally and physically) complex regions on earth. For example, how do the history, religions, philosophies, and physical settings come together to form the complex mosaic of the region? Why is it often difficult for many Americans to truly understand the region?

2. From what we have discussed in class plus your readings of the textbook, describe what life would be like in a typical village in the region. What would it look like, how are people's lives structured socially, where do they shop, what are some of the patterns and rhythms of daily life like? How does life in the villages differ from that of the large cities?

3. Discuss the various factors that have contributed to the physical landscapes of Europe. How were the mountains and valleys created? What role did the Ice Ages play in the sculpturing of the landscapes? In what ways have the physical landscapes influenced the cultural development of Europe? How do the landscapes (rivers, mountains, peninsulas, bays, etc.) put many European countries at an advantage compared to many other places on Earth?

4. Briefly discuss the development of the geopolitical structure of Europe (from the Roman Empire through the Dark Ages, and so on). In what ways have the various Kings, Queens, Dukes, Counts, and others assorted nobility influenced the cultural landscape of Europe (from castles to land ownership)? How did rivers, mountains, and access to the seas and oceans put some realms at an advantage compared to others (e.g. France compared to Poland)?

5. Please explain what we mean when we say the Russia is one of the most geographically disadvantaged places on Earth. For example, how does its relative location, access to the outside world, mineral resources, physical size, climates, landforms, rivers, and its difficult defensive position place it at a disadvantage? How does these factors compare to those of Western Europe?

6. Please select one of the following European countries and write a brief overview of what the people and places “look” like (e.g. a description of some of the people and places associated with the country – housing, foods, dress, celebrations, music, history, etc.): Ireland, England, France, Portugal, Italy, Germany, Norway, Sweden, Greece, Belgium, Scotland, and Russia.

4. ADOPT-A-COUNTRY PROJECT

Congratulations, you are the new AMERICAN AMBASSADOR to the country that you have selected. As part of your responsibilities you are to prepare a report for the Department of State (to be submitted through me) which will provide an overview of the people and places of your country. Learning about a country involves a treasure hunt throughout the library and elsewhere. You can't just go to the internet and look up your country. The materials are scattered across a wide range of topics. Consult atlases, books, journals, magazines, government documents, travel agencies, reference materials, maps, newspapers, Internet, computer programs, etc. You will have to be very creative in order to prepare a quality report (which is expected). I have not given you a list of sources because I believe that discovery is an important part of the process of learning. Your report may include, but not be limited to, the following topics (no need to have everything included; That would produce a book or major movie):

Relative location and size of your country (compare with a state in the United States).

A description of the climate of your country.

An overview of the topography.

Vegetation and wildlife patterns.

Major mountains and rivers.

Major cities.

Population pattern (numbers, ages, density, history).

Brief history of your country.

Birth rate and death rate and population doubling time.

Infant mortality rate and life expectancy at birth.

Percent of population living in rural areas.

What are the principal agricultural crops?

What is the level of education in your country?
 What is the per capital income?
 What is your crime rate? How does it compare with the U.S.?
 Does your country have gun control? What type?
 Who is the head of state (President, King, Ruler)?
 What form of government does your country have?
 Who is your country's Ambassador to the United States?
 When was the last war in your country?
 What countries are your neighbors and friends?
 Who might your enemies be?
 Describe the military (troops, equipment, spending).
 Are the people happy (how do you define happiness)?
 What are some current events in your country?
 How is your country different from America?
 In what ways is it similar to America?
 How are Americans viewed in your country?
 What are the major religions in your country?
 Describe the various ethnic groups in your country.
 What languages are spoken in your country?
 What is the status of women in your country?
 If I were to travel to your country, what would be some major tourist sites?
 What are some major industries of your country?
 What products does the U.S. import from your country?
 What products does your country import from the U.S.?
 What does the economic and political future of your country look like?
 What are the best aspects of your country (assume that you are trying to "sell" your country to tourists)?
 What are the worst aspects of your country (what would you want to "hide" from the tourists?)
 What are some of the foods eaten in your country?
 Who are the popular artists and authors?
 What kind of music do the citizens listen to?
 What can we learn from the culture of your country?

What do you like most about living in this country? Least?

Anything else of interest to report?

The Report: The report should reflect what you have learned about the process of gathering information about a country. It should be clear, organized, professional, and demonstrate your creativity. Sources should be cited and a bibliography is expected. If you have any questions please talk to me. Your Report is **due by the last week of classes**

5. Final Examination

Your Name, Please

Welcome to the final, fun-filled exciting exam. There is only one correct answer for each question, so please select the BEST one. A True or False question must be completely true or else it is false. If you have any questions, please call on me. There is a total of 100 points possible for this test.

Multiple Choice – True/False Questions: Each question is worth 2 ½ (100 points). Please place your responses in the spaces on the left.

_____ 1. It is correct to assume that all Native Americans were of the same culture.

TRUE OR FALSE

_____ 2. The patterns of European settlement of Central and South America reflects:

1. Only people from Spain settled in the region
2. A pattern similar to that of the United States; people from many European countries
3. Only Spanish, French, and Germans settled in the region
4. Very few people from Europe settled in the region

_____ 3. Which of the following settlement processes helped establish the legal claims of a group of people?

1. Proclaiming ownership in the name of the King or Queen
2. Drawing your border on a map
3. Stating your claim in writing
4. Effective settlement (having your citizens live there)

_____ 4. The American culture can best be described as a:

1. Melting Pot
2. Stew Pot
3. White Anglo-Saxon Protestant culture
4. Rust Bowl

_____ 5. Which of the following Pre-Columbian groups had an empire in what is now Mexico?

1. Yucantanian
2. Spanish
3. Aztecs
4. Incas

_____ 6. The combination of agriculture and industry (processing) is known as:

1. Land tenure
2. Plantation
3. Nationalization
4. Periodic market

_____ 7. Technically, the ethnic term “anglo” can only be applied to the people from the culture of England or derived from the English culture. TRUE OR FALSE

_____ 8. While the Europeans and their cultures had a major impact upon the indigenous peoples of the New World, the opposite was not true (the New World cultures had no impact on Europe).

TRUE OR FALSE

_____ 9. Which of the following indigenous peoples had a large empire in present-day Peru?

1. Aztecs
2. Mayans
3. Navajos
4. Incas

_____ 10. All of the following are significant about the Homestead Act of 1862 EXCEPT:

1. For the first time single women could claim land
2. It was the first U.S. land act
3. Most Southerners were excluded
4. Lands west of the Missouri River were open to settlement

_____ 11. In Central and South America most villagers shop at:

1. Super Markets
2. Malls
3. Costco
4. Periodic Markets

_____ 12. In most Central and South American countries Spanish is the language spoken by most people.

TRUE or FALSE

_____ 13. All of the following apply to “T Towns” EXCEPT:

1. Settlement of the town preceded the railroad
2. The “wrong side of the track” was common
3. Fresno and Hanford are good examples of a “T Town”
4. Businesses that dealt in bulky goods were located parallel to the tracks while “Main Street” was at a right angle (90°)

_____ 14. What is the process called that lets countries legally take over the assets of foreign companies?

1. Eminent domain
2. Nationalization
3. Manifest destiny
4. Bilateral normalization

_____ 15. Which of the following allowed people living in rural

America to have access to the same goods as those living in large cities like Chicago?

1. Oregon Trail
2. Sears & Roebuck Catalog
3. G. I. Bill
4. Manifest Density

_____ 16. The ethnicity of settlers (immigrants) in Central and South America reflects:

1. Spain
2. Portugal
3. France
4. A pattern similar to that of the United States

_____ 17. Which of the following European countries still has colony in South America?

1. England
2. France
3. Spain
4. Lichtenstein

_____ 18. History is often a record of the exceptional people and events rather than what was normal.

TRUE OR FALSE

_____ 19. The philosophies of Scouting (both Boy and Girl Scouts) in America have been heavily influenced by which cultural group?

1. Native Americans
2. French
3. Spanish
4. English

_____ 20. Which of the following two events helped link the United States in the mid 1800s?

1. Transcontinental Railroad and Telegraph lines
2. The Ford Model "T" and the Oregon Trail
3. The Dust Bowl migration and First World War
4. The G.I. Bill and Internet

_____ 21. When someone mentions "pre-Columbian pottery" they are referring to pottery made after the arrival of Columbus in the New World. TRUE OR FALSE

_____ 22. Which of the following settlements represent a "Landscape of Hope"?

1. Slum
2. Hacienda
3. Plantation
4. Barrio

_____ 23. In Central and South America social stratification (grouping people into social classes) is very rare.

TRUE OR FALSE

_____ 24. Which of the following people is known as the "Liberator of South America"?

1. Bill Clinton
2. Samuel Moors
3. Simon Bolivar
4. Mahatma Gandhi

_____ 25. In many periodic markets in South America, women wear what garment to distinguish which village they come from?

1. Hats
2. Dresses
3. Shoes

4. Bling

_____ 26. What was the major thing that attracted the Spanish to the New World?

1. Good farm lands
2. Tax deductions
3. Peace
4. Gold, silver, and other riches

_____ 27. The Louisiana territory was purchased from the:

1. French
2. English
3. Spanish
4. Dutch

_____ 28. Which of the following settlements represents a “Landscape of Despair”?

1. Slum
2. Hacienda
3. Plantation
4. Barrio

_____ 29. Widespread corruption is one of the major factors that plague societies in Central and Southern America.

TRUE OR FALSE

_____ 30. America became a major innovator or developer of technology because of:

1. We have always been “land rich and labor poor”
2. Inventors like Alexander Graham Bell and Thomas Edison created laboratories to encourage inventions
3. People who create new products are often rewarded
4. All of the above

_____ 31. With the collapse of the Soviet Union in 1990s, funding for many radical groups ceased and these groups have now turned to marketing drugs, kidnapping people, and general acts of crime.

TRUE OR FALSE

_____ 32. A major benefit of the use of Coca leaves in South America by indigenous peoples is to minimize the effects of altitude sickness. TRUE OR FALSE

_____ 33. Fewer than 5% of the African brought to the New World as slaves came to the United States.

TRUE OR FALSE

_____ 34. Which individual's ideas and practices gave the average American the freedom of movement or mobility (travel, vacations, residence, shopping, etc.)?

1. Franklin D. Roosevelt
2. Benjamin Franklin
3. Henry Ford
4. John F. Kennedy

_____ 35. Which of the following events had the greatest impact upon average American's lives (in regards to education, housing, and exposing many people to other parts of America and the world)?

1. Civil War
2. Great Depression
3. First World War
4. Second World War (including the G.I. Bill)

_____ 36. What settlement did the Guianese government allow to be created in an attempt to block Venezuela's territorial claims on their country?

1. French Guiana
2. Machu Picchu
3. Amazonia
4. Jonestown

_____ 37. The major difference between the Spanish settlement of Central America and the English and European settlement of North America was:

1. The Spanish came in ships
2. The Europeans brought families with them while the Spanish brought soldiers
3. The Spanish came to build cities
4. The Europeans were only looking for wealth in North America

_____ 38. Between 1854 and 1929 hundreds of thousands of children were sent west into America for adoption on the:

1. Oregon Trail
2. Ford Model "T"
3. Freedom of Mobility Special
4. Orphan trains

_____ 39. The rigid grid pattern seen on the North American landscape is a consequence of Thomas Jefferson's Township & Range survey system. TRUE OR FALSE

_____ 40. In class when we use an example from either the American or European cultures to relate to similar things in other parts of the world, we are using the educational concept of:

1. Redundancy
2. Using the familiar to teach the foreign (concepts and ideas)
3. Effective reinforcement
4. Student learning outcomes

It's over! You have done a great job. Relax now. Don't worry about the test; put it out of your mind. Remember, no amount of worry or anguish will magically change your responses on this exam, so

why worry? I thank you for taking part in the adventure and experiences of the semester and I hope that you and your family have a safe, wonderful, and peaceful Summer. Hope to see you next year. May many small wonders cross your path every day reminding you of the beauty of life.

6. I Need Help



Need more information about this course? Have questions about faculty resources? Can't find what you're looking for? Experiencing technical difficulties?

We're here to help! Contact oe@achievingthdream.org for support.

PART II
INTRODUCTION TO
GEOGRAPHY

7. Basics, Environment, Humans

1.1 Geography Basics

Learning Objectives

1. Understand the focus of geography and the two main branches of the discipline.
2. Learn about the tools geographers use to study the earth's surface.
3. Summarize the grid system of latitude and longitude and how it relates to seasons and time zones.
4. Distinguish between the different types of regional distinctions recognized in geography.
5. Understand the spatial nature of geography and how each place or region is examined, analyzed, and compared with other places or regions.
6. Determine the basic geographic realms and their locations.

What Is Geography?

Geography is the spatial study of the earth's surface (from the Greek *geo*, which means “Earth,” and *graphein*, which means “to write”). Geographers study the earth's physical characteristics, its inhabitants and cultures, phenomena such as climate, and the

earth's place within the universe. Geography examines the spatial relationships between all physical and cultural phenomena in the world. Geographers also look at how the earth, its climate, and its landscapes are changing due to cultural intervention.

The first known use of the word *geography* was by Eratosthenes of Cyrene (modern-day Libya in North Africa), an early Greek scholar who lived between 276 and 194 BCE. He devised one of the first systems of **longitude** and **latitude** and calculated the earth's circumference. Additionally, he created one of the first maps of the world based on the available knowledge of the time. Around the same time, many ancient cultures in China, southern Asia, Polynesia, and the Arabian Peninsula also developed maps and navigation systems used in geography and cartography.

The discipline of geography can be broken down into two main areas of focus: physical geography and human geography. These two main areas are similar in that they both use a spatial perspective, and they both include the study of place and the comparison of one place with another.

Physical geography is the spatial study of natural phenomena that make up the environment, such as rivers, mountains, landforms, weather, climate, soils, plants, and any other physical aspects of the earth's surface. Physical geography focuses on geography as a form of earth science. It tends to emphasize the main physical parts of the earth—the lithosphere (surface layer), the atmosphere (air), the hydrosphere (water), and the biosphere (living organisms)—and the relationships between these parts.

The major forms of study within physical geography include the following:

- Geomorphology (the study of the earth's surface features)
- Glaciology (the study of glaciers)
- Coastal geography (the study of the coastal regions)
- Climatology (the study of climates and climate change)
- Biogeography (the study of the geographic patterns of species distribution)

Some physical geographers study the earth's place in the solar system. Others are environmental geographers, part of an emerging field that studies the spatial aspects and cultural perceptions of the natural environment. Environmental geography requires an understanding of both physical and human geography, as well as an understanding of how humans conceptualize their environment and the physical landscape.

Physical landscape is the term used to describe the natural terrain at any one place on the planet. The natural forces of erosion, weather, tectonic plate action, and water have formed the earth's physical features. Many US state and national parks attempt to preserve unique physical landscapes for the public to enjoy, such as Yellowstone, Yosemite, and the Grand Canyon.

Human geography is the study of human activity and its relationship to the earth's surface. Human geographers examine the spatial distribution of human populations, religions, languages, ethnicities, political systems, economics, urban dynamics, and other components of human activity. They study patterns of interaction between human cultures and various environments and focus on the causes and consequences of human settlement and distribution over the landscape. While the economic and cultural aspects of humanity are primary focuses of human geography, these aspects cannot be understood without describing the landscape on which economic and cultural activities take place.

The cultural landscape is the term used to describe those parts of the earth's surface that have been altered or created by humans. For example, the urban cultural landscape of a city may include buildings, streets, signs, parking lots, or vehicles, while the rural cultural landscape may include fields, orchards, fences, barns, or farmsteads. Cultural forces unique to a given place—such as religion, language, ethnicity, customs, or heritage—influence the cultural landscape of that place at a given time. The colors, sizes, and shapes of the cultural landscape usually symbolize some level of significance regarding societal norms. Spatial dynamics assist in identifying and evaluating cultural differences between places.

Traditionally, the field of cartography, or map making, has been a vital discipline for geographers. While cartography continues to be an extremely important part of geography, geographers also look at **spatial** (space) and **temporal** (time) relationships between many types of data, including physical landscape types, economies, and human activity. Geography also examines the relationships between and the processes of humans and their physical and cultural environments. Because maps are powerful graphic tools that allow us to illustrate relationships and processes at work in the world, cartography and geographic information systems have become important in modern sciences. Maps are the most common method of illustrating different spatial qualities, and geographers create and use maps to communicate spatial data about the earth's surface.

Geospatial techniques are tools used by geographers to illustrate, manage, and manipulate spatial data. Cartography is the art and science of making maps, which illustrate data in a spatial form and are invaluable in understanding what is going on at a given place at a given time.

Making maps and verifying a location have become more exact with the development of the global positioning system (GPS). A GPS unit can receive signals from orbiting satellites and calculate an exact location in latitude and longitude, which is helpful for determining where one is located on the earth or for verifying a point on a map. GPS units are standard equipment for many transportation systems and have found their way into products such as cell phones, handheld computers, fish finders, and other mobile equipment. GPS technology is widely implemented in the transport of people, goods, and services around the world.

Remote sensing technology acquires data about the earth's surface through aerial photographs taken from airplanes or images created from satellites orbiting the earth. Remotely sensed images allow geographers to identify, understand, or explain a particular landscape or determine the land use of a place. These images can serve as important components in the cartographic (map-making) process. These technologies provide the means to examine and

analyze changes on the earth's surface caused by natural or human forces. Google Earth is an excellent example of a computer tool that illustrates remotely sensed images of locations on the earth.

Figure 1.1 Low Elevation Air Photo of Cultural Landscape in Morehead, Kentucky

Photo by R. Berglee – CC BY-NC-SA.

Geographic information science (GIS), often referred to as geographic information systems, uses a computer program to assimilate and manage many layers of map data, which then provide specific information about a given place. GIS data are usually in digital form and arranged in layers. The GIS computer program can sort or analyze layers of data to illustrate a specific feature or activity. GIS programs are used in a wide range of applications, from determining the habitat range of a particular species of bird to mapping the hometowns of university students.

Figure 1.2 Illustration of Layers in a GIS Process

GIS specialists often create and analyze geographical information for government agencies or private businesses. They use computer programs to take raw data to develop the information these organizations need for making vital decisions. For example, in business applications, GIS can be used to determine a favorable location for a retail store based on the analysis of spatial data layers such as population distribution, highway or street arrangements, and the locations of similar stores or competitive establishments. GIS can integrate a number of maps into one to help analysts understand a place in relation to their own specific needs.

GIS also focuses on storing information about the earth (both cultural and natural) in computer databases that can be retrieved and displayed in the form of specialized maps for specific purposes or analyses. GIS specialists require knowledge about computer and database systems. Over the last two decades, GIS has revolutionized the field of cartography: nearly all cartography is now done with the assistance of GIS software. Additionally, analysis of various cultural and natural phenomena through the use of GIS software and specialized maps is an important part of urban planning and other social and physical sciences. GIS can also refer to techniques used to represent, analyze, and predict spatial relationships between different phenomena.

Geography is a much broader field than many people realize. Most people think of area studies as the whole of geography. In reality, geography is the study of the earth, including how human activity has changed it. Geography involves studies that are much broader than simply understanding the shape of the earth's landforms. Physical geography involves all the planet's physical systems. Human geography incorporates studies of human culture, spatial

relationships, interactions between humans and the environment, and many other areas of research that involve the different subspecialties of geography. Students interested in a career in geography would be well served to learn geospatial techniques and gain skills and experience in GIS and remote sensing, as they are the areas within geography where employment opportunities have grown the most over the past few decades.

The Earth and Graticule

Location

When identifying a region or location on the earth, the first step is to understand its relative and absolute locations. Relative location is the location on the earth's surface with reference to other places, taking into consideration features such as transportation access or terrain. Relative location helps one compare the advantages of one location with those of another. Absolute location, on the other hand, refers to an exact point on the earth's surface without regard to how that point is related to any other place. Absolute location is vital to the cartographic process and to human activities that require an agreed-upon method of identifying a place or point.

Just as you were taught in geometry that there are 360 degrees in a circle or a sphere, the earth also has 360 degrees, and they are measured using a grid pattern called the **graticule**. Lines of latitude and longitude allow any absolute location on the earth to have an identifiable address of degrees north or south and east or west,

which allows geographers to accurately locate, measure, and study spatial activity.

Geographers and cartographers organize locations on the earth using a series of imaginary lines that encircle the globe. The two primary lines are the equator and the prime meridian. From these lines, the systems of longitude and latitude are formed, allowing you to locate yourself anywhere on the planet. The line is the longest when you travel along in an east-west direction. At the equator, the sun is directly overhead at noon on the two equinoxes, which occur in March and September.

Figure 1.3 Basic Lines of Longitude and Latitude

Parallels or Lines of Latitude

Figure 1.4 Noted Lines of Latitude

The **equator** is the largest circle of latitude on Earth. The equator divides the earth into the Northern and Southern Hemispheres and is called 0 degrees latitude. The other lines of latitude are numbered from 0 to 90 degrees going toward each of the poles. The lines north of the equator toward the North Pole are north latitude, and each of the numbers is followed by the letter “N.” The lines south of the equator toward the South Pole are south latitude, and each of the numbers is followed by the letter “S.” The equator (0 latitude) is the only line of latitude without any letter following the number. Notice that all lines of latitude are parallel to the equator (they are often called parallels) and that the North Pole equals 90 degrees N and the South Pole equals 90 degrees S. Noted parallels include both the Tropic of Cancer and the Tropic of Capricorn, which are 23.5 degrees from the equator. At 66.5 degrees from the equator are the Arctic Circle and the Antarctic Circle near the North and South Pole, respectively.

Meridians or Lines of Longitude

The **prime meridian** sits at 0 degrees longitude and divides the earth into the Eastern and Western Hemispheres. The prime meridian is defined as an imaginary line that runs through the Royal Observatory in Greenwich, England, a suburb of London. The Eastern Hemisphere includes the continents of Europe, Asia, and Australia, while the Western Hemisphere includes North and South America. All meridians (lines of longitude) east of the prime meridian (0 and 180) are numbered from 1 to 180 degrees east (E); the lines west of the prime meridian (0 and 180) are numbered from 1 to 180 degrees west (W). The 0 and 180 lines do not have a letter attached to them. The meridian at 180 degrees is called the **International Date Line**. The International Date Line (180 degrees longitude) is opposite the prime meridian and indicates the start of each day (Monday, Tuesday, etc.). Each day officially starts at 12:01 a.m., at the International Date Line. Do not confuse the International Date Line with the prime meridian (0 longitude). The actual International Date Line does not follow the 180-degree meridian exactly. A number of alterations have been made to the International Date Line to accommodate political agreements to include an island or country on one side of the line or another.

Climate and Latitude

The earth is tilted on its axis 23.5 degrees. As it rotates around the sun, the tilt of the earth's axis provides different climatic seasons because of the variations in the angle of direct sunlight on the planet. Places receiving more direct sunlight experience a warmer climate. Elsewhere, the increased angle of incoming solar radiation near the earth's poles results in more reflected sunlight and thus a cooler climate. The Northern Hemisphere experiences winter when sunlight is reflected off the earth's surface and less of the sun's energy is absorbed because of a sharper angle from the sun.

The **Tropic of Cancer** is the parallel at 23.5 degrees north of the equator, which is the most northerly place on Earth, receiving direct sunlight during the Northern Hemisphere's summer. Remember that the earth is tilted 23.5 degrees, which accounts for seasonal variations in climate. The **Tropic of Capricorn** is the parallel at 23.5 degrees south of the equator and is the most southerly location on Earth, receiving direct sunlight during the Southern Hemisphere's summer.

The tropics (Cancer and Capricorn) are the two imaginary lines directly above which the sun shines on the two solstices, which occur on or near June 20 or 21 (summer solstice in the Northern Hemisphere) and December 21 or 22 (winter solstice in the Northern Hemisphere). The sun is directly above the Tropic of Cancer at noon on June 20 or 21, marking the beginning of summer in the Northern Hemisphere and the beginning of winter in the Southern Hemisphere. The sun is directly above the Tropic of Capricorn at noon on December 21 or 22, marking the beginning of winter in the Northern Hemisphere and the beginning of summer in the Southern Hemisphere. Solstices are the extreme ends of the seasons, when the line of direct sunlight is either the farthest north or the farthest south that it ever goes. The region between the Tropics of Cancer and Capricorn is known as the tropics. This area does not

experience dramatic seasonal changes because the amount of direct sunlight received does not vary widely. The higher latitudes (north of the Tropic of Cancer and south of the Tropic of Capricorn) experience significant seasonal variation in climate.

Figure 1.5 Road Sign South of Dakhla, Western Sahara (Claimed by Morocco), Marking the Tropic of Cancer

This sign was placed in this desert location by the Budapest-Bamako rally participants. The non-English portion is in Hungarian because of the European participants in the race.

Wikimedia Commons – public domain.

The **Arctic Circle** is a line of latitude at 66.5 degrees north. It is the farthest point north that receives sunlight during its winter season ($90^\circ \text{ N} - 23.5^\circ = 66.5^\circ \text{ N}$). During winter, the North Pole is away from the sun and does not receive much sunlight. At times, it is dark for most of the twenty-four-hour day. During the Northern Hemisphere's summer, the North Pole faces more toward the sun and may receive sunlight for longer portions of the twenty-four-hour day. The **Antarctic Circle** is the corresponding line of latitude at 66.5 degrees south. It is the farthest location south that receives sunlight during the winter season in the Southern Hemisphere (90°

$S - 23.5 = 66.5$ S). When it is winter in the north, it is summer in the south.

The Arctic and Antarctic Circles mark the extremities (southern and northern, respectively) of the polar day (twenty-four-hour sunlit day) and the polar night (twenty-four-hour sunless night). North of the Arctic Circle, the sun is above the horizon for twenty-four continuous hours at least once per year and below the horizon for twenty-four continuous hours at least once per year. This is true also near the Antarctic Circle, but it occurs south of the Antarctic Circle, toward the South Pole. Equinoxes, when the line of direct sunlight hits the equator and days and nights are of equal length, occur in the spring and fall on or around March 20 or 21 and September 22 or 23.

Figure 1.6 Graphic of the Four Seasons

Photo by R. Berglee – CC BY-NC-SA.

Time Zones

Universal Time (UT), Coordinated Universal Time (UTC), **Greenwich Mean Time** (GMT), or Zulu Time (Z): all four terms can be defined as local time at 0 degrees longitude, which is the prime meridian (location of Greenwich, England). This is the same time under which many military operations, international radio broadcasts, and air traffic control systems operate worldwide. UTC is set in zero- to twenty-four-hour time periods, as opposed to two twelve-hour time periods (a.m. and p.m.). The designations of a.m. and p.m. are relative to the central meridian: a.m. refers to *ante meridiem*, or “before noon,” and p.m. refers to *post meridiem*, or “after noon.” UT, UTC, GMT, and Z all refer to the same twenty-four-hour time system that assists in unifying a common time in regard to global operations. For example, all air flights use the twenty-four-hour time system so the pilots can coordinate flights across time zones and around the world.

The earth rotates on its axis once every twenty-four hours at the rate of 15 degrees per hour ($15 \times 24 = 360$). **Time zones** are established roughly every 15 degrees longitude so that local times correspond to similar hours of day and night. With this system, the sun is generally overhead at noon in every time zone that follows the 15-degree-wide system. The continental United States has four main time zones (see Table 1.1 “Four Main Time Zones in the Continental United States and Their Central Meridians” and Figure 1.7 “Major Time Zones of the World”).

Table 1.1 Four Main Time Zones in the Continental United States and Their Central Meridians

USA Time Zones	Central Meridian
Eastern standard time zone	75 degrees W
Central standard time zone	90 degrees W
Mountain standard time zone	105 degrees W
Pacific standard time zone	120 degrees W

Figure 1.7 Major Time Zones of the World

The twenty-four time zones are based on the prime meridian in regard to Universal Coordinated Time (UTC), Greenwich Mean Time (GMT), or Zulu Time (Z), which all operate on the twenty-four-hour time clock. Local time zones are either plus or minus determined by the distance from the prime meridian.

Figure 1.8 Diagram Illustrating the Width of a Time Zone

In this diagram, 75 W is the central meridian for the eastern standard time zone in the United States.

The eastern standard time zone is five hours earlier than the time at the prime meridian (UTC) because it is about 75 degrees west of 0 degrees ($5 \times 15 = 75$). For example, if it is noon in London, then it is 7 a.m. in New York. If it is 1 p.m. in New York, it is 10 a.m. in San Francisco, which is three times zones to the west. Since there are twenty-four hours in a day, there are twenty-four time zones on Earth. Each time zone is 15 degrees wide.

A problem with the 15-degree time zones is that the zones do not necessarily follow state, regional, or local boundaries. The result is that time zones are seldom exactly 15 degrees wide and usually have varied boundary lines. In the United States, the boundaries between the different time zones are inconsistent with the lines of longitude; in some cases, time zones zigzag to follow state lines or to keep cities within a single time zone. Other countries address the problem differently. China, for example, is as large in land area as the United States yet operates on only one time zone for the entire country.

Regions in Geography

A region is a basic unit of study in geography—a unit of space characterized by a feature such as a common government, language, political situation, or landform. A region can be a formal country governed by political boundaries, such as France or Canada; a region can be defined by a landform, such as the drainage basin of all the water that flows into the Mississippi River; and a region can even be defined by the area served by a shopping mall. Cultural regions can be defined by similarities in human activities, traditions, or cultural attributes. Geographers use the regional unit to map features of particular interest, and data can be compared between regions to help understand trends, identify patterns, or assist in explaining a particular phenomenon.

Regions are traditionally defined by internal characteristics that provide a sense of place. Their boundaries vary with the type of region, whether it is formal, functional, or vernacular; each type has its own meaning and defined purpose. A formal region has a governmental, administrative, or political boundary and can have political as well as geographic boundaries that are not open to dispute or debate. Formal boundaries can separate states, provinces, or countries from one another. Physical regions can be included within formal boundaries, such as the Rocky Mountains or New England. An official boundary, such as the boundary of a national park, can be considered a formal boundary. School districts, cities, and county governments have formal boundaries.

Natural physical geographic features have a huge influence on where political boundaries of formal regions are set. If you look at a world map, you will recognize that many political boundaries are natural features, such as rivers, mountain ranges, and large lakes. For example, between the United States and Mexico, the Rio Grande makes up a portion of the border. Likewise, between Canada and the United States, a major part of the eastern border is along the Saint

Lawrence Seaway and the Great Lakes. Alpine mountain ranges in Europe create borders, such as the boundary between Switzerland and Italy.

While geographic features can serve as convenient formal borders, political disputes will often flare up in adjacent areas, particularly if valuable natural or cultural resources are found within the geographic features. Oil drilling near the coast of a sovereign country, for example, can cause a dispute between countries about which one has dominion over the oil resources. The exploitation of offshore fisheries can also be disputed. A Neolithic mummy of a man who died in 3300 BCE caused tension between Italy and Switzerland: the body was originally taken to Innsbruck, Switzerland, but when it was determined that the body was found about 90 meters (180 feet) inside the border of Italy, Italian officials laid claim to the body.

Functional regions have boundaries related to a practical function within a given area. When the function of an area ends, the functional region ends and its boundaries cease to exist. For example, a functional region can be defined by a newspaper service or delivery area. If the newspaper goes bankrupt, the functional region no longer exists. Church parishes, shopping malls, and business service areas are other examples of functional regions. They function to serve a region and may have established boundaries for limits of the area to which they will provide service. An example of a common service area—that is, a functional region—is the region to which a local pizza shop will deliver.

Vernacular regions have loosely defined boundaries based on people's perceptions or thoughts. Vernacular regions can be fluid—that is, different people may have different opinions about the limits of the regions. Vernacular regions include concepts such as the region called the “Middle East.” Many people have a rough idea of the Middle East's location but do not know precisely which countries make up the Middle East. Also, in the United States, the terms *Midwest* or *South* have many variations. Each individual might have a different idea about the location of the boundaries of the

South or the Midwest. Whether the state of Kentucky belongs in the Midwest or in the South might be a matter of individual perception. Similarly, various regions of the United States have been referred to as the Rust Belt, Sun Belt, or Bible Belt without a clear definition of their boundaries. The limit of a vernacular area is more a matter of perception than of any formally agreed-upon criteria. Nevertheless, most people would recognize the general area being discussed when using one of the vernacular terms in a conversation.

Using a State as a Comparison Guide

In comparing one formal political region with another, it is often helpful to use a familiar country, state, province, or political unit as a reference or guide. Wherever you are located, you can research the statistical data for a formal region familiar to you to provide a common reference. The US state of Kentucky is one example that can be used to compare formal political regions. Kentucky ranks close to the middle range of the fifty US states in terms of its population of 4.3 million people. Kentucky is also within the median range of the fifty states in overall physical area. The state's 40,409-square-mile physical area ranks it thirty-

seventh in size in the United States. Kentucky is not as large in physical area as the western states but is larger in physical area than many of the eastern states. Kentucky includes part of the rural peripheral region of Appalachia, but the state also has cosmopolitan core urban centers such as Lexington and Louisville. Kentucky also borders the metropolitan city of Cincinnati. The rural peripheral regions of the state are home to agriculture and mining. The urban core areas are home to industry and service centers. Other US states could also be used as examples. Identifying a state's geographical attributes provides readers both in and outside the United States with a comparison indicator for geographic purposes.

Figure 1.9

The state of Kentucky can be used as a comparison guide for understanding other formal political regions around the world.

World Regional Geography

World regional geography studies various world regions as they compare with the rest of the world. Factors for comparison include both the physical and the cultural landscape. The main questions are, Who lives there? What are their lives like? What do they do for a living? Physical factors of significance can include location, climate type, and terrain. Human factors include cultural traditions, ethnicity, language, religion, economics, and politics.

World regional geography focuses on regions of various sizes across the earth's landscape and aspires to understand the unique character of regions in terms of their natural and cultural attributes. Spatial studies can play an important role in regional geography. The scientific approach can focus on the distribution of cultural and natural phenomena within regions as delimited by various natural and cultural factors. The focus is on the spatial relationships within any field of study, such as regional economics, resource management, regional planning, and landscape ecology.

Again, this textbook takes a regional approach with a focus on themes that illustrate the globalization process, which in turn helps us better understand our global community. The regions studied in world regional geography can be combined into larger portions called realms. Realms are large areas of the planet, usually with multiple regions, that share the same general geographic location. Regions are cohesive areas within each realm. The following eleven realms are outlined in this text:

1. Europe (Eastern Europe and Western Europe)
2. The Russian Realm (Russian republic of the former Soviet Union)
3. North America (United States and Canada)
4. Middle America (Caribbean, Mexico, Central America)
5. South America

6. North Africa, the Middle East and central Asia
7. Subsaharan Africa (Africa south of the Sahara Desert)
8. Southern Asia (India and its neighbors)
9. Eastern Asia (China, Mongolia, Japan, and the Koreas)
10. Southeast Asia (mainland region and the islands region)
11. Australia and the Pacific (including New Zealand)

Figure 1.10 Major World Realms

Key Takeaways

- Geography is the spatial study of the earth's surface. The discipline of geography bridges the social sciences with the physical sciences. The two main branches of geography include physical geography and human geography. GIS, GPS, and remote sensing are tools that geographers use to study the spatial nature of physical and human

landscapes.

- A grid system called the graticule divides the earth by lines of latitude and longitude that allow for the identification of absolute location on the earth's surface through geometric coordinates measured in degrees. There are twenty-four time zones that are set at 15-degree intervals each and organize time intervals around the world.
- The tilt of the earth's axis at 23.5 degrees helps create the earth's seasonal transitions by either absorbing or reflecting the sun's energy. The line of direct sunlight always hits the earth between 23.5 degrees north (Tropic of Cancer) and 23.5 degrees south (Tropic of Capricorn), depending on the time of year.
- A region is the basic unit of study in geography. Three main types of boundaries define a region: formal, functional, and vernacular. World regional geography is the study of a particular group of world regions or realms as each compares with the rest of the world.

Discussion and Study Questions

1. How does the discipline of geography provide a bridge between the social sciences and the physical sciences?
2. How does the cultural landscape assist in indicating

the differences between a wealthy neighborhood and a poverty-stricken neighborhood?

3. How can remote sensing technology assist in determining what people do for a living?
4. What is the significance of the Tropic of Cancer and the Tropic of Capricorn?
5. What occupations depend on knowledge of the seasons for their success?
6. If it is 4 p.m. in San Francisco, what time is it in London, England?
7. How would GIS, GPS, or remote sensing technology be used to evaluate the destruction caused by a tornado in Oklahoma?
8. How is the cultural landscape influenced by the physical landscape?
9. Can you list a formal region, a functional region, and a vernacular region that would include where you live?
10. What methods, topics, or procedures would be helpful to include in the study of world geography?

Geography Exercise

Identify the following key places on a map:

- Arctic Circle
- Antarctic Circle
- Equator

- International Date Line
- North Pole
- Prime meridian
- Tropic of Cancer
- Tropic of Capricorn
- South Pole

Activities

1. Use Google Earth to locate your current school or residence.
2. Draw a map of your home state or province and include lines of latitude and longitude.
3. Compile the statistical data on your home state, province, or territory to use in comparing formal political regions.

PART III
EUROPE

8. The Realm, Regions, & Development

2.1 Introducing the Realm

Learning Objectives

1. Describe the various climate types and physical landforms of the European continent.
2. Explain how Europe's physical geography has supported its development.
3. List Europe's various natural resources.
4. Summarize the environmental concerns Europe faces.

From the Roman Empire to the European Union (EU), Europe's historical pattern of development is a model study in regional geography. From historic empires to diverse nation-states to a multicountry union, the continent struggles to confront the cultural forces that unite and divide it. The powerful impact European colonialism has had on the world since the Industrial Revolution is still felt today. The rural-to-urban shift prompted by the Industrial Revolution first impacted Europe and continues to impact developing countries. Understanding the geographic region of Europe is essential to understanding our world. This short summary of the basic concepts will provide a valuable lesson in globalization, which affects every human being on the planet. The concepts and principles that apply to Europe can also apply to other countries and regions.

Figure 2.1 Map of Europe

University of Texas Libraries

Location and Climate

Europe is a northern continent. All the British Isles, for example, fall above the fiftieth parallel. If we compare Europe's position on a globe with that of the contiguous United States, we see that much of Europe lies north of the United States. Paris, France, is at about the same latitude as Fargo, North Dakota. Athens, Greece, is at about the same latitude as St. Louis, Missouri. Europe's northern position affects its growing seasons and people's moods, and it should be taken into consideration as an important influence in the evolution of the European character. Europe is also surrounded by bodies of water: the Atlantic Ocean borders Europe on the west, the Arctic Ocean borders Europe to the north, and many seas surround the various peninsulas and coastal regions.

The oceans exert significant influence on the world's climates. The oceans collect and store vast amounts of solar energy, particularly around the equator, and transport that heat with their currents. Ocean currents can move water for thousands of miles from one temperature zone to another. Because oceans can absorb so much heat, maritime climates are often milder than continental

ones, with smaller temperature variations from day to night as well as from winter to summer. This influences not only temperature but also precipitation patterns over wide regions of Europe and the rest of the world. Water moderates coast environments in a number of ways. Water heats and cools more slowly than land. This heat inertia allows coastal communities to have climates that tend to be more moderate than one might imagine for places so far north. Interior Europe does not benefit from coastal waters and can have winters as cold as those found within the upper midwestern United States.

Figure 2.2 The Dominant Climate Types of Europe

The Gulf Stream is perhaps the most important current for Western Europe's climate and is responsible for producing a temperate climate for a northern latitude location. Most of Western Europe has a moderate type C climate. The Gulf Stream originates in the Gulf of Mexico, where the waters are warmed. This powerful current follows the Eastern Seaboard of the United States before crossing the Atlantic Ocean for Europe. The Gulf Stream's most dramatic effect can be found in the western coastal islands of Scotland, which has a mild enough climate to support some forms of tropical flora, even though it is a degree of latitude as far north as Hudson Bay, Canada.

The coast of Norway provides another example. While most of

Norway's coastal area lies within the Arctic region, it remains free of ice and snow throughout the winter. People living farther inland and closer to Eastern Europe and Russia encounter the colder type D climates. Colder air sweeps down from the Arctic north or from eastern Siberia and provides colder winters in this eastern region. The Mediterranean Sea moderates the temperature to the south, providing a type C climate around its shores. Type C climates meet up with type E climates at or near the Arctic Circle in Norway and in Iceland.

Four Main European Landforms

Europe has four main landforms, many islands and peninsulas, and various climate types. The four main landforms include the **Alpine region, Central Uplands, Northern Lowlands,** and **Western Highlands**. Each represents a different physical part of Europe. The wide-ranging physical environment has provided Europe with an abundance of biodiversity. Biodiversity refers to diversity of the number of species in an ecosystem and the quantity of members in each species. The physical environment also provides natural resources and raw materials for human activities. Europe's moderate climates and favorable relative location are supported by its access to the many rivers and seas. These advantageous developmental factors supported the development of the Industrial Revolution in Europe, which gave rise to highly technical and urban

societies. Europe has emerged as one of the core economic centers of the global economy. Associated with the urbanization of Europe are high human population densities that have placed a strain on the natural environment. As result, there has been significant deforestation and the loss of natural habitat, which has in turn has decreased the realm's level of biodiversity.

Rivers are abundant in Europe and have provided adequate transportation for travel and trade throughout its history. Most of Europe is accessible by water transport either via the many rivers or along the extensive coastlines of the peninsulas and islands. Two main rivers divide Europe: the **Danube** and the **Rhine**. Both have their origins in the region of southern Germany on or near the border with Switzerland. The Rhine River flows north and empties into the North Sea in Rotterdam, Holland, one of the world's busiest ports. The Danube flows east through various major European cities, such as Vienna, Budapest, and Belgrade before emptying into the **Black Sea**.

Figure 2.3 Four Main Landforms of Europe: Western Highlands, Northern Lowlands, Central Uplands, and the Alpine Region

Alpine Region

The **High Alps**, which range from eastern France to Slovenia, are central to the **Alpine region**. Included in the **Alpine Range** are the **Pyrenees**, located on the border between France and Spain; the **Apennines**, running the length of Italy; the **Carpathians**, looping around Romania from Slovakia; and finally, the shorter **Dinaric Alps** in former Yugoslavia. Mountains usually provide minerals and ores that were placed there when the earth's internal processes created the mountains. Mountains also isolate people by acting as a dividing range that can separate people into cultural groups.

Figure 2.4 The Alpine Region:
Eiger, Mönch, and Jungfrau
from Männlichen—Swiss Alps

The Alpine region encircles the Mediterranean coastlines, which have more temperate type C climates that are particularly warm with hot, dry summers and cool, wet winters. This climate type allows for the cultivation of food products such as olives, citrus fruit, figs, apricots, and grapes. Evergreen scrub oaks and other drought-resistant shrubs are common in the Mediterranean region.

The Central Uplands

The region bordering the main Alps to the north, which includes a large portion of southern Germany extending eastward, is known as the **Central Uplands**. These foothills to the Alps are excellent sources of raw materials such as forest products and coal, which are valuable resources for industrial activities. The Central Uplands are also good locations for dairy farming and cattle raising. This middle portion of the continent has a mixed deciduous-coniferous forest, and the vegetation includes oak, elm, and maple trees intermingled with pine and fir trees. There are four distinct seasons in this region with moderate amounts of precipitation year round.

Northern Lowlands

Figure 2.5

The Western Highlands meet the lowlands in central Scotland.

Photo by R. Berglee – CC BY-NC-SA.

Similar to the breadbasket of the midwestern United States, Europe's **Northern Lowlands** possess excellent farmland. Major agricultural operations here provide for a large European population. The land is flat to rolling with relatively good soils. The Northern Lowlands are a great plain that extends across northern Europe from southern France, north through Germany, and then all the way to the Ural Mountains of Russia. This area is typified by prairies and areas of tall grasses and is mostly used as farmland. The lowlands area also contains bogs, heaths, and lakes. The eastern part of this great plain around Ukraine is characterized by a steppe biome. It is a flat and relatively dry region with short grasses and is generally an agricultural region. This eastern area has great swings in temperature, both from day to night and from summer to winter. Winter temperatures in the eastern steppe can drop to below -40°F , with summer temperatures reaching as high

as 105 °F. This is similar to the steppes of eastern Montana or western North Dakota in the United States.

Western Highlands

On the western edges of the European continent arise short rugged mountains called highlands that extend throughout Norway, parts of Britain, and portions of the **Iberian Peninsula** of Portugal and Spain. These Western Highlands hold sparser populations and are less attractive to large farming operations. Agriculture is usually limited to grazing livestock or farming in the valleys and meadows. The **Scottish Highlands** are noted for their wool products and Highland cattle. In England, the central chain of highlands called the **Pennines** proved valuable during the Industrial Revolution because they enabled hydropower and, later, coal mining. Coal mining was prominent in the highland regions of Wales. In the far northern regions of Scandinavia, tundra environments prevail. In this coldest and driest biome, permafrost dominates the landscape, and the land becomes soggy for brief periods during the few weeks of summer. The flora consists primarily of lichens, mosses, low shrubs, and wildflowers.

Natural Resources in Europe

The physical landforms of Europe provide a diversity of geographic opportunities that have catapulted Europe through the Industrial Revolution and into the information age. With an abundance of natural resources, European countries have gained wealth from the land and leveraged their geographic location to develop a powerhouse of economic activity for the global marketplace. Europe has placed a strong focus on manufacturing activity to take advantage of its natural resources. The highly urbanized society has struggled to find a balance between modernization and environmental concerns. Industrial activities have contributed to the degradation of the environment and the demise of a number of species.

Different regions of Europe are blessed with fresh water supplies, good soils, and various minerals. Chief among the mineral deposits in Europe is iron ore, which can be found in Sweden, France, and Ukraine. Other minerals exist in smaller quantities, including copper, lead, bauxite, manganese, nickel, gold, silver, potash, clay, gypsum, dolomite, and salt. Extraction activities have supported the continent's industrialization.

The ready access to vast areas of the Atlantic Ocean and a number of major seas, lakes, and rivers has elevated fish to an important natural resource in Europe. The seas around Europe provide about 10 percent of the world's fish catches. Mirroring the situation around the world, European fishing activity increased as population increased. Europeans are becoming increasingly aware of the effects of overfishing. Stocks of Atlantic cod and Atlantic mackerel are considered to be at risk because of the twin threats of overfishing and changes in the environment that are affecting natural mortality and slowing spawning. Stocks of eastern North Atlantic bluefin tuna are also attracting attention for the same reason. Other species of fish in the North Atlantic and the Baltic Sea

are considered overexploited. Changes to the fishery are a major concern for strictly ecological reasons and also because fish comprise such a significant portion of the European economy.

The countries of Europe, with the formation of the EU, began to work toward shared research and policies with respect to the fishery. The Common Fisheries Policy was drafted and includes strict and extensive rules and guidelines for fishing, particularly of cod. The rules are so strict and thus so controversial that Norway and Iceland decided to opt out of the EU rather than agree to abide by these rules. The effect of these rules is incompletely known, but the cod stocks in the North Sea do not seem to be rebounding as quickly or substantially as expected.

Forest covers more than 40 percent of the continent's land area, with the majority on the Russian side. Forests exist primarily in the less populous Nordic and Baltic countries and in Central Europe. About half the forest land in Europe is privately owned. Interestingly, there are several different forms of private ownership, including large family holdings, holdings by forest industries, and small to very small holdings by thousands of individuals. Most of the forested land is managed, and about 85 percent of the forests produce exploitable resources. The percentage of forested land in Europe is rebounding because of an extensive tree-planting initiative since 2000. Pollution has caused great harm to the forests of Poland, the Czech Republic, and eastern Germany, and acid rain and air pollution have seriously harmed forests such as the **Black Forest** of southern Germany, which has also experienced heavy logging activity.

Soil resources are of critical importance. Soil is necessary for growing food, supporting livestock, supporting other natural resources such as the forests, and supplying groundwater. Soil resources are only just beginning to receive attention in Europe. Problems to be addressed include loss of topsoil from development and building activities, older-style agricultural practices, mining, contamination from industries and other sources, and acidification as a result of acid rain.

Coal, now substantially depleted, is abundant in several areas of Great Britain, including some offshore areas, as well as in the industrial centers of Germany and in Ukraine. Other coals deposits are found in Belgium, France, Spain, the Czech Republic, Poland, Slovakia, and Russia. The burning of coal has produced high levels of air pollution. Acid rain has been a major concern in the northern countries, where wind currents carry pollutants north into Scandinavia from the industrial regions of Central Europe. In Scandinavia, acid rain has diminished fish populations in many of the lakes. Forest health is also being challenged, which is diminishing the economic conditions of regions that depend on forests for their economic survival.

Petroleum and natural gas deposits exist underneath the North Sea and were first tapped in the 1970s. Five European countries have rights to these resources, including Norway, the United Kingdom, Denmark, the Netherlands, and Germany, with Norway holding the bulk of the rights. The governments of these five nations agree that, although tapped only decades ago, half the North Sea oil reserves have been consumed.

Before the extraction of petroleum products from the North Sea, Russia and the former Soviet Union's other republics supplied petroleum to Europe. These areas still have a number of active extraction operations. Hydroelectric power has been important in Europe as well. With both coal and oil resources largely depleted and the desire to avoid the environmental damage caused by dams, the European Energy Commission is devoting substantial energy and resources to encouraging use of renewable resources such as wind and solar energy. In March 2007, European leaders agreed that a binding target of 20 percent of all energy must be from alternative sources by 2020. Also, 10 percent of the transportation fuels used by EU members must be sustainable biofuels.

Key Takeaways

- The Gulf Stream provides a moderate type C climate for much of Western Europe. Eastern Europe can experience colder type D climates.
- Europe has four main physical landforms that provide a diversity of natural resources. The North European Lowland holds the majority of its agricultural potential.
- An increase in population has also increased the demand on the environment. Various environmental concerns are becoming more evident. Acid rain from industrialization has caused extensive damage to forests and fish populations in northern Europe. Atlantic fisheries are also experiencing a decline in production.

Discussion and Study Questions

1. Identify and locate the four main physical landforms of Europe. What are the main features of each?
2. How do these landforms and natural resources provide wealth, opportunities, and advantages to the European community?
3. Why is there a higher concentration of acid rain in northern Europe? How is acid rain affecting the

environment?

4. What two rivers act to naturally divide Europe? Which rivers flow through Paris and London?
5. Track the flow of each of the two main rivers and identify the major cities that each flows through.
6. Where are the major mountain ranges of the Alpine region?
7. How does the Alpine region contribute to the economies of the countries of Europe?
8. Why do the countries of Western Europe have more moderate type C climates even though they are in the northern latitudes?
9. How does agricultural production vary with physical landforms or climate changes?
10. How are Europeans addressing the decline in the North Atlantic fishing industry?

Geography Exercise

Identify the following key places on a map:

- Alpine region
- Alps
- Apennines
- Black Forest
- Black Sea
- Carpathians
- Central Uplands

- Danube River
- Dinaric Alps
- Iberian Peninsula
- Mediterranean Sea
- North Sea
- Northern Lowlands
- Pyrenees
- Rhine River
- Scottish Highlands
- Strait of Gibraltar
- Ural Mountains
- Western Highlands

PART IV
RUSSIA

9. The Realm & Regions

3.1 Introducing the Realm

Learning Objectives

1. Identify Russia's climatic influences and physical regions.
2. Determine how the czars expanded their territorial power to create the Russian Empire.
3. Contrast the ways that the governments of the Russian Empire and the Soviet Union dealt with the issue of diverse nationalities within their countries.
4. Describe some of the environmental problems facing the Russian republics today.

The massive expanse of Russia exhibits a variety of physical environments, such as tundras, steppes, mountains, and birch forests. Type D (continental) climates dominate most of the country and characterize large landmasses such as Eurasia and North America. Land in the center of a large continent, far from the moderating effects of oceans, tends to heat up rapidly in the summer and cool down rapidly in the winter. These areas are known for hot summers and cold, harsh winters. Northern Russia borders the Arctic Ocean, and frigid air masses from the Arctic swoop south across Russia each winter. Moreover, Russia's northerly latitude means that it experiences a short growing season and has never been an agricultural superpower; the country usually has to import grain to feed its people. Mountain ranges to the south block summer rains and warm air masses that would otherwise come from South and Central Asia, thus creating deserts and steppes in southern Russia.

Most of Russia's population live in the European part of the country on the Eastern European Plain, also known as the Western Russian Plain, or the **Russian Plain**, the most agriculturally

productive land in Russia. The eastern edge of the plain is marked by the **Ural Mountains**, a low-lying mountain chain (about 6,000 feet) that crosses Russia from the Arctic Ocean to Kazakhstan. The mountains contain deposits of coal, iron ore, and precious and semiprecious stones and are considered the boundary between Europe and Asia. To the south of the Russian Plain is another mountain range, the **Caucasus Mountains**, which bridges the gap between the **Caspian** and **Black Seas**. East of the Urals are the **West Siberian Plain**, the **Central Siberian Plateau**, the **Yakutsk Basin**, the **Eastern Highlands**, and the **Central Asian Ranges**. Russia has rich natural resources, such as petroleum, natural gas, and forest products.

Figure 3.2 Physical Regions of Russia

Expansion of the Empire

The territory that makes up the Russian Federation was gradually

conquered by the Russian Empire as the country expanded from its political core around Moscow/St. Petersburg during the sixteenth through the nineteenth centuries. By the end of the eighteenth century, Czarina Catherine the Great had expanded Russia to include the area that is now Ukraine (the north side of the Black Sea), the northern Caucasus Mountains, and Alaska (which Russia later sold to the United States). During the next century, the Russian Empire expanded eastward into Central Asia (what is now Kazakhstan, Uzbekistan, and the other Central Asian republics), southward into the rest of the Caucasus region, and westward into Poland and Finland. In the twentieth century, when the Russian Empire disintegrated and was replaced by the Soviet Union (the Union of Soviet Socialist Republics or USSR), the central government continued to expand and strengthen its control of the vast area from Eastern Europe to the Pacific Ocean.

Both the Russian Empire and the Soviet Union were imperial powers. In other words, these governments ruled a large variety of ethnic groups in distant places: people who spoke many languages, people who worshiped different gods in different ways, people who had various skin and hair colors, and people who did not consider themselves to be Russian. Although the British and some other European powers had an arguably more difficult task of ruling empires that were widely scattered around the world, Russia had the largest empire in terms of territory. Ruling this diverse, immense empire was an incredible challenge.

The czars ruled this empire with Russification and the sword. Russification refers to the attempt to minimize cultural differences and turn all Russian subjects into Russians, or at least to make them as Russian as possible. As they were all subject to the Russian czars, people were taught the Russian language and were encouraged to convert to Russian Orthodoxy. Russification was not very successful, and the farther people were from Moscow the less likely they were to be Russified. When the Soviets took over the Russian Empire, millions of Muslims still lived in Central Asia, on the

Crimean peninsula of southern Ukraine, in the Caucasus Mountains, and elsewhere.

The Soviets took a different tack when it came to taming the diversity of the empire. Instead of emphasizing unity under the Russian czar, the Russian language, and the Russian Orthodox religion, the Soviets decided to organize—and thus try to control—the diversity of ethnic groups found in the Soviet Union. They chose some of the major groups (Uzbek, Kazakh, and so forth) and established Soviet Socialist Republics that corresponded to these major groups. Thus they created the Uzbek Soviet Socialist Republic (Uzbek SSR), the Kazakh Soviet Socialist Republic (Kazakh SSR), the Ukrainian Soviet Socialist Republic (Ukrainian SSR), and a different republic for each of fourteen ethnic groups, plus the Russian Soviet Federative Socialist Republic. About eighty-five other ethnic groups were not given their own republics, although some of them were allocated regions within the Russian Republic. In theory, each of the Soviet Socialist Republics was an independent state choosing to ally with the Soviet Union. In practice, of course, these republics were part of a totalitarian, centrally ruled state with far fewer autonomous rights than states in the United States.

Figure 3.3 Former Soviet Union

The creation of these republics strengthened certain ethnic/national identities and weakened others. There had not been a fully developed Uzbek national identity before the formation of the

Uzbek SSR. The same was true for the Kazakh SSR, the Turkmen SSR, and others. Although people in a certain area might have spoken the same language, they did not think of themselves as belonging to a nation of fellow Uzbeks, Kazakhs, or Turkmen until they were put into one by the Soviet rulers. In 1991, when the Soviet Union collapsed, these Soviet Socialist Republics were able to declare their independence from Russia, and the national identities fostered during the Soviet era came to fruition.

At the same time that the Soviets were organizing minority ethnic groups into republics, they were also sending ethnic Russians to live in non-Russian parts of the Soviet Union. Some were sent by force—such as Russians who were sent to prison camps in Siberia and stayed in the area after they were eventually freed. Other Russians were sent around the empire to work in factories, power plants, and other industries, or they were sent to help administer the government. By sending Russians to the far reaches of the Soviet Union, the Russian government hoped to consolidate its control over the various republics and to dilute the strength of the minority ethnicities. This policy also had unintended consequences: when the Soviet Union collapsed after 1991 and the various republics became independent countries, they each had to deal with sizable Russian minorities. For example, at the time of its independence, nearly as many ethnic Russians lived in Kazakhstan (38 percent) as ethnic Kazakhs (40 percent). In the twenty years since then, many Russians moved to Russia from the former Soviet republics. In 2010, Kazakhstan's population was only about 24 percent ethnic Russian¹.

Figure 3.4 New Russian Federal Districts

Wikimedia Commons – CC BY 2.5.

The Russian federation was created with eighty-three federal subjects: two autonomous federal cities; forty-six provinces (**oblasts**) and nine territories (**krais**) that function in the same way and are the most common type of federal unit; twenty-one republics; four autonomous districts (**okrugs**); and one autonomous oblast. Moscow and St. Petersburg are the two federal cities that function as their own units. The oblasts and krais each have a governor appointed by the central government and a locally elected legislature. The governorship was an elected position in the 1990s, but President Vladimir Putin changed the structure to strengthen the power of the central state. The republics, designed to be home to certain ethnic minorities, are allowed to have their own constitutions and governments and to select an official language that will be used besides Russian, but they are not considered independent countries with the right to secession. The autonomous districts were also formed for ethnic minorities and are administered either by the central state or by the province or territory in which they are located. The only autonomous oblast was created in the 1930s to be a home for Jews in the Russian Far East, but only about 1 percent of the population remains Jewish today.

Regional Environmental Problems

Each region of the Russian republic has its own environmental issues. The core region surrounding Moscow, with all its industrial activity and large urban expanses, introduces sewage and chemicals to the country's waterways, contributing to serious water pollution. The same water pollution is found east of the Ural Mountains—and in the waterways in that region—because of the industrial cities found there. Moscow and the ring of industrial cities surrounding it have seen a dramatic increase in automobile use since 1991, contributing to air pollution. Russia is blessed with abundant natural resources, but significant environmental damage has been the price of exploiting and extracting those resources. Massive oil spills have occurred in the taiga and tundra areas, where the lack of safety management has increased environmental damage during oil exploration and development. The taiga is the large expanse of evergreen or boreal forests in the north just south of the tundra in North America, Europe, and Asia. The taiga is most common in type D climates and is one of the largest biomes on earth. The taiga is the largest biome in Russia. Mining and smelting processes in Siberian cities have added to the region's air and water pollution. These ecosystems are rather fragile and will take years to recover from such damage.

Water pollution from the rivers extends into the Black Sea, the Caspian Sea, and other bodies of water. **Lake Baikal**, described as the largest freshwater lake in the world, was at one time pristine, but pollutants have entered its waters from nearby industrial activity. Increased pollution in the Black and Caspian Seas, as well as overfishing, the lack of fishing regulations, and the lack of law enforcement, has resulted in the devastation of fish populations such as the caviar-producing sturgeon. The Arctic waters of

the **Barents Sea** off the northern coast of Russia have been a dumping ground for nuclear waste products and expended nuclear reactors from naval vessels. The consequences of this nuclear pollution are not widely known or studied. Many additional aging nuclear reactors from the Soviet era dot the landscape, and they will need to be decommissioned at some point, adding to the nuclear waste issues. Various regions in Siberia were used for nuclear testing and are also contaminated with nuclear radiation.

Key Takeaways

- Russia's climate is characterized by long, cold winters and short summers, and because of a short growing season, the country has such poor agriculture that usually it needs to import grain.
- The Russian Empire gradually expanded its territory to the east, west, and south of Moscow and by the end of the nineteenth century had accumulated a vast area of land and a great variety of people of many ethnicities, languages, and religions.
- The Soviets sent ethnic Russians across the Union of Soviet Socialist Republics (USSR) to better control and govern the territory and its people.
- When the Soviet Union collapsed, its internal nationality-oriented republics declared independence, and the Russians who had been sent to live around the USSR were now living in non-Russian countries. While most of the ethnic Russians stayed in their current countries, many others returned to Russia after 1991.

Discussion and Study Questions

1. What physical feature provides a divide between European and Asian Russia?
2. What are Russia's main physical regions?
3. In what ways was Russia a colonial empire?
4. What strategies did the Russian Empire use to govern a multiethnic state?
5. What were Soviet Socialist Republics, and why were they created?
6. What was a long-term consequence of the formation of Soviet Socialist Republics for the current geopolitical organization of this world region?
7. What are some of the major environmental problems in Russia?
8. Why did so many of the Soviet republics separate and become independent in 1991?
9. Why wasn't the Russian Orthodox Church more prominent or powerful during the Soviet era?
10. Why do more people live on the smaller European side of Russia than the larger Asian side?

Geography Exercise

Identify the following key places on a map:

- Barents Sea

- Black Sea
- Caspian Sea
- Caucasus Mountains
- Central Asian Ranges
- Central Siberian Plateau
- Eastern Highlands
- European Plain
- Lake Baikal
- Ural Mountains
- West Siberian Plain
- Yakutsk Basin

¹“Demography of the Soviet Union,” Wikipedia, http://en.wikipedia.org/wiki/Demography_of_the_Soviet_Union; “The World Factbook,” Central Intelligence Agency, <https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html>.

PART V

NORTH AFRICA/
SOUTHWEST ASIA

10. The Realm & Regions

8.1 Introducing the Realm

Learning Objectives

1. Understand three basic traits the countries of the realm shares in common.
2. Outline the two cultural hearths and explain why they developed where they did.
3. Describe how the people of this realm gain access to fresh water.
4. Understand how the events of the 2011 Arab Spring have affected the realm.

The countries of the realm share three key dominant traits that influence all other human activities. The first key common trait relates to the climate of the region. Though various climate types can be found in this realm, it is the dry or arid type B climate that dominates and covers most of the physical area. Other climate types include the type H highland climate (cold temperatures at the high elevations with moderate temperatures at the bases) of the mountains of the Maghreb, Iran, or Central Asia and the more moderate type C climate in the coastal regions bordering the sea. The type C climate along the coastal Mediterranean area attracts human development and is home to many large port cities. The overall fact is that vast areas of each region are uninhabited desert. North Africa has the largest desert in the world—the Sahara—which borders the **Libyan Desert** and the **Nubian Desert**. About one third of the Arabian Peninsula is part of the **Empty Quarter** of the Rub' al Khali (Arabian Desert). Kazakhstan, Uzbekistan, and Turkmenistan have vast regions of desert with few if any inhabitants. This aspect of the realm reveals the importance of water as a valuable natural resource. Most people in the realm are more dependent on the availability of water than on the availability of oil.

The second trait is Islam: most of the people in the realm are Muslims. The practice of Islam in day-to-day life takes different forms in the various divisions of the religion. The differences between the divisions have contributed to conflict or open warfare. Islam acts as more than just a religion. It also serves as a strong cultural force that has historically unified or divided people. The divisive nature of the religion has often resulted in serious political confrontations within the realm between groups of different Islamic ideologies. Concurrently, the religion of Islam is also a unifying force that brings Muslims with similar beliefs together with common bonds. Islam provides structure and consistency in daily life. The faith can provide comfort and a way of living. The holy cities of Mecca and Medina are located in Saudi Arabia. Other holy cities for other divisions of Islam include Jerusalem and the two cities holy to Shia Muslims: Karbala and Najaf in Iraq. Islam dominates the realm, but other religions are significant in various regions. Israel is a Jewish state, and Christianity is common in places from Lebanon to Egypt. There are also followers of the Baha'i faith, Zoroastrianism, and groups such as the Druze, just to name a few.

The third factor that all three regions of the realm share is the availability of significant natural resources. North Africa, Southwest Asia, and Turkestan all have significant reserves of oil, natural gas, and important minerals. It stands to reason that not every country has the same reserves and that some of the countries have very few or none at all. However, in terms of how the countries gain national wealth, it is the export of oil that has dominated the economic activity as it relates to the global community. This realm is a peripheral realm. The resource that the realm can offer to the core economic regions of the world is the energy to fuel their economies and maintain their high standard of living. Enormous economic profits from the sale of these resources have traditionally been held in the hands of the elite ruling leader or his clan and do not always filter down to most of the population. The control of and profits from natural resources have become the primary objectives of the

countries; this fuels conflicts and armed military interventions in areas such as Iraq and Afghanistan.

Cultural Hearths

Availability and control of fresh water have typically resulted in the ability of humans to grow food crops and expand their cultural activities. Hunter-gatherer groups did not settle down in one area but were more nomadic because of their seasonal search for food. As humans developed the ability to grow crops and provide enough food in one place, they no longer needed to move. The earliest human settlements sprang up in what is the present-day Middle East. Early human settlements provide some indication of early urbanization patterns based on the availability or surplus of food. The shift to permanent settlements included the domestication of livestock and the production of grain crops. Fruits and vegetables were grown and harvested domestically. The activities of this era created humanity's earliest version of the rural-to-urban shift associated with the Industrial Revolution or present development. It is theorized that the ability to grow excess food provided the time and resources for urbanization and the establishment of organized communities, which often progressed into political entities or regional empires.

It has been estimated that some of the earliest cities in the world—Jericho, for example—were first inhabited around 10,000 BCE in the Middle East. In the same region, two cultural hearths provide significant historical value to the concept of human development: Mesopotamia and the Nile Valley in Egypt. Both areas

were settings for the growth of human civilization and are still being examined and studied today. In Mesopotamia, a remarkable human civilization emerged along the banks of the **Tigris** and **Euphrates** Rivers in what is present-day Iraq, Syria, and southern Turkey. The climate, soils, and availability of fresh water provided the ingredients for the growth of a human civilization that is held in high esteem because of its significant contributions to our human history.

Figure 8.2 Head of Gudea, Sumerian Ruler from Mesopotamia, Circa 2121 BCE

image

Wikimedia Commons – public domain.

Mesopotamia and the Fertile

Crescent

Mesopotamia, meaning “land between rivers,” is located between the Tigris and Euphrates Rivers. Neolithic pottery found there has been dated to before 7000 BCE. Humans in this area urbanized as early as 5000 BCE. People were settling in the Mesopotamia region, building magnificent cities, and developing their sense of human culture. Mesopotamia gave rise to a historical cradle of civilization that included the Assyrian, Babylonian, Sumerian, and Akkadian Empires, all established during the Bronze Age (about 3000 BCE or later). Famous cities such as Ur, Babylon, and Nineveh were located in the Mesopotamia region. The control of water and the ability to grow excess food contributed to their success. They developed extensive irrigation systems. Large grain storage units were necessary to provide the civic structure and to develop a military to protect and serve the city or empire. The human activity in this area extended around the region all the way to the Mediterranean Sea, which is where the term Fertile Crescent comes from.

Figure 8.3 The Two Main
Cultural Hearths in the
Realm: Mesopotamia and the
Fertile Crescent in Asia and

Upper and Lower Egypt in Africa

image

Various ancient groups were well established on the eastern side of the Fertile Crescent along the Mediterranean coast. The cities of Tyre and Sidon were ports and access points for trade and commerce for groups like the Phoenicians who traded throughout the Mediterranean. Ancient cities such as Damascus and Jericho became established in the same region and were good examples of early human urbanization during the Bronze Age. These cities are two of the oldest continually inhabited cities in the world.

Nile River Civilization

Human civilization also emerged along the Nile River valley of what is now Egypt. The pyramids and the Sphinx in the **Giza Plateau** just outside Cairo stand testimony to the human endeavors that took place here. Spring flooding of the **Nile River** brought nutrients and water to the land along the Nile Valley. The land could produce excess food, which subsequently led to the ability to support a structured, urbanized civilization. The Nile River is the lifeblood of the region. In the fifth century BCE, the ancient Greek historian Herodotus suggested that Egypt was “the gift of the Nile.” The dating for the beginning of the civilization along the Nile River is often in question, but Egyptologists estimate the first dynasty

ruled both Upper and Lower Egypt around 3100 BCE. Upper Egypt is in the south and Lower Egypt is in the north because the Nile River flows north. The terms “Upper” and “Lower” refer to elevation. Geologists, using the erosion patterns of the Sphinx, estimate that it was constructed about 10,000 BCE. The ability of humans to harness the potential of the environment set the stage for technological advancements that continue to this day. The Egyptian civilization flourished for thousands of years and spawned a legacy that influenced their neighbors in the region, who benefited from their advancements.

Figure 8.4 Egyptian Pyramids of the Giza Plateau



*All Giza
Pyramids*

The human activities that created the civilizations in Mesopotamia and along Egypt's Nile River gave humanity a rich heritage to help us understand our history. Many of our legends, stories, and myths have their origins in these cultures. Their cultural developments provided the basis for much of the Western world's religious beliefs and early philosophical ideas. The engineering feats needed to create the magnificent temples and pyramids have by themselves been studied and analyzed over the centuries to give modern scientists and scholars a reason to pause and recognize the high level of organization and structure that must have gone into developing and managing these civilizations. Various aspects of science and the arts were being developed by these ancient people. Writing, mathematics, engineering, and astronomy were becoming highly advanced. Artifacts such as clay tablets and hieroglyphs are still being discovered and interpreted and shed additional light on the advancements of these civilizations and their contribution to our collective human civilization.

Access to Fresh Water

Water is one of the necessities for human existence, and human settlements have long been based on the availability of water for human consumption and agriculture, navigation, and the production of energy. In North Africa and Southwest Asia, the availability of water has an even greater relevance because of the

dominant type B climate. Methods used to address the shortage of water or to access fresh water have been nearly as diverse as the people who live here. Large populations of people can be found wherever there is fresh water. Water has historically been transferred from source to destination through canals, aqueducts, or special channels. Many ruins of extensive aqueducts from Roman times and earlier remain throughout the realm. The issues associated with water use continue to affect the lives of the people of this realm. Rapid population growth and industrialization have intensified the demand for fresh water.

Figure 8.5 Roman Aqueduct Near Caesarea

image

Photo by R. Berglee – CC BY-NC-SA.

Water can be found in the desert regions in a range of forms. For example, there are oases, springs, or noted wells from which people can draw underground water that is close to the surface. Mountainous regions such as the Atlas Mountains in North Africa or the Elburz Mountains in Iran trap moisture, which produces higher quantities of precipitation. The precipitation is then available in the valleys to irrigate crops. Discovering or developing other methods of acquiring fresh water is a requirement in areas without mountains.

Underground Water in Libya

In the Sahara region, Libya draws water from deep underground wells that tap into the vast aquifers beneath the desert that were charged with water when the region was tropical thousands of years ago. The water is referred to as fossil water. Extensive systems of canals and pipelines have been developed in Libya to extract fossil water and use it for agricultural production or for urban purposes. The man-made river project, one of the largest of its kind, has drawn fresh water from the desert to large cities such Tripoli and Benghazi. The local drinking water in Benghazi is contaminated by saltwater intrusion from the Mediterranean. Underground aquifers are underneath political boundaries, so the allocation and control of water are matters of political debate with the potential to lead to military conflict. The project's potential duration will be a function of how quickly the water is used and how many people use the aquifer system. The main problem with this system is that underground aquifers are not considered a renewable resource; as more countries tap into the aquifers, the available water will be depleted more quickly. As water is drawn from the aquifers for industrial irrigation, the water table goes down. Local settlements that rely on well water may in time have to dig deeper wells or move to locations where water resources are still available.

Nile Water in Egypt

Egypt draws water from the Nile to irrigate fields for extensive food production. For thousands of years, floods of the Nile annually covered the land with fresh silt and water. This made the land productive, but the flooding often caused serious damage to human infrastructure. The building of the Aswan High Dam in the 1970s helped control the flooding of the Nile Valley. The river no longer flooded annually, and water had to be pumped onto the land. Over time, the constant and extensive use of this type of irrigation causes the small quantities of salt in the water to build up in the soil to serious levels, thereby reducing the land's productivity. This process, called salinization, is a common problem in arid climates. To rid the soil of the salts, fresh water is needed to flood the fields, dissolving the salt and then moving the salty water back off the fields. High salinization in the soil and the reduction in agricultural productivity is a growing concern for Egypt. Egypt's growing population places a high demand on the availability of food. More than half of the eighty million people in Egypt live in rural areas, and many of them make their living in agriculture, growing food that plays a critical role in the country's economic stability

Water from the Tigris and Euphrates

The major source of water in the Fertile Crescent region comes from the Tigris and Euphrates rivers. Both have their origins in Turkey and converge at the Shatt al-Arab waterway that flows into the Persian Gulf. The Euphrates is the longest river in Southwest Asia and flows through Syria from Turkey before entering into Iraq. Turkey had developed large dams on both the Tigris and Euphrates for agricultural purposes and to generate hydroelectric power. As water is diverted for agriculture in Turkey there is less water flowing downstream for Syria or Iraq. Disputes over water resources continue to be a major concern in the Tigris-Euphrates Basin. The Atatürk Dam in Turkey is largest dam on the Euphrates, and it has a reservoir behind the dam that is large enough to hold the total annual discharge of the river. All three countries have dams on the Euphrates and both Turkey and Iraq have dams on the Tigris. The three countries signed a memorandum of understanding in 2009 to strengthen cooperation within the Tigris-Euphrates Basin. All three countries need the water for agriculture to produce food for a growing population. Agreements to share water have been difficult as a result of the Iraq War and the recent protests and demonstrations in Syria that have contributed to further political tension between the three countries.

Water Conservation in Israel

Israel has taken innovative steps to conserve water and use it efficiently. Drip irrigation mixed with fertilizers is called fertigation. Fertigation is used extensively in the area. Israel grows plantation crops such as bananas, which require large quantities of water. Banana groves are covered with material that allows sunlight to penetrate but reduces the amount of transpiration, which conserves water. Israel has worked to recycle water whenever possible. Gray water is water extracted from sewage that has been treated to be used in agriculture. Underground wells in the West Bank region provide water for a high percentage of people in both the Palestinian areas and Israel. The issue of control over the water is contentious at times. Just as the control of water may have been an important factor in the early Mesopotamian civilizations, it remains a point of political conflict in places such as Israel and the West Bank. The lack of fresh water and the heavier demand placed on water resources have caused countries that can afford it to desalinize seawater. This process is used extensively in the oil-rich states of the Arabian Peninsula. Israel is implementing a similar plan to accommodate their increasing population and fresh water requirements.

Figure 8.6 Banana Grove in

Israel Near the Lebanese Border

image

The grove is covered with material that allows sunlight to penetrate but helps reduce the loss of water through transpiration.

Photo by R. Berglee – CC BY-NC-SA.

Mountain Water in Iran

Iran is largely a desert climate; thus most of the country does not receive copious amounts of precipitation. In an effort to redistribute the water available from the high mountains, Iranians have developed a system of qanats to collect water where it is available and channel it to the cities or urban areas for use. A qanat might include a system of shafts or wells along a mountain slope that allows water to collect into a common underground channel, which is then diverted to wherever it is needed. This system has been in use since ancient times in many arid regions of the realm and around the world. More than 2,700 years ago, a qanat was developed in what is present-day Iran. The qanat has a system of hundreds of wells and channels water for more than twenty-eight miles; it still provides drinking water to more than forty thousand people in the city of Gonabad. Thousands of qanats were developed over the centuries in this area. Persians used cold qanat water from the mountains to keep ice cool during the summer months. Agricultural

production relies heavily on water from qanats, which in turn are dependent on climate conditions and local weather patterns.

Water Shortages in Arabia

The Arabian Peninsula almost always conjures up images of desert conditions; contrary to that image, there is water in the peninsula. Underground aquifers of fossil water are located beneath the sands similar to that in the Sahara Desert. Saudi Arabia taps into these water resources to irrigate agricultural land to grow food. This area faces the same issue as Libya and other areas of the world that rely on underground aquifers: eventually the water supply will be used up. The majority of the Arabian Peninsula is desert and water is always in short supply. Many coastal desert countries such as the United Arab Emirates (UAE), Bahrain, and Qatar have resorted to the desalinization of seawater for their needs, but this is viable only as long as the country can afford the energy cost required to operate the desalinization plants.

Yemen is a state on the Arabian Peninsula that is mountainous and has used terracing to more effectively benefit from what little precipitation they receive. Water from precipitation is trapped in terraces, and as it flows down the mountainside, each terrace uses what it needs and then passes the water to the next lower terrace. More land can be farmed to produce higher yields of agricultural crops such as sorghum and cereals. One of the main problems with Yemen's terrace system is that most of its trees are being cut down for firewood. Tree roots are essential for holding the soil together on the fragile mountain slopes. Another problem is heavy

rains that cause serious erosion and damage to the terrace system. Additionally, the extremely rapid growth rate of Yemen's population is outstripping its agricultural production.

Diversion of Water in Turkestan

Fresh water is in short supply in many of the desert regions of Turkestan in Central Asia. Agricultural production has traditionally been dependent on water flowing in rivers and streams that originated with the precipitation from the mountains, but as humans have developed canals and irrigation systems, water from rivers has been diverted for agricultural use. Vast fields of cash crops such as cotton were developed during the Soviet era for economic reasons, and as discussed in more detail in Section 8.7 “Central Asia and Afghanistan”, the result had devastating consequences for the Aral Sea, which depended on the water from these rivers for its survival. More than half the population of Central Asia depends on agriculture for their livelihood. The other half, of course, requires water and food for their existence.

Figure 8.7 Precipitation Patterns for North Africa and Southwest Asia

image

Arab Spring of 2011

The year 2011 brought about important changes for the human geography of parts of this realm. The year ushered in a wave of human activity that awakened the power of the citizens to speak out against conditions in their country and actively protest against their governments. North Africa, the Middle East, and the Arabian Peninsula experienced the highest levels of protests and insurgency. Political leaders that had been in power for extended periods were challenged and removed from office. Democratic reforms were requested or demanded by citizens seeking more individual freedom and greater access to political power. Uprisings in some of the countries were internal; other countries received external support or intervention. Overall, demonstrations, protests, and outright revolution involved millions of people desiring improved living conditions and a better future for themselves and their families.

Protests emerged in North Africa in the beginning of 2011. Tunisia was the first country in which leadership felt the heat of civil

resistance and open revolution. In January, the Tunisian president of more than twenty-three years was forced to flee to Saudi Arabia. In Egypt, millions of protesters demonstrated in the streets against political corruption and the lack of reforms. The revolution of Egypt's citizens was not an armed conflict, but it was an effective protest, because it eventually brought about the ouster of President Hosni Mubarak, who had been in office for almost thirty years. Demonstrations and protests continued against governments in Morocco and Algeria; the people voiced their concerns regarding issues such as high unemployment, poor living conditions, and government corruption. Libya's protests erupted into a full-scale armed revolution as antigovernment rebels took control of the city of Benghazi in an attempt to topple Muammar Gadhafi's forty-two years of authoritarian control of the government, oil revenues, and the people. The armed Libyan revolution was eventually successful in taking control of Tripoli and in removing Gadhafi and his family from power. The revolution in Libya was aided by North Atlantic Treaty Organization (NATO) air strikes and the implementation of a no-fly zone over the country.

The ripple effect that the Tunisian revolution had on North Africa was felt on the Arabian Peninsula in places such as Yemen and Bahrain. Mass public demonstrations in Yemen over government corruption, economic conditions, and high unemployment escalated into serious armed conflicts between government troops and opposition factions that wanted the president removed from office. In Bahrain, the protests and demonstrations were centered on the request for more personal freedoms and a greater role in leadership for the Shia population, who experienced discrimination by the Sunni-dominated government. Protests also occurred in Oman for greater reforms.

The Middle East did not escape the Arab Spring of 2011. Protests in Jordan forced King 'Abdullah II to reorganize his government. Israel and Lebanon were not as affected, as they have been addressing many of these issues on an ongoing basis. The country experiencing the greatest impact was Syria. Major mass demonstrations and

serious protests against the government were staged in a number of cities across the country. In Syria, the long-term leadership of an Alawite minority continues to run the government and control the military. The al-Assad family—a father and then his son—has ruled Syria since 1971. The Syrian government has cracked down on the revolution with hard-line measures aimed at subduing the protests and demonstrations. By September 2011, more than two thousand protesters had been killed in Syria, and many more were detained or tortured. Countless others have tried to flee to neighboring countries for their safety. The protesters in Syria want democratic reforms as well as the end of the al-Assad family reign.

Other parts of the realm also felt the effects of the Arab Spring of 2011 with mixed results. Iran has had similar protests and demonstrations in past years, but there was not a major revolution or uprising as a direct result of the Arab Spring. Iran is not an Arab country but has experienced ongoing political friction between citizen factions and the government. The wars in Iraq and Afghanistan have tempered or isolated internal protests or revolutionary activities in those countries even though armed conflicts continue. Various Central Asian states have been working through similar issues but either have not had mass demonstrations or have not received the attention of news media regarding their situations. The wave of change that swept over the realm in the Arab Spring of 2011 is an example of how centripetal and centrifugal cultural forces act on a state or region. The political landscape was altered or drastically changed in many countries. The impact of these changes will be realized in the years and decades to come.

Key Takeaways

- The realm of North Africa and Southwest Asia

extends from the Atlantic Ocean along the Moroccan coast to the western border of China. It includes the regions of North Africa, Southwest Asia, and Central Asia (often referred to as Turkestan).

- Three basic features that dominate this realm include the arid type B climates, Islam as the predominant religion, and the export of petroleum and minerals to gain wealth. There are exceptions to all three features, but these three are found within most countries of the realm.
- The two main cultural hearths in this realm are located along the rivers in Mesopotamia and in Egypt. Control of and access to water resources to grow excess food were the basis for the success of the empires that flourished in these two areas.
- Fresh water is a valuable resource that is not always available in North Africa and Southwest Asia because of the climate and physical geography. Each region within the realm has developed its own methods to draw from or extract the valuable resource of fresh water.
- The Arab Spring of 2011 was a massive wave of protests and demonstrations by citizens of the realm against their governments over such issues as poor living conditions, high unemployment, government corruption, and the lack of democratic reforms. Various leaders were removed from office and governments were pressed to reform their power structures to allow for more shared governance and reduced political corruption.

Discussion and Study Questions

1. Why does this realm include parts of three continents?
2. Which countries have territory on more than one continent?
3. What common traits are shared by most people in this realm?
4. What might have prompted the first rural-to-urban shift for human settlements?
5. Why is the Middle East called by that term? What is it in the “middle” of?
6. What did the two cultural hearths contribute to the advancement of human culture?
7. Why did the cultural hearths develop where they did?
8. What are some of the methods Israel has used to address their fresh water requirements?
9. What prompted the Arab Spring of 2011? Which country was the first to see change?
10. What were some of the common issues that people protested across the realm?

Geography Exercise

Identify the following key places on a map:

- Arabian Peninsula
- Asia Minor
- Atlas Mountains
- Elburz Mountains
- Empty Quarter
- Euphrates River
- Fertile Crescent
- Giza Plateau
- Levant
- Libyan Desert
- Mesopotamia
- Middle East
- Nile River
- Nubian Desert
- Tigris River
- Turkestan

PART VI

SUB-SAHARAN AFRICA

II. The Realm

Chapter 7: Subsaharan Africa

Identifying the Boundaries

Subsaharan Africa includes the African countries south of the Sahara Desert. The **African Transition Zone** cuts across the southern edge of the Sahara Desert at the widest portion of the continent. Many of the countries in the African Transition Zone are included in the realm of Subsaharan Africa. The realm can be further broken down into regional components: **Central Africa**, **East Africa**, **West Africa**, and **Southern Africa**. At the eastern end of the African Transition Zone is the **Horn of Africa**, which is often included in the region of East Africa. Maps vary in terms of which countries are included in each region, but this general geographic breakdown is helpful in identifying country locations and characteristics. **Madagascar** is a large island off the southeastern coast of Africa and is usually not included with the other regions because its geographic qualities and biodiversity are quite different from the mainland.

The continent of Africa is surrounded by salt water. The Indian Ocean borders it on the east, and the Atlantic is on the west. The southern tip of the continent—off South Africa—is often referred to as the **Cape of Good Hope**, where the Atlantic Ocean meets the Indian Ocean. The continent of Africa has a number of small island groups that are associated with the realm and are independent countries. Approximately 350 miles off the coast of West Africa in the North Atlantic are ten islands that make up the independent country of Cape Verde. Just south of Nigeria on the eastern side of the Gulf of Guinea near the equator are the two islands that make up the independent country of São Tomé and Príncipe, a former Portuguese colony. The small country of Equatorial Guinea also includes an island off the coast of Cameroon where its capital is located. Three island groups in the Indian Ocean around

Madagascar include the independent countries of the Seychelles, Comoros, and Mauritius.

Figure 7.1 The Continent of Africa

image

Updated from map courtesy of University of Texas Libraries.

PART VII
SOUTH ASIA

12. The Realm & Regions

9.1 Introducing the Realm

Learning Objectives

1. Summarize the realm's physical geography. Identify each country's main features and physical attributes and locate the realm's main river systems.
2. Understand the dynamics of the monsoon and how it affects human activities.
3. Outline the early civilizations of South Asia and learn how they gave rise to the early human development patterns that have shaped the realm.
4. Describe how European colonialism impacted the realm.
5. Learn about the basic demographic trends the realm is experiencing. Understand how rapid population growth is a primary concern for the countries of South Asia.

The Physical Geography

The landmass of South Asia was formed by the Indian Plate colliding with the Eurasian Plate. This action started about seventy million years ago and gave rise to the highest mountain ranges in the world. Most of the South Asian landmass is formed from the land in the

original Indian Plate. Pressure from tectonic action against the plates causes the Himalayas to rise in elevation by as much as one to five millimeters per year. Destructive earthquakes and tremors are frequent in this seismically active realm. The great size of the Himalayas has intensely influenced the beliefs and traditions of the people in the realm. Some of the mountains are considered sacred to certain religions that exist here.

Figure 9.2 Trekking Trail on the Way to Mt. Everest in the Himalayas of Northern Nepal

image

Mt. Everest is the world's highest peak at 29,035 feet. The Himalayas are the highest mountain chain in the world and create a natural border between South Asia and China.

Steve Hicks – The Himalayas summed up in one picture! – CC BY 2.0.

The Himalayan Mountains dominate the physical landscape in the northern region of South Asia. **Mt. Everest** is the tallest peak in the world, at 29,035 feet. Three key rivers cross South Asia, all originating from the Himalayas. The **Indus River**, which has been a center of human civilization for thousands of years, starts in Tibet and flows through the center of Pakistan. The **Ganges River** flows through northern India, creating a core region of the country.

The **Brahmaputra River** flows through Tibet and then enters India from the east, where it meets up with the Ganges in Bangladesh to flow into the Bay of Bengal. While the northern part of this region includes some of the highest elevations in the world, the Maldives in the south has some of the lowest elevations, some barely above sea level. The coastal regions in southern Bangladesh also have low elevations. When the seasonal reversal of winds called the monsoon arrives every year, there is heavy flooding and its effect on the infrastructure of the region is disastrous. The extensive **Thar Desert** in western India and parts of Pakistan, on the other hand, does not receive monsoon rains. In fact, much of southwest Pakistan—a region called **Baluchistan**—is dry, with desert conditions.

The mountains on the border between Pakistan and Afghanistan extend through Kashmir and then meet up with the high ranges of the Himalayas. The Himalayas create a natural barrier between India and China, with the kingdoms of Nepal and Bhutan acting as buffer states with Tibet. Farther south along the east and west coasts of India are shorter mountain ranges called ghats. The **Western Ghats** reach as high as eight thousand feet, but average around three thousand feet. These ghats are home to an extensive range of biodiversity. The **Eastern Ghats** are not as high as the Western Ghats, but have similar physical qualities. The ghats provide a habitat for a wide range of animals and are also home to large coffee and tea estates. The **Deccan Plateau** lies between the Eastern and Western Ghats. The **Central Indian Plateau** and the **Chota-Nagpur Plateau** are located in the central parts of India, north of the two Ghat ranges. The monsoon rains ensure that an average of about fifty-two inches of rain per year falls on the Chota-Nagpur Plateau, which has a tiger reserve and is also a refuge for Asian elephants.

The Monsoon

A monsoon is a seasonal reversal of winds that is associated with heavy rains. The summer monsoon rains—usually falling between June and September—feed the rivers and streams of South Asia and provide the water needed for agricultural production. In the summer, the continent heats up, with the Thar Desert fueling the system. The rising hot air creates a vacuum that pulls in warm moist air from the Bay of Bengal and the Indian Ocean. This action shifts moisture-laden clouds over the land, where the water is precipitated out in the form of rain.

Figure 9.3 The Monsoon System in South Asia

image

Wikimedia Commons = public domain.

The monsoon rains bring moisture to South Asia right up to the Himalayas. As moisture-laden clouds rise in elevation in the mountains, the water vapor condenses in the form of rain or snow and feeds the streams and basins that flow into the major rivers, such as the Brahmaputra, Ganges, and Indus. The Western Ghats creates a similar system in the south along the west coast of India.

Parts of Bangladesh and eastern India receive as much as six feet of rain during the monsoon season, and some areas experience severe flooding. The worst-hit places are along the coast of the Bay of Bengal, such as in Bangladesh. There is less danger of flooding in western India and Pakistan, because by the time the rain clouds have moved across India they have lost their moisture. Desert conditions are evident in the west, near the Pakistan border in the great Thar Desert. On average, fewer than ten inches of rain fall per year in this massive desert. On the northern rim of the region, the height of the Himalayas restricts the warm moist monsoon air from moving across the mountain range. The Himalayas act as a precipitation barrier and create a strong rain shadow effect for Tibet and Western China. The monsoon is responsible for much of the rainfall in South Asia.

By October, the system has run its course and the monsoon season is generally over. In the winter, the cold, dry air above the Asian continent blows to the south, and the winter monsoon is characterized by cool, dry winds coming from the north. South Asia experiences a dry season during the winter months. A similar pattern of rainy summer season and dry winter season is found in other parts of the world, such as southern China and some of Southeast Asia. A final note about the monsoons: small parts of South Asia, such as Sri Lanka and southeastern India, experience a rainy winter monsoon as well as a rainy summer monsoon. In their case, the winter monsoon winds that come down from the north have a chance to pick up moisture from the Bay of Bengal before depositing it on their shores.

Early Civilizations

The Indian subcontinent has a long history of human occupation, and is an area where cities independently developed and civilization emerged. The earliest civilization on the subcontinent was the **Indus Valley Civilization**, in existence from about 3300 BCE to 1500 BCE. This Bronze Age civilization started as a series of small villages that became linked in a wider regional network. Urban centers developed into various religious and trade networks that spanned as far as Central Asia, Southwest Asia, and, perhaps, Egypt. The civilization is known for its planned structures. The cities and villages of the urban phases were planned with major streets going north/south and east/west. It had a system of drains that channeled waste water outside the city. Additionally, this civilization had a homogeneous material culture. Its artifacts of pottery and metallurgy all had a very similar style that was spread over a vast land area, a fact that aided in the recognition of the expanse of the culture.

Invasions by outsiders have the potential effect of bringing with them an influx of new ideas, concepts, and technology. Likewise, the Indus Valley Civilization no doubt had an impact on the region that it encompassed. Little is known of the historical events of earlier times. Some of the evidence we rely on today to discern historical events is gleaned from language, religion, and ethnicity. Significant to South Asia is the presence of Indo-European languages. It is presumed that these languages were brought to the region by immigrants from the west, where these languages were dominant. Aryans from Persia and other cultures might have diffused languages such as Hindi to South Asia, which later may have led to Hindi, for example, becoming the lingua franca of the region.

The northern plains of South Asia, which extend through the Ganges River valley over to the Indus River valley of present-day Pakistan, were fertile grounds for a number of empires that

controlled the region throughout history. After the decline of the Indus Valley Civilization, various phases of Iron Age traditions emerged. Most of this Iron Age culture is defined by the presence of iron metallurgy and distinctive characteristics of ceramics.

The **Mauryan Empire** existed between 322 and 185 BCE and was one of the most extensive and powerful political and military empires in ancient India. This empire was founded by Chandragupta Maurya in 322 BCE, who began to extend his regime westward, easily conquering areas that had been disrupted by the expansion of Alexander the Great's armies. The Mauryan Empire was prosperous and greatly expanded the region's trade, agriculture, and economic activities. This empire created a single and efficient system of finance, administration, and security. One of the greatest emperors in the Mauryan dynasty was Ashoka the Great, who ruled over a long period of peace and prosperity. Ashoka embraced Buddhism and focused on peace for much of his rule. He created hospitals and schools and renovated major road systems throughout the empire. His advancement of Buddhist ideals is credited with being the reason most of the population on the island of Sri Lanka is Buddhist to this day.

Islam became a powerful force in South Asia upon its diffusion to the subcontinent. Muslim dynasties or kingdoms that ruled India between 1206 and 1526 are referred to collectively as the **Delhi Sultanate**. The Delhi Sultanate ended in 1526 when it was absorbed into the expanding **Mughal Empire**. The Islamic Mughal Empire ruled over much of northern and central India from the 1500s to about the middle of the nineteenth century. After 1725, it began to decline rapidly because of a combination of factors, with European colonialism adding the finishing touch. The Mughal Empire had been religiously tolerant but Muslim oriented. The classic period of this empire began in 1556 and ended in 1707. Many of the monuments we associate with India, including the Taj Mahal, the Red Fort in Lahore, and the Agra Fort, were built during the classical period.

Colonialism in South Asia

The force of colonialism was felt around the world, including in South Asia. South Asia provides an excellent example of colonialism's role in establishing most of the current political borders in the world. From the sixteenth century onward, ships from colonial Europe began to arrive in South Asia to conduct trade. The British East India Company was chartered in 1600 to trade in Asia and India. They traded in spices, silk, cotton, and other goods. Later, to take advantage of conflicts and bitter rivalries between kingdoms, European powers began to establish colonies. Britain controlled South Asia from 1857 to 1947.

Figure 9.4

image

British colonialism in South Asia began in 1857 and lasted until 1947.

Goa is the smallest state in modern-day India. In the sixteenth century, it was first encountered by Portuguese traders, who annexed it shortly after arriving. Goa was a colony of Portugal for the next 450 years. By the mid-1800s, most of the population of the tiny area had been forcibly converted to Christianity. Many of the Hindu traditions, however, survived in the region. Hindu holidays are celebrated among the expatriate community in India. Christian holidays are also celebrated, especially Christmas and Easter. The cathedrals and secular architecture in many of the historic buildings

of Goa are European in style, reflecting its Portuguese origins. This architecture is locally termed “Indo-Portuguese.” Goa was one of the longest-held colonial possessions in the world. It was finally annexed to India in 1961.

The British no longer controlled South Asia after 1947. Local resistance and the devastating effects of World War II meant the British Empire could not be controlled as it once was. Great Britain pulled away from empire building to focus on its own redevelopment. Upon the British withdrawal from India, Britain realized the immense cultural differences between the Muslims and Hindus and created political boundaries based on those differences. **West Pakistan** was carved out of western India; **East Pakistan** was carved from eastern India. However, the new borders separating Hindu and Muslim majorities ran through population groups, and some of the population now found itself to be on the wrong side of the border. The West Pakistan-India partition grew into a tragic civil war, as Hindus and Muslims struggled to migrate to their country of choice. More than one million people died in the civil war, a war that is still referred to in today's political dialogue between Pakistan and India. The **Sikhs**, who are indigenous to the **Punjab** region in the middle, also suffered greatly. Some people decided not to migrate, which explains why India has the largest Muslim population of any non-Muslim state.

Another civil war would erupt in 1973 between West Pakistan and East Pakistan. When the states were first created in 1947, they operated under the same government despite having no common border and being over nine hundred miles apart and populated by people with no ethnic similarities. The civil war lasted about three months and resulted in the creation of the sovereign countries of Pakistan and Bangladesh (formerly East Pakistan). The name Bangladesh is based on the Bengali ethnicity of most of the people who live there. Both Pakistan and Bangladesh are among the top ten most populous countries in the world.

Language is probably one of the more pervasive ways that Europeans affected South Asia. In modern-day India and Pakistan,

English is the language of choice in secondary education (English-medium schools). It is often the language used by the government and military. Unlike many other Asian countries, much of the signage and advertising in Pakistan and India is in English, even in rural areas. Educated people switch back and forth, using English words or entire English sentences during conversation in their native tongue. Some scholars have termed this Hinglish or Urglish as the base languages of northern India and Pakistan are Hindi and Urdu, respectively.

The British game of cricket is an important cultural and national sport within this Asian subcontinent. The constant conflict between the nations of India and Pakistan are reflected in the intense rivalry between their national cricket teams. The Cricket World Cup is held every four years and is awarded by the International Cricket Council. South Asian countries have won the Cricket World Cup three times: India (1983), Pakistan (1992), and Sri Lanka (1996).

Population in South Asia

South Asia has three of the ten most populous countries in the world. India is the second largest in the world, and Pakistan and Bangladesh are numbers five and six, respectively. Large populations are a product of large family sizes and a high fertility rate. The rural population of South Asia has traditionally had large families. Religious traditions do not necessarily support anything other than a high fertility rate. On the other hand, the least densely populated country in South Asia is the Kingdom of Bhutan. Bhutan has a population density of only fifty people per square mile. Bhutan

is mountainous with little arable land. More than a third of the people in Bhutan live in an urban setting. Population overgrowth for the realm is a serious concern. An increase in population requires additional natural resources, energy, and food production, all of which are in short supply in many areas.

Table 9.1 Demographics of South Asia and the World's Most Populous Countries

Rank	Country name	Population in millions	Total population density	Physiologic density	Fertility rate	Population growth rate (%)	Doubling time in years
1	China	1,336	361	2,405	1.54	0.49	143
2	India*	1,189	937	1,912	2.62	1.34	52
3	United States	313	84	468	2.06	0.96	73
4	Indonesia	245	331	3,013	2.25	1.07	65
5	Brazil	203	62	884	2.18	1.13	62
6	Pakistan*	187	604	2,414	3.17	1.57	45
7	Bangladesh*	158	2,852	5,186	2.60	1.57	45
8	Nigeria	155	435	1,319	4.73	1.94	36
9	Russia	138	21	301	1.42	-0.47	
10	Japan	126	867	7,225	1.21	-0.28	
11	Mexico	113	149	1,149	2.29	1.10	64
41	Nepal*	29	525	3,379	2.47	1.59	44
57	Sri Lanka*	21	862	6,001	2.2	0.93	75
165	Bhutan*	0.700	50	1,697	2.2	1.2	58
176	Maldives*	0.400	3,438	26,194	1.81	-0.15	
* Countries noted with an asterisk are part of South Asia							
† Empty cell indicates a negative population doubling time.							

Source: CIA World Factbook, June 2011, accessed September 13, 2011, <https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html>.

South Asia's growing population has placed exceedingly high demands on agricultural production. The amount of area available for food production divided by the population may be a more helpful indicator of population distribution than total population density. For example, large portions of Pakistan are deserts and mountains that do not provide arable land for food production. India has the

Thar Desert and the northern mountains. Nepal has the Himalayas. The small country of the Maldives, with its many islands, has almost no arable land. The number of people per square mile of arable land, which is called the physiologic density, can be an important indicator of a country's status. Total population densities are high in South Asia, but the physiologic densities are even more astounding. In Bangladesh, for example, more than five thousand people depend on every square mile of arable land. In Sri Lanka the physiologic density reaches to more than 6,000 people per square mile, and in Pakistan it is more than 2,400. The data are averages, which indicate that the population density in the fertile river valleys and the agricultural lowlands might be even higher.

Figure 9.5 Crowded Street in New Delhi, India

image

Urban areas of South Asia are expanding rapidly.

John Halsam – IMG_3555 – CC BY 2.0.

The population of South Asia is relatively young. In Pakistan about 35 percent of the population is under the age of fifteen, while about 30 percent of India's almost 1.2 billion people are under the age of fifteen. Many of these young people live in rural areas, as most of the people of South Asia work in agriculture and live a subsistence lifestyle. As the population increases, the cities are swelling to

accompany the growth in the urban population and the large influx of migrants arriving from rural areas. Rural-to-urban shift is extremely high in South Asia and will continue to fuel the expansion of the urban centers into some of the largest cities on the planet. The rural-to-urban shift that is occurring in South Asia also coincides with an increase in the region's interaction with the global economy.

The South Asian countries are transitioning through the five stages of the index of economic development. The more rural agricultural regions are in the lower stages of the index. The realm experienced rapid population growth during the latter half of the twentieth century. As death rates declined and family size remained high, the population swiftly increased. India, for example, grew from fewer than four hundred million in 1950 to more than one billion at the turn of the century. The more urbanized areas are transitioning into stage 3 of the index and experiencing significant rural-to-urban shift. Large cities such as Mumbai (Bombay) have sectors that are in the latter stages of the index because of their urbanized work force and higher incomes. Family size is decreasing in the more urbanized areas and in the realm as a whole, and demographers predict that eventually the population will stabilize.

Figure 9.6 Population Growth in India

image

CIA World Factbook – public domain.

At the current rates of population growth, the population of South Asia will double in about fifty years. Doubling the population of Bangladesh would be the equivalent of having the entire 2011 population of the United States (more than 313 million people) all living within the borders of the US state of Wisconsin. The general rule of calculating doubling time for a population is to take the number seventy and divide it by the population growth rate. For Bangladesh the doubling time would be $70 \div 1.57 = 45$ years. The doubling time for a population can help determine the economic prospects of a country or region. South Asia is coming under an increased burden of population growth. If India continues at its current rate of population increase, it will double its population in fifty-two years, to approximately 2.4 billion. Because the region's rate of growth has been gradually in decline, this doubling time is unlikely. However, without continued attention to how the societies address family planning and birth control, South Asia will likely face serious resource shortages in the future.

Key Takeaways

- All the South Asian countries border India by either a physical or a marine boundary. The Himalayas form a natural boundary between South Asia and East Asia (China). The realm is surrounded by deserts, the Indian Ocean, and the high Himalayan ranges.
- The summer monsoon arrives in South Asia in late May or early June and subsides by early October. The rains that accompany the monsoon account for most of the rainfall for South Asia. Water is a primary resource, and the larger river systems are home to large populations.

- The Indus River Valley was a location of early human civilization. The large empires of the realm gave way to European colonialism. The British dominated the realm for ninety years from 1857 to 1947 and established the main boundaries of the realm.
- Population growth is a major concern for South Asia. The already enormous populations of South Asia continue to increase, challenging the economic systems and depleting natural resources at an unsustainable rate.

Discussion and Study Questions

1. Why are the Himalayan Mountains continuing to increase in elevation? Which of the countries of South Asia border the Himalayas?
2. What are the three major rivers of South Asia? Where do they start and what bodies of water do they flow into? Why have these river basins been such an important part of the early civilizations of the realm and why are they core population areas today?
3. Why does the monsoon usually arrive in late May or early June? What is the main precipitation pattern that accompanies the monsoon? Why is the monsoon a major source of support for South Asia's large population?
4. What changes did British colonialism bring to

South Asia? When did the British control South Asia? Why do you think the British lost control when they did?

5. Why is the high population growth rate a serious concern for South Asian countries? What can these countries do to address the high population growth rate?
6. How can Pakistan have a higher fertility rate than Bangladesh but still have the same growth rate and doubling time?
7. Why would the country of the Maldives be concerned about climate change?
8. How would you assess the status of each country with regard to the index of economic development?
9. What are the three dominant religions of the realm? How did religion play a role in establishing the realms' borders? What happened to East Pakistan?
10. How can the principle of doubling time be used to assess a country's future potential? What is the general formula to calculate a population's doubling time?

Geography Exercise

Identify the following key places on a map:

- Arabian Sea
- Baluchistan

- Bay of Bengal
- Brahmaputra River
- Central Indian Plateau
- Chota-Nagpur Plateau
- Deccan Plateau
- Eastern Ghats
- Ganges River
- Himalayas
- Indian Ocean
- Indus River
- Kashmir
- Mt. Everest
- Punjab
- Thar Desert
- Western Ghats

PART VIII
EAST ASIA

13. The Realm & Regions

10.1 Introducing the Realm

Learning Objectives

1. Outline the countries and territories that are included in East Asia. Describe the main physical features and climate types of each country.
2. Understand the relationship between physical geography and human populations in East Asia.
3. Summarize the main objectives in building the Three Gorges Dam.
4. Describe how colonialism impacted China. Outline the various countries and regions that were controlled by colonial interests.
5. Outline the three-way split in China after its revolution and where each of the three groups ended up.

Physical Geography

East Asia is surrounded by a series of mountain ranges in the west, Mongolia and Russia in the north, and Southeast Asia to the south. The Himalayas border Tibet and Nepal; the **Karakoram Ranges, Pamirs**, and the **Tian Shan Mountains** shadow Central Asia; and the **Altay Mountains** are next to Russia. The **Himalayan**

Mountains are among the highest mountain ranges in the world, and Mt. Everest is the planet's tallest peak. These high ranges create a rain shadow effect, generating the dry arid conditions of type B climates that dominate **western China**. The desert conditions of western China give rise to a large uninhabitable region in its center. Melting snow from the high elevations feeds many of the streams that transition into the major rivers that flow toward the east.

Created by tectonic plate action, the many mountain ranges are also home to earthquakes and tremors that are devastating to human livelihood. The Indian tectonic plate is still pushing northward into the Eurasian plate, forcing the Himalayan ranges upward. With an average elevation of fifteen thousand feet, the Tibetan Plateau is the largest plateau region of the world. It has high elevations and type H climates. The plateau is sparsely populated and the only places with human habitation are the river valleys. Lhasa is the largest city of the sparsely populated region. Sometimes called "the Roof of the World," the Tibetan Plateau is a land of superlatives. The small amount of precipitation that occurs often comes in the form of hailstorms mixed with wind. Its landscape is generally rocky and barren.

The vast arid regions of western China extend into the **Gobi Desert** between Mongolia and China. Colder type D climates dominate the Mongolian steppe and northern China. The eastern coast of the Asian continent is home to islands and peninsulas, which include Taiwan and the countries of Japan and North and South Korea. North Korea's type D climates are similar to the northern tier of the United States, comparable to North Dakota. Taiwan is farther south, producing a warmer tropical type A climate. The mountainous islands of Japan have been formed as a result of tectonic plates and are prone to earthquakes. Since water moderates temperature, the coastal areas of East Asia have more moderate temperatures than the interior areas do. A type C climate is dominant in Japan, but the north has a colder type D climate. The densely populated fertile river valleys of central and southeastern China are matched by contrasting economic conditions. Rich

alluvial soils and moderate temperatures create excellent farmland that provides enormous food production to fuel an ever-growing population.

Most of China's population lives in its eastern region, called **China Proper**, with type C climates, fresh water, and good soils. China Proper has dense population clusters that correspond to the areas of type C climate that extend south from Shanghai to Hong Kong. Around the world, most humans have gravitated toward type C climates. These climates have produced fertile agricultural lands that provide an abundance of food for the enormous Chinese population. To the south the temperatures are warmer, with hot and humid summers and dry, warm winters. The climates of China Proper are conducive for human habitation, which has transformed the region into a highly populated human community. The **North China Plain** at the mouth of the **Yellow River** (*Huang He River*) has rich farmland and is the most densely populated region in China.

Northwest of Beijing is **Inner Mongolia** and the Gobi Desert, a desert that extends into the independent country of Mongolia. Arid type B climates dominate the region all the way to the southern half of Mongolia. The northern half of Mongolia is colder with continental type D climates. In the higher elevations of the highlands in western Mongolia, there is a section of type H highland climates. Its climate and location identify Mongolia as a landlocked country in the northern latitudes with a low level of precipitation. The areas of type D climate that extend north from Beijing through Northeast China at times receive more precipitation than northern Mongolia. Northeast China features China's great forests and excellent agricultural land. Many of China's abundant natural mineral resources are found in this area. Balancing mineral extraction with the preservation of agricultural land and timber resources is a perennial issue.

Lying north of the Great Wall and encompassing the autonomous region of Inner Mongolia is the vast Mongolian steppe, which includes broad flat grasslands that extend north into the highlands. North China includes the Yellow River basin as well as the

municipalities of Beijing and Tianjin. Areas around parts of the Yellow River are superb agricultural lands, including vast areas of loess that have been terraced for cultivation. Loess is an extremely fine silt or windblown soil that is yellow in color in this region. Deciduous forests continue to exist in this region, despite aggressive clearcutting for agricultural purposes. The Great Wall of China rests atop hills in this region.

Most of western China is arid, with a type B climate. Western China has large regions like the **Takla Makan Desert** that are uninhabited and inhospitable because of hot summers and long cold winters exacerbated by the cold winds sweeping down from the north. In a local Uyghur language, the name *Takla Makan* means “*You will go in but you will not go out.*” To the far west are the high mountains bordering Central Asia that restrict travel and trade with the rest of the continent. Northwestern China is a mountainous region featuring glaciers, deserts, and basins.

Figure 10.3 China and Its Main Climate Regions

image

Updated from map courtesy of University of Texas Libraries.

The central portion of China Proper is subtropical. This large region includes the southern portion of the **Yangtze River** (Chang Jiang River) and the cities of **Shanghai** and **Chongqing**. Alluvial processes give this area excellent agricultural land. Its climate is warm and humid in the summers with mild winters; monsoons create well-

defined summer rainy seasons. Tropical China lies in the extreme south and includes **Hainan Island** and the small islands that neighbor it. Annual temperatures are higher here than in the subtropical region and rainfall amounts brought by the summer monsoons are at times very substantial. This area is characterized by low mountains and hills.

River Basins of China

There are two major river systems that provide fresh water to the vast agricultural regions of the central part of China Proper. The Yellow River (Huang He River) is named after the light-colored silt that washes into the river. It flows from the Tibetan highlands through the North China Plain into the Yellow Sea. Dams, canals, and irrigation projects along the river provide water for extensive agricultural operations. Crops of wheat, sorghum, corn, and soybeans are common with vegetables, fruit, and tobacco grown in smaller plots. The North China Plain has to grow enough food to feed its one thousand people per square mile average density. This plain does not usually produce a food surplus because of the high demand from the large population of the region. Beijing borders the North China Plain. Its nearest port, **Tianjin**, continues to expand and grow, creating an economic center of industrial activity that relies on the peripheral regions for food and raw materials. Cotton is an example of a key industrial crop grown here.

The Yangtze River (Chang Jiang River) flows out of the Tibetan Plateau through the Sichuan Province, through the Three Gorges region and its lower basin into the East China Sea. Agricultural

production along the river includes extensive rice and wheat farming. Large cities are located on this river, including Wuhan and **Chongqing**. **Nanjing** and Shanghai are situated near the delta on the coast. Shanghai is the largest city in China and is a growing metropolis. The **Three Gorges Dam** of the Yangtze River is the world's largest dam. It produces a large percentage of the electricity for central China. Ocean-going ships can travel up the Yangtze to **Wuhan** and, utilizing locks in the Three Gorges Dam, these cargo vessels can travel all the way upriver to Chongqing. The Yangtze River is a valuable and vital transportation corridor for the transport of goods between periphery and core and between the different urban centers of activity. Sichuan is among the top five provinces in China in terms of population and is dependent on the Yangtze River system to provide for its needs and connect it with the rest of China.

Figure 10.4 China and Its Main Population Regions

image

The region of eastern China that is favorable to large populations is called China Proper. River basins historically produce abundant food, which in turn leads to concentrated populations.

Northeast China was formerly known as Manchuria, named after the Manchu ethnic group that had dominated the region in Chinese history. Two river basins create a favorable industrial climate for economic activity. The lower **Liao River Basin** and the **Songhua**

River Basin cut through Northeast China. The cities of **Harbin** and **Shenyang** are industrial centers located on these rivers. This region is known as the **Northeast China Plain**. It has extensive farming activities located next to an industrial landscape of smokestacks, factories, and warehouses. Considerable mineral wealth and iron ore deposits in the region have augmented the industrial activities and have created serious environmental concerns because of excessive air and water pollution. In its zenith in the 1970s, this was China's main steel production area, but the region is being reduced to a rustbelt since many of China's manufacturing centers are now being developed in the southern regions of China Proper.

The southernmost region of China Proper is home to the **Pearl River Basin**, an important agricultural and commercial district. Though smaller in size than the Yangtze River Basin, major global urban centers are located on its estuary, where the mouth of the river flows into the South China Sea. The system includes the Xi River, Pearl River, and their tributaries. As the third-longest river system in China, these rivers process an enormous amount of water, and have the second-highest volume of water flow after the Yangtze. **Guangzhou**, Macau, and Hong Kong are the largest cities located here, alongside the rapidly expanding industrial center of **Shenzhen**. As mentioned earlier, Macau was a former Portuguese colony and Hong Kong was a former British colony. These urban areas are now hubs for international trade and global commerce. Guangzhou is one of the largest cities in China, along with Shanghai, Beijing, Wuhan, and Tianjin. Cantonese heritage and traditions form a foundation for the cultural background of the people who live here.

Figure 10.5 Xi-Pearl River System

image

An estuary is a wide area at the mouth of a river where it meets the sea. Hong Kong is located on the eastern side of the Pearl River Estuary, and the former Portuguese colony of Macau is located on the western side of the waterway.

Wikimedia Commons – CC BY 2.0.

Three Gorges Dam (The New China Dam)

The Three Gorges Dam on the Yangtze River is known in China as the New China Dam. Its hydroelectric production system is the largest on Earth. The river system is the world's third longest, after the Nile and the Amazon. Ideas for this project go back to the days just after the last dynasty fell. Plans and development began in the decades before 1994, when the construction of the dam began. The

main purposes of the dam are to control the massive flooding along the Yangtze, produce hydroelectric power, and increase shipping capacity along the river.

Figure 10.6 Three Gorges Dam Region

image

The Yangtze River flows through three deep gorges where a dam has been constructed to stabilize flooding, produce electricity, and support river transportation.

- Dam length: 7,661 feet
- Dam height: 610 feet
- Dam width (at base): 377 feet
- Physical construction began: December 14, 1994
- Construction cost: estimated thirty-nine billion US dollars
- Estimated surface area of reservoir: 403 square miles
- Estimated length of reservoir: 375 miles
- Capacity of thirty-two generators totaling 22,500 MW (equivalent to about twenty nuclear power plants)

the size of the Watts Bar 1, the newest US nuclear reactor)

Before construction of the dam, flooding along the Yangtze cost thousands of lives and billions of dollars in damage. In 1954, the river flooded, causing the deaths of more than thirty-three thousand people and displacing an additional eighteen million people. The giant city of Wuhan was flooded for three months. In 1998, a similar flood caused billions of dollars in damage, flooded thousands of acres of farmland, resulted in more than 1,526 deaths, and displaced more than 2.3 million people. The dam was rigorously tested in 2009, when a massive flood worked its way through the waterway. The dam was able to withstand the pressure by containing the excess water and controlling the flow downstream. The dam saved many lives and prevented billions of dollars in potential damage. The savings in human lives and in preventing economic damage are projected to outweigh the cost of the dam in only a few decades.

The dam produces most of the electricity for the lower Yangtze Basin, including Shanghai, the largest city in China. Five years of the dam producing electricity has already paid for about one-third of its construction costs, which is equivalent to burning approximately 150 million tons of coal (depending on coal quality). This reduces the emission of millions of tons of carbon dioxide, sulfur, and nitrogen oxides into the atmosphere, which reduces air pollution and does not contribute to climate change. Heavy freight traffic on the Yangtze was the norm even before the dam was built; in fact, it has the highest rates of transport of any

river. The building of the dam has augmented the amount of freight traffic.

Figure 10.7

image

China's Three Gorges Dam on the Yangtze River is the largest dam in the world.

Wikimedia Commons – CC BY 2.0.

All the positive attributes of the Three Gorges Dam have contributed to the economic development of China. This is a testimony to the engineering and technological capacity of the nation. However, this project has also created its own problems and negative impacts on culture and the environment. By 2008, the number of people forced to relocate from the flooding of the reservoir had reached 1.24 million. Historic villages and hundreds of archaeological sites were flooded. Thousands of farmers had to be relocated to places with less productive soils. Compensation to the farmers for relocation was forfeited because of corruption and fraud. Sadly, much of the scenic beauty of the river basin is now under water.

Animal species like the critically endangered Siberian Cranes, who had wintered in the former wetlands of the river, had to find habitat elsewhere. The endangered Yangtze River Dolphin has been doomed to extinction because of the dam and the amplified river activity. The dam restricts the flushing of water pollution and creates a massive potential for landslides along its banks, exacerbating the potential for the silting in of the reservoir and the clogging of the dam's turbines. The dam also sits on a fault zone and there is concern that the massive weight of the water in the reservoir could trigger earthquakes that may destroy the dam, with catastrophic consequences. Large development projects tend to have an enormous impact on the people and the environment that inhabit their shadow. The building of the Three Gorges Dam has created controversy, with strong arguments on both sides of the issues. To further complicate the situation, other large dams are being proposed or are under construction along the same river.

Chinese Dynasties and Colonialism

The earliest Chinese dynasty dates to around 2200 BCE. It was

located in the rich North China Plain. Organized as a political system, Chinese dynasties created the Chinese state, which provided for a continuous transfer of power, ideas, and culture from one generation to another. From 206 to 220 CE, the **Han Dynasty** established the Chinese identity; Chinese people became known as People of Han or Han Chinese. The last dynasty, the **Qing (Manchu) Dynasty**, which ruled between 1644 and 1911, claimed control of a region including all of China, Mongolia, Southeast Asia, and Korea. Dynastic rule ended in China in 1911.

Figure 10.8 The Great Wall of China

Construction started in the seventh century BCE and, including all its branches, the wall is about 5,500 miles long.



Europeans colonized the Americas, Africa, and South Asia, and it was only a matter of time before technology, larger ships, and the European invasion reached East Asia. European colonialism arrived in China during the Qing Dynasty. China had been an industrialized state for centuries; long before the empires of Rome and Greece were at their peak, China's industrial cities flourished with the concepts of clean drinking water, transportation, and technology. Paper, gunpowder, and printing were used in China centuries before they arrived in Europe. The Silk Road, which crossed the often dangerous elevations of the high mountain passes, was the main link between China and Europe.

European colonial powers met tough resistance in China. They were kept at bay for years. Meanwhile, the Industrial Revolution in Europe, which cranked out mass-produced products at a cheap price, provided an advantage over Chinese production. British colonizers also exported opium, an addictive narcotic, from their colonies in South Asia to China to help break down Chinese culture. By importing tons of opium into China, the British were able to instigate social problems. The first **Opium Wars** of 1839–1842 ended with Britain gaining an upper hand and laying claim to most of central China. Other European powers also sought to gain a foothold in China. Portugal gained the port of Macau. Germany took control of the coastal region of the rich North China Plain. France carved off part of southern China and Southeast Asia. Russia came from the north to lay claim to the northern sections of China. Japan, which was just across the waterfront from China, took control of Korea and the island of **Formosa** (now called Taiwan). Claims on China increased as colonialism moved in to take control of the Chinese mainland.

Though European powers laid claim to parts of China, they often fought among themselves. China did not produce heavy military weapons as early as the Europeans did and therefore could not fend

them off upon their invasion. Chinese culture, which had flourished for four thousand years, quickly eroded through outside intrusion. It was not until about 1900, when a rebellion against foreigners (known as the **Boxer Rebellion**) was organized by the Chinese people, that the conflict reached recognizable dimensions. The Qing Dynasty dissolved in 1911, which also signified an end to the advancements of European colonialism, even though European colonies remained in China.

Three-Way Split in China

European colonialism in China slowed after 1911, and World War I severely weakened European powers. The Japanese colonizers, on the other hand, continued to make advancements. Japan did not have far to travel to resupply troops and support its military. In China, a doctor by the name of **Dr. Sun Yat-sen** promoted an independent Chinese Republic, free from dynastic rule, Japan, or European colonial influence. Political parties of Nationalists and Communists also worked to establish the republic. Dr. Sun Yat-sen died in 1925. The Nationalists, under the leadership of **Chiang Kai-shek**, defeated the Communists and established a national government. Foreigners were evicted. The Communists were driven out of politics.

Figure 10.9 Taiwan Currency



Both the Republic of China (ROC) and the People's Republic of China (PRC) consider Dr. Sun Yat-sen to be a famous Chinese historical figure.

Richard winchell – Museum of Australian Currency Notes – CC BY-ND 2.0.

Nationalists, Communists, and Japan conducted a three-way war over the control of China. Japan's military took control of parts of Northeast China, known as Manchuria, and were making advancements on the eastern coast. Nationalists defeated the Communists for power and were pushing them into the mountains. The Chinese people were in support of the two parties working together to defeat the Japanese. **The Long March** of 1934 was a six-thousand-mile retreat by the Communists through rural China, pursued by Nationalist forces. The people of the countryside gave aid to the efforts of the Communists. The Chinese were primarily interested in the defeat of Japan, a country that was brutally killing massive numbers of China's people in their aggressive war.

Figure 10.10 The Three-Way Split of China and the Emergence of Communist China in 1949

image

In 1945, the defeat of Japan in World War II by the United States changed many things. Japan's admission of defeat prompted the end of Japanese control of territory in China, Taiwan, Korea, Southeast Asia, and the Pacific. By 1948, the Communists, who were becoming well organized, were defeating the Nationalists. Chiang Kai-shek gathered his people and what Chinese treasures he could and fled by boat to the island of Formosa (Taiwan), which in 1945 had just been freed from Japan. Taiwan was declared the official Republic of China (ROC). The Communists took over the mainland government. In 1949, Communist leader **Mao Zedong** declared the establishment of the People's Republic of China (PRC) with its capital in Peking (Beijing). Japan was devastated by US bombing and defeated in World War II; its infrastructure destroyed and its colonies lost, Japan had to begin the long process of rebuilding its country. Korea was finally liberated from the Chinese dynasties and Japanese colonialism but began to experience an internal political division. Political structures in the second half of the twentieth century in East Asia were vastly different from the political structures that had been in place when the century began.

Key Takeaways

- China is the largest country in physical area and in population in East Asia. The realm is isolated by the high mountains in the west, which cause a major rain shadow and desert conditions in the western regions. Mongolia is the only landlocked country. The other countries and territories are located along the Pacific Rim.
- Robust population growth has been supported by adequate food production in the major river valleys and coastal regions of East Asia. Coastal areas receive adequate precipitation and allow access to fishing for human activities.
- The Three Gorges Dam was constructed on the Yangtze River to control flooding, generate electricity, and support shipping. The dam is the largest in the world. Downsides of the dam have included the relocation of human settlements, erosion, and other environmental concerns.
- Colonialism infiltrated China and challenged its last dynasty. By 1911, both the dynasty and European colonialism were in demise. In a three-way battle for power in China, the Communists emerged in 1949 to take control. The Nationalists fled to Formosa to form their own government.

Discussion and Study Questions

1. Outline the countries or territories that make up the region known as East Asia.
2. How is East Asia separated from the rest of Asia? How did this keep the realm isolated for many centuries?
3. What is the only landlocked country in East Asia? Describe its physical features.
4. What are the main climate types in each of the countries in East Asia?
5. Where are the four main river basins in China Proper? How do they contribute to China's development?
6. What are the three main benefits of the Three Gorges Dam? What are three of the negative impacts?
7. What was significant about the Han and Qing Dynasties? When did dynastic rule end in China?
8. How did the British attempt to break down Chinese culture? What was China's response?
9. What was the relationship between Japan, Korea, and China before World War II?
10. What was the three-way split in China about? What happened to each of the three groups?

Geography Exercise

Identify the following key places on a map:

- Altay Mountains
- Chang Jiang River
- China Proper
- Chongqing
- Formosa
- Gobi Desert
- Guangzhou
- Hainan Island
- Harbin
- Hong Kong
- Huang He River
- Inner Mongolia
- Karakoram Ranges
- Liao River
- Macau
- Nanjing
- North China Plain
- Northeast China Plain
- Pamirs
- Pearl River
- Shanghai
- Shenyang
- Shenzhen
- Songhua River
- Taiwan
- Takla Makan Desert
- Three Gorges Dam

- Tianjin
- Tian Shan
- Tibet
- Western China
- Wuhan
- Xizang
- Yangtze River
- Yellow River

PART IX
SOUTHEAST ASIA

14. Regions

11.1 Introducing the Realm

Learning Objectives

1. Understand the geographical differences between the mainland region and the insular region.
2. Summarize how the region was colonized. Learn how colonial activities influence each country's cultural situation.
3. Realize how the physical geography has been influenced by tectonic activity.
4. Outline the main ethnic and religious affiliations of Southeast Asia and explain why they are so diverse.
5. Comprehend the impact and influence of the overseas Chinese in the region.

Physical Geography

The islands and the mainland of Southeast Asia include a wide array of physical and cultural landscapes. The entire realm is located in the tropics except the northernmost region of Burma (Myanmar), which extends north of the Tropic of Cancer. A tropical Type A climate dominates the region and rainfall is generally abundant. The tropical waters of the region help moderate the climate. Southeast Asia is located between the Indian Ocean on the west and the Pacific

Ocean on the east. Bordering the many islands and peninsulas are various seas, bays, straits, and gulfs that help create the complex maritime boundaries of the realm. The South China Sea is a major body of water that acts as a separator between the mainland and the insular region. The thousands of islands that make up the various countries or lie along their coastal waters create a matrix of passageways and unique physical geography.

The three longest rivers of the realm, Mekong, Red, and Irrawaddy, are located on the mainland and have their headwaters in the high elevations of Himalayan ranges of China. The Mekong River makes its way from the high Himalayas in China and helps form the political borders of Laos and Thailand on its way through Cambodia to Vietnam where it creates a giant delta near Ho Chi Minh City (Saigon). The Red River flows out of China and through Hanoi to the Red River delta on the Gulf of Tonkin. The Irrawaddy River flows through the length of Burma providing for the core area of the country. Another major river of the mainland is the Chao Phraya of Thailand. With its many tributaries, the Chao Phraya creates a favorable core area that is home to the largest population of the country. Many other rivers can be found on both the mainland and the insular region. The rivers transport water and sediments from the interior to the coasts, often creating large deltas with rich soils that are major agricultural areas. Multiple crops of rice and food products can be grown in the fertile river valleys and deltas. The agricultural abundance is needed to support the ever-increasing populations of the realm.

Tectonic plate activity has been responsible for the existence of the many islands and has created the mountainous terrain of the various countries. High mountain ranges can have peaks that reach elevations of over fifteen thousand feet. The high-elevation ranges of New Guinea, which are along the equator, actually have glaciers, ice, and snow that remain year-round. The island of Borneo, in the center of the insular region, is actually a segment of ancient rock that has been pushed upward by tectonic forces to form a mountainous land mass. The mountains on Borneo have been worn

down over time by erosion. Mountains and highlands stretch across the northern border of the realm along the borders with India and China. The interior nature of this border makes it less accessible. Similar dynamics can be found in the interior of the islands of the insular region, where the isolation and remoteness have helped create the environmental conditions for unique flora and fauna. In the highland areas the human cultural landscape can be diverse. Time and isolation have worked together to form the traditions and cultural ways that give local groups their identity and heritage.

Tectonic activity makes the region vulnerable to earthquakes and volcanic eruptions. The volcanic peak of Mt. Pinatubo, in the Philippines, erupted in 1991, spewing ash and smoke into the atmosphere and impacting much of the planet. An earthquake of 9.0 magnitude occurred off the coast of the Indonesian island of Sumatra in 2004 and caused widespread disaster throughout the wider region of the Indian Ocean. As many as one hundred fifty thousand deaths were reported, mainly from flooding. A thirty-five-foot-high wall of water from the tsunami devastated many coastal areas from Thailand to India.

Impact of Colonialism

Southeast Asia has not escaped the impact of globalization, both colonial and corporate. As Europeans expanded their colonial activities, they made their way into Southeast Asia. Southeast Asia was heavily influenced by European colonialism. The only area of the region that was not colonized by the Europeans was Thailand, which was called **Siam** during the colonial era. It remained an

independent kingdom throughout the colonial period and was a buffer state between French and British colonizers. The Japanese colonial empire controlled much of Southeast Asia before World War II.

Some of the countries and regions of Southeast Asia became known by their colonial connection. Indonesia was once referred to as the Dutch East Indies, which was influential in the labeling of the Caribbean as the West Indies. French Indochina is a term legitimized for historical references to the former French claims in Southeast Asia. Malaya and British Borneo each had its own currency based on a dollar unit that was legal tender for the regions of the Federation of Malaya, Singapore, Sarawak, North Borneo, and Brunei. Independence from the European powers and freedom from Japanese imperialism by the end of World War II provided a new identification for the various countries of the realm. Cultural and economic ties remain between many former colonies and their European counterparts.

Figure II.2

image

Southeast Asia was colonized by Europeans and later by Japan.

East Timor, a former Portuguese colony south of Indonesia, has been the most recent colony to gain independence. Timor is an island just north of Australia. The western portion is claimed by Indonesia. The whole island was annexed to Indonesia in 1975. As a result of separatist movements that entailed conflict and violence, the eastern portion was finally granted independence in 2002. Since then, East Timor has been working to establish itself as a country

and is now negotiating its offshore boundary to include important oil and gas reserves.

Cultural Introduction

Southeast Asia has a population of more than six hundred million people; more than half the population lives on the many islands of Indonesia and the Philippines. The small island of Java in Indonesia is one of the most densely populated places on Earth. More than half of the two hundred forty-five million people who live in Indonesia live on the island of Java. The island of Luzon in the Philippines is also one of the more densely populated areas of the insular region. The Philippines has over one hundred million people, Vietnam has more than ninety million, and Thailand has about sixty-seven million. Local areas with high food-producing capacity are also high population centers, which would include deltas, river valleys, and fertile plains.

The ethnic mosaic of Southeast Asia is a result of the emergence of local differences between people that have evolved into identifiable cultural or ethnic groups. Though there are a multitude of specific ethnic groups, a number of the larger ones stand out with recognizable populations. On the mainland the Burmese, Thai, Khmer, and Vietnamese are the largest groups, coinciding with the physical countries from Burma to Vietnam. A similar situation can be found in the insular region. Many distinct groups can exist on the many islands of the region. The island of New Guinea, for example, has hundreds of local groups with their own languages and traditions. The large number of ethnic groups is dominated by

Indonesians, Malays, and Filipinos, coinciding with the countries of Indonesia, Malaysia, and the Philippines. Each of these main groups has many subgroups that hold to their own cultural heritage in the areas where they exist. The many islands of Indonesia and the Philippines create the opportunity for diversity to continue to thrive, in spite of the globalization process that increased the interaction and communication opportunities between groups.

Indonesia is also home to the largest Muslim population in the world. All major religions can be found here. The Philippine population is predominantly Christian, but there is a minority Muslim community, including rebel insurgents. Most of people in Malaysia follow Islam. About 95 percent of the people in Thailand and more than 60 percent of the people in Laos are Buddhist. Hinduism is present in the Indonesian island of Bali and in various other locations in the region. Animism and local religions can be found in rural and remote areas. Clearly, Southeast Asia is a mix of many ethnic groups, each with its own history, culture, and religious preference.

Overseas Chinese

Southeast Asia is also home to over thirty million overseas Chinese—ethnic Chinese who live outside of China. The Chinese exodus to the realm was the greatest during the last Chinese dynasties and during the colonial era. European colonial powers enhanced this migration pattern by leveraging the use of people with Chinese heritage in their governing over the local populations in the realm. Life has often been difficult for overseas Chinese. The

Japanese occupation of the realm during World War II was a time of harsh discrimination against Chinese. Japanese occupation and colonialism diminished with the end of World War II. The overseas Chinese minority retained an economic advantage because of their former colonial status and their economic connections. Chinatowns emerged in many of the major cities of Southeast Asia. The discrimination against the Chinese, fueled by religious or socioeconomic differences, often continued after World War II by the local ethnic majorities. Nevertheless, overseas Chinese in Southeast Asia have been instrumental in promoting the global business arrangements that have established the Pacific Rim as a major player in the international economy.

Key Takeaways

- Southeast Asia can be studied by dividing up the realm into two geographic regions: the mainland and the insular region. The mainland borders China and India and has extensive river systems. The insular region is made up of islands and peninsulas between Asia and Australia, often with mountainous interiors.
- France and Britain colonized the mainland region of Southeast Asia. Burma was a British colony and the rest was under French colonial rule. The Japanese took control of the region briefly before World War II ended in 1945. Siam was the only area not colonized. Siam became the country of Thailand.
- The physical geography of the mainland and the insular region is dominated by a tropical type A climate. Cooler temperatures may be found in the mountainous regions and more even temperatures

ranges can be found along the coasts. Tectonic plate activity is responsible for the many earthquakes and volcanic eruptions that occur in the realm.

- Southeast Asia is ethnically, religiously, and linguistically diverse. A number of major ethnic groups dominate in the mainland and insular region but are only examples of the multitude of smaller groups that exist in the realm. One minority group is the overseas Chinese, who immigrated to the realm during the colonial era.

Discussion and Study Questions

1. Which countries of Southeast Asia are in the mainland region? Which countries are in the insular region?
2. What are the four main rivers of the mainland region and how do they contribute to each region's economic activities?
3. How has tectonic plate activity been evident in Southeast Asia? How has the rest of the world been influenced by tectonic activity in the realm?
4. Which European countries have been the main colonizers and which countries did each colonize? How has the colonial experience influenced the realm?
5. Where are the main population centers? Why are these locations favorable to such large populations?

Which countries are the most populous?

6. What are the main ethnic groups on the mainland and in the insular region? Why are there so many ethnic groups in this realm? How has physical geography contributed to the diversity?
7. What are the main religious affiliations of the realm? Which countries have the largest Buddhist, Muslim, and Christian populations? How do you think this diversity of religious beliefs could create difficulties in the workplace?
8. What is the newest country to declare independence in the realm? Which European country colonized the area? Why didn't this country gain its independence many decades ago?
9. How have the overseas Chinese influenced the realm of Southeast Asia? Why have the overseas Chinese been so influential in the economic situation of the Pacific Rim?
10. What other region of the world has similar dynamics in physical geography and colonial activities to the insular region of Southeast Asia?

Geography Exercise

Identify the following key places on a map:

- Chao Phraya River
- Gulf of Tonkin

- Ho Chi Minh City
- Indochina
- Insular Region
- Irrawaddy River
- Mainland Region
- Mekong River
- Red River
- Saigon
- Siam

PART X
NORTH AMERICA

15. The Realm & Regions

Identifying the Boundaries

Figure 4.1

image

The geographic center of North America is located near Rugby, North Dakota. Notice the flags of Mexico, Canada, and the United States.

Photo by R. Berglee – CC BY-NC-SA.

The realm of North America as a continent extends from the polar regions of the Arctic in northern Canada and Alaska all the way south through Mexico and the countries of Central America. Geographers usually study the continent by dividing it into two separate realms based on differences in physical and cultural geography. Both the United States and Canada share similar physical geography characteristics as well as a common development history with either a British or French colonial legacy. Mexico and Central America are dominated by more tropical climates and were colonized mainly by the Spanish. The United States and Canada—the second- and third-largest countries in the world in physical area, respectively—make up more than 13 percent of the world's total landmass. The Atlantic Ocean borders their eastern edge, and the Pacific Ocean creates their western boundary. To the north is the Arctic Ocean. The North American region is

highly urbanized—about 80 percent of the population lives in cities—but other vast areas, especially in Canada, are sparsely populated. Although some natives remain, most of North America's diverse population consists of immigrants or descendants of immigrants from other world regions. The United States is the world's largest economy, and both countries enjoy high standards of living as technologically developed countries.

PART XI

MIDDLE AMERICA

16. The Realm & Regions

5.1 Introducing the Realm

Learning Objectives

1. Define the differences between the rimland and the mainland.
2. Summarize the impact of European colonialism on Middle America.
3. Distinguish between the Mayan and Aztec Empires and identify which the Spanish defeated.
4. Describe how the Spanish influenced urban development.

Physical Geography

Middle America has various types of physical landscapes, including volcanic islands and mountain ranges. Tectonic action at the edge of the Caribbean Plate has brought about volcanic activity, creating many of the islands of the region as volcanoes rose above the ocean surface. The island of Montserrat is one such example. The volcano on this island has continued to erupt in recent years, showering the island with dust and ash and making habitation difficult. Many of the other low-lying islands, such as the Bahamas, were formed by coral reefs rising above the ocean surface. Tectonic plate activity not only has created volcanic islands but also is a constant source

of earthquakes that continue to be a problem for the Caribbean community.

The republics of Central America extend from Mexico to Colombia and form the final connection between North America and South America. The **Isthmus of Panama**, the narrowest point between the Caribbean Sea and the Pacific Ocean, serves as a **land bridge** between the continents. The backbone of Central America is mountainous, with many volcanoes located within its ranges. Much of the Caribbean and all of Central America are located south of the Tropic of Cancer and are dominated by tropical type A climates. The mountainous areas have varied climates, with cooler climates located at higher elevations. Mexico has extensive mountainous areas with two main ranges in the north and highlands in the south. There are no landlocked countries in this realm, and coastal areas have been exploited for fishing and tourism development.

Rimland and Mainland

Using a regional approach to the geography of a realm helps us compare and contrast a place's features and characteristics. Location and the physical differences explain the division of Middle America into two geographic areas according to occupational activities and colonial dynamics: the rimland, which includes the Caribbean islands and the Caribbean coastal areas of Central America, and the mainland, which includes the interior of Mexico and Central America.

Colonialism thrived in the rimland because it consists mainly of islands and coastal areas that were accessible to European ships.

Ships could easily sail into a cove or bay to make port and claim the island for their home country. After an island or coastal area was claimed, there was unimpeded transformation of the area through plantation agriculture. On a plantation, local individuals were subjugated as servants or slaves. The land was planted with a single crop—usually sugarcane, tobacco, cotton, or fruit—grown for export profits. Most of these crops were not native to the Americas but were brought in during colonial times. European diseases killed vast numbers of local Amerindian laborers, so slaves were brought from Africa to do the work. Plantation agriculture in the rimland was successful because of the import of technology, slave labor, and raw materials, as well as the export of the harvest to Europe for profit.

Plantation agriculture changed the rimland. The local groups were diminished because of disease and colonial subjugation, and by the 1800s most of the population was of African descent. Native food crops for consumption gave way to cash crops for export. Marginal lands were plowed up and placed into the plantation system. The labor was usually seasonal: there was a high demand for labor at peak planting and harvest times. Plantations were generally owned by wealthy Europeans who may or may not have actually lived there.

The mainland, consisting of Mexico and the interior of Central America, diverged from the rimland in terms of both colonial dynamics and agricultural production. The interior lacked the easy access to the sea that the rimland enjoyed. As a result, the hacienda style of land use developed. This Spanish innovation was aimed at land acquisition for social prestige and a comfortable lifestyle. Export profits were not the driving force behind the operation, though they may have existed. The indigenous workers, who were poorly paid if at all, were allowed to live on the haciendas, working their own plots for subsistence. African slaves were not prominent in the mainland.

In the mainland, European colonialists would enter an area and stake claims to large portions of the land, often as much as thousands or even in the millions of acres. Haciendas would eventually become the main landholding structure in the mainland

of Mexico and many other regions of Middle America. In the hacienda system, the Amerindian people lost ownership of the land to the European colonial masters. Land ownership or the control of land has been a common point of conflict throughout the Americas where land transferred from a local indigenous ownership to a colonial European ownership.

Figure 5.2 Mainland and Rimland Characteristics of Middle America Based on Colonial-Era Economic Activities

image

The rimland was more accessible to European ships, and the mainland was more isolated from European activity.

The plantation and hacienda eras are in the past. The abolition of slavery in the later 1800s and the cultural revolutions that occurred on the mainland challenged the plantation and hacienda systems and brought about land reform. Plantations were transformed into either multiple private plots or large corporate farms. The hacienda system was broken up, and most of the hacienda land was given back to the people, often in the form of an ejidos system, in which the community owns the land but individuals can profit from it by sharing its resources. The ejidos system has created its own set

of problems, and many of the communally owned lands are being transferred to private owners.

The agricultural systems changed Middle America by altering both the systems of land use and the ethnicity of the population. The Caribbean Basin changed in ethnicity from being entirely Amerindian, to being dominated by European colonizers, to having an African majority population. The mainland experienced the mixing of European culture with the Amerindian culture to form various types of mestizo groups with Hispanic, Latino, or Chicano identities.

The European Invasion

Though the southern region of the Americas has commonly been referred to as “Latin America,” this is a misnomer because Latin has never been the lingua franca of any of the countries in the Americas. What, then, is the connection between the southern region of the Americas and Latin? To understand this connection, the reader needs to bring to mind the dominant languages as well as the origin of the colonizers of the region called “Latin America.” Keep in mind that the name of a given country does not always reflect its lingua franca. For example, people in Mexico do not speak a language called “Mexican”; they speak Spanish. Likewise, Brazilians do not speak “Brazilian”; they speak Portuguese.

European colonialism had an immense effect on the rest of the world. Among other things, colonialism diffused the European languages and the Christian religion. Latin Mass has been a tradition in the Roman Catholic Church. Consider the Latin-based Romance

language group and how European colonialism altered language and religion in the Americas. The Romance languages of Spanish and Portuguese are now the most widely used languages in Middle and South America, respectively. This is precisely why the term *Latin America* is not technically an appropriate name for this region, even though the name is widely used. *Middle America* is a more accurate term for the region between the United States and South America, and *South America* is the appropriate name for the southern continent in spite of the connection to Latin-based languages.

European colonialism impacted Middle America in more ways than language and religion. Before Christopher Columbus arrived from Europe, the Americas did not have animals such as horses, donkeys, sheep, chickens, and domesticated cattle. This meant there were no large draft animals for plowing fields or carrying heavy burdens. The concept of the wheel, which was so prominent in Europe, was not found in use in the Americas. Food crops were also different: the potato was an American food crop, as were corn, squash, beans, chili peppers, and tobacco. Europeans brought other food crops—either from Europe itself or from its colonies—such as coffee, wheat, barley, rice, citrus fruits, and sugarcane. Besides food crops, building methods, agricultural practices, and even diseases were exchanged.

The Spanish invasion of Middle America following Columbus had devastating consequences for the indigenous populations. It has been estimated that fifteen to twenty million people lived in Middle America when the Europeans arrived, but after a century of European colonialism, only about 2.5 million remained. Few of the indigenous peoples—such as the Arawak and the Carib on the islands of the Caribbean and the Maya and Aztec on the mainland—had immunities to European diseases such as measles, mumps, smallpox, and influenza. Through warfare, disease, and enslavement, the local populations were decimated. Only a small number of people still claim Amerindian heritage in the Caribbean Basin, and some argue that these few are not indigenous to the

Caribbean but are descendants of slaves brought from South America by European colonialists.

Columbus landed with his three ships on the island of Hispaniola in 1492. Hispaniola is now divided into the countries of Haiti and the Dominican Republic. With the advantage of metal armor, weapons, and other advanced technology, the Spanish invaders quickly dominated the local people. Since Europe was going through a period of competition, warfare, and technological advancements, the same mind-set carried forward to the New World. Indigenous people were most often made servants of the Europeans, and resistance resulted in conflict, war, and often death. The Spanish soldiers, explorers, or adventurers called conquistadors were looking for profits and quick gain and ardently sought gold, silver, and precious gems. This quest for gain pitted the European invaders against the local groups. The Roman Catholic religion was brought over from Europe and at times was zealously pushed on the local “heathens” with a “repent or perish” method of conversion.

Many of the Caribbean islands have declared independence, but some remain crown colonies of their European colonizers with varying degrees of autonomy. Mexico achieved independence from Spain by 1821, and most Central American republics also gained independence in the 1820s. In 1823, the United States implemented the Monroe Doctrine, designed to deter the former European colonial powers from engaging in continued political activity in the Americas. US intervention has continued in various places in spite of the reduction in European activity in the region. In 1898, the United States engaged Spain in the Spanish-American War, in which Spain lost its colonies of Cuba, Puerto Rico, and others to the United States. Puerto Rico continues to be under US jurisdiction and is not an independent country.

The Maya and the Aztec

Though the region of Mexico has been inhabited for thousands of years, one of the earliest cultures to develop into a civilization with large cities was the Olmec, which was believed to be the precursor to the later Mayan Empire. The Olmec flourished in the south-central regions of Mexico from 1200 BCE to about 400 BCE. Anthropologists call this region of Mexico and northern Central America Mesoamerica. It is considered to be the region's cultural hearth because it was home to early human civilizations. The Maya established a vast civilization after the Olmec, and Mayan stone structures remain as major tourist attractions. The classical era of the Mayan civilization lasted from 300 to 900 CE and was centered in the Yucatán Peninsula region of Mexico, Belize, and Central America. Guatemala was once a large part of this vast empire, and Mayan ruins are found as far south as Honduras. During the classical era, the Maya built some of the most magnificent cities and stone pyramids in the Western Hemisphere. The city-states of the empire functioned through a sophisticated religious hierarchy. The Mayan civilization made advancements in mathematics, astronomy, engineering, and architecture. They developed an accurate calendar based on the seasons and the solar system. The extent of their immense knowledge is still being discovered. The descendants of the Maya people still exist today, but their empire does not.

Figure 5.3 Mayan Site of

Uxmal in the Yucatán Region of Mexico

image

The classical Mayan era lasted from 300 to 900 CE. Many magnificent cities were built with stone and remain today as major tourist attractions.

Photo by R. Berglee – CC BY-NC-SA.

The Toltec, who controlled central Mexico briefly, came to power after the classical Mayan era. They also took control of portions of the old Mayan Empire from the north. The Aztec federation replaced the Toltec and Maya as the dominant civilization in southern Mexico. The Aztec, who expanded outward from their base in central Mexico, built the largest and greatest city in the Americas of the time, Tenochtitlán, with an estimated population of one hundred thousand. Tenochtitlán was located at the present site of Mexico City, and it was from there that the Aztec expanded into the south and east to create an expansive empire. The Aztec federation was a regional power that subjugated other groups and extracted taxes and tributes from them. Though they borrowed ideas and innovations from earlier groups such as the Maya, they made great strides in agriculture and urban development. The Aztec rose to dominance in the fourteenth century and were still in power when the Europeans arrived.

Spanish Conquest of 1519–21

After the voyages of Columbus, the Spanish conquistadors came to the New World in search of gold, riches, and profits, bringing their Roman Catholic religion with them. Zealous church members sought to convert the “heathens” to their religion. One such conquistador was Hernán Cortés, who, with his 508 soldiers, landed on the shores of the Yucatán in 1519. They made their way west toward the Aztec Empire. The wealth and power of the Aztecs attracted conquistadors such as Cortés, whose goal was to conquer. Even with metal armor, steel swords, sixteen horses, and a few cannons, Cortés and his men did not challenge the Aztecs directly. The Aztec leader Montezuma II originally thought Cortés and his men were legendary “White Gods” returning to recover the empire. Cortés defeated the Aztecs by uniting the people that the Aztecs had subjugated and joining with them to fight the Aztecs. The Spanish conquest of the Aztec federation was complete by 1521.

As mentioned, the Spanish invasion of Middle America had devastating consequences for the indigenous populations. It is estimated that there were between fifteen and twenty-five million Amerindians in Middle America before the Europeans arrived. After a century of European colonialism, there were only about 2.5 million left (Module 01). Cortés defeated the Amerindian people by killing off the learned classes of the religious clergy, priestly orders, and those in authority. The local peasants and workers survived. The Spanish destroyed the knowledge base of the Maya and Aztec people. Their knowledge of astronomy, their advanced calendar, and their engineering technology were lost. Only through anthropology, archaeology, and the relearning of the culture can we fully understand the expanse of these early empires. The local Amerindian descendants of the Maya and the Aztec still live in the region, and there are dozens of other Amerindian groups in Mexico with their own languages, histories, and cultures.

The Spanish Colonial City

As the Spanish established urban centers in the New World, they structured each town after the Spanish pattern, with a plaza in the center. Around the plaza on one side was the church (Roman Catholic, of course). On the other sides of the plaza were government offices and stores. Residential homes filled in around them. This pattern can still be seen in almost all the cities built by the Spanish in Middle and South America. The Catholic Church not only was located in the center of town but also was a supreme cultural force shaping and molding the Amerindian societies conquered by the Spanish.

In Spain, the cultural norm was to develop urban centers wherever administration or military support was needed. Spanish colonizers followed a similar pattern in laying out the new urban centers in their colonies. Extending out from the city center (where the town plaza, government buildings, and church were located) was a commercial district that was the backbone of this model. Expanding out on each side of the spine was a wealthy residential district for the upper social classes, complete with office complexes, shopping districts, and upper-scale markets.

Figure 5.4 Catholic Cathedral
across from a Plaza in the

Yucatán City of Valladolid (left); Model of a Spanish Colonial Urban Pattern (right)

image

The Spanish colonial urban pattern had a plaza in the center of the city with government buildings around the square and a Catholic church on one side.

Photo by R. Berglee – CC BY-NC-SA.

Surrounding the central business district (CBD) and the spine of most cities in Middle and South America are concentric zones of residential districts for the lower, working, and middle classes and the poor. The first zone, the zone of maturity, has well-established middle-class residential neighborhoods with city services. The second concentric zone, the zone of transition (in situ accretion), has poorer working-class districts mixed with areas with makeshift housing and without city services. The outer zone, the zone of periphery, is where the expansion of the city occurs, with makeshift housing and squatter settlements. This zone has little or no city services and functions on an informal economy. This outer zone often branches into the city, with slums known as favelas or barrios that provide the working poor access to the city without its benefits. Impoverished immigrants that arrive in the city from the rural areas often end up in the city's outer periphery to eke out a living in some of the worst living conditions in the world.

Cities in this Spanish model grow by having the outer ring progress to the point where eventually solid construction takes hold and city services are extended to accommodate the residents. When this ring reaches maturity, a new ring of squatter settlements

emerges to form a new outer ring of the city. The development dynamic is repeated, and the city continues to expand outward. The urban centers of Middle and South America are expanding at rapid rates. It is difficult to provide public services to the outer limits of many of the cities. The barrios or favelas become isolated communities, often complete with crime bosses and gang activities that replace municipal security.

Figure 5.5 Spanish-American City Structure According to the Ford-Griffin Model

image

Key Takeaways

- Haciendas were located chiefly in the mainland and plantations were located mainly in the rimland.
- Both the hacienda and the plantation structures of agriculture altered the ethnic makeup of their respective regions. The rimland had an African labor base, and the mainland had an Amerindian labor base.
- In their quest for wealth, Spanish conquistadors destroyed the Aztec Empire and colonized the Middle

American mainland. Much historical knowledge was lost with the demise of the learned class of the Aztec Empire.

- Europeans introduced many new food crops and domesticated animals to the Americas and in turn brought newly discovered agricultural products from America back to Europe.
- The Spanish introduced the same style of urban planning to the Americas that was common in Spain. Many cities in Middle and South America were patterned after Spanish models.

Discussion and Study Questions

1. What are the three main regions of Middle America?
2. What are the main distinctions between the mainland and the rimland?
3. What are the differences between a hacienda and a plantation?
4. What happened to the plantations and haciendas established during the colonial era?
5. Why is Middle America often referred to as a part of “Latin America”?
6. Who were the Aztec and the Maya, and when did their empires flourish? What happened to these empires?
7. What are some ways that European colonialism

affected this realm?

8. What features were found at the center of town in the Spanish urban model?
9. How did the Spanish organize the structure of their colonial cities?
10. How does the Ford-Griffin Model illustrate the development of the Spanish-American city?

Geography Exercise

Identify the following key places on a map:

- Atlantic Ocean
- Bahamas
- Baja Peninsula
- Caribbean Sea
- Central America
- Greater Antilles
- Gulf of Mexico
- Isthmus of Panama
- Lesser Antilles
- Mainland
- Pacific Ocean
- Rimland
- Yucatán Peninsula

References

“Module 01: Demographic Catastrophe—What Happened to the Native Population after 1492?,” http://www.dhr.history.vt.edu/modules/us/mod01_pop/context.html.

PART XII

SOUTH AMERICA

17. The Realm & Regions

6.1 Introducing the Realm

Learning Objectives

1. Summarize the main physical features and characteristics of South America.
2. Explain how European colonialism dominated the realm and divided up the continent.
3. Describe the ethnic, economic, and political patterns in the Guianas.
4. Outline the main cultural realms of South America. Describe each realm's main ethnic majority and explain how colonialism impacted each region.
5. Summarize how the South American countries are attempting to integrate their economies.

The continent of South America has a wide diversity of physical landscapes, from the high **Andes Mountains** to the tropical forests of the Amazon Basin. This assortment of physical features offers many resource bases, allowing people to engage in economic activity, gain wealth, and provide for their needs. The long range of the Andes holds mineral riches that have been being extracted since ancient times. Precious metals have been mined from the mountains to grant great opportunities for those fortunate enough to be recipients of its wealth. Fossil fuels have been found in abundance in the far northern regions of Venezuela and Colombia. The Amazon Basin has been a source of hardwood lumber and, more recently, extensive mineral wealth. Some of the largest iron-ore mines in the world are located here. The massive plains of Brazil and the rich soils of the Pampas allow for enormous agricultural operations that provide food products for the continent and for the world. Even the inhospitable Atacama region in northern Chile holds some of the world's largest copper reserves. In addition, the

wide variety of climate zones allows a diverse range of species to develop. The extremes in physical geography in South America have created both barriers and opportunities to those who live there.

Before the era of European colonialism, many local groups organized themselves into states or empires. The Inca Empire was the largest in existence at the time the Europeans arrived. The early empires developed massive structures that required huge cut stones weighing many tons to be moved into place without the benefit of modern tools or technology. European colonialism altered the continent in several ways. Not only did the Europeans defeat and conquer indigenous Amerindian groups such as the Inca, but cultural exchanges also took place that altered the way of life for countless South Americans. Colonialism created many of the current country borders and influenced trade relationships with the newly created colonies. The plantation system and the introduction of slaves from Africa drastically changed the ethnic makeup of the people living along the eastern coast. After slavery was abolished, indentured servitude brought workers from Asia to support the labor base.

Indentured servants were usually poor individuals who agreed to work for an agreed upon period of time, usually less than seven years, in return for the necessities of life such as lodging, food, and transportation or clothing. These individuals did not usually receive a salary but may have received a lump sum payment upon completion of the agreed upon service. Under favorable conditions indentured servants were treated like relatives and gained important experience and job skills to provide for their future. Many situations were much less favorable and resembled a form of slavery where individuals did not survive their servitude but succumbed to disease, harsh conditions, or death.

The physical environment and the influence of colonialism were both responsible for the cultural attributes of the regions of South America. The continent can be divided into regions by ethnic majorities influenced by early colonial development. The mixing of ethnic groups from Europe, Africa, and Asia with each other

or with the indigenous population has created a diverse cultural mosaic. For example, most people in Guyana and Suriname are from Asia, most people in Argentina and Uruguay are from Europe, most people in Peru and Bolivia are Amerindian, and most people in many areas along the eastern coast of Brazil are of African descent. A large percentage of the population of South America is of a mixed ethnic background. Understanding the cultural geography of South American supports comprehension of the realm's human development patterns.

South America's modern economic development has helped integrated it with the global economy. The levels of economic development vary widely within the realm. There are clear indications of core-peripheral spatial patterns within various regions of the continent, and rural-to-urban shift has been strong in many areas. The rural regions in the Andes or the interior suffer from a lack of economic support needed to modernize their infrastructure. At the same time, metropolitan areas are expanding rapidly and are totally integrated with global markets and the latest technologies. Most of the large cities are located along the coastal regions. This pattern of urbanization is mainly a result of colonial activity and influence. The countries of South America are working among themselves to network trade and commerce activities. Trade agreements and economic unions have become standard methods of securing business partnerships to enhance the realm's economic opportunities.

Physical Geography

The far-reaching Andes Mountains and the massive Amazon River system dominate South America's physical geography. The five-thousand-mile-long Andes Mountain chain extends along the entire western region of the continent from Venezuela to southern Chile. The Andes are the longest mountain chain on Earth and the highest in the Americas. The Andes Mountain range has more than thirty peaks that reach at least twenty thousand feet in elevation, many of which are active volcanoes. The Andes has provided isolation to the **Inca Empire**, mineral wealth to those with the means for extraction, and a barrier to travelers crossing the continent. The Andes' minerals include gold, silver, tin, and other precious metals. Mining became a major industry in the colonial era and continues to the present.

At the core of the continent is the mighty Amazon River, which is more than two thousand miles long and has an enormous drainage basin in the largest tropical rain forest in the world. The Amazon's many tributaries are larger than many other world rivers. Flowing parallel to the equator, the Amazon is in contention with the Nile as the longest river in the world. In 2007, a dispute arose over the actual length of the Amazon River. Brazilian scientists using satellite imagery and teams on the ground using a global positioning system (GPS) calculated a new length for the Amazon. Using similar methods, the Nile River also had a new length calculated. Both were determined to be longer than originally measured. At this time, the actual length of each river is openly disputed. The most accurate statement is that the Amazon River has the greatest discharge of any river in the world, and it is potentially also the longest river in the world.

The Amazon carries about a fifth of all river water in the world. The Amazon and its many tributaries drain the entire interior region of the continent, covering 40 percent of South America. During

the rainy season, the Amazon River can be more than one hundred miles wide. No bridges span the Amazon River. Its source is a glacial stream located high in the Peruvian Andes, about 150 miles from the Pacific Ocean.

The Amazon's extended tributaries—such as the **Rio Negro**, the **Madeira**, and the **Xingu**—move massive amounts of water through the Amazon Basin and are major rivers in their own right. The Amazon has more than 1,100 tributaries; a dozen are more than one thousand miles long. Hydroelectric dams are located on the tributaries to produce electricity for the region's fast-growing development. South America has additional large rivers that drain the continent, including the **Orinoco**, which flows through Venezuela; the **Sao Francisco**, which flows through southeast Brazil; and the **Paraguay** and the **Paraná** Rivers, which flow south from Brazil into the **Rio de la Plata** between Argentina and Uruguay.

Lake Titicaca rests in the middle of the **Altiplano Region** of the Central Andes on the border between Peru and Bolivia. The Altiplano Region is a wide basin between two main Andean mountain ranges. The word altiplano means “valley” in Spanish. There are a substantial number of altiplanos in South America. They provide for agricultural production and human habitation. The Altiplano Region has been home to ancient civilizations that date back to early human settlements. Lake Titicaca is a large freshwater lake about 120 miles long and 50 miles wide. The surface is at an elevation of about twelve thousand feet above sea level, and the lake is more than nine hundred feet deep in some areas. Usually at such high elevations, the temperature would dip below freezing and restrict agriculture. However, the large lake acts as a solar energy collector by absorbing energy from the sun during the day and giving off that energy in the form of heat during the night. The energy redistribution allows for a moderate temperature around the lake that is conducive to growing food crops. With abundant fresh water and the ability to grow food and catch fish, the Altiplano Region has supported human habitation for thousands of years. On the Bolivian side of the lake is the ancient stone site of Tiahuanaco,

which has had some artifacts dated to 1500 BCE or earlier. People continue to live around and on Lake Titicaca and maintain a subsistence lifestyle.

Figure 6.2 Lake Titicaca with Traditional Reed Boat Made by Amerindian Locals

image

Lake Titicaca is the highest-elevation navigable lake in the world.

Benedict Adam – Peru – CC BY 2.0.

Across the Andes Mountains from the Altiplano Region is the Atacama Desert. The Atacama is one of the driest places on Earth: in some parts, no rain has fallen in recorded history. In normal circumstances, the Atacama would be a desolate region without human activity, but that is not the case. Some of the world's largest copper reserves are found here. Nitrates, which are used in fertilizers, are also found in large quantities. Mining the Atacama has brought enormous wealth to people fortunate enough to be on the receiving end of the profits. The rain shadow effect is responsible for the extraordinary dryness of the Atacama. The Andes are quite high at this latitude, and the winds blow in rain clouds from the east. When the clouds reach the mountains, they ascend in elevation, releasing their precipitation without ever reaching the western side of the Andes.

South America has large agricultural plateaus east of the Andes,

such as the **Mato Grosso Plateau**, which includes a portion of the great cerrado agricultural region of central Brazil. The Cerrado is a vast plain that has been developed for agriculture and produces enormous harvests of soybeans and grain crops. Bordering the Cerrado to the southeast are the **Brazilian Highlands**, an extensive coffee-growing region. The **Pampas** in eastern Argentina, Uruguay, and southernmost Brazil is another excellent agricultural region with good soils and adequate rainfall. Farming, cattle ranching, and even vineyards can be found here, making the Pampas the breadbasket of the Southern Cone. To the south of the Pampas is the lengthy expanse of **Patagonia**, which covers the southern portion of Argentina east of the Andes. Patagonia is a prairie grassland region that does not receive a very much rainfall because of the rain shadow effect of the Andes to the west. The main activities in Patagonia are the raising of cattle and other livestock. The region is starting to attract attention for the extraction of natural resources such as oil, natural gas, and valuable minerals.

To the northern part of the continent in Venezuela and Colombia, sandwiched between the Andes Mountains and the **Guiana Highlands**, is a grassland region with scrub forests called the Llanos. The human population is small because of the remoteness of the region along the Orinoco River basin. The Guiana Highlands of southeast Venezuela and the Guianas are an isolated set of mountainous plateaus mixed with rugged landscapes and tropical climates. Angel Falls, the highest waterfall in the world, with a free fall of more than 2,647 feet and a total drop of about 3,212 feet (more than half a mile), is located here. To the northwest of the Llanos and the Guiana Highlands in Venezuela is **Lake Maracaibo**, a large inland lake open to the Caribbean Sea. A coastal lake, Maracaibo rests atop vast oil reserves that provide economic wealth for Venezuela.

European Colonialism

South America's colonial legacy shaped its early cultural landscape. The indigenous people, with their empires and local groups, were no match for the Iberian invaders who brought European colonialism to the continent. South America was colonized exclusively by two main Iberian powers: Spain colonized the western part of the South America, and Portugal colonized the east coast of what is present-day Brazil. The only region that was not colonized by those two powers was the small region of the **Guianas**, which was colonized by Great Britain, the Netherlands, and France.

Figure 6.3 Colonial Activity in South America

image

Everything changed with the invasion of the Iberian colonizers. The underlying tenets of culture, religion, and economics of the local indigenous people were disrupted and forced to change. It is no mystery why the two dominant languages of South America are Spanish and Portuguese and why Roman Catholicism is the realm's dominant religion. Colonialism also was responsible for transporting food crops such as the potato, which originated in the Peruvian Andes, to the European dinner table. Today, coffee is a main export of Colombia, Brazil, and other countries in the tropics. Coffee was not native to South America but originated in

Ethiopia and was transferred by colonial activity. The same is true of sugarcane, bananas, and citrus fruits; oranges were not native to South America, but today Brazil is the number one exporter of orange juice. Colonialism was driven by the desire for profit from the quick sale of products such as gold or silver, and there was a ready market for goods not found in Europe, such as tobacco, corn, exotic animals, and tropical woods.

Plantation agriculture introduced by the Europeans led to a high demand for manual laborers. When the local populations could not meet the labor demand, millions of African workers were brought through the slave trade. These African slaves introduced their own unique customs and traditions, altering the culture and demographics of the Western Hemisphere. The current indigenous Amerindian population, a fraction of what it was before the Europeans arrived, makes up only a small percentage of South America's total population. Europeans colonizers generally took the best land and controlled the economic trade of the region. The acculturation in South America is directly related to the European colonial experience.

The Inca Empire and Francisco Pizarro

Not long after Hernán Cortés conquered the Aztec Empire of Mexico in 1521, a young Spanish conquistador named Francisco Pizarro, stationed in what is now Panama, heard rumors of silver

and gold found among the South American people. He led several sailing excursions along the west coast of South America. In 1531 CE, he founded the port city of Lima, Peru. Since 1200 CE, the Inca had ruled a large empire extending out from central Peru, which included the high-elevation Altiplano Region around Lake Titicaca. The Inca Empire dominated an area from Ecuador to Northern Chile. The Inca were not the most populous people but were a ruling class who controlled other subjugated groups. Pizarro, with fewer than two hundred men and two dozen horses, met up with the Inca armies and managed to defeat them in a series of military maneuvers. The Inca leader was captured by the Spanish in 1533. Two years later, in 1535, the Inca Empire collapsed.

Figure 6.4 Colonialism in South America

image

The two main colonizers in South America were Spain and Portugal. The Spanish conquistador Francisco Pizarro defeated the Inca Empire.

The Inca Empire was significant thanks to the high volume of gold and silver found in that region of the Andes. The story is told that Pizarro placed the captured Inca leader in a small room and told him that if the room was filled with gold to the top of the Inca leader's head, Pizarro would let the Inca leader go free. Gold was summoned from the people and the countryside, and the room was filled. The conquistadors forced the Inca leader to convert to Catholicism and be baptized and then killed him. The

gold was melted down and transported back to Spain. The mineral wealth of the Andes made the conquistadors rich. Lima was once one of the wealthiest cities in the world. Europeans continued to dominate and exploit the mining of minerals in Peru and Bolivia throughout the colonial era. European elites or a Mestizo ruling class has dominated or controlled the local Amerindian groups in the Andes since colonial times.

Figure 6.5 The Jesuit Church of La Compañía de Jesús on the Plaza de Armas in Cuzco, Peru

image

The original church was constructed in 1571 on the site of the ancient Incan palace. The earthquake of 1650 caused severe damage to the building, so it had to be reconstructed in about 1688. Many Catholic cathedrals in Latin America were built with stones from ancient sites. This cathedral is claimed to be the Western Hemisphere's most ideal example of colonial baroque architecture.

James Preston – La Compania de Jesus, Cusco – CC BY 2.0.

Many Amerindian groups inhabited this region before the Inca Empire, such as the people who built and lived in the ancient city of Tiahuanaco, which could have bordered Lake Titicaca during an earlier climate period, when the lake was much larger. Clearly,

humans have lived in South America for thousands of years. There is speculation that travel between South America and the Mediterranean region occurred earlier than current historic records indicate. Many of the ruins in the western region of South America have not been thoroughly excavated or examined by archaeologists, and the size and scope of many of the stone structures stand as testimony to the advancements in engineering and technology employed in an era that, according to historical records, had only primitive tools.

The Iberian Division of the Continent

The Spanish conquistadors were not the only European invaders to colonize South America. Colonial influence—which forced a change in languages, religion, and economics—also came from the small European kingdom of Portugal. Portuguese ships sailed along the eastern coast of South America and laid claim to the region for the king. The Portuguese did not find large gold or silver reserves, but they coveted the land for the expansion of their empire. Soon the Spanish and the Portuguese were fighting over the same parts of South America. In 1494, the issue was brought before the Roman Catholic Church. The **Tordesillas Line** was drawn on a map to divide South America into the Spanish west and the Portuguese east. The region that is now Brazil became the largest Portuguese colonial possession in South America, a center for plantation agriculture

similar to that in the Caribbean. For this reason, a large African population lives in Brazil, and most of the people in Brazil speak Portuguese and are Roman Catholics.

Independence did not come for the Spanish colonies until 1816 and 1818, when Chile and Argentina broke away in an independence movement in the south. Simón Bolívar led liberation movements in the north. By 1824, the Spanish were defeated in South America. Brazil did not gain independence from Portugal until 1822, when the prince of Portugal declared an independent Brazil and made himself Brazil's first emperor. It was not until 1889 that a true republic was declared and empire was abolished.

Colonialism and the Guianas

The Guianas in the northeast were the only European colonies in South America that were not under Spanish or Portuguese control. The British, Dutch, and French all held claims to different parts of the Guianas. French Guiana remains a colony (department) of France to this day. The transition from colony to independent state has required persistence, time, and patience. Guyana and Suriname only just received their independence in the latter part of the twentieth century.

Figure 6.6 The Guianas of South America

image

The coastal location of the Guianas provided European colonialists with an excellent site for plantation agriculture. Coastal cities had easy access to the Atlantic trade system. The active slave trade in the Atlantic brought African slaves to the Guianas to work the plantations. When slavery was abolished, indentured servants were brought in from other parts of the world that were colonized by the same European powers. Colonialism and plantation agriculture entirely changed the cultural dynamics of the Guianas. Port cities along the coast are the dominant urban centers. The Guianas follow a pattern similar to that of the rimland of the Caribbean and are included with the Caribbean in many studies. At the present time, bauxite (aluminum ore) mining and oil deposits along the coast provide modest income, and many people make their living in subsistence agriculture.

Guyana

Guyana and its neighbors have a tropical type A climate. The main interior regions are covered with dense forests. Some deforestation has taken place in Guyana; even so, forests cover more than 80 percent of Guyana's land area with a diverse range of forests, ranging from dry evergreen forests to tropical rain forests, and with

thousands of species of plants that are only found in this region. Guyana's natural habitats and biodiversity are unparalleled, which is attributable to the climate, distinctive landforms, and largely well-preserved ecosystems. Its large rain forests play host to a myriad of species not found elsewhere. The interior regions remain more than 70 percent pristine, but this will change if logging, mining, and deforestation are not managed appropriately.

Guyana was called British Guiana before it became independent in 1966. The region was home to Carib and Arawak groups before the arrival of the Dutch, who established the first colony there in 1616. By 1831, the British had taken control and declared the colony British Guiana. African slaves were the main source of plantation labor until slavery was abolished in 1834. At that point, indentured servants from many countries were targeted for labor; most were East Indians from South Asia. There were also thousands of servants from China and other countries.

The ethnic background of Guyana's population, which is less than one million, is a mix of African (36 percent), East Indian (50 percent), and Amerindian (7 percent). The remainder are mixed and European. The religious background of the East Indians includes both Hindus and Muslims. About 50 percent of the population has converted to Christianity. Ethnic divisions create difficulties in organizing politics and social activities. For example, one political concern is that minority groups with greater economic advantages will dominate the political arena without regard to the wishes of other ethnic groups.

Most of Guyana's people live in the coastal regions. The almost impenetrable interior has large uninhabited areas with dense tropical forests. To protect its unique biodiversity, large areas have been placed in conservation areas and national parks. More than one million acres have been placed in the Konashen Community-Owned Conservation Area (COCA) to help preserve the natural environment and provide a sustainable economic relationship with local Waiwai people. In a similar effort, the government created the Kaieteur National Park, which features the spectacular Kaieteur

Falls, which is about five times higher than Niagara Falls in North America. For its size, the falls has an enormous amount of water volume flowing over its crest. Other areas of the Guyana are also being considered for preservation.

Figure 6.7 Kaieteur Falls, Guyana

image

Kaieteur Falls has the largest single-drop waterfall by volume in the world. A national park has been created in this area to include the falls.

Paul Arps – Kaietur falls from a distance (Guyana 2001) – CC BY 2.0.

Guyana's economy is based on agricultural activities and the export of extracted natural resources. Sugarcane is a main cash crop, and timber sales are increasing. Fishing is common in the coastal areas. Bauxite mining has been the main mining activity, and mining of gold and other minerals has only advanced in recent years. Guyana's economy is similar to that of many islands of the Caribbean, a relationship exemplified by its membership in **CARICOM** (the Caribbean Community). CARICOM's headquarters is located in Georgetown, the capital of Guyana.

Suriname

Suriname's colonial name was Dutch Guiana. The name was changed when independence was granted in 1975. The cultural background of the colony is as diverse as its history. Dutch Guiana was divided between British and Dutch colonists. Slavery and plantation agriculture were introduced in the colonial period, and the harsh conditions of slavery caused many slaves to escape the plantations and live in the forests. These runaway slaves, called **Maroons**, eventually organized into viable independent groups. Peace treaties were finally made with the Maroons to grant them legitimate rights. After slavery was abolished, indentured servants from South Asia and the Dutch East Indies (Indonesia) were conscripted into the colony's labor base.

Most of the half-million people who live in Suriname today reside along the coast. The ethnic background of the people includes East Indian (37 percent), Creole (31 percent), Indonesian (15 percent), African (10 percent), Amerindian (2 percent), Chinese (2 percent), and European (about 1 percent). All three of the Guianas are ethnically diverse, and in this setting, the diversity creates tensions related to social and economic stability. Guyana and Suriname are the least Latin regions of South America; the Creoles, for example, are mainly a mix of African and Dutch mixed with Asian or Amerindian. Establishing a stable government and conducting civil affairs are often complicated by the ethnic groups that vie for power and political control. The religious background in Suriname includes Hindu, Muslim, Christian, and a mix of African religions such as Winti.

Figure 6.8 Ethnic Groups of Suriname by Percentage of the Population

image

Data courtesy of CIA World Factbook 2010.

Suriname depends on agriculture and natural resources as its two main economic activities. Suriname has the smallest physical area of all the independent South American states, and it has a limited ability to provide opportunities and advantages for its growing population. Bauxite is the country's main export product. In 1941, during World War II, the United States occupied the country to secure the valuable bauxite mines that were critical to the war effort. Suriname has also been expanding its gold mining, oil extraction, logging, and fishing industries. To protect its natural environment and its extensive biodiversity, the country has established national parks and created the large Central Suriname Nature Reserve, which UNESCO has named a World Heritage Site. Suriname hopes to benefit from these measures to create an ecotourism market.

Both Guyana and Suriname have had border disputes with their neighbors. Guyana has been locked in a challenge with Venezuela over its western region, which Venezuela claimed during the colonial era. A 1905 treaty ruled in Guyana's favor, but a small portion is still under dispute. The corner of Suriname that borders Brazil and Guyana has been an issue of contention fueled by the potential for mining of gold and other minerals in the area. The maritime boundary between Suriname and Guyana is also a point of contention. Suriname's border with French Guiana has a disputed area along the southern corner next to Brazil. These disputes emerged out of colonial agreements and poorly defined treaty boundaries.

French Guiana

French Guiana is still a colony (department) of France. With fewer than 250,000 people in an area slightly smaller than Kentucky, this is a sparsely inhabited area. Half the population lives in the capital city of Cayenne. Most of the population is Creole, mainly a combination of African and French with various Asian groups mixed in. The people work in subsistence agriculture or for the French government. A noted feature of the colony's heritage is the former off-shore prison on **Devil's Island**, which France used to secure its most undesirable prisoners. More than fifty thousand French prisoners were delivered to the Devil's Island facility during the colonial era, but less than 10 percent survived. The prison was closed in 1951.

Figure 6.9 The Ariane 42P Carrying the TOPEX/ Poseidon Spacecraft

image

This Ariane 42P was launched from the European Space Agency's Guiana Space Center in Kourou, French Guiana, on August 10, 1992.

Photo courtesy of NASA – public domain.

The European Space Agency maintains a launch center in French

Guiana because of its favorable climate and launch conditions. France maintains the facility and has highly subsidized the department's economy. This European support provides the population with a higher standard of living than in many other South American countries. Economic activities have included fishing, agriculture (bananas and sugar), and logging. Deforestation from the sale of hardwood lumber has become a problem throughout the Guianas as it leaves the soil open for erosion. Logging endangers the area's fragile but extensive biodiversity. Roads, dams, and gold mining have also contributed to the erosive destruction of the environment.

Cultural Regions of South America

It is impossible to understand the current conditions in South America without first understanding what occurred to create those conditions. This is why studying European colonialism is so important. Colonialism changed the ethnicity, religion, language, and economic activities of the people in South America. The past five hundred years have tempered, stretched, and molded the current states and regions of the South American continent. To identify standards of living, ethnic majorities, and economic conditions, it is helpful to map out South America's various **cultural regions**.

In South America, five main cultural regions indicate the majority ethnic groups and the main economic activities:

1. Tropical Plantation Region
2. Rural Amerindian Region
3. Amazon Basin
4. Mixed Mestizo Region
5. European Commercial Region (Southern Cone)

Figure 6.10 Cultural Spheres of South America.

image

These are generalized regions that provide a basic understanding of the whole continent. Technological advancements and globalization have increased the integration of the continent to the point that these regions are not as delineated as they once were, but they still provide a context in which to comprehend the ethnic and cultural differences that exist within the realm.

Tropical Plantation Region

Figure 6.II Young Women in Salvador, Brazil

image

Salvador, Brazil, is located along the coastal region of South America where the Tropical Plantation Region was prominent. Most people in this region are of African descent.

Carnal.com Studios – Salvador Carnaval Comanches 03 – CC BY 2.0.

Located along the north and east coast of South America, the Tropical Plantation Region resembles the Caribbean rimland in its culture and economic activity. The region, which extends as far south as the Tropic of Capricorn, has a tropical climate and an agricultural economy. Europeans opened up this area for plantation agriculture because of coastal access for ships and trade. The local people were forced into slavery, but when the local people died off or escaped, millions of African slaves were brought in to replace them. After slavery was abolished, indentured servants from Asia were brought to the Guianas to work the plantations. The Tropical Plantation Region has a high percentage of people of African or Asian descent.

Rural Amerindian Region

Figure 6.12 Amerindians

image

The Amerindian woman and child in this photo live in the Sacred Valley of the Andes in Peru.

Thomas Quine – Mother and Child – CC BY 2.0.

The Rural Amerindian Region includes the countries of Ecuador, Peru, and Bolivia. The ruling Mestizo class that inherited control from the European conquistadors mainly lives in urban areas. Most of the rural Amerindian population lives in mountainous areas with type H climates and ekes out a hard living in subsistence agriculture. This is one of the poorest regions of South America, and land and politics are controlled by powerful elites. The extraction of gold and silver has not benefited the local Amerindian majority, which holds to local customs and speaks local languages.

Amazon Basin

The Amazon Basin, which is characterized by a type A climate, is the least-densely populated region of South America and is home to isolated Amerindian groups. Development has encroached upon the region in the forms of deforestation, mining, and cattle ranching. Large deposits of iron ore, along with gold and other minerals, have been found in the Amazon Basin. Preservation of the tropical rain forest of this remote region has been hampered by the destructive pattern of development that has pushed into the region. The future of the basin is unclear because of development patterns that are expected to continue as Brazil seeks to exploit its interior peripheral region. Conflicts over land claims and the autonomy of Amerindian groups are on the rise.

Figure 6.13 Amazon River Drainage Basin

image

The Amazon has more than 1,100 tributaries.

Image courtesy of NASA – public domain.

Mixed Mestizo Region

The Mixed Mestizo Region includes the coastal area of the west and the interior highlands of the north and east. This region between the Tropical Plantation Region and the Rural Amerindian Region includes a majority of people who share a mixed European and Amerindian ethnicity. It is not as poor as the Rural Amerindian Region and yet not as wealthy as the European-dominated region to the south. Paraguay falls into the Mixed Mestizo Region, as do other portions of other South American countries such as parts of Brazil, Colombia, and Venezuela. Paraguay is mainly Mestizo, but its economic qualities resemble that of the Rural Amerindian Region to the north, even though Paraguay is not located in the mountains.

European Commercial Region (Southern Cone)

The southern part of South America, called the European Commercial Region or the Southern Cone, includes Chile, Argentina, Uruguay, and parts of Brazil. European ethnic groups dominate this region and include not only Spanish and Portuguese but also German, Austrian, Italian, and other European ethnic heritages. Fertile soils and European trade provided early economic growth, and the region attracted industry and manufacturing in

the later decades of the twentieth century. There are not many Amerindians or people of African descent here. More than 90 percent of all the people in Argentina, Chile, and Uruguay are of European descent and live in urban areas. With a highly urbanized population and with trade connections to a globalized economy, it is no surprise that the Southern Cone is home to South America's most developed economies.

Globalization and Trade

South America has been fragmented by European colonialism, which established colonies and economic dependence on its European masters. The colonial economic patterns did not encourage the South American countries to work together to create an integrated continental trade network. Countries outside the continent have promoted trade partnerships to benefit from South America's natural resources and agricultural exports. The establishment of the European Union and the North American Free Trade Agreement (NAFTA) created globalized trading blocs that challenged the South American countries to consider how to take advantage of trading opportunities within their realm to protect and support their own economic interests.

Since the 1990s, cooperation and business ventures have started to form within the realm to create a more integrated network of trade and commerce to benefit the countries of South America. Transportation and communication systems are being developed through joint ventures by internal investment groups. River and road systems continue to be managed and developed for improved

transport of people and goods throughout the continent. Free-trade agreements have been implemented to support the integration of internal economic networks and competition in the global marketplace.

In 2008, the South American countries formed the **Union of South American Nations (UNASUR)** to oversee the customs unions and trade agreements within the realm. One of the more established trade associations is **Mercosur (the Southern Cone Common Market)**, created in 1995 by the southern countries. It has evolved to include most countries in South America and is the most dominant trade agreement in the realm. Full members of Mercosur include Argentina, Uruguay, Paraguay, and Brazil. Chile, Bolivia, Peru, Ecuador, and Colombia are associate members. As of 2011, Venezuela's membership was under review. The **Andean Community**(Colombia, Ecuador, Peru, and Bolivia) was established in 1969 but did not gain ground until 1995, when it established stronger trade measures. Multinational corporations have supported the creation of a **Free Trade Area of the Americas (FTAA)** to include all of the Western Hemisphere in one unified trade association. It has not been approved and has received strong opposition from Mercosur and economic forces that support a more localized economy controlled by local people.

South America faced division and competition during the colonial era between the Spanish and the Portuguese. Today's new era of corporate colonialism has created similar fragmentation and divisions. The level of trade between the countries of South America and the United States and Europe varies widely. Countries such as Colombia and Chile have well-established trade relationships with the United States and are unwilling to jeopardize those trade connections to strengthen ties with their neighbors that have less-supportive political relationships with the United States. External global trade arrangements often provide financial benefits to individual countries that might not be shared by the bordering countries in the same region. South America's historical fragmentation has not made it easy to unify the continent under a

singular trade agreement to compete against the European Union or NAFTA.

Key Takeaways

- The extensive Andes Mountain chain and the massive Amazon River dominate the realm's physical geography.
- The Spanish and the Portuguese were the two main colonial powers that dominated South America. The Guianas were the only part of the continent not dominated by these two European powers.
- Britain, Holland, and France formed colonies in the Guianas. The slave trade brought many people of African descent to the Guiana colonies. After slavery was abolished, indentured servants from Asia were brought to the Guianas to support the labor base.
- Identifying the majority ethnic groups in South America can be helpful in classifying the various cultural regions of the realm. Colonial activities and ethnic backgrounds are consistent enough to formulate regions with similar characteristics.
- Globalization and the creation of economic or political units such as the European Union and NAFTA have prompted the South American countries to work together to implement cooperative trade agreements and create the Union of South American Nations.

Discussion and Study Questions

1. What are the two main physical features of South America? Where are they located?
2. What two main European colonial powers dominated South America?
3. What are the majority ethnic groups in each of the Guianas?
4. How do most people in the Guianas make a living?
5. Where are the five main cultural regions of South America?
6. What are the majority ethnic groups in each of the cultural regions of the continent?
7. Why would the Southern Cone have a stronger economic position than other regions?
8. What environmental concerns are prominent in the Guianas?
9. What are the main economic trade agreements for the South American countries?
10. Why has it been so difficult to unify the countries in this realm into a single trade zone?

Geography Exercise

Identify the following key places on a map:

- Altiplano

- Amazon Basin
- Amazon River
- Andes Mountains
- Atacama Desert
- Brazilian Highlands
- Cape Horn
- Cerrado
- Devil's Island
- Easter Island
- European Commercial Region
- Falkland Islands
- Galapagos Islands
- Guiana Highlands
- Guianas
- Lake Maracaibo
- Lake Titicaca
- Llanos
- Madeira River
- Mato Grosso Plateau
- Mixed Mestizo Region
- Orinoco River
- Pampas
- Paraguay River
- Paraná River
- Patagonia
- Rio de la Plata
- Rio Negro
- Robinson Crusoe Island
- Rural Amerindian Region
- Sao Francisco River
- Southern Cone
- Tierra del Fuego

- Tordesillas Line
- Tropical Plantation Region
- Xingu River