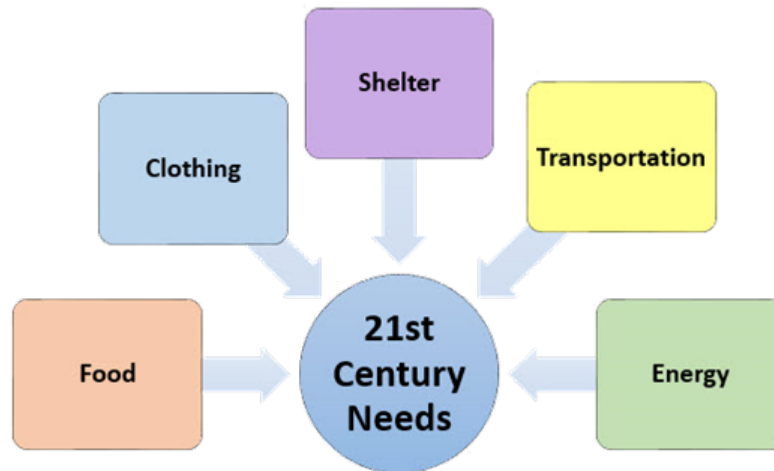


## PHYSICAL ENVIRONMENT AND HUMAN ACTIVITY



### Unit Overview

Across the Eastern Hemisphere, people live and work in a wide variety of physical environments. Some regions have rugged mountains and cold climates. Others experience warm temperatures throughout the year and very little rainfall. Nonetheless, everyone has certain basic needs that must be met. In this unit, you will learn how people adapt to their environments and find ways to fill their basic needs within their surroundings. Let's get started!

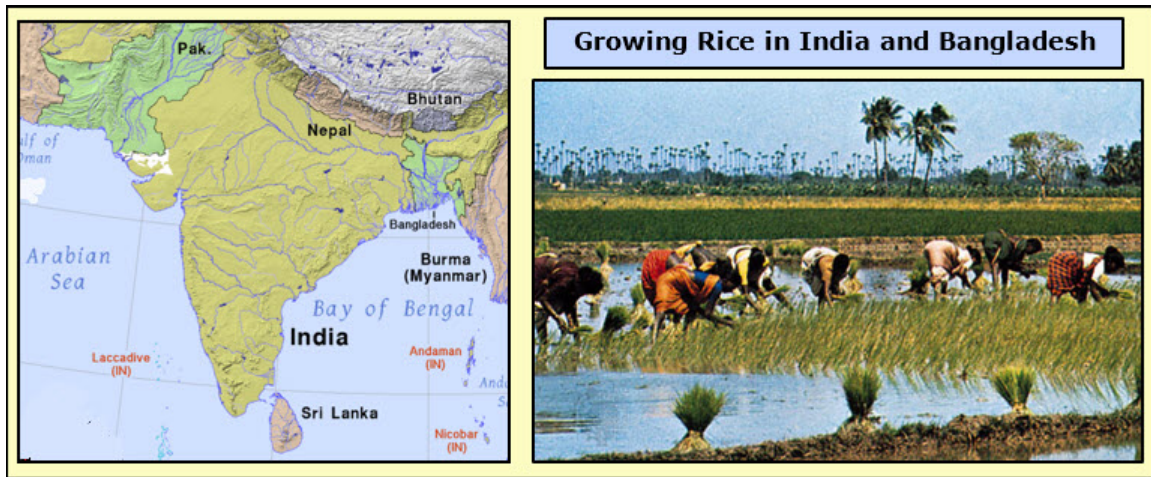
### Physical Environment Influences Human Activity

Although many of us like where we live, no place is perfect. For this reason, people are always looking for ways to adapt to their physical environment. The goal is to make their lives better. A **physical environment** consists of all the factors of nature present in a particular area. These include landforms, waterways, soil conditions, climate, natural resources, plant life, and animal life. Our physical environment influences our human activities. **Human activities** are the things that we do to help us meet our needs and enjoy our lives. In other words, where we live determines how we live. Geographers call this relationship between people and their surroundings **human interaction**. Although not all human activities have had positive results, people have attempted to adapt to their surroundings since the beginning of time. They do this to obtain not just what they want but what they actually need to live and work in the 21<sup>st</sup> century. This includes food, water, clothing, shelter, transportation, and energy.

### What We Really Need: Food and Water

If people are going to survive, there are certain basic necessities that they must have. One of these is food. Today, many countries meet this need through world trade. As a result, some regional differences in what people eat have disappeared over time. Nonetheless, populations in some areas of the world still depend on what they can grow locally. Therefore, farmers grow and people eat what they can produce within their physical environment. For example, the South Asian countries of **India and Bangladesh** are among the world's top producers of **rice**. For rice

to flourish, it needs warm temperatures and enough rain to create flooded fields called **paddies**. The physical environment of this region provides both of these.



Wind conditions here result in heavy rains, or **monsoons**, in the summer months. Although they make the growth of rice possible, there is no way to control the amount of water that arrives during the monsoons. Some years, they cause devastating floods and loss of life. The video below describes the effect of the monsoons on the Indian province of Meghalaya.

On the other hand, places like eastern **Russia, Poland, and Ukraine** have cooler temperatures and less rainfall. Here, the physical environment offers the right conditions for growing **wheat**. Other places with even less rainfall are better suited for grazing cattle and sheep. Although they are too dry for farming, they provide enough rainfall to support grasslands necessary for feeding animals. The physical environment of **Australia and New Zealand** has made these nations of the South Pacific two of the world's largest producers of sheep. Similar conditions in **East Africa** provide the right environment for herding cattle.

## What We Really Need: Clothing

Humans also need clothing to protect them from certain aspects of their physical environment. This influences the style of dress throughout the Eastern Hemisphere. It is another way that people adapt to the climate in which they live. For example, much of North Africa consists of the **Sahara and Arabian Deserts**. Scientists have recorded the Earth's hottest temperatures here. Berbers and Arabs, who live in this region, wear wide, loose clothing made of white or light-colored material. This reflects sunlight and provides ventilation for a cooling effect. The inhabitants are also careful to cover their heads and necks.

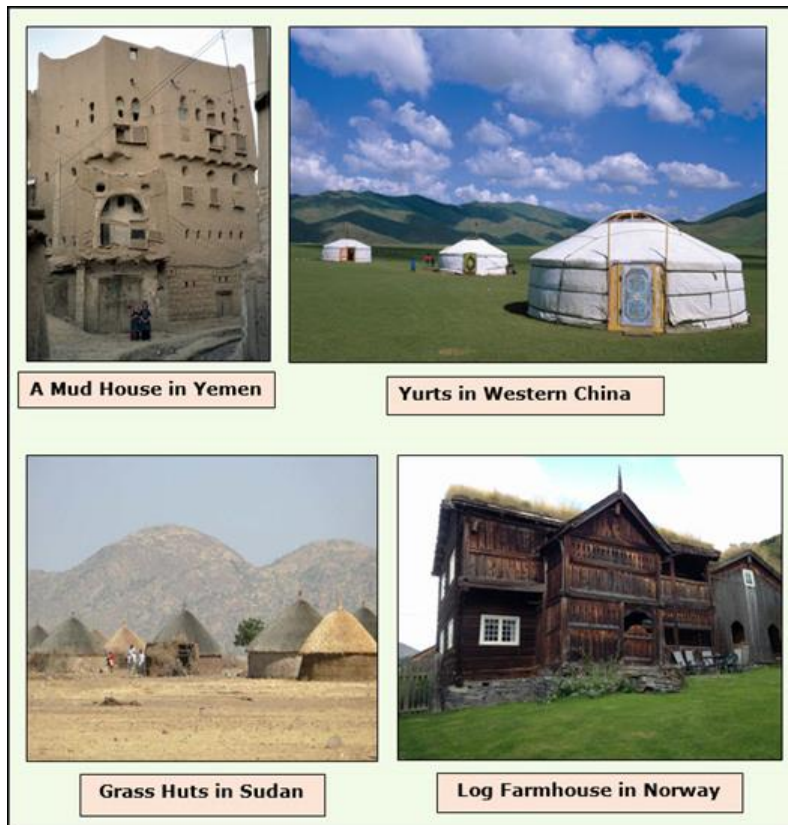


Vietnam, located in Southeast Asia, also has very warm temperatures throughout most of the country. Unlike the Sahara, rainfall here is often heavy. Watch the video listed below to learn how the Vietnamese have adapted their clothing to their physical environment.



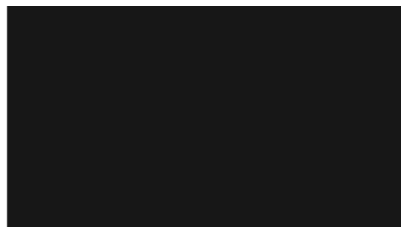
### What We Really Need: Shelter

Another basic requirement for human survival is shelter. A shelter is a structure that provides protection from anything that is harmful or threatening. Over the centuries, people have come to count on these buildings for cover from the weather, security, and storage for food, tools and other possessions. Today, we think of them as our homes. The materials used to build these structures are generally found in an area's physical environment. For example, in the African country of **South Sudan**, there is not enough rainfall to produce lumber for the construction of houses. There is, however, enough moisture to grow grass. The people can not only raise livestock, but they can also use the grasses as building material. This results in the **grass huts** pictured below.



*Images of Sudan and Norway courtesy of Bernard Gagnon and Øyvind S. Johanse*

The cool, dry climate of **Mongolia** permits the growth of grasslands but does not support forests. Bordered by China on the south and Russia on the north, this is another place where only a small supply of wood is available to build homes. Because the grasslands are well-suited for raising animals, herders frequently move from one grazing area to another. For these reasons, the people who live here need houses that are moveable and use only a small amount of lumber. **Yurts** fulfill both requirements. These large, round tents are formed around a few wooden poles tied together with ropes. They are covered with hides, felt, and canvas. In a few hours, they can be dismantled and rebuilt on another site. Watch the video below to learn more about yurts and how the area's physical environment influences the lives of Mongolians.

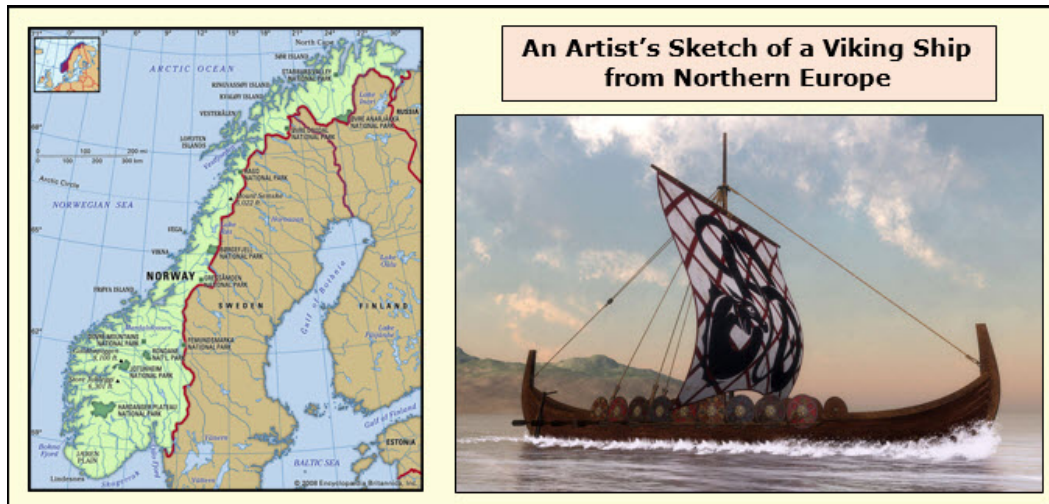


**Yemen**, a nation located in the Middle East, has some dry areas with few resources for construction. People here have adapted by making bricks from mud and straw. You might be surprised to learn that they are able to build homes with several stories like the one pictured above. People living in countries with short summers and colder temperatures require shelters that protect them from ice and snow. **Northern Europe**, for example, has the physical environment that supports forests and supplies timber. For this reason, log homes, like the Norwegian farmhouse pictured here, are common.

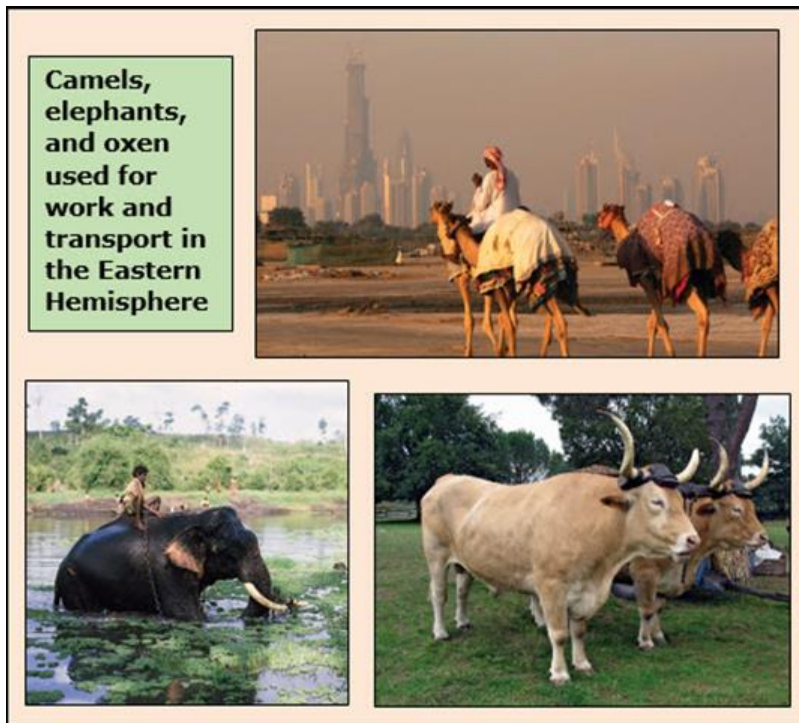


## What We Really Need: Transportation

Transportation is the process of moving something or someone from one place to another. It is necessary because not all the items or living conditions that people need and want are within their reach. Therefore, they have to move themselves or move things to them. Today, airplanes, ships, cars, and trucks are present everywhere in the world. In fact, these forms of transportation are so common that we often take them for granted. Can you imagine what travel was like before mechanized transportation existed? In earlier times, people used water and wind to get from one place to another. A region's physical environment determined its access to water routes and times of the year most suitable for travel. For example, the ancient Greeks, who lived on a peninsula with miles of coastline, sailed from one city-state to another to trade. The **Vikings** of Northern Europe also lived on a peninsula and traveled far from home on **longboats** equipped with sails.



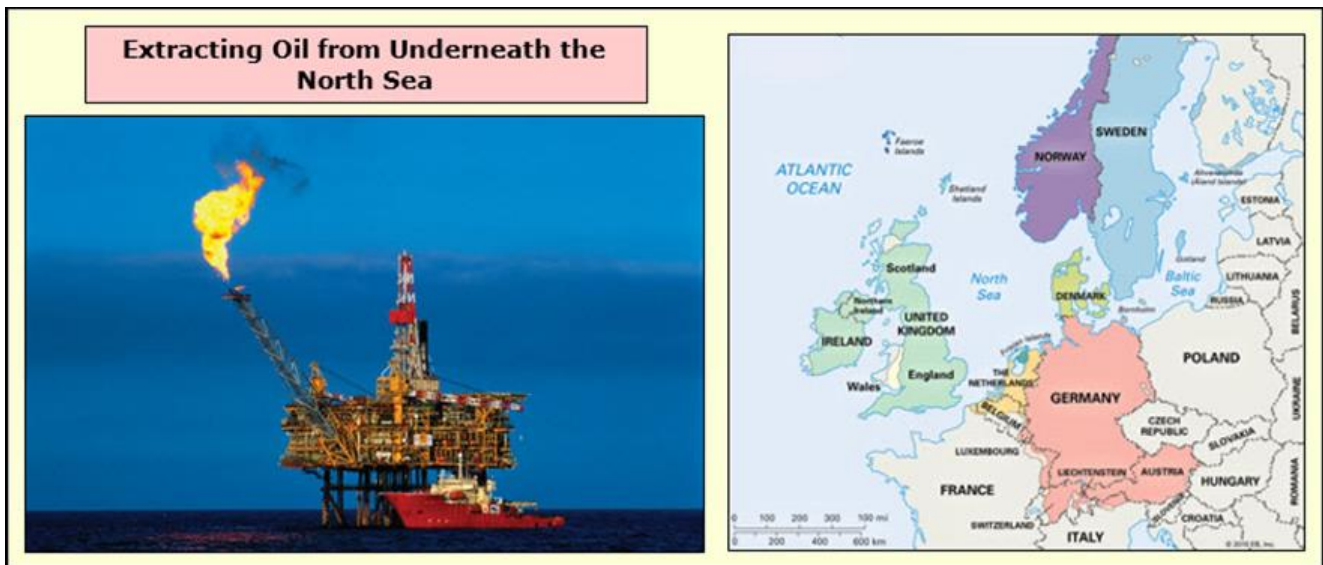
For centuries, people relied on animals to provide overland transportation. The animals that did this work were the ones that survived best in their physical environment. Caravans of camels crossed the deserts and carried goods from Asia to Europe. **Camels** did not need water as frequently as other animals. Their padded feet protected them from the desert heat, and long lashes kept the blowing sand out of their eyes. In other areas of the Eastern Hemisphere, **horses** proved to be the best means of transportation. Along with **oxen**, Europeans also used them to pull plows and to carry heavy loads to market. In India, **elephants** transported people and performed tasks that required strength and intelligence. In the twenty-first century, they continue to transport crops and lumber.



## What We Really Need: Energy

If nations are going to develop industries, they need sources of energy. Some forms of energy, such as wind, water, and sunlight, are **renewable**. This means that they will always be available no matter how much people use them.

**Nonrenewable** resources, on the other hand, cannot be replaced, at least not for millions of years. This group includes coal, natural gas, uranium, and oil. Like other resources, sources of energy are not distributed evenly around the world. For example, the Middle Eastern nations of **Saudi Arabia and Iraq** produce more oil than they use. However, many other nations, such as Japan and the **United Kingdom**, consume more oil than they produce. These countries must buy oil from others or look for alternative sources within their own physical environments.



The search for alternative sources of energy has encouraged the nations of the Eastern Hemisphere to explore several options. In the 1970s, countries bordering the **North Sea** began to drill for oil and natural gas underwater. Today, offshore rigs like the one pictured above stretch four hundred miles across this body of water. The North Sea has not only become Europe's most important oil and natural gas producer but has also decreased the region's dependency on foreign oil.

In an attempt to use less coal, **China** has invested in turbines like those pictured below to create electricity by harnessing the wind. The **Gansu Wind Project** is on track to become the world's largest wind farm. The Chinese government has announced that it expects **wind power** to be an important factor in the growth of the nation's economy over the next decade. Not all wind turbines operate on land. The United Kingdom has placed a series of 175 turbines in the English Channel. Known as the **London Array**, it is the world's largest offshore wind farm. Learn more about this project by watching the video listed below.



### Time for a Quick Review

Before moving on to Unit 5, take a few minutes to review the terms found in Unit 4. Be sure that you can answer the "Can I" questions listed here with a loud "yes".

### **Can I**

...list the basic needs that 21<sup>st</sup> Century people have in common?

...Identify features that cause variations in the physical environment?

...define human-environmental interaction?

...give examples of how people in the Eastern Hemisphere fill their needs by adapting to their physical environment?



### **Additional Activities and Resources**

#### **[Unit 4 Organizer](#)**

**[In the coldest village on Earth, eyelashes freeze and dinner is frozen](#)** (article and quiz courtesy of Newsela)