

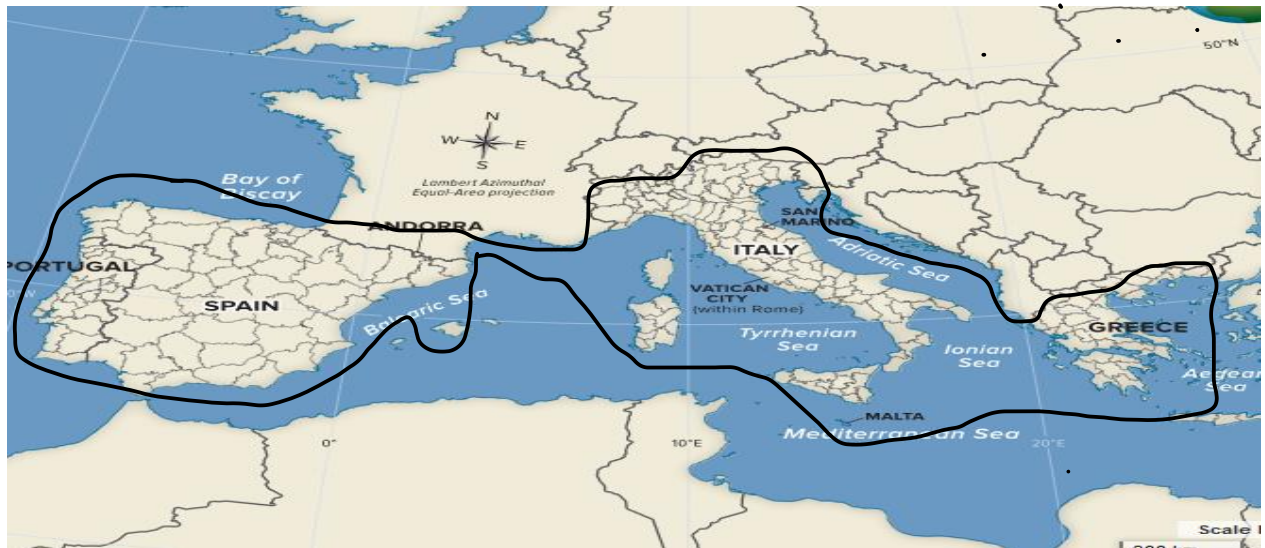
# Physical Geography of Southern Europe: *Content Vocabulary*

**Access** – a way to approach or enter

**Resource** – a usable stock or supply

**Massif** – a body of mountain ranges formed by fault-line activity

**Tungsten** – an extremely rare heavy-metal essential in the high-tech industry



Lesson 1

## Physical Geography of Southern Europe

*It matters because*– The seaports of the Iberian Peninsula, the mountains and rivers of the Italian Peninsula, and the rocky islands of Greece have played important roles in the history of Southern Europe. Its geographic location has made this subregion—which includes the

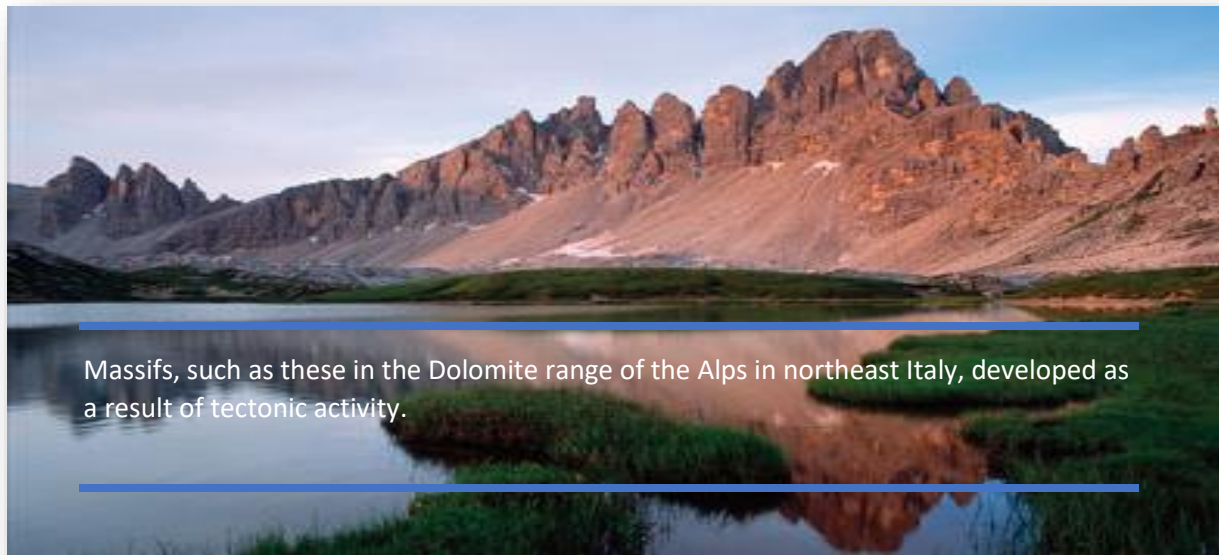
*countries of Italy, Spain, Andorra, Greece, Portugal, Vatican City, Malta, Cyprus, and San Marino—important for trade and agriculture stretching back more than 3,000 years.*

## Landforms

*What two types of physical features dominate Southern Europe's physical geography?*

Geographically, Europe is a continent made up of peninsulas. The southern part of the region includes three major peninsulas: the Iberian Peninsula, the Italian Peninsula, and the Balkan Peninsula.

Extending off southwestern Europe, the Iberian Peninsula is the location of Spain and Portugal. This landmass separates the Atlantic Ocean from the Mediterranean Sea, leaving only the 20-mile-(32-km-) wide Strait of Gibraltar to connect them. Coastal plains give way to the Meseta, a large plateau that makes up most of the interior of the peninsula. To the north, the Iberian Peninsula is separated from the rest of Europe by the Pyrenees, mountains that have isolated the



peninsula's residents for centuries. The independent principality of Andorra is located high in the Pyrenees between modern-day Spain and France. Andorra owes its political autonomy to its isolated location in the mountains.

The most southwestern of Europe's mountain ranges, the Pyrenees stretch from the Bay of Biscay on the Atlantic side of Spain to the Mediterranean Sea. At its widest the Pyrenees range is a daunting 80 miles (128 km) across. The Pyrenees are characterized by flat-topped **massifs**—a body of mountain ranges formed by fault-line activity. The forces of plate tectonics are responsible for the rise of these massifs, and earthquakes occur as the mountains are built up.

Italy occupies the Italian Peninsula, which extends from the south of Europe into the heart of the Mediterranean Sea. Plains cover only about one-third of the Italian Peninsula. The largest is the plain of Lombardy along the Po River in the north. The coastline of Italy varies from high, rocky cliffs to long, sandy beaches, and has several well-sheltered ports to support trade. The Apennine Mountains run down the spine of the peninsula all the way through the center of the large island of Sicily off the southwestern tip of Italy. The range is about 1,245 miles (2,000 km) long.

To the north of the Italian Peninsula lie the majestic Alps, the most recognizable range of mountains on the European continent. They loom over Southern Europe and form a natural barrier between the Italian Peninsula and Northern Europe. Because the Alps are the highest mountain range in Europe, they are also the source of Europe's largest and most important rivers. These rivers flow north into France and Germany or south where they empty into the Mediterranean, Adriatic, and Black Seas.

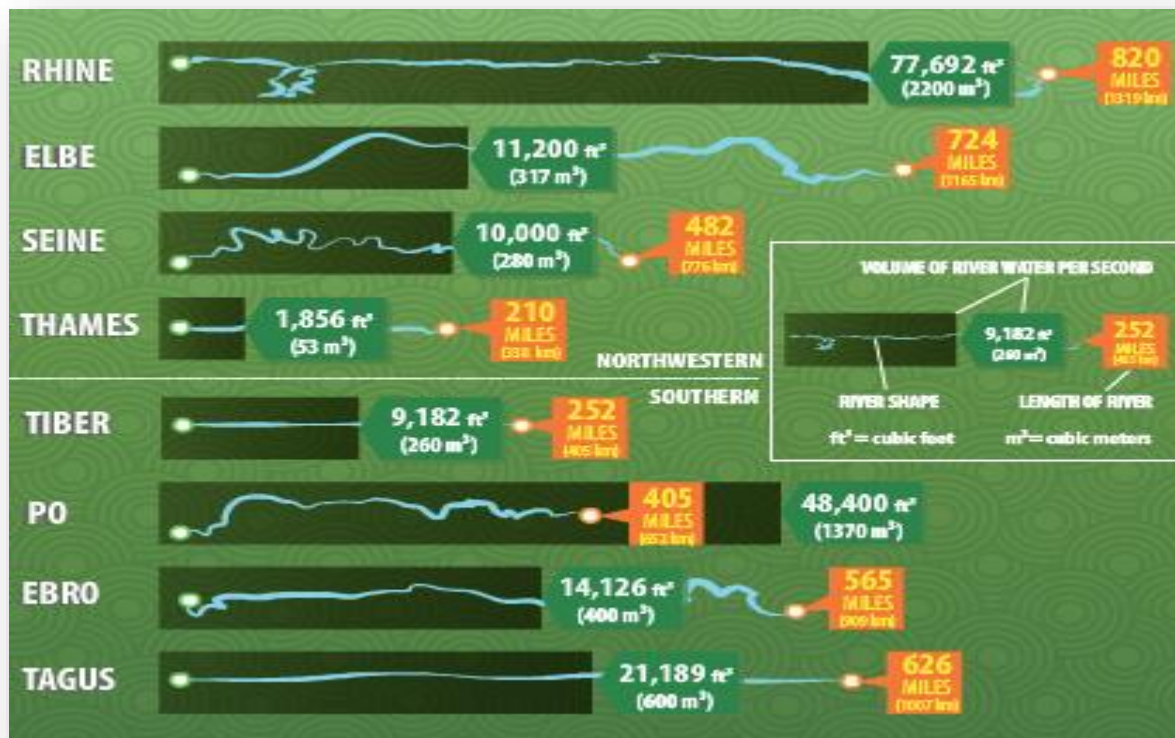
In southeastern Europe, the Balkan Peninsula is bounded by the Adriatic and Ionian Seas to the west and the Aegean and Black Seas to the east. Greece is the southernmost country on the Balkan Peninsula. The numerous mountains on this peninsula have limited the area's potential for communication and development. However, this has been offset by the region's easy **access** to the sea. Greece is known for the large numbers of islands—nearly 2,000—that spread out from its coastline in the Aegean Sea.

The islands that lie south of the mainland of the Iberian, Italian, and Balkan Peninsulas are geographically and politically important to Spain, Italy, and Greece. They serve as trading posts in the Mediterranean. Rugged mountains form the larger islands of Sicily, Sardinia, Corsica, Crete, and Cyprus. Tectonic activity is characteristic of this region. Sicily, the largest of these islands, is dominated by Mount Etna. At 10,700 feet (3,261 m), Mount Etna is Europe's tallest active volcano. Smaller island groups include Spain's Balearic Islands in the Mediterranean, Italy's Lipari Islands in the Tyrrhenian Sea, and the three islands of Malta in the Mediterranean.

## Water Systems

*How do Southern Europe's rivers compare to those of Northwestern Europe?*

The two major rivers on the Iberian Peninsula are the **Tagus** and the **Ebro**. Both rivers play crucial roles in the economy and ecology of the region. However, their roles are limited because they, like all rivers on the Iberian Peninsula, are generally too shallow for large ships.



The Tagus River begins near the eastern edge of Spain and travels westward for 626 miles (1,007 km) through Portugal to the Atlantic Ocean. In northern Spain, nearly 200 tributaries, mostly from the rainy Pyrenees, feed the Ebro River, Spain's longest river. The steep gorges and rocky terrain that this river flows through make it inaccessible to boats. However, the Ebro has been dammed to provide a significant portion of Spain's hydroelectric power. In addition, the resulting reservoirs provide water to an impressive network of irrigation canals that support the agriculture of Spain.

The Apennines form a mountain range that runs down the center of the long and narrow Italian Peninsula. This has created rivers that are steep, short, and relatively narrow and shallow, and not suitable for transportation by boat. In the north, however, the Po River runs through the plain of Lombardy. Although it is Italy's longest and most significant river, it is still only 405 miles (652 km) long.

Venice is located at the mouth of the Po on the Adriatic Sea. The city has built a complicated system of dikes and canals to help control the river's outflow. Efforts to claim marshy areas of the Po Delta for small farms failed due to floods, especially in the 1950s and 1960s. Nevertheless, the drainage basin of the Po River forms Italy's largest and most fertile agricultural plain, covering 27,062 square miles (70,091 sq. km).

The **Tiber River** is Italy's second-longest river and has great historical significance. A mere 252 miles (405 km) long, this short river is nevertheless very important to Italy's economic history. It is the primary water source for the capital, Rome. Civitavecchia, on the lower part of the river, is a significant port and naval harbor for Rome. The Tiber River empties into the Tyrrhenian Sea.

Greece, on the southern tip of the Balkan Peninsula, has a mountainous terrain. Its rivers are short, unsuitable for navigation, and unusable for irrigation. In their upper courses, near their sources, the rivers flow in broad, gently sloping valleys. However, in their middle courses they plunge through basins into narrow gorges. In their lower courses, as they near their mouths, they meander across coastal plains into marshy deltas. Northeastern Greece is home to the **Maritsa River**, located in a low valley full of marshes. The Maritsa marks Greece's border with Turkey. In northeastern Greece, the two main rivers are the **Vardar** and the **Aliákmon**.

Glacial movement in the last ice age did not reach Southern Europe's peninsulas. As a result, the landforms of these countries lack the natural lakes or reservoirs found in Northern Europe and Northwestern Europe. The climate of Southern Europe is also much drier than farther north, another reason why there are fewer rivers and lakes in this subregion

## Climate, Biomes, and Resources

*Why does Southern Europe's climate make it popular with tourists and ideal for agricultural activities?*

Southern Europe's location on the Mediterranean Sea influences the climate and biomes of the subregion. The climate also makes the subregion a popular vacation destination. The subregion is particularly suited for growing grapes, olives, and shrub herbs and raising goats and other livestock.

## Climate Regions and Biomes

The Alps separate two major climate zones: the marine west coast climate to the north and the warm Mediterranean climate of Italy and the Balkans to the south. The Alps block most Atlantic winds from the north, causing less precipitation to fall in Southern Europe. Generally, Southern Europe experiences the warm, dry summers and the mild, rainy winters characteristic of the Mediterranean climate.

The Mediterranean climate of Southern Europe results, in part, from the warm waters of this sea. Average yearly rainfall across Southern Europe is less than 30 inches (76 cm), and most of the yearly rainfall occurs in the winter months. The plants and animals native to the subregion are well-suited for less water and the



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Crops such as olives and grapes grow well in the fertile lands and mild climate of Southern Europe.

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long summer dry period. The coastal areas are covered in chaparral, or shrubs and shrub trees that are drought resistant. Most agriculture in Southern Europe takes place on coastal plains that receive more rainfall and develop a thicker topsoil as a result of runoff and sediment left by rivers.

The ecosystems in the Mediterranean are diverse and ecologically sensitive to climate change. Gorges channel water away from the land, leaving much of the region warm, dry, and covered in scrub plants. The coastal plains have rich sedimentary soil and a high diversity of plant life, and support most of the regional agriculture. However, they are prone to flooding.

## Natural Resources

Italy has few mineral **resources**. Portugal, however, has large deposits of copper. Northern Spain, along the Pyrenees and the Atlantic Ocean, is rich in coal, tin, and tungsten. **Tungsten** is an extremely rare heavy-metal element which is essential in high-tech industries. Spain's mining operations in search of this valuable natural element are unlikely to be reduced.

Both Italy and Spain have benefited from the production of hydroelectricity. Greece has many rivers suitable for producing hydroelectricity. However, Greece has not fully developed these resources.



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*Spain has more natural resources than Italy due to their different geological histories.*

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