

## CLIMATES AND LANDSCAPES OF THE WORLD

The Earth has a multitude of climates.

**Hot climates:** In the intertropical zone, or between the Tropic of Cancer (23° 27'N) and the Tropic of Capricorn (23° 27'S).

**Temperate climates:** From the tropics (23° 27' N and S) to the polar circles (66° 33' N and S).

**Cold climates:** From the polar circles (66° 33' N and S) to the poles (90° N and S) and the zones of high altitude.

There are different types of climates within each main climate zone: hot (equatorial, tropical and desert), temperate (mediterranean, oceanic and continental) and cold (polar and mountain.)

Hot climates:

### **Equatorial**

Location: near the Equator, between 10° N and 10° S.

Average annual temperatures are around 25°C, with little variation (less than 3°C). It is hot all year round.

Total annual precipitation is higher than 2,000 mm. It rains every month.

Rivers: Have abundant and regular flow, so that they go through areas of abundant and constant rainfall.

Vegetation: Abundant and varied. It's called jungle with tall trees and large leaves (ebony tree)

Fauna: Abundant and varied: birds like the toucan; mammals like the jaguar; reptiles like the boa and insects like the termite.

### **Tropical**

Location: between 10° and 30° N and S, at the same latitude as the desert climate.

Average annual temperatures are over 20° C. Variation is between 3°C and 10°C, increasing further from the Equator.

Yearly total precipitation is between 2,000 mm (south-east Asia) and 1,000 mm. There is a dry season.

Rivers: Have abundant but irregular flow because rainfall changes.

Vegetation: Varied. It's called Savannah with scattered trees capable of withstanding the shortage of water in the dry season (baobab).

Fauna: Abundant and varied: giraffes, zebras, lions and insects, birds and reptiles abound.

### **Desert**

Location: It shares latitudes with the tropical climate.

Average yearly temperatures are high, over 20°C. There are big differences between day and night.

Precipitation is scarce, under 250 mm, and irregularly distributed.

Rivers: There aren't rivers, but riverbeds remain dry most of the year and only carry water when it rains. This is called oasis.

Vegetation: is very sparse and consist of small shrubs and plants such as cactuses that survive for their ability to store water or their deep roots.

Fauna: Scarce and little varied, but lizards, scorpions, camels and mice stand out. All of them adapted to the rigorous climate.

### Temperate climates:

#### **Mediterranean**

Location: Between latitudes 30° and 40° in both hemispheres.

Average annual temperature ranges between 10°C and 18°C. Temperature variations are between 12°C and 16°C. Summers are hot and winters are mild.

Precipitation ranges between 900 mm and 300 mm a year. Distribution is irregular and summers are very dry.

Rivers: Have an irregular flow: In summer they carry scarce water and at other times floods may occur.

Vegetation: the forest is formed by perennial trees like holm oaks. In addition, aromatic species like rosemary abound.

Fauna: Varied: deer, vultures, rabbits and the lynx but it is in danger of extinction.

#### **Oceanic or Atlantic**

Location: Between 40° and 50° latitude (and even up to 60) in both hemispheres.

Average annual temperature ranges from 10°C to 15°C. Variation is low (from 10°C to 12°C). Winters are mild and summers are cool.

Annual total precipitation is around 1,000 mm. It is regular throughout the year.

Rivers: Have an abundant and regular flow all the year round.

Vegetation: Forests are formed by deciduous trees like the beech or the oak. In addition, meadows are very common.

Fauna: Varied: bears, squirrels, wolves, worms...

#### **Continental**

North America, Europe and Asia.

The average annual temperature is between 0°C and 10°C. Variation is very high. Winters are long and cold, and summers are short and hot.

Precipitation ranges between 750 mm and 300 mm. It is irregular, with a maximum precipitation in summer.

Rivers: Freeze in winter and thaw in spring.

Vegetation: Is formed by taiga like fir trees capable to withstand low temperatures thanks to its needle-shaped leaves and conical shaped cup.

Fauna: similar to mediterranean and oceanic fauna with deer, bears, squirrels.

## Cold climates:

### **Polar**

Location: Near the poles.

Average annual temperatures are below 0°C. It is never higher than 10°C.

Precipitation is scarce, less than 250 mm annually. It mainly falls as snow.

Rivers: There aren't rivers because the ground is permanently frozen, it is so called permafrost.

Vegetation is very scarce and consists of lichens, mosses and low shrubs like birches.

Fauna: Animals adapted to the cold weather like the penguin or the polar bear.

### **High mountain**

Location: High mountainous areas.

Temperature decreases with altitude (0.6° C every 100 metres). Summers are short and cool.

Winters are long and very cold.

Precipitation increases with altitude, especially in the spots where the wind blows.

Rivers: Are born here.

Vegetation: Varies according to altitude and places.

## **Climates and landscapes of Spain**

The climate of Spain is influenced by the following **factors**:

- **Latitude**: The Iberian Peninsula and the Balearic Islands are in the southern half of the temperate zone. Therefore, they have seasons and receive a lot of sunlight. The Canary Islands, situated in a subtropical latitude, have mild, steady temperatures all year round.

- **Location**: Spain is between two continents Europe and Africa and between two great masses of water the Atlantic Ocean and the Mediterranean Sea. As a result, it receives hot and cold air masses from both land and sea.

- **Sea Influence**: This regulates temperatures along the coasts and on the archipelagos throughout the year. However, there are much greater variations between high and low temperatures inland.

- **Relief**: At higher altitudes, temperatures fall and precipitation increases. The orientation of the mountain determines whether a place receives a lot of wind and sunlight. Mountain ranges act as barriers which block air masses.

Spain has the following climates:

- **Oceanic climate** extends across northern Spain.

Temperatures are mild, with cool winters and warm summers.

Precipitation is abundant and regular (more than 800 mm annually).

The landscape has been humanised. In many areas, deciduous trees like oaks and beeches have been replaced by pine and eucalyptus trees.

**-Mediterranean climate** is characteristic in most of the Peninsula, the Balearic Islands, Ceuta and Melilla. It has three sub-climates:

-Typical:

Winters are cool and summers are hot in most coastal areas.

Precipitation is between 300 and 700 mm annually, and it mainly falls in autumn and spring.

-Continental:

In areas inland, temperatures are very low in winter and high in summer.

Precipitation is between 400 and 600 mm annually.

-Semi-arid:

Winters are mild and summers are hot in the south-east.

Precipitation is less than 300 mm annually. There are long periods of drought.

Mediterranean woodland (holm oaks and cork trees) is no longer very extensive. Intensive land use has transformed these landscapes.

**-Subtropical climate** is characteristic of the Canary Islands.

Temperatures are mild all year round.

Precipitation is scarce and mainly occurs in winter.

Vegetation includes conifers and laurel forests (laurisilva), and endemic species like the dragon tree and the Canary palm.

**-Mountain climate** is found in the highest mountain ranges.

Winters are long and cold, and summers are short and cool.

Precipitation is abundant. Vegetation changes with altitude.