



# CLIMATE ZONES

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## Köppen-Geiger Climate Classification

Af Am As Aw	Tropical climates
BSh BSk BWh BWk	Dry climates
Cfa Cfb Cfc	Temperate climates
Csa Csb Csc	
Dwa Cwb Cwc	
Dfa Dfb Dfc Dfd	Continental climates
Dsa Dsb Dsc Dsd	
Dwa Dwb Dwc Dwd	
EF ET	Polar and alpine climates

Basemap: Gridded population cartogram  
Using data by Kocak et al. (2006), Rubel et al. (2017), GFSM - Columbia University (2018)

**T**he need to understand the complexity of the global climate was relevant long before climate change became a pressing issue. Climate classifications categorise and structure the world's climate in systematic ways. Their aim is to create homogenous groups that show the specific characteristics of the climate in a region. The earliest known schemes date back to the ancient Greeks, who divided the climate into latitudinal zones.

While numerous such classifications exist, two main approaches can be distinguished. Genetic classifications aim to differentiate global climates

by their causes, taking into account atmospheric circulation and its resulting patterns. Empirical classifications, on the other hand, look at the measurable characteristics of different climates and their effects on things such as the biosphere. More recently, there have also been efforts to combine elements of both approaches into an integrative classification system. Within each classification scheme there are main climate zones that are then subdivided into different climate types or sub-types within that zone.

Climate classifications provide an understanding of the complex interrelations of elements and factors

that shape the world's climates and their effects on the land surface. While climate data such as precipitation or temperature can give an understanding of the changing climatic conditions, the differentiation of climate zones adds a qualitative element that generalises these interactions and explains the effects of climate conditions on the geography of the planet.

The world's climate is far more complicated than the early observations made by the ancient Greeks suggested. Climate zones are also one (although far from the only) element in understanding human settlement patterns and characteristics

of civilisations in different parts of the world. A view of these zones from the perspective of people can therefore provide interesting insights into which climates humans have adapted to and the people who live in some of the more extreme climates.

This world map shows the world classified according to the Köppen-Geiger classification (an empirical system), but resized according to the population size of each area. It thus shows which climate types support the greatest populations.

Köppen-Geiger developed their empirical system during the late 19th and early 20th centuries. They divided

the world into five main climate zones, which are indicated by the letters A to E (see map legend). These are then further subdivided according to their seasonal precipitation (indicated by the second letter) and a temperature subgroup (where applicable, represented by the third letter). The main criteria for the classification came from the observation of biomes and the links between climate and vegetation.

The system is still among the most commonly used today and is regularly refined and updated in order to take into account new empirical data and changing climate patterns.

Human populations are mostly found

in more favourable climate zones, which also sustain the necessary basis for agricultural food production. As shown in this map, these are predominantly the tropical and temperate climates. Far fewer humans have adapted to the more extreme cooler or drier climates.

Climate change will cause complex changes to the system. Climate zones shift according to temperature, but as events in recent years are increasingly showing, there are also changes in seasonality and weather patterns. This will inevitably have an impact on the characteristics of the world's climate zones and change the lives and livelihoods of people who live in them.