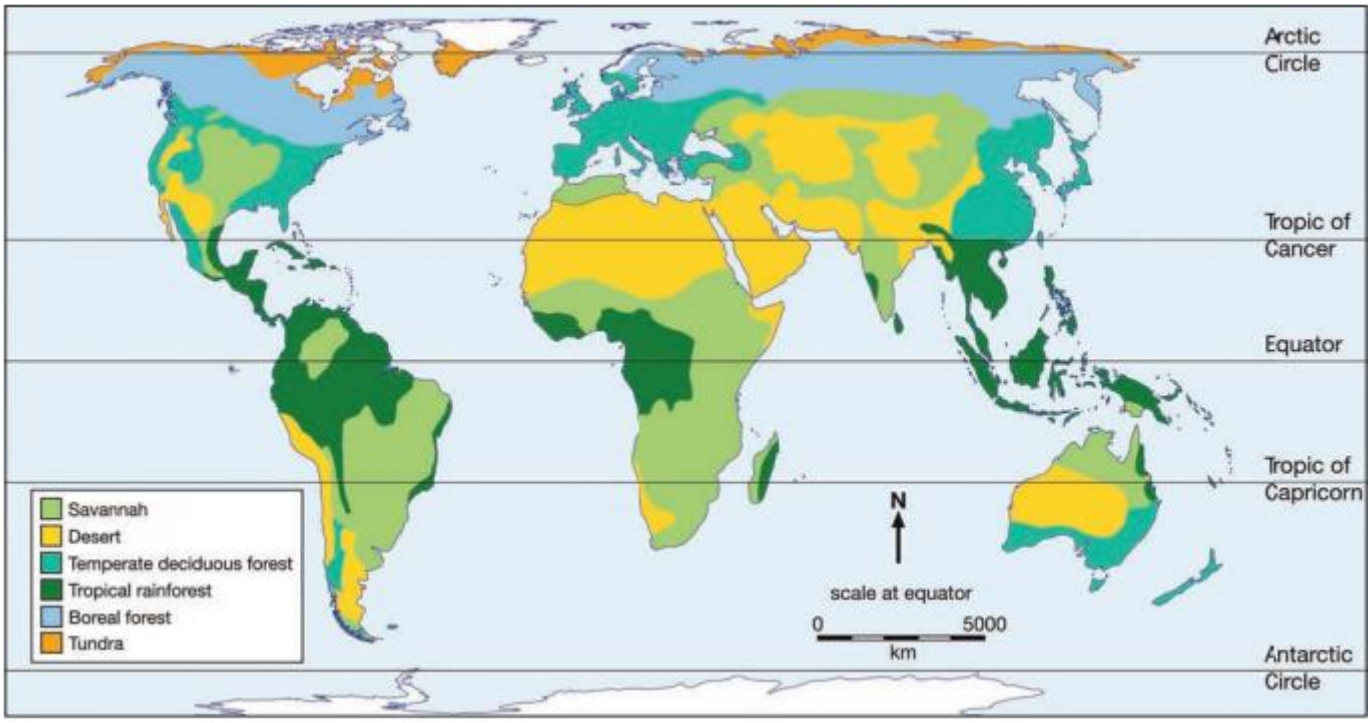
The World's Biomes

What is a biome?

Biomes are large regions of the world with places that share a similar climate, and are home to similar vegetation and animals that have adapted to live in those conditions. There are five major types of biomes: aquatic, grassland, forest, desert and tundra. Some of these biomes can be further divided into more specific categories, such as tropical rainforest, savannah or boreal forest.



Tropical rainforests biome

Tropical rainforests are found in the equatorial climate zone. These Equatorial rainforests are the world's most diverse biome, home to over half of plant and animal species. They consist of broad layers (emergent, main canopy, understorey and forest floor) with different flora and fauna in each layer, and are dominated by broad-leaved trees that form a dense canopy. Characteristic features of rainforest plants include 'drip tips' to help them shed water from the daily downpours, and 'buttress roots' to support the tallest trees. Animals found in tropical rainforests include jaguars, pumas, monkeys, frogs, butterflies, snakes and exotic birds. Tropical rainforests are located in the Amazon region in South America, the Congo basin in West Africa and Southeast Asia. Equatorial rainforest also absorb more than fifty per cent of all atmospheric carbon dioxide each year. Threats to this biome include deforestation and habitat destruction.





Savannah biome

Savannahs are found in the tropical climate zone and are characterised by tall grasses and scattered trees and shrubs. Savannahs can be seen as a geographical transition between tropical rainforests and higher latitude deserts. Grasses and trees have long roots to keep them anchored in poor soils and help them obtain as much moisture from the soil as possible. Animals found in savannahs include large grazing mammals such as elephants, large carnivores including the lion, and small invertebrates such as grasshoppers and termites. Locations include Venezuela, Colombia, Zambia and Australia. Threats to this biome include desertification due to lengthening dry seasons, too little rain and ranching/wheat farming.




Hot desert biome

Hot deserts are based in the desert climate zone. The arid environment means they are characterised by extremely sparse vegetation. Desert plants have tough leathery leaves to help them conserve water and spines to protect them from being eaten. Animals found in hot deserts include reptiles such as lizards and snakes, mammals such as camels and rabbits, and desert birds such as finches and vultures. Some desert animals are nocturnal and live much of their life underground. Hot deserts include the Sahara, Gobi, Namib, Kalahari, Atacama and Australian deserts. Threats to this biome include human activities such as mining, damage from off-road vehicles and tourists digging up cacti for souvenirs.




Temperate forest biome

Temperate forests are found in the temperate climate zone, in eastern North America and most of Europe, China and Japan. They are characterised by broad-leaved deciduous trees (trees which shed their leaves annually) or mixed deciduous and evergreen forests. Deciduous trees lose their leaves during winter, and the resulting leaf litter produces a rich supply of humus for smaller plants and fungi. Temperate forests provide habitats for nesting birds and smaller mammals such as bats and squirrels, predators such as foxes and badgers, and insects, such as centipedes and beetles that live in the leaf litter. Threats to this biome include human activity such as clearing the forests for farming, fuel or building materials.



Boreal forest biome

Apart from the oceans, boreal forest is the world's largest biome. Boreal forests are found in northern latitudes between tundra and temperate forests, where the temperate climate zone gives way to arctic and polar climates, characterised by long winters and moderate to high annual rainfall. There are a limited number of conifer species (pine, spruce, larch and fir), all needle or scale-leaved evergreen trees that bear cones. These trees have adapted to withstand extreme winter cold as their narrow leaves or needles reduce water loss due to transpiration. Thin soils mean they tend to have shallow roots, and downward sloping branches help them to shed snow. Because of the harsh climate boreal forest can support only a limited range of animals, including large herbivorous mammals such as moose or caribou, rodents such as beavers and squirrels, and large hibernating mammals such as bears. It also supports predators such as lynx, wolves and foxes. Boreal forests are found in northern Russia, especially Siberia, Canada and Alaska, Scandinavia and Japan. Threats to this biome include fire (either from human activity or lightning), intensive forest clearance and oil spills from leaking pipelines.



Tundra biome

The world's coldest biome; tundra is located in the arctic or polar climate zones or above the timberline (above which trees cannot grow) on high mountains. The subsoil is permanently frozen, and the topsoil only thaws for a few weeks, during the brief summer. When snow and the topsoil thaw, the surface can become wet and boggy, attracting mosquitoes to the tundra during summer. Few plants can survive in this harsh environment: those that can include grasses, lichens and mosses. Animals adapted to this environment include Arctic foxes, wolves, reindeer, hares and lemmings. Birds include the ptarmigan and several kinds of waterfowl. Tundra is located in the far north of Canada, Scandinavia and Russia, and in South Georgia and the South Sandwich Islands. Threats to this biome include climate change, tourism, oil drilling and oil spills.



