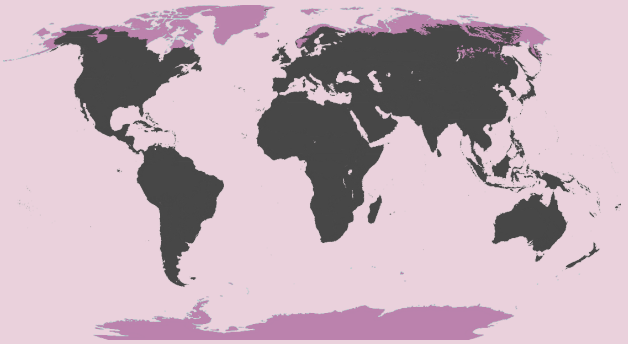
Climate Examples

These two climatic types are examples of **how climate affects the population**, including the human activities that take place here. You are encouraged to research your own climatic types.

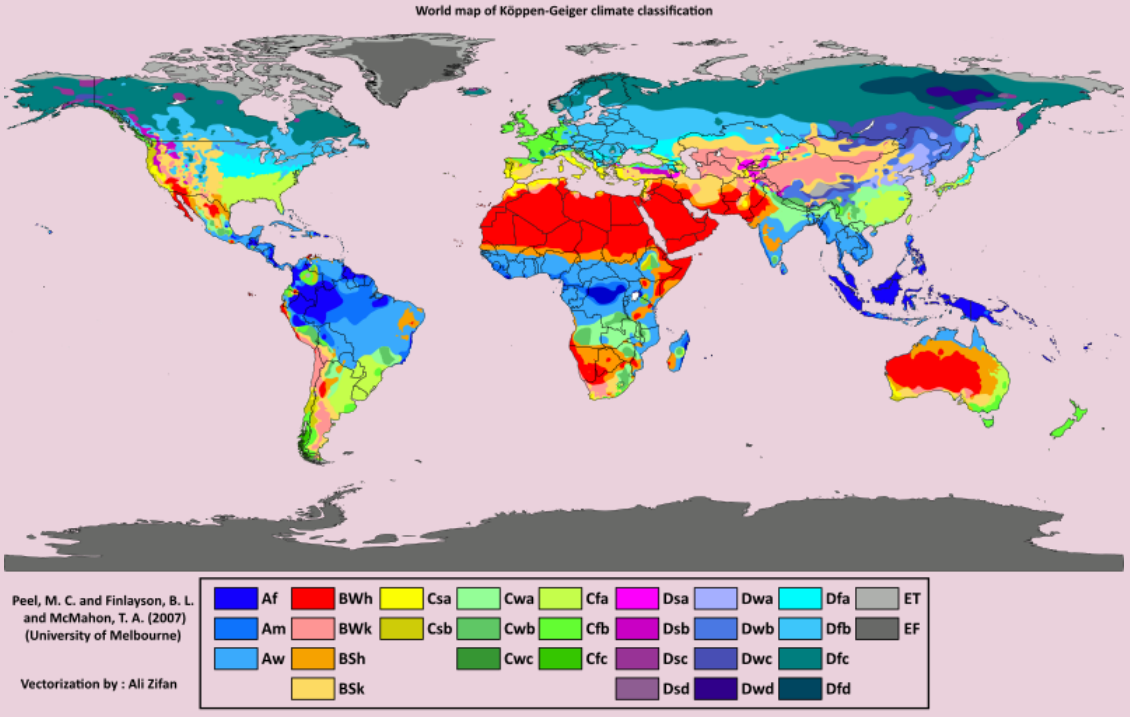
POLAR CLIMATES

Polar climates are located at the **poles** (high **latitudes**) of the Earth. Polar regions lie within the Arctic Circle and the Antarctic Circle.

One definition of a polar climate is that the area lies within the **10°C isotherm**, meaning on the hottest months (Northern Hemisphere - July; Southern Hemisphere - January) the average temperature stays **below** 10°C.



According to Koppen Classification, polar climates can be divided into tundra climates (ET) and ice cap climates (EF), shown in the Koppen Classification map below:



(Source: https://commons.wikimedia.org/w/index.php?curid=47086879)

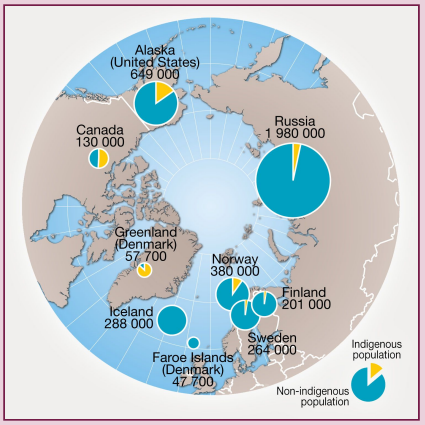
Characteristics of Polar Climates:

- **Consistently below freezing temperatures**
- **Very little precipitation** and the majority of precipitation is snow
- Few plants and animals can thrive due to **undernourished, frozen soils** and **harsh climate**.

How climate affects the population:

As polar climates are **extremely cold and dry**, the amount of people that can be supported is low. **Human activities** are limited by the polar climate, which consequently dictates population numbers.

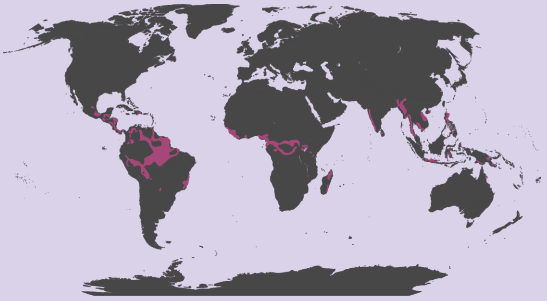
- Population **numbers** are **very low** within polar regions due to the harsh conditions, which make it difficult to obtain food, build, or develop a large-scale society. Antarctica is so cold and barren that there are no native residents; only scientific researchers live there (and even this number does not reach the tens of thousands). Around **4 million** people live in **Arctic regions**, and there are few **indigenous residents** due to development being so **limited in the past** (when there were few means of surviving in the cold).



- It is difficult to **build buildings and infrastructure** due to the frozen ground (**permafrost**). This surface will easily **crack**, is hard to build into, and can also **melt** when temperatures fluctuate, leaving developments unstable. Populations have had to **adapt** when developing their communities, such as building their houses on **stilts** to avoid the frost, or building on large slabs of **concrete**.
- General **day-to-day life** is severely affected by living in such a cold environment. Clothing must be suitable, and occupations are limited and often seasonal (oil, gas and coal work, tourism, fishing etc.).
- Agricultural productivity is low due to the poor soil and the harsh climate, especially arable crops. Therefore, food mainly comes from **meat** and **fish** rather than crops. This type of agricultural system is usually **subsistence**, with the intention of feeding the population rather than selling yields for profit.
- **Global warming** is causing areas of **permafrost to decrease** and temperatures to rise, meaning **arable land** in polar climates (or at least subpolar climates) is increasing. Human activities are therefore changing in these areas, with arable farming becoming a more attainable source of food in some regions.

TROPICAL MONSOON CLIMATES

Tropical monsoon climates are located within the **tropics and subtropics** that surround the equator. They are located in Central and South America, Central Africa, and South and Southeast Asia.



Characteristics of Tropical Monsoon Climates:

- Very **warm**, **humid** climate
- Temperatures are consistently above **18°C**
- **Dry seasons** and **wet seasons** known as 'monsoon seasons' (a monsoon is a change in wind direction, usually bringing very rainy wet seasons)

How climate affects the population:

- More than **60%** of the world's population live in areas affected by a monsoonal climate, although this is mainly due to **urbanisation**.

- **Agriculture** is based around monsoon seasons, and it can be very beneficial for crops such as **rice**. Paddy fields are concentrated within monsoonal Asia, as the wet seasons bring **waterlogged land** that is perfect for growing **semiaquatic rice**. The intense rain also partially contributes to the **flat land**, as the flooding has created smooth floodplains. Due to the large agricultural industry that has developed within these regions, **commercial rice fields** that use **irrigation** sourced from wetter regions have developed.

- Many people choose to move to these areas from surrounding areas because of the **opportunities in farming** and better food security, **causing overpopulation**. Urbanisation (which stems from food security and agriculture in the region) has also massively contributed to overpopulation within **urban areas**, causing poor quality of life.

- People must also **adapt** to the monsoon climate, and the risks of an **abnormality in the seasons**, e.g. **prolonged dry seasons** and **shorter wet seasons** (or vice versa) can be detrimental to crops. The monsoon does not always bring the same amounts of rainfall, meaning **wheat, rice, tea, vegetables, and farm animals** can all suffer from droughts and floods. Not only does this affect farmers' livelihoods, but also the region's food supplies. Furthermore, floods and droughts caused by the monsoon can **directly affect the population**, e.g. the 2014 monsoon caused nearly 300 people to die in Pakistan and India, mainly due to flooding causing landslides.