

What's the Difference Between Weather and Climate?

Today, children always hear stories from their parents and grandparents about how snow was always piled up to their waists as they walked to school. Children today in most areas of the country haven't experienced those kinds of impressive snow-packed winters. The change in recent winter snows indicate that the climate has changed since their parents were young.

What Weather Means

Weather is basically the way the atmosphere is behaving in a certain place, mainly with respect to its effects upon life and human activities. The difference between weather and climate is that weather consists of the short-term (minutes to months) changes in the atmosphere. Most people think of weather in terms of temperature, humidity, precipitation, cloudiness, brightness, visibility, wind, and atmospheric pressure, as in high and low pressure.

In most places, weather can change from minute-to-minute, hour-to-hour, day-to-day, and season-to-season. Climate, however, is the average of weather over time and space. An easy way to remember the difference is that climate is what you expect, like a very hot summer, and weather is what you get, like a hot day with pop-up thunderstorms.

What Climate Means

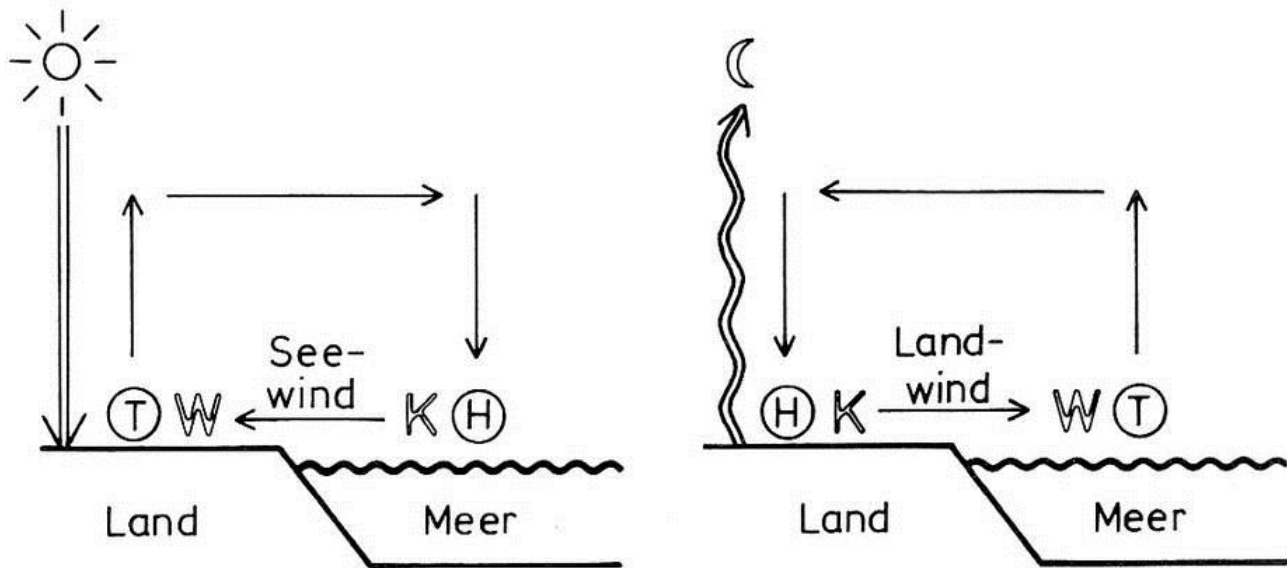
In short, climate is the description of the long-term pattern of weather in a particular area. Some scientists define climate as the average weather for a particular region and time period, usually taken over 30-years. It's really an average pattern of weather for a particular region.

When scientists talk about climate, they're looking at averages of precipitation, temperature, humidity, sunshine, wind velocity, phenomena such as fog, frost, and hail storms, and other measures of the weather that occur over a long period in a particular place. For example, after looking at rain data, lake and reservoir levels, and satellite data, scientists can tell if during a summer, an area was drier than average. If it continues to be drier than normal over the course of many summers, than it would likely indicate a change in the climate.

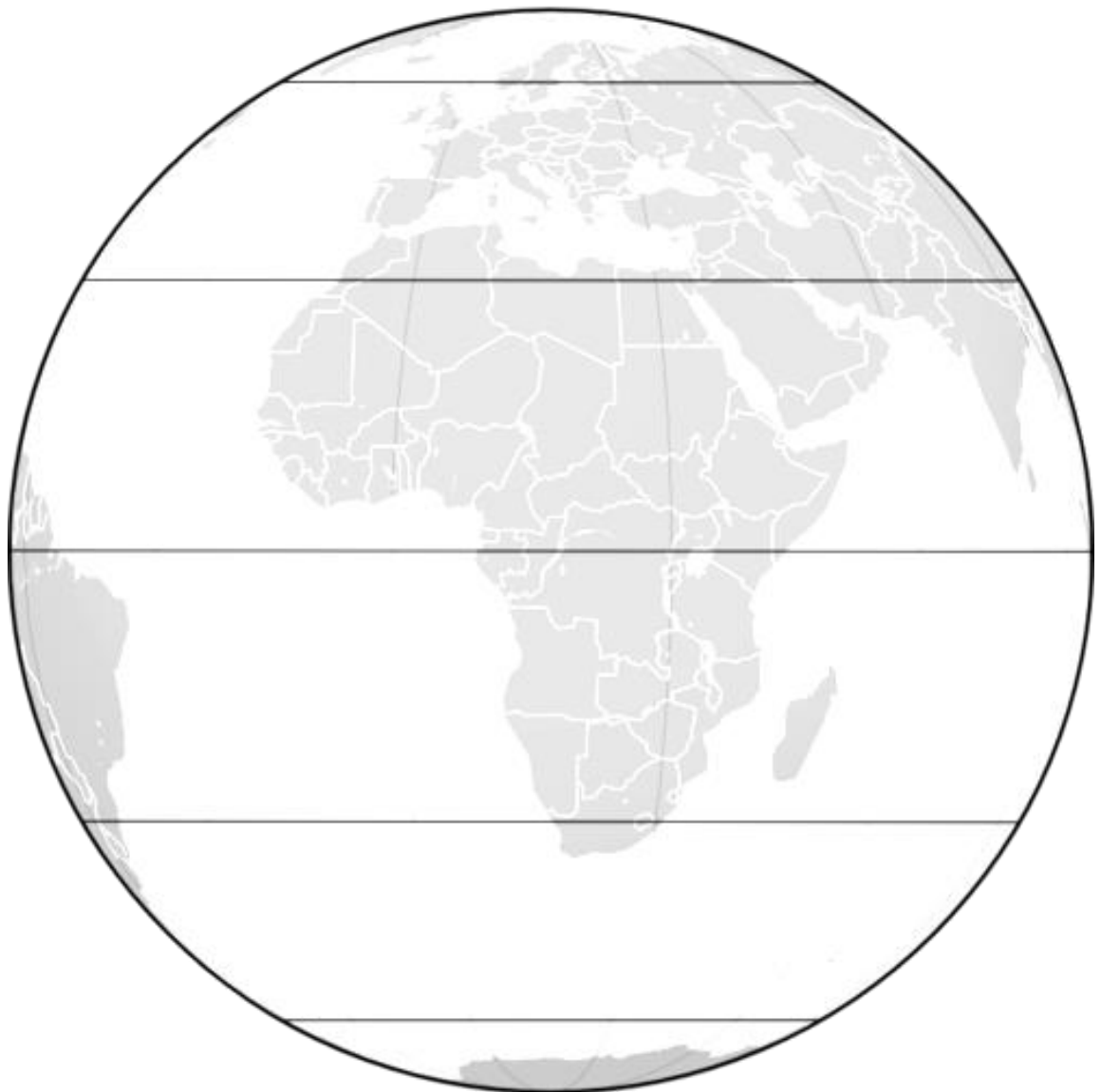
So what's the difference?

The World's Wind System

On a local level



On a global level



Images taken from (08/11/15):

http://www.ima-umwelt.de/typo3temp/_processed_/csm_modellierung_thermische_windsysteme_skizze_land_seewind_2f5de9302d.jpg

http://wikis.zum.de/zum/images/thumb/0/0a/Earth_%28orthographic_projection%29.png/500px-Earth_%28orthographic_projection%29.png