

Climate

Climate, sometimes understood as the "average weather," is defined as **"the measurement of the mean and variability of relevant quantities of certain variables (such as temperature, precipitation or wind) over a period of time"**, ranging from months to thousands or millions of years. The classical period is 30 years, as defined by the World Meteorological Organization. Climate in a wider sense is the state, including a statistical description, of the climate system.

(WMO)

Climate is the long-term average of the weather in a given place. (EPA)

Weather Versus Climate

Weather is a specific event or condition that happens over a period of hours or days. For example, a thunderstorm, a snowstorm, and today's temperature all describe the weather. Climate refers to the average weather conditions in a place over many years (usually at least 30 years). (epa.gov)

Climate system and climate change

The global system consisting of five major components: the atmosphere, the hydrosphere, the cryosphere, the lithosphere and the biosphere and the interactions between them. The climate system changes in time under the influence of its own internal dynamics and because of external forcings such as volcanic eruptions, solar variations, orbital forcing, and anthropogenic forcings such as the changing composition of the atmosphere and land-use change.

(IPCC)