

Title of Chapter in Book: Weather

Author: Akan Bassey Williams

Outlet: *Encyclopaedia of Global Warming and Climate Change* (3rd ed., pp. 1083-1087). Thousand Oaks, CA: SAGE Publications Inc., USA.

doi: <http://dx.doi.org/10.4135/9781412963893.n710>

Abstract: Weather is the physical condition or state of the atmosphere at any given time. It is what is happening in the atmosphere at any time or over any short period of time. If there were no atmosphere, there would be no weather. The principal elements of weather are temperature, pressure, winds, moisture, and precipitation. Thus, weather of any place is the sum total of its temperature, pressure, winds, moisture, and precipitation conditions for a short period of a day or a week. Temperature expresses intensity of heat. Unequal distribution of temperature over the Earth's surface causes differences in atmospheric pressure, which causes winds. Moisture is present in the atmosphere as water vapor, often condensed into clouds. It may be precipitated in the form of rain, hail, sleet, or snow. The capacity of air to gather and retain water vapor is largely dependent on its temperature. The higher the temperature, the greater the capacity of air to hold moisture. On cooling, the air is not able to retain all the moisture it gathers while warm. This leads to condensation and precipitation.