
Wind, Permanent winds and Types of wind

Wind

Wind can be defined as air currents or moving the mass of air from high-pressure areas to low-pressure areas. Typically, air under high pressure normally moves towards areas under low pressure. Winds are formed by moving air masses that begins right from the sun's radiation. As the sun's radiation unevenly heats the land, the air above the surfaces warms up and starts to rise because it becomes less dense. As the air rise, low atmospheric pressure is created. As a result, the air with cooler temperatures sink and the sinking continues to create higher atmospheric pressure.

Permanent winds

The winds blowing almost in the same direction throughout the year are called prevailing or permanent winds. These are also called as invariable or planetary winds because they involve larger areas of the globe. The direction of these winds blowing from high-pressure areas to the low-pressure areas is influenced by the rotation of the earth. Such winds do not blow from north to south or vice versa. This influence of earth's rotation on the formation of permanent winds is called the Coriolis effect. There are three types of permanent winds as shown below -

Trade winds

Trade winds are the dominating patterns of easterly surface winds present at the tropics in the direction of the Earth's equator.

Westerlies

These winds blow from subtropical high-pressure belts to low-pressure belts and confine themselves to the temperate zone of the earth.

Polar Winds

Such winds blow in frigid zones from polar high-pressure belts to the sub-polar low-pressure belts. These are also known as polar easterlies as they blow from the eastern direction.