

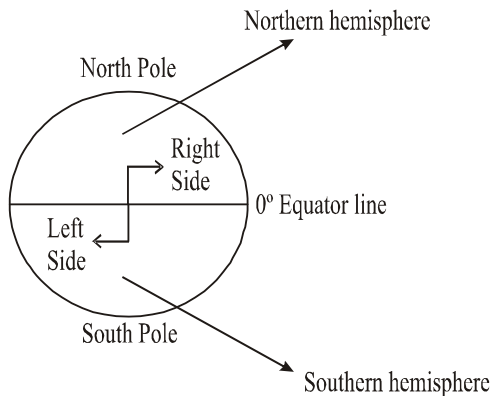
13. WIND

Defination

- Due to horizontal abnormalities, air moves from the areas of high pressure to the areas of low pressure.
- This horizontally moving air is called wind.

Movement of the wind

- (a) **Because of Coriolis force all winds are deflected to the right clockwise in the Northern Hemisphere.**

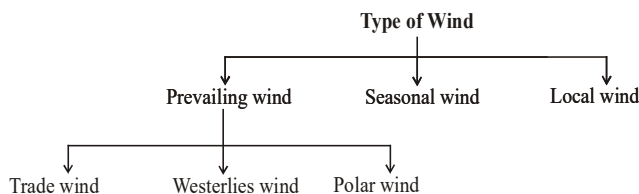


Movement of the wind

- (b) **While they are deflected to the left anti-clock wise in the Southern Hemisphere with respect to the rotating earth.**

- Coriolis force also increases with the increasing wind velocity.
- Since this phenomenon was firstly proved by a France scientist Ferrel, it is called Ferrel's Law

Types of winds



Prevailing wind

- It's other name is planetary wind
- It's also known as permanent wind
- The winds blowing almost in the same direction throughout the year are called prevailing winds.
- Prevailing wind are three types

(a) Trade winds

(b) Westerlines winds

(c) Polar winds

(a) Trade winds–

- These are the permanent winds blowing in both the hemispheres.
- Trade winds are the winds having fixed paths.
- Trade winds converge and rise causing convectional rainfall in the equatorial region near the equator.

(b) Westerlies winds–

- These winds are best developed in the 40°–65° latitudes.
- Westerlies wind known as various names due to its nature.

(a) **On 40° S Latitudes-** These wind known as Roaring forties.

(b) **On 50° S Latitudes-** These wind known as Furious Fifties.

(c) **On 60° S Latitudes-** These wind known as Shrieking Sixties.

- These names are given by the sailors who were being effected by those westerlies.

(c) Polar winds–

- Polar wind blows from the polar high-pressure belts to the sub-polar low pressure belts.
- These wind have very low temperature.

2. Seasonal winds -

- Seasonal winds change their direction of blowing with the changing seasons.
- These are also called as Periodic winds.
- Seasonal winds are of three types-
 - (a) Monsoon winds.
 - (b) Land and Sea Breezes.
 - (c) Mountain and Valley Breezes.

3. Local winds -

- These winds blow due to local variation in the temperature and pressure.
- These wind influence a very small area.
- Hot local winds raise the temperature of the blowing area