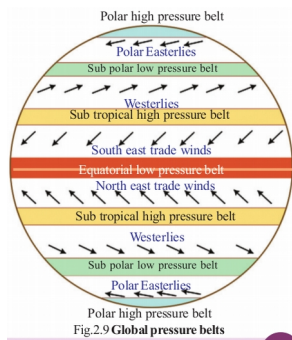


## Winds

### Planetary winds :

- The winds developed between the global pressure belts.



#### a) Trade winds :

- Winds blow from sub tropical high pressure belts to equatorial low pressure belt are called trade winds.
- ◆ They blow from north east (north east trade wind) in the northern hemisphere and south east (south east trade wind) in the south hemisphere.
- ◆ The zone where the two pressure belts converge together is called Inter Tropical Convergence Zone (ITCZ)

#### b) Westerlies :

- Blow from sub tropical high pressure zones to sub polar low pressure zone.
- ◆ Direction of these winds is mostly from west.
- ◆ Stronger in southern hemisphere due to vast expanse of ocean.
- ◆ Known as Roaring Forties (40<sup>o</sup> latitudes ), Furious Fifties (50<sup>o</sup> latitudes) and Shrieking Sixties (60<sup>o</sup> latitudes).

#### c) Polar Easterlies :

- Blow from polar high pressure belt to sub polar low pressure belt.
- ◆ Blow from the east in both the hemispheres.
- ◆ Play a significant role in determining the climate of North America, Eastern Europe and Russia.

## Periodic winds

- Winds that repeat at regular intervals of time .  
Eg: Monsoon winds, sea breeze, land breeze, mountain breeze and valley breeze

#### a) Monsoon winds :

- ◆ The term 'monsoon' is derived from the Arab word 'mousom'.
- Winds that change direction in accordance with season.
- ◆ Monsoon is the seasonal reversal of wind in a year.

#### Factors responsible for the formation of monsoon wind :

- ◆ The apparent movement of the sun.
- ◆ Coriolis force.
- ◆ Difference in heating.

- There are two types of monsoon winds : South West monsoon and North East monsoon

**South West monsoon wind :**

■ Low pressure forms along the region through which Tropic of Cancer passes due to the high temperature during summer.

- ◆ As a result wind is blown from ocean to land.
- ◆ When the South East trade winds cross the Equator they get deflected due to coriolis effect and blow as South West monsoon winds.

**North East monsoon wind :**

■ High pressure forms over the Asian land mass and low pressure over Indian ocean during winter.

- ◆ As a result wind blows from land to ocean. These are the North East monsoon winds.