Convection current originating from the Tibetian plateau diverge horizontally in upper atmosphere and acquires bipolor movement, to propagate towards North and South. The southern branch of this upper tropospheric Air motion established itself over Indian subcontinent and get the regard of easterly Jet. This upper tropospheric easterly Jet further get influenced by the upper tropospheric low pressure condition prevailing over the surface of Medagascar Mascarnes Island group. In this change atmospheric scherio the propagating Easterly Jet cross equator and finaly sink over the surface of Medagascar and Mascarnes Island.

The subsidence of Easterly Jet not only create a strong high pressure condition over these Islands but also intensify or strengthen prominance of subtropical High pressure belt. Now the prevailing south-East trade winds originates from medgascar mascarnes Ireland group and transform into south-west monsoon after crossing equator neas Africa.

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These moisture ~~leaden~~ south-west monsoon branches able to cause sufficient precipitation over India and finally reaches upto the low pressure vaccum of Tibetean plateau. It should be noted that the circulation that prevails between the plateau of Tibet and the madagascar mascarnis Island group from June to September is regarded as monsoon circulation which is nothing but the thermodynamic modification of Hadley-circulation It also means that the whole climatology of India get influenced by South tropical Jet during winter and easterly Jet in the month of Summer.

Date
15/09/20

Geography by Apurv Sir

Oceanic Currents

Oceanic Currents are the horizontal movement of water mass from one place to another in a definite direction under the influence of several factors like, temperature, pressure, salinity, density wind motion, gravitational force, coriolis force etc. Currents are the medium that transfer tremendous amount of energy from one place to another and are responsible to create a several climatic zones over the surface of earth. They are also responsible to regulate several climatological atmospheric phenomenas like Evaporation, condensation, cloud formation, atmospheric circulation, precipitation etc.

factors Influencing the origin of Oceanic Currents

1. Temperature

If other factors are constant then always the movement of oceanic currents would take place from high temperature zones toward low, however with the rise in temperature if the rate

of evaporation also increases then the mass movement of water would take place from low temperature zones toward high that is low evaporating zone toward high at the same time with the rise in temperature and rate of evaporation if the amount of precipitation also increases over the surface then again the movement of water mass would take place from high precipitating zone toward low.

2. Atmospheric Pressure

If other factors are constant then always the propogation of oceanic current shall take place from low pressure areas towards high. however If the prevailing wind factor becomes more prominent then the propogation would always takes place from high pressure zones to low.

3. Salinity and Density

Salinity is normally expressed as part per thousand ie amount of salt in gram dissolved in 1 litre sample sea water.

Under oceanographical illustration it is clear that in areas where the level of salinity is high, the degree of density would also be high or more. Subsequently in the zone of high density the sea water level would normally remain low to develop a slope from low saline areas toward high. To follow this slope oceanic currents also propogate from low saline area towards high.

Gravition and CORIOLIS force

Gravition force resist the mass movement and attract the object to the centre of earth. It is maximum over poles and also high in the lowes layers of the ocean than surface layers. CORIOLIS force on the other hand deflect an object from its normal path. It is maximum over poles and least over equator

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OCEANIC CURRENTS of North PACIFIC OCEAN

Oceanic currents of Northern pacific get influenced by the direction and propogation of easterlies and westerlies, the prevailing north east trade winds able to carry sufficient amount of warm oceanic watermass from the coast of Mexico towards phillipines as North equatorial current. This prevailing north equatorial current able to accumulate sufficient amount of warm water mass along the cost of philippines to develope a slope in south-north direction, and to generate a warm oceanic current between philippines and Japan called as KUROSHIO current reaching to the south of Japan the KUROSHIO current bifurcates into two branches, the western branch of its is regarded as TSHOSHIMA current.

The propogating KUROSHIO Current also Covergence with cold OYASHIO current near the cost of Japan eventually the cold and warm oceanic water mass of respective currents get dragged by westerlies in west-east direction to generate one more oceanic current from

Japan to the south of Alaska, called as north pacific drift. By this resultant phenomena of horizontal mass movement abundant amount of water mass piled up to the south of Alaska by which a slope develop in North-South direction along the western margin of North America. This slope will apparently give rise to California current which finally merges with North equatorial current and completes the whole circulation of northern pacific ocean.

OCEANIC CURRENTS of South Pacific Ocean

South Equatorial currents originate from the ~~east~~ coast of Peru under the influence of south-east trade wind to accumulate sufficient amount of warm water mass along the ~~east~~ coast of Indonesia and north east Australia. By this resultant phenomena a slope develope in north south direction to generate a warm oceanic current along the eastern coast of Australia called as eastern Australian current reaching alone the south eastern coast of Australia the eastern Australian current comes under the influence of westerlies and transform

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Into south pacific drift eventually the south pacific drift able to accumulate sufficient amount of watermass along the ~~east~~ coast of chilli to generate the propogation of a cold oceanic current in south north direction called as Peru or Humbolt current. finally the Peru current merges with South Equatorial current near Peru to complete the whole circulation of oceanic current in southern Pacific.