

## **WELCOME TO VIRTUAL CLASS STD VII**

**SUBJECT : GEOGRAPHY  
CHAPTER NUMBER: 8  
CHAPTER NAME : THE HYDROSPHERE**

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**CHANGING YOUR TOMORROW**

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# The Hydrosphere

## Ocean currents

Ocean currents are like river flow in oceans. They represent a regular volume of water in a definite path and direction.

### Caused of ocean current:-

- Variations in temperature of ocean water
  - The rotation of Earth
  - The prevailing winds
  - Salinity in water
  - The shape of the land
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- Ocean currents are streams of water flowing constantly on the ocean's surface in definite directions. They are caused by differences in the temperature and salinity of water, by wind, solar heating and gravity.
  - The winds majorly responsible for creating ocean currents are the Westerlies and the Trade winds. Owing to the earth's rotation, winds blow anti-clockwise in the northern hemisphere and clockwise in the southern hemisphere. This pattern of blowing winds is called the Coriolis effect.

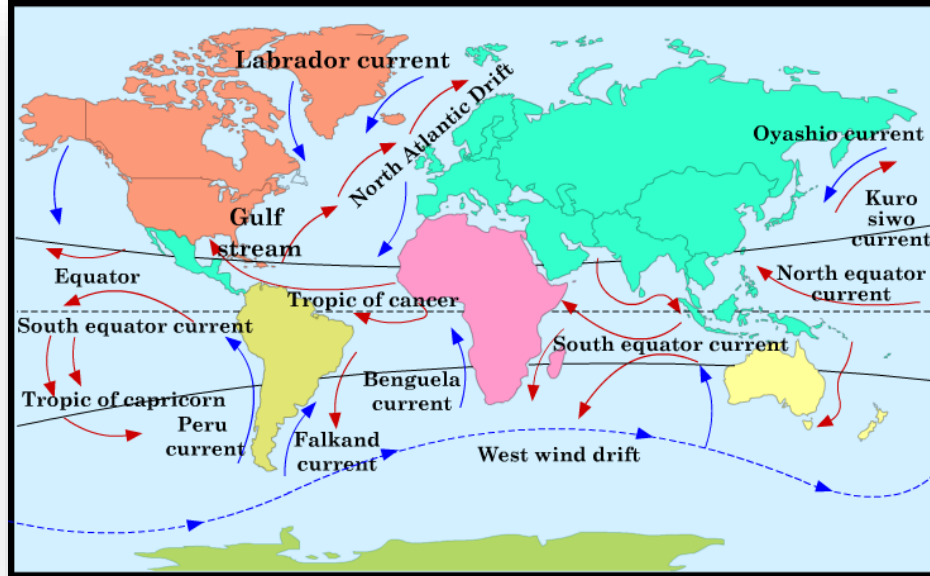
- Ocean currents also move in the same pattern as winds i.e. anti-clockwise in the northern hemisphere and clockwise in the southern hemisphere. The ocean currents can be warm or cold, depending on their origin. Warm ocean currents originate near the equator and move towards the poles or higher latitudes while cold currents originate near the poles or higher latitudes and move towards the tropics or lower latitude.
- The ocean currents greatly influence the temperature of an area. In areas where warm and cold currents meet, the temperature falls, giving rise to foggy conditions. However, mixing of warm and cold currents supports a rich marine life.

There are two types of current **warm ocean current and cold ocean current**. Warm ocean current moves from equatorial region to polar regions and cold currents move from polar to equatorial regions.

## Effects of ocean currents:

The ocean currents influence the temperature conditions of the coastal areas.

- Warm currents increase the temperature over land surface.
- The areas where warm and cold currents meet, provide the best fishing grounds of the world.
- Seas Around Japan and the eastern coast of North America are such examples.
- The areas where a warm and cold current meet, also experience foggy weather making it difficult for navigation.



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