Ocean Salinity

Introduction

- Salinity means the total content of dissolved salts in Sea or Ocean.
- The average salinity of the ocean – 35.2% or 35 parts of salt in 1000 parts of water.
- It is generally expressed as ‘parts per thousand’ (ppt).
- A salinity of 24.7 % has been regarded as the upper limit to fix ‘brackish water’.
- Isohalines are used on maps to show the salinity of different places.
- Isohalines – lines joining places having an equal degree of salinity.

Sources of salinity

- The salts dissolved in the ocean waters have their origin on the continental landmasses.
- Carried into the oceans by rain, rivers, groundwater table, sea-waves, and glaciers.
- Some of the dissolved salts have their origin from the ocean bottom.
- The dead and decomposing organic matter also adds to the salinity of the oceans.

Factors affecting ocean salinity

- The salinity of water in the surface layer of oceans is influenced by Evaporation, Precipitation
- In the coastal regions, the surface salinity is influenced by the freshwater flow from rivers.
- In the Polar region, the surface salinity is influenced by the processes of freezing and melting of ice.
- The wind also influences the salinity of an area by moving water to other areas.
- The ocean currents contribute to the salinity variations.
- The change in the density or temperature influences the salinity of water in an area.

Role of Ocean Salinity

- Salinity determines compressibility, thermal expansion, temperature, density, absorption of insolation, evaporation and humidity.
- It also influences the composition and movement of the sea: water and the distribution of fish and other marine resources.