Reverse Osmosis(RO)

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Why in news?

The NGT had issued an order stating that RO purifiers to be banned if they had less than 500 mg/litre total dissolved solids (TDS) in water. The Supreme Court rejected the NGT order and requested the RO Association to approach the Center with its complaints.

What is reverse osmosis?

- Osmosis is the movement of solvent molecules from the region of pure solvent (area of low solute concentration) towards the solution (area of higher solute concentration) through a semipermeable membrane.
- Using the concept of osmosis and osmotic pressure, a process called reverse osmosis (RO) has been devised.
- RO is a process in which a large pressure is applied to the solution side so as to overcome the osmotic pressure.
- This pushes the pure solvent under pressure, out of the solution through the semipermeable membrane.
- This process finds a number of practical applications like purification of drinking water, removal of salt from water molecules, removal of effluents from water, etc.