OCEAN CURRENTS

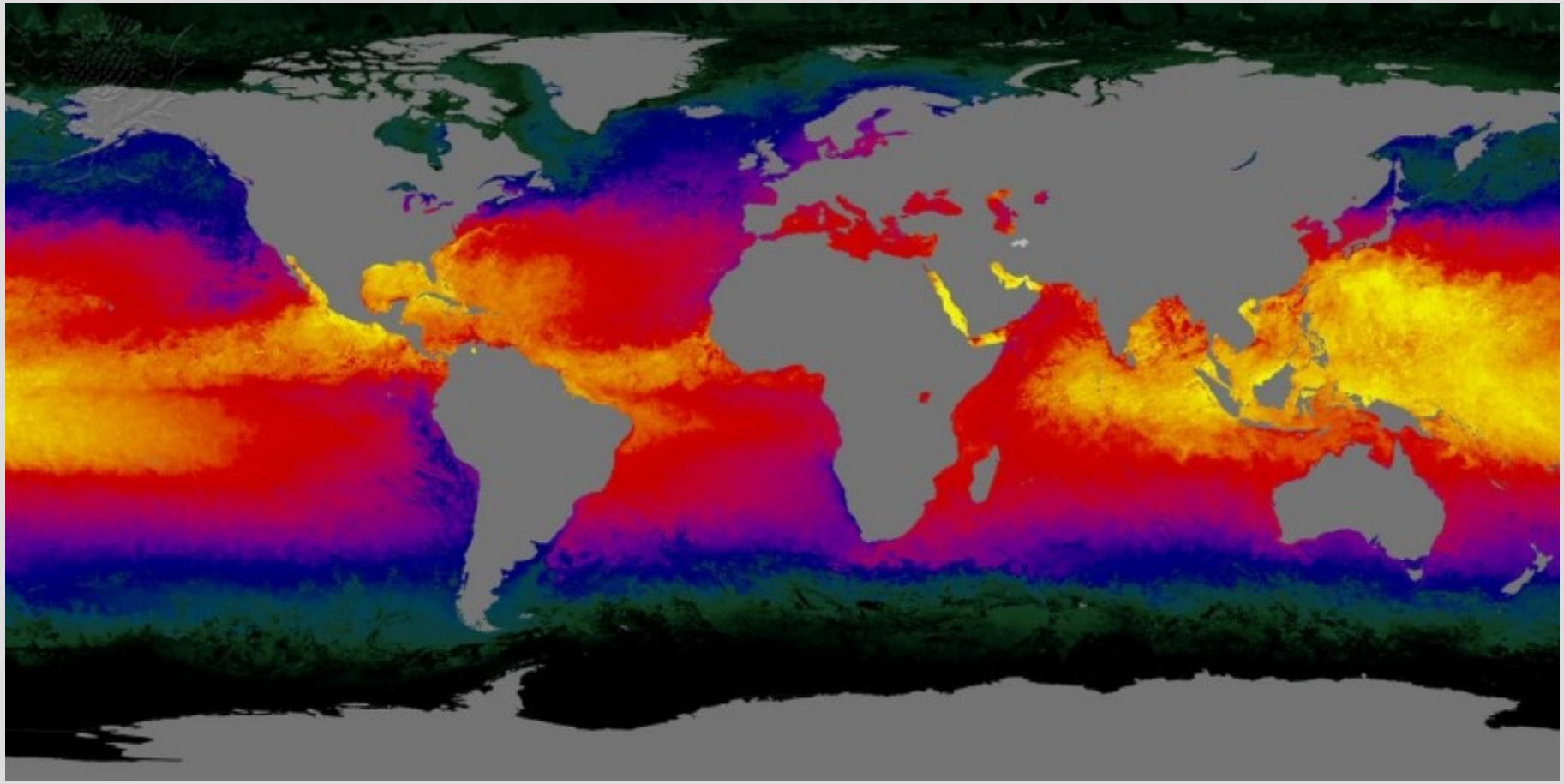
TERMS TO REVIEW

Temperature	Density	Salinity
• Measured on arbitrary scales indicating which way energy will flow (hotter, more energy. Cooler, less energy)	• The ratio of a mass to a unit volume specified as grams per cubic centimeter	• A measure of the total concentration of dissolved solids in seawater, usually expressed as parts per thousand

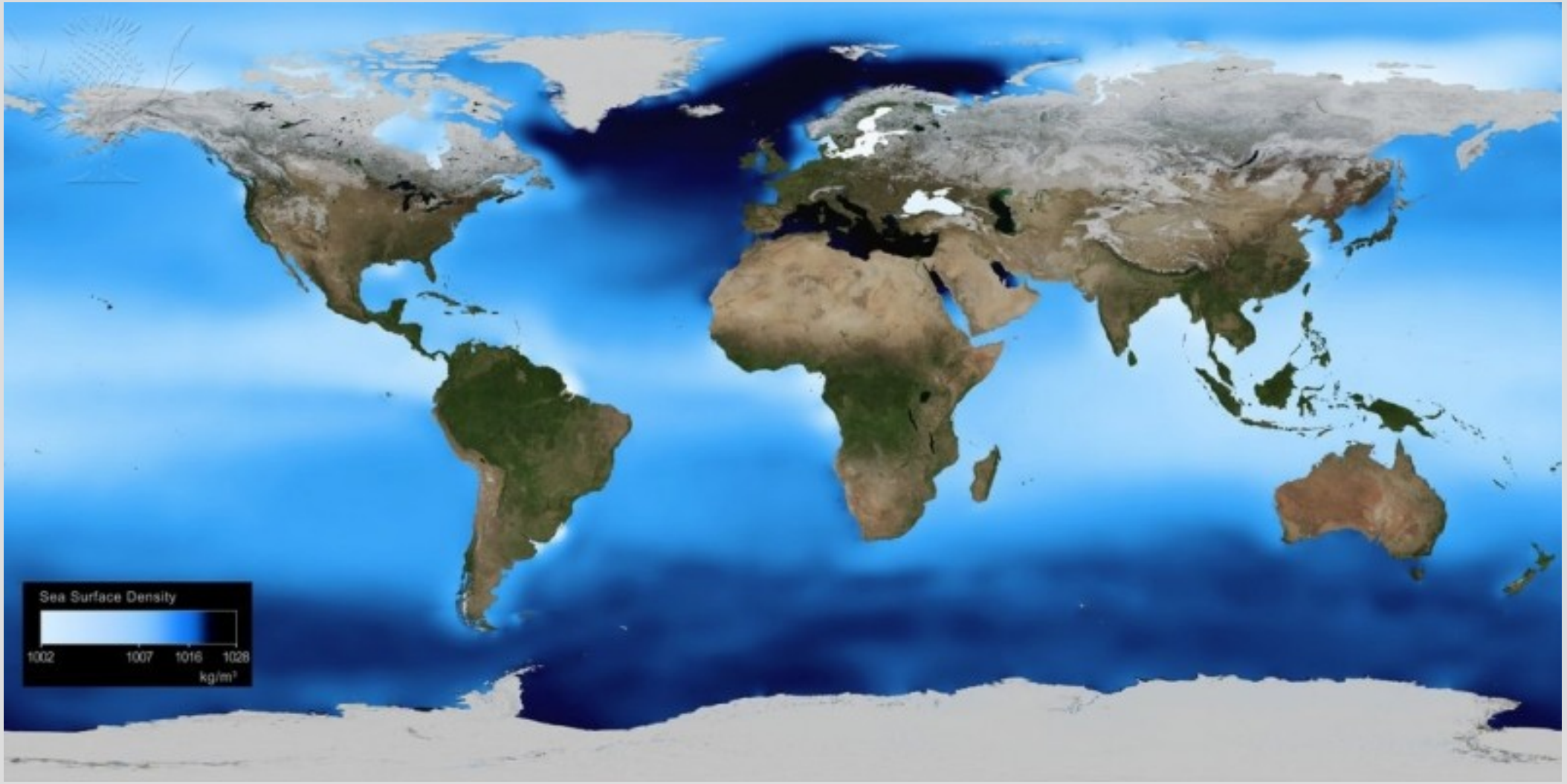
TEMPERATURE DISRUPTION

Demonstration

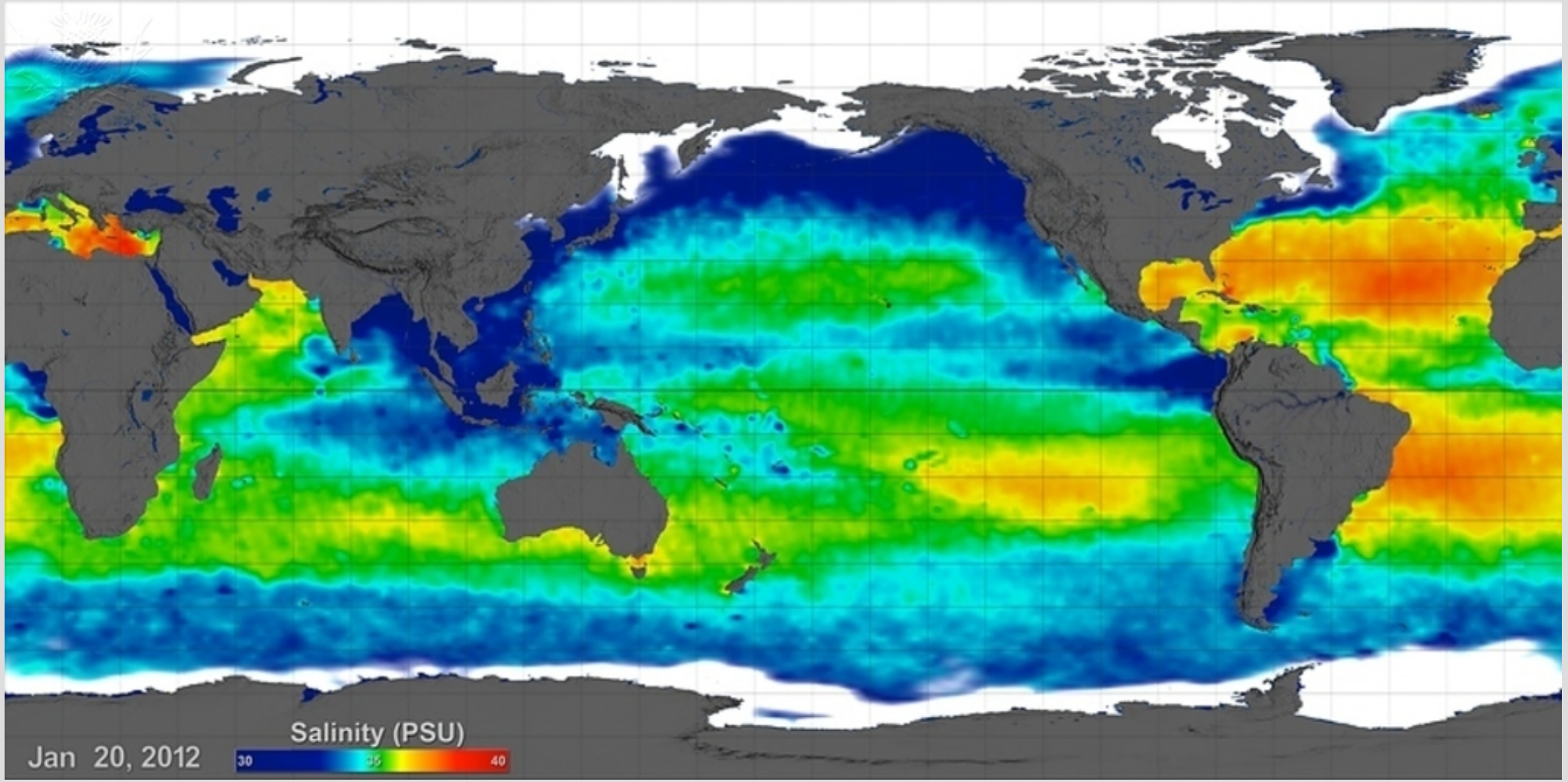
TEMPERATURE DISTRIBUTION ON EARTH –OCEAN SURFACE TEMP.



DENSITY DISTRIBUTION



SALINITY DISTRIBUTION

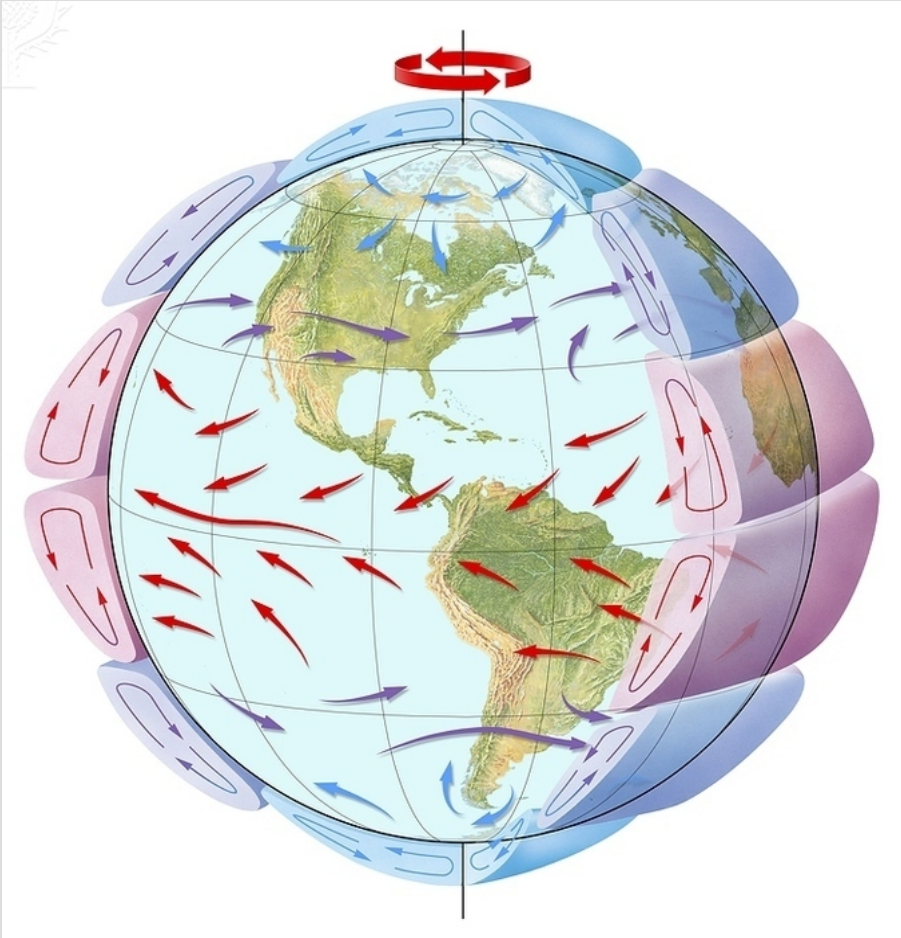


WHAT DRIVES OCEAN CURRENTS?

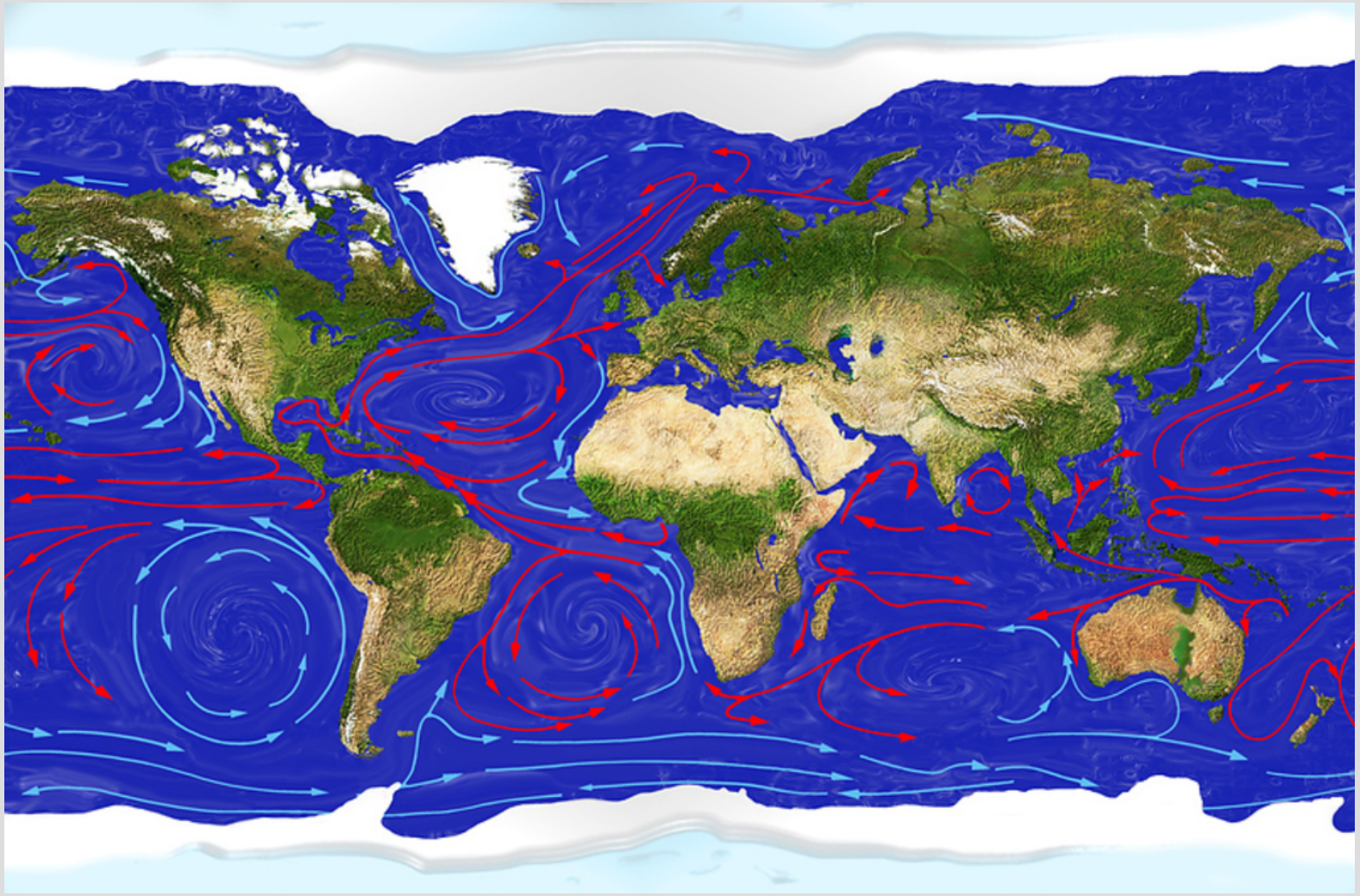
Wind

Density Differences

WIND PATTERNS

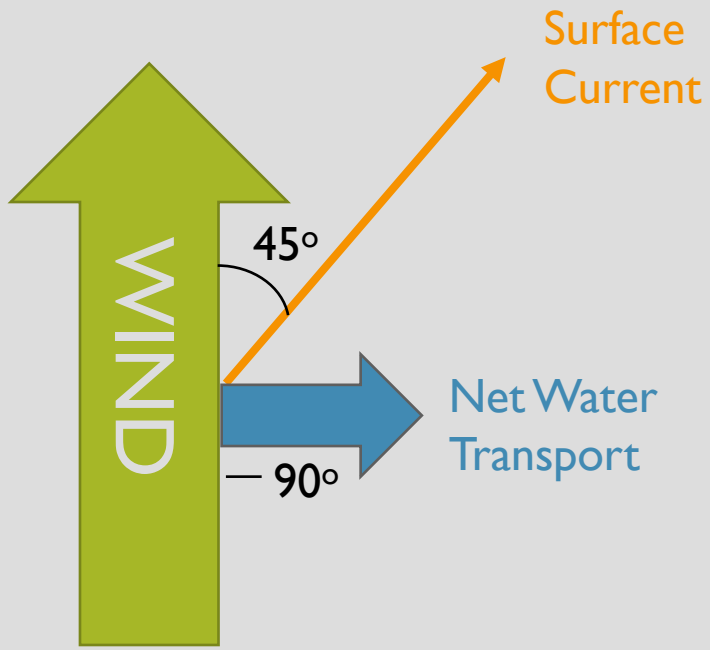


SURFACE CURRENTS



EKMAN TRANSPORT

- Defn: The net flow of water to the right of the wind in the Northern Hemisphere and to the left in the Southern Hemisphere which arises as a consequence of the Coriolis deflection



Occurring in Northern Hemisphere

HOW TO INCREASE WATER DENSITY

Increase Salinity

Decrease Temperature

HOW DO WE TRACK CURRENTS?

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