

Closer Look: Global Ocean Conveyor

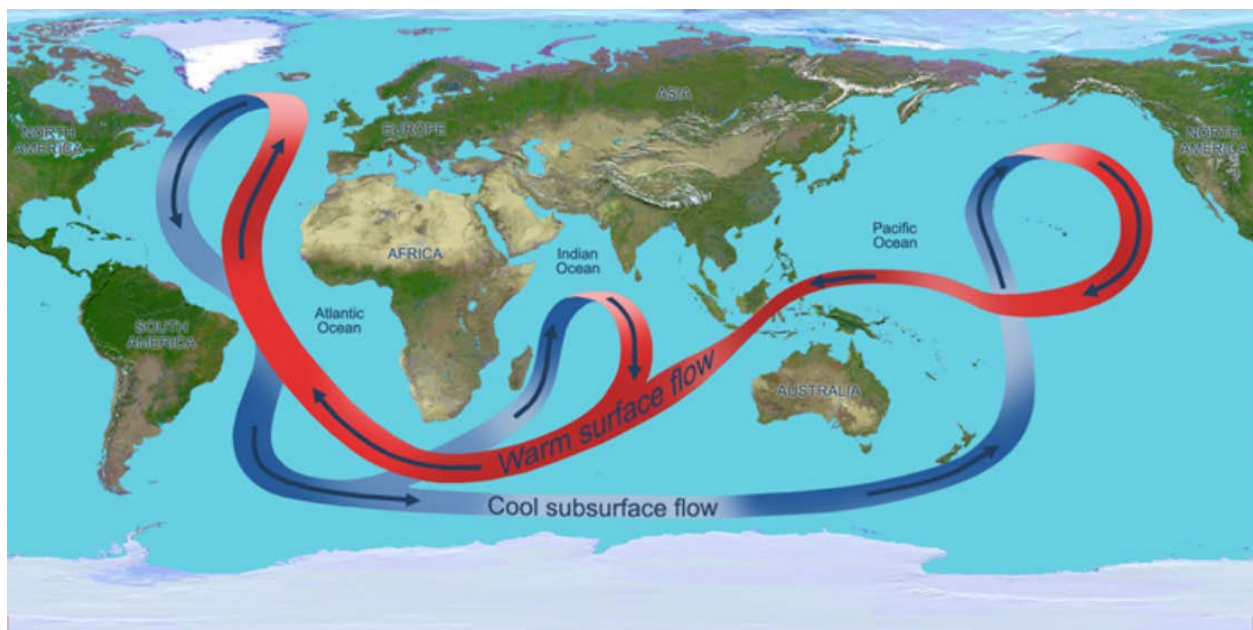


Illustration of the global ocean conveyor

Global ocean conveyor (or, thermohaline circulation) is a large-scale water circulation pattern in the world's oceans (see illustration above). This pattern is driven by changes in water temperature and salinity that alter the density of water. Salt water is more dense than freshwater, and cold water is more dense than warm water. Therefore, cold, salty water is the most dense.



Closer Look:

[Watch](#) a video
about the
global ocean
conveyor.

More dense water sinks to the bottom of the ocean while less dense water remains on the surface. In the Arctic region, the cold, salty ocean water therefore normally sinks. However, there is a concern that as the Arctic warms and more sea ice melts, the influx of freshwater will make the seawater at high latitudes less dense. The less dense water will not be able to sink. This will contribute to the slowdown of the global ocean conveyor, which will change the climate of the European and North American continents because their climate is moderated by the warm surface ocean currents, shown by the red arrow in the figure.