

# Vital ocean current on verge of collapse

By 2050, melting ice sheets could weaken or even halt an essential Atlantic Ocean current that transports heat, salt and nutrients around the globe, according to a new study, with catastrophic consequences

## THERMOHALINE CIRCULATION

Warm, less saline water flows north, where it cools to form sea ice

**1** *Atlantic Meridional Overturning Circulation*

**2** Deep water formation: cooler, more saline, denser water, sinks

*Atlantic Ocean*

Deep current

Surface current

*Indian Ocean*

Deep water loses salinity and rises to surface

**3**

*ANTARCTICA*

Takes around 1,000 years for water to complete cycle

**Melting Greenland ice sheet lowering salinity, sea ice not forming, overturning slowing**

*Antarctic Circumpolar Current*

Low salinity

*Sea level rise*

*Storms, 10°C fall in temperature*

*Monsoon disruption*

*Drought*

*Amazon drought*

High salinity