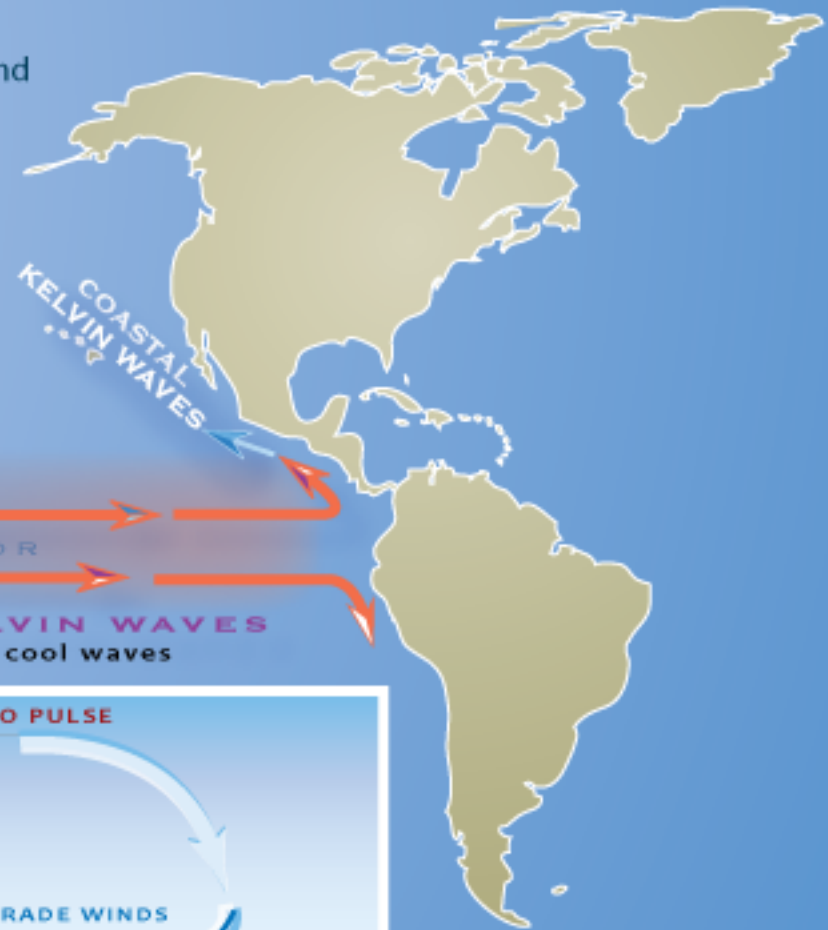


- 1 The tropical trade winds blow from east to west. This blows the warm surface ocean water westward, forming super-heated pools.
- 2 These hot pools warm the atmosphere, causing the air to rise. When the warm wet air rises high enough it reaches the cooler upper level atmosphere. This creates rain and growing storms.
- 3 Rising air sucks up the surrounding atmosphere. Winds from the east and west flow up into the storm. Trade winds to the east of the storm are strengthened. Waters become even warmer.
- 4 To the west, the west to east flow of wind towards the storm weakens the trade winds. The rain cools and churns the surface, allowing cold subsurface waters to well upward.
- 5 As the MJO storms drift eastward, it leaves a trail of cooled water. It takes several weeks for the waters to warm up again.



storms drift eastward, leaving cool water in their wake

5

CHANGE IN WINDS (MJO)

EQUATOR

EQUATORIAL KELVIN WAVES alternate warm & cool waves

COOL MJO PULSE

WARM MJO PULSE

trade winds weaken

cooling surface water

4

water gradually rewarms

cool water rising & mixing

1

winds strengthen

TROPICAL TRADE WINDS

warm surface water

2

3

MJOs and the Kelvin Waves they create