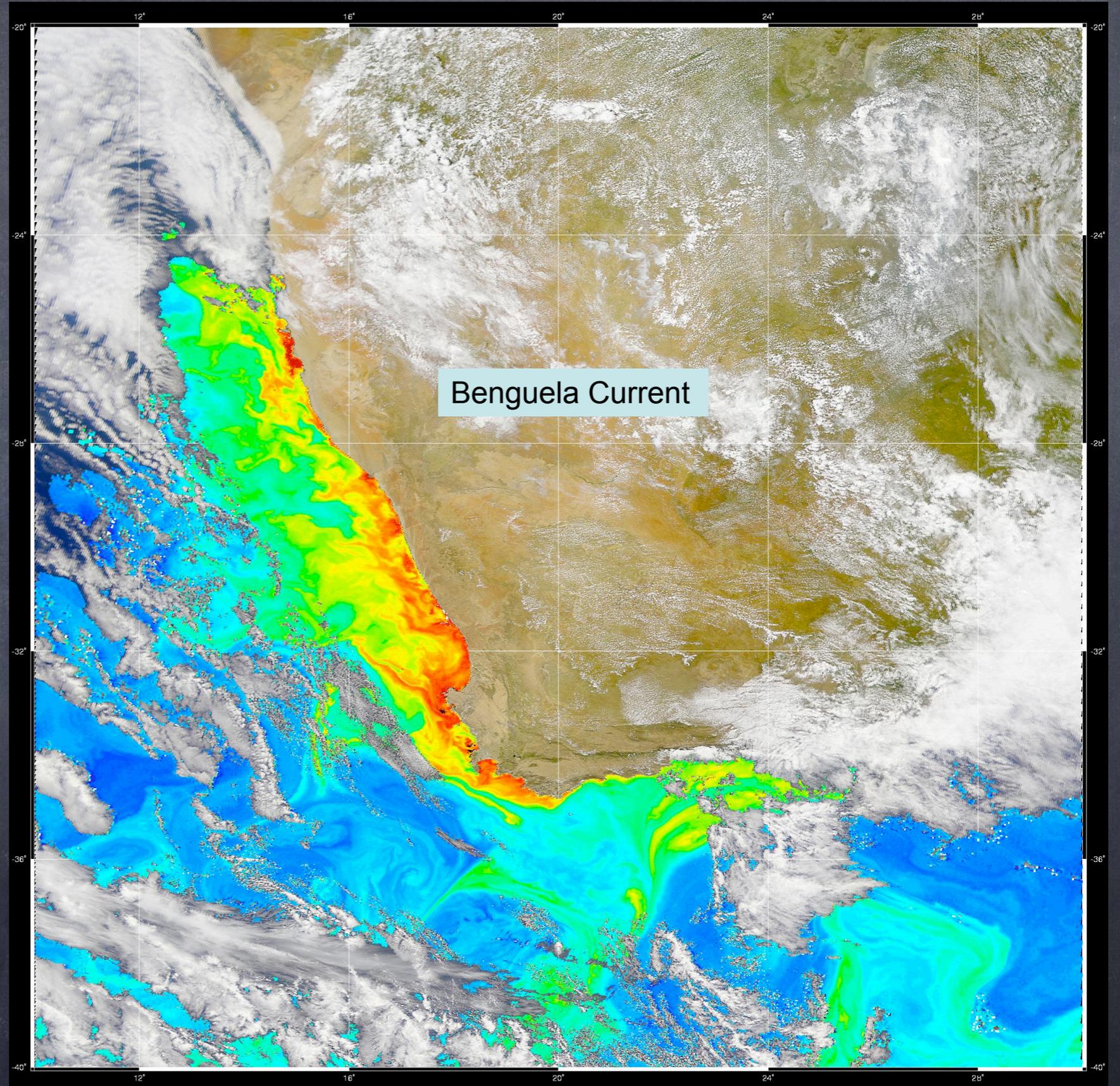


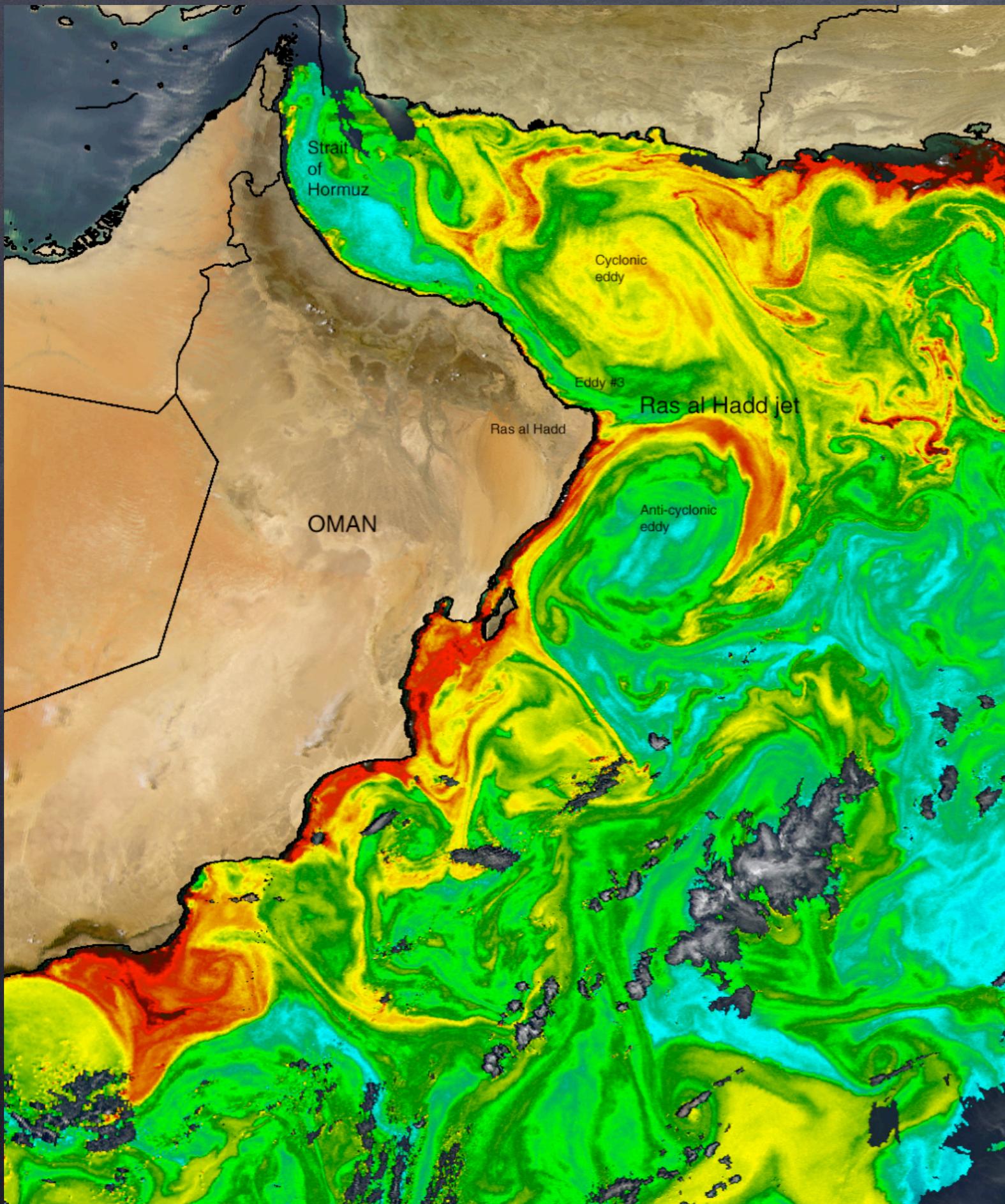
Upwelling: Equatorial, coastal, and Antarctic

Lecture 17

Upwelling
draws cooler,
nutrient-rich
waters to the
surface of the
ocean

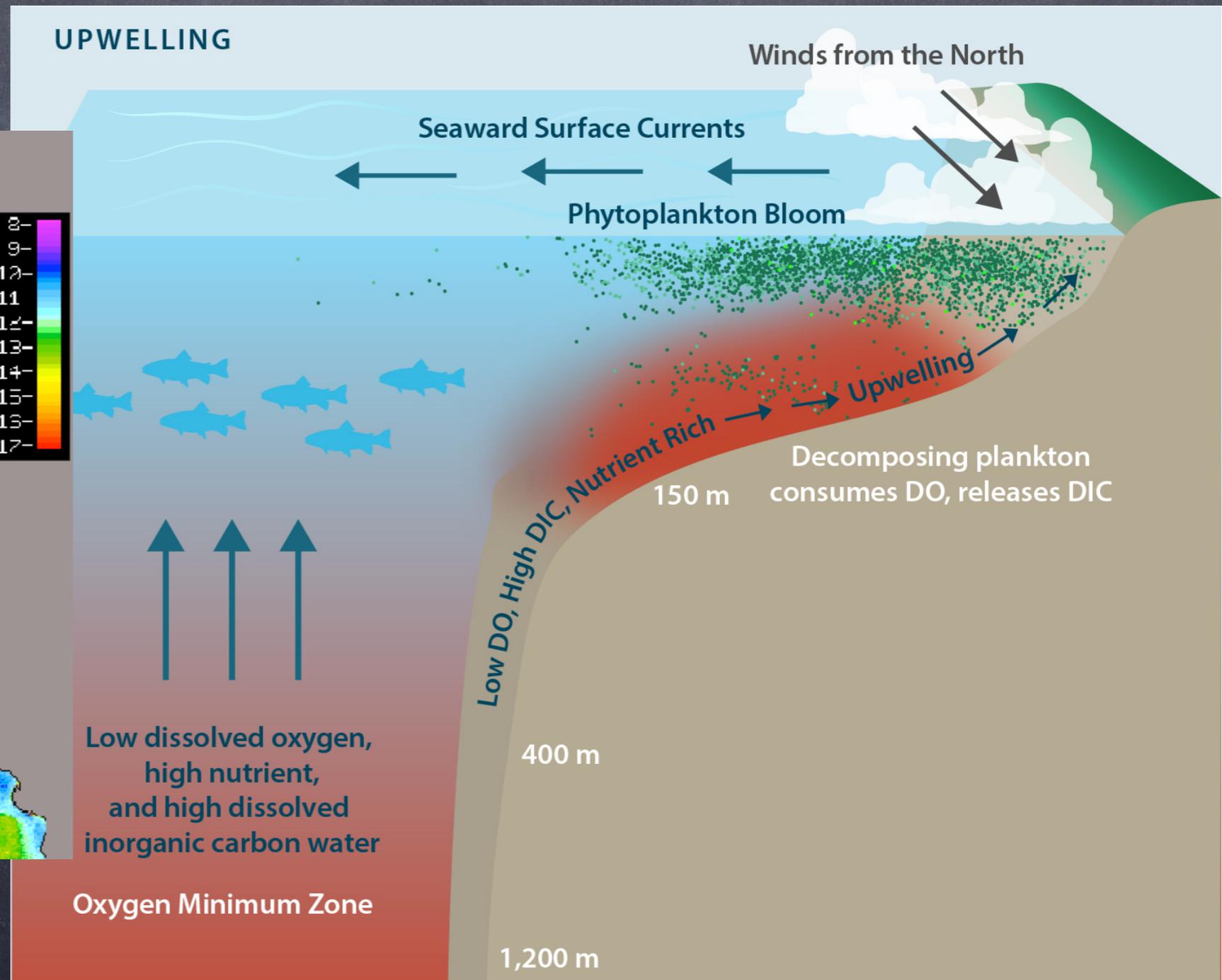
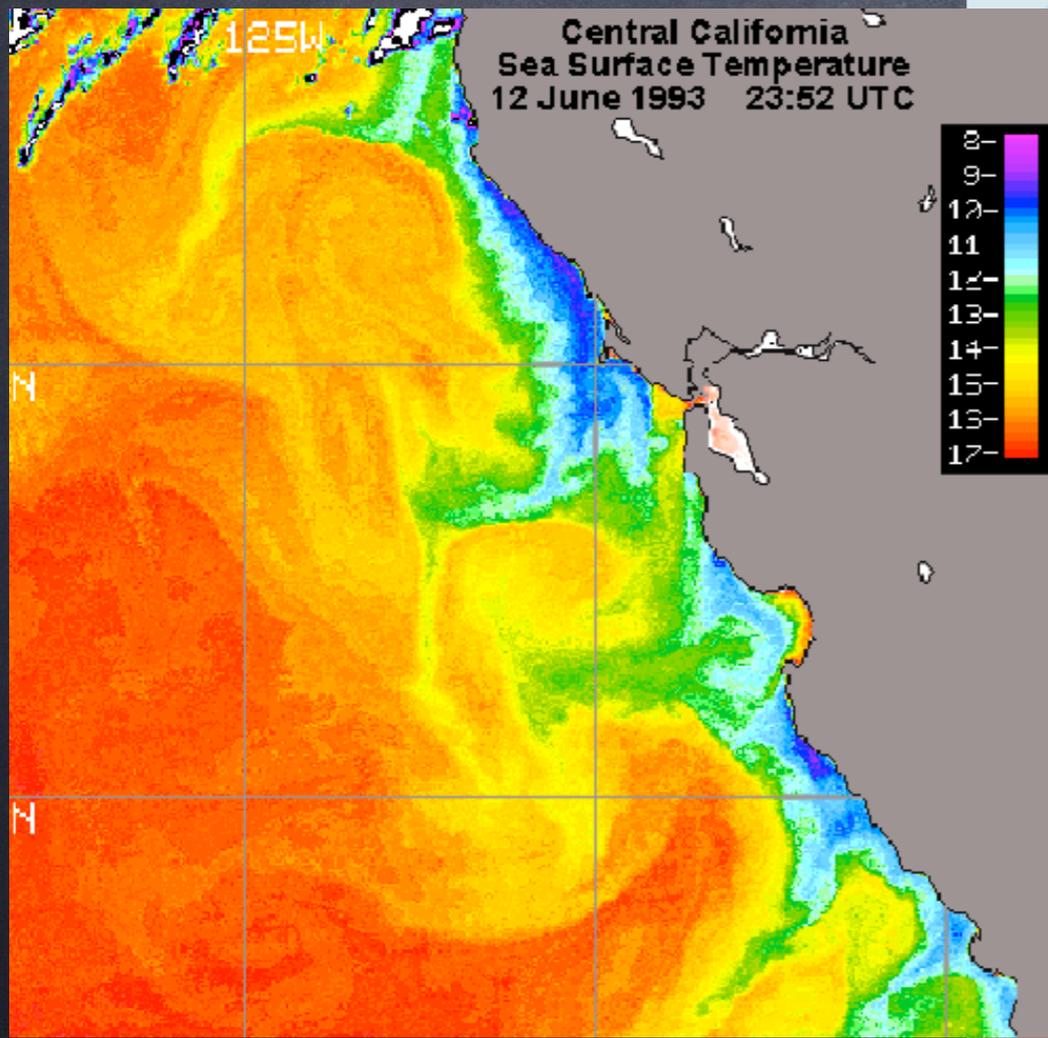
Upwelling is
common along
eastern
boundaries.
Why?



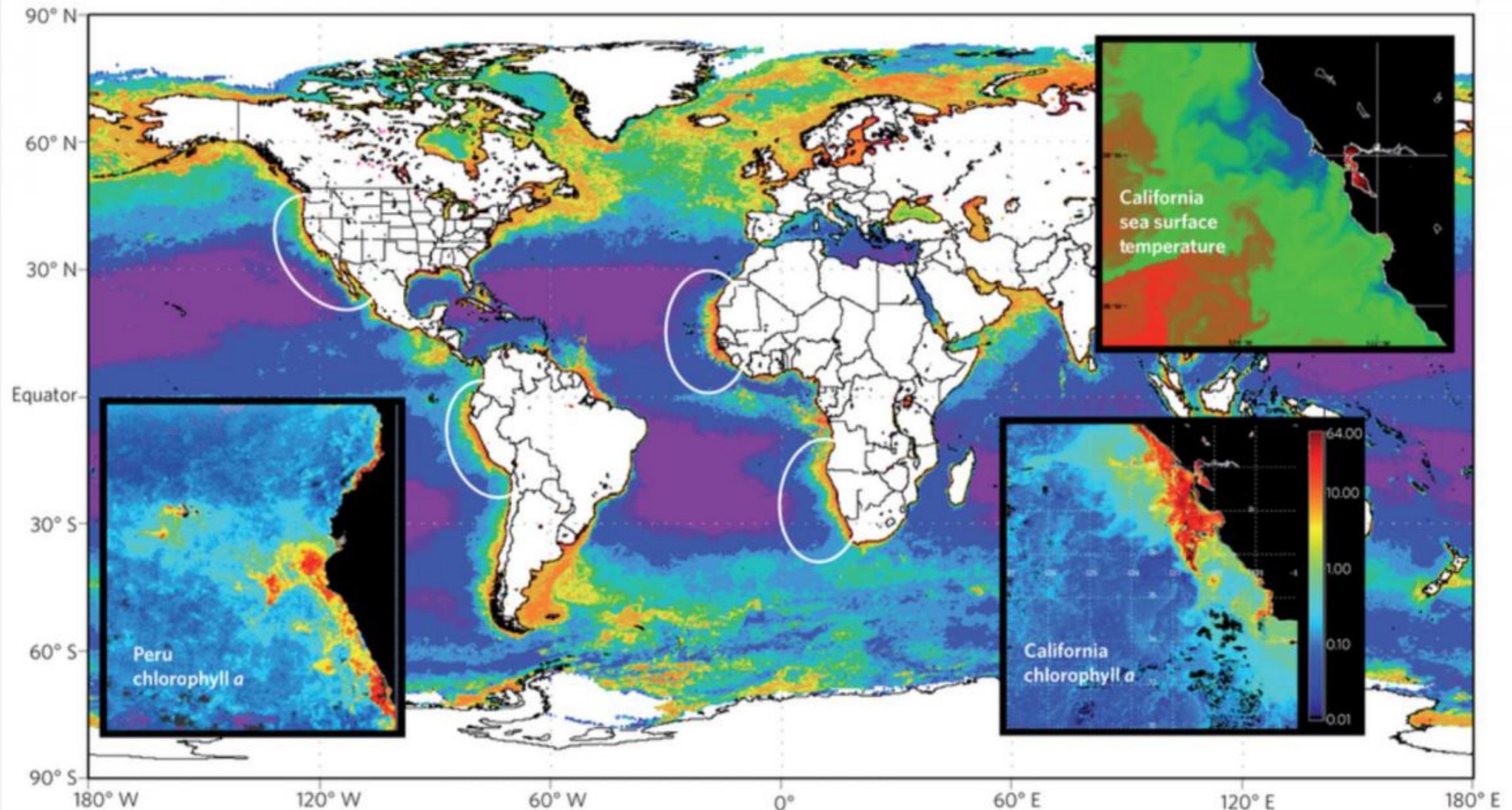


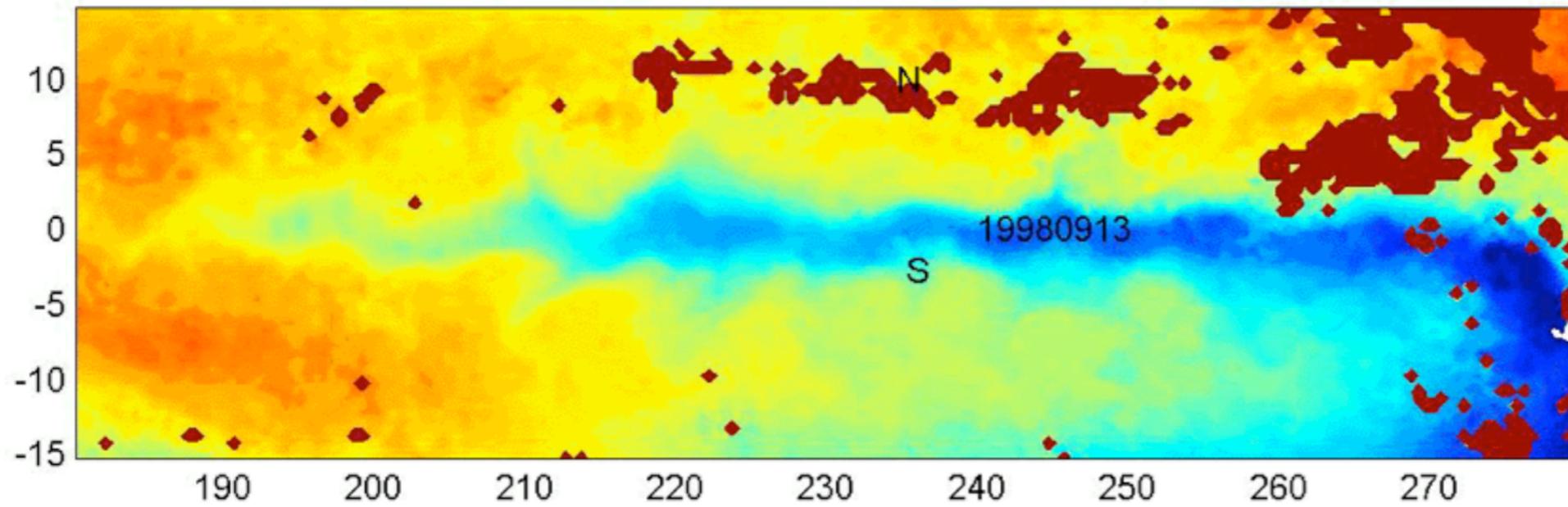
Chlorophyll a

California Current and Upwelling System

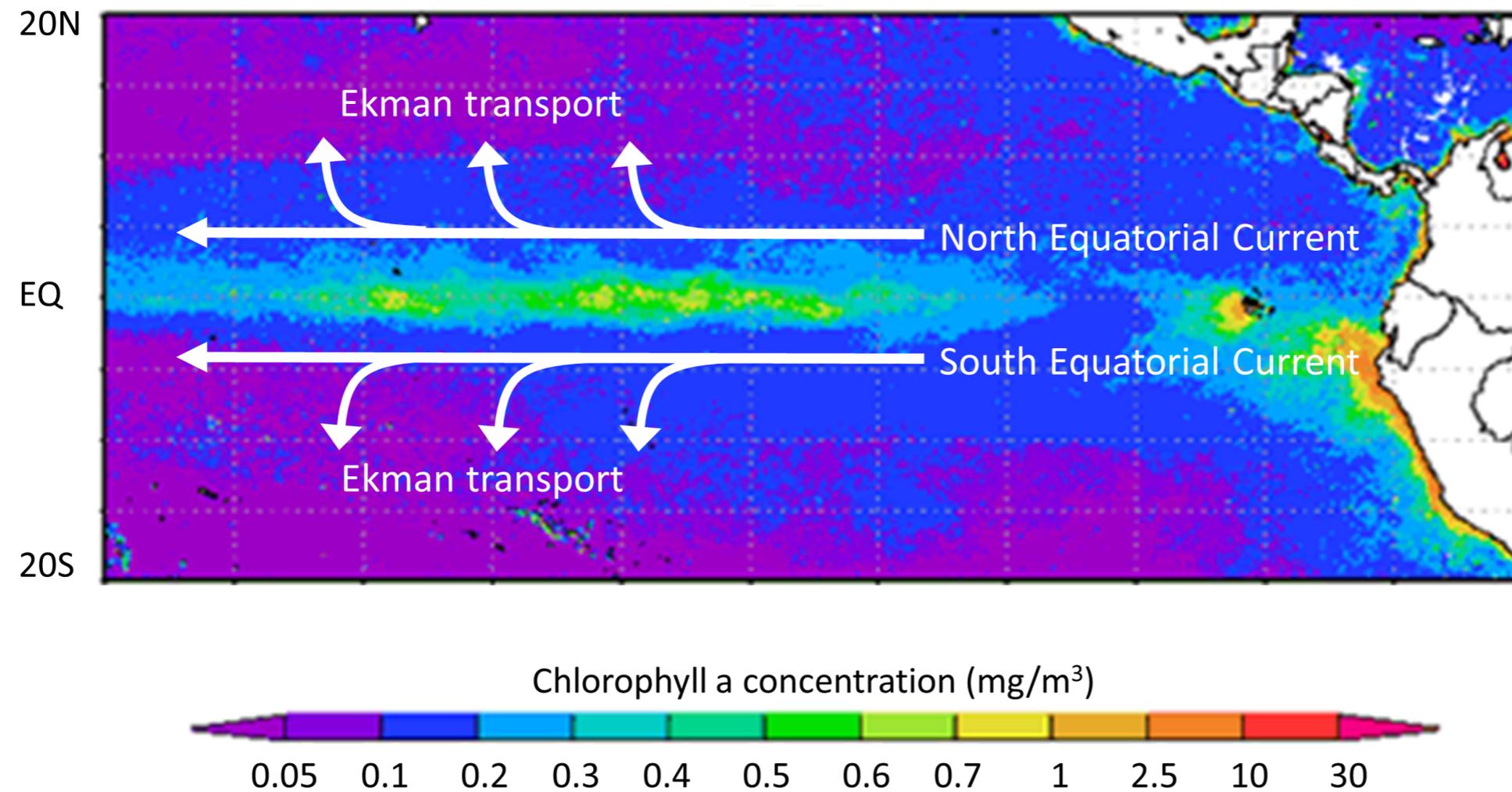


Upwelling systems on Eastern boundaries, driven by local along-shore winds





Equatorial
Pacific
upwelling:
SST and
Chl a



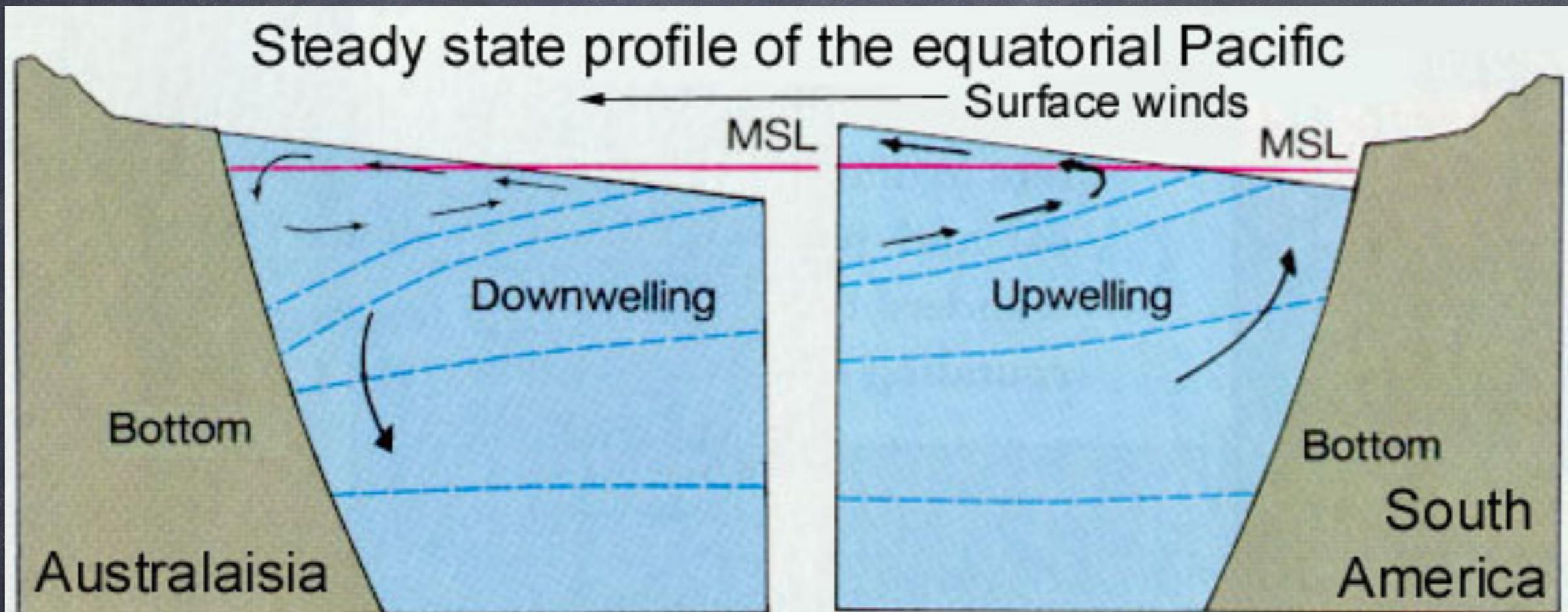


Fig 7. For downwelling to occur (according to Ekman), a southbound wind must be present - this is the case at the east coast of Australia; while a northbound wind must blow at the west coast of South America for upwelling to take place.

Upwelling is strong in the Southern Ocean around Antarctica

