

# Project Manta

## East Australian Current (EAC) Region Oceanographic conditions report

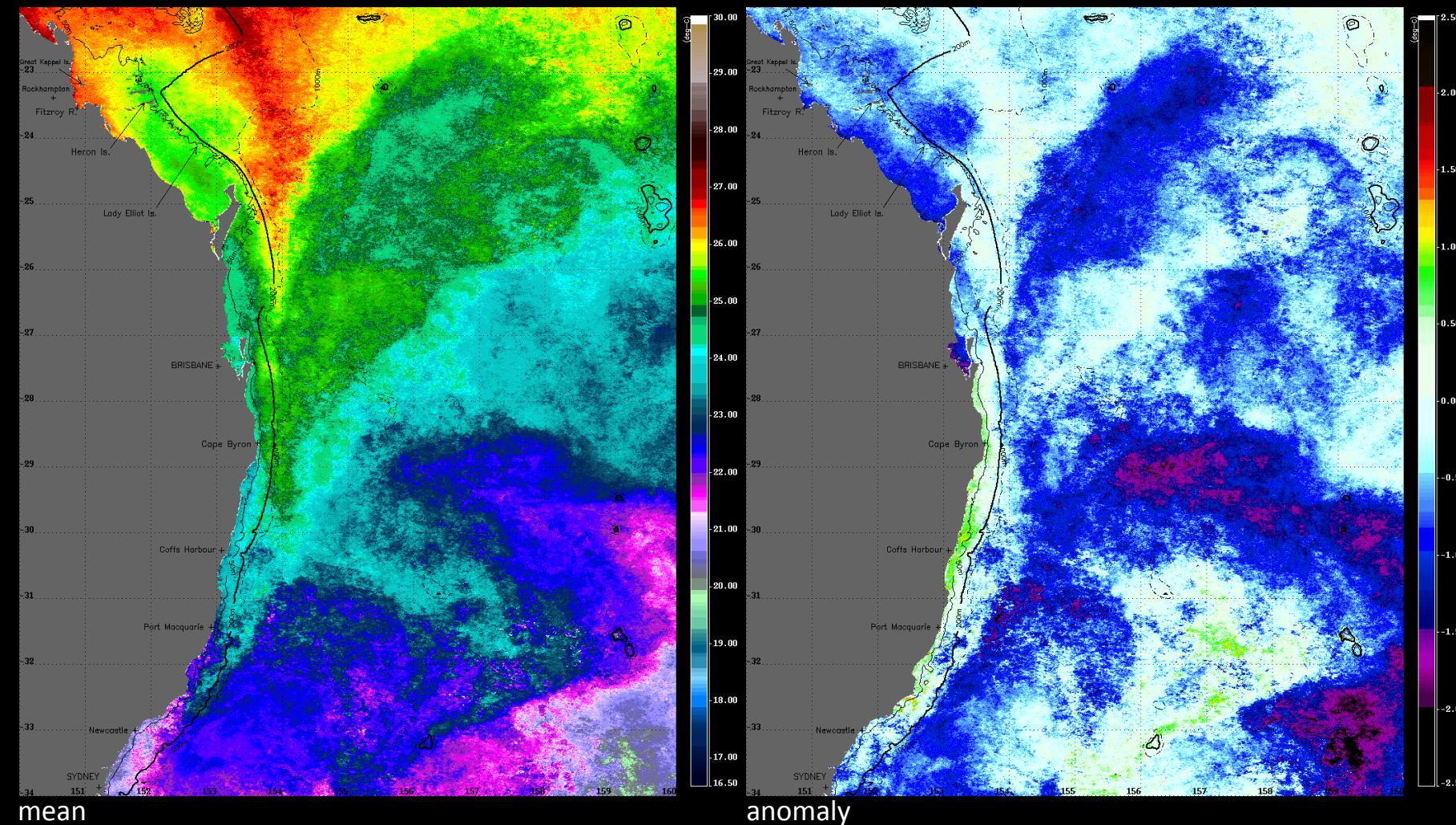
December 2011

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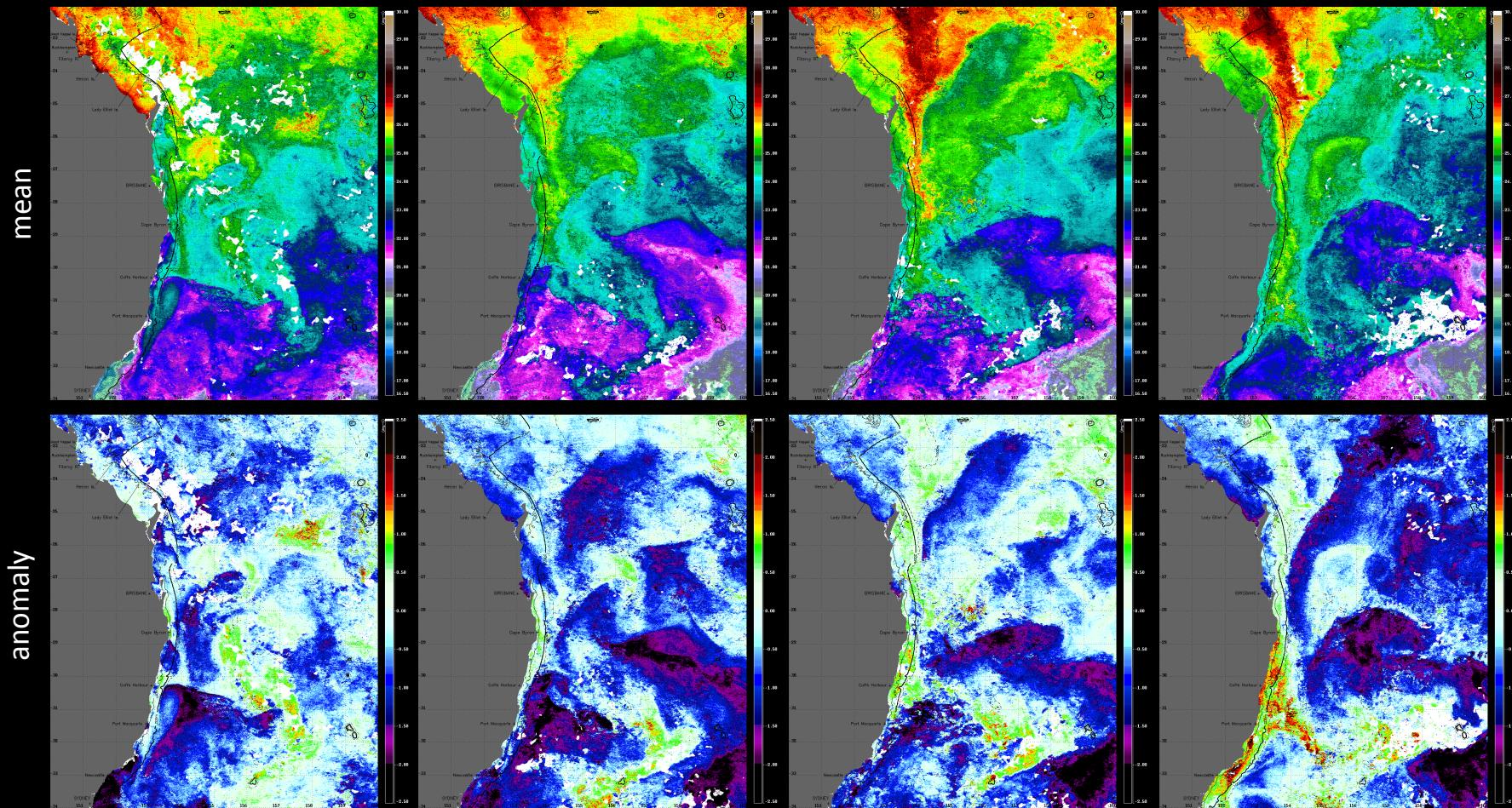
UQ-GPEM Biophysical Oceanography Group

# EAC Monthly MODIS SST (D+N): December 2011



- Intense negative SST anomalies all throughout except for the inner shelf between 27.5 to 31°S and further offshore

# EAC Weekly MODIS SST (D+N): starting from 1-7 December 2011

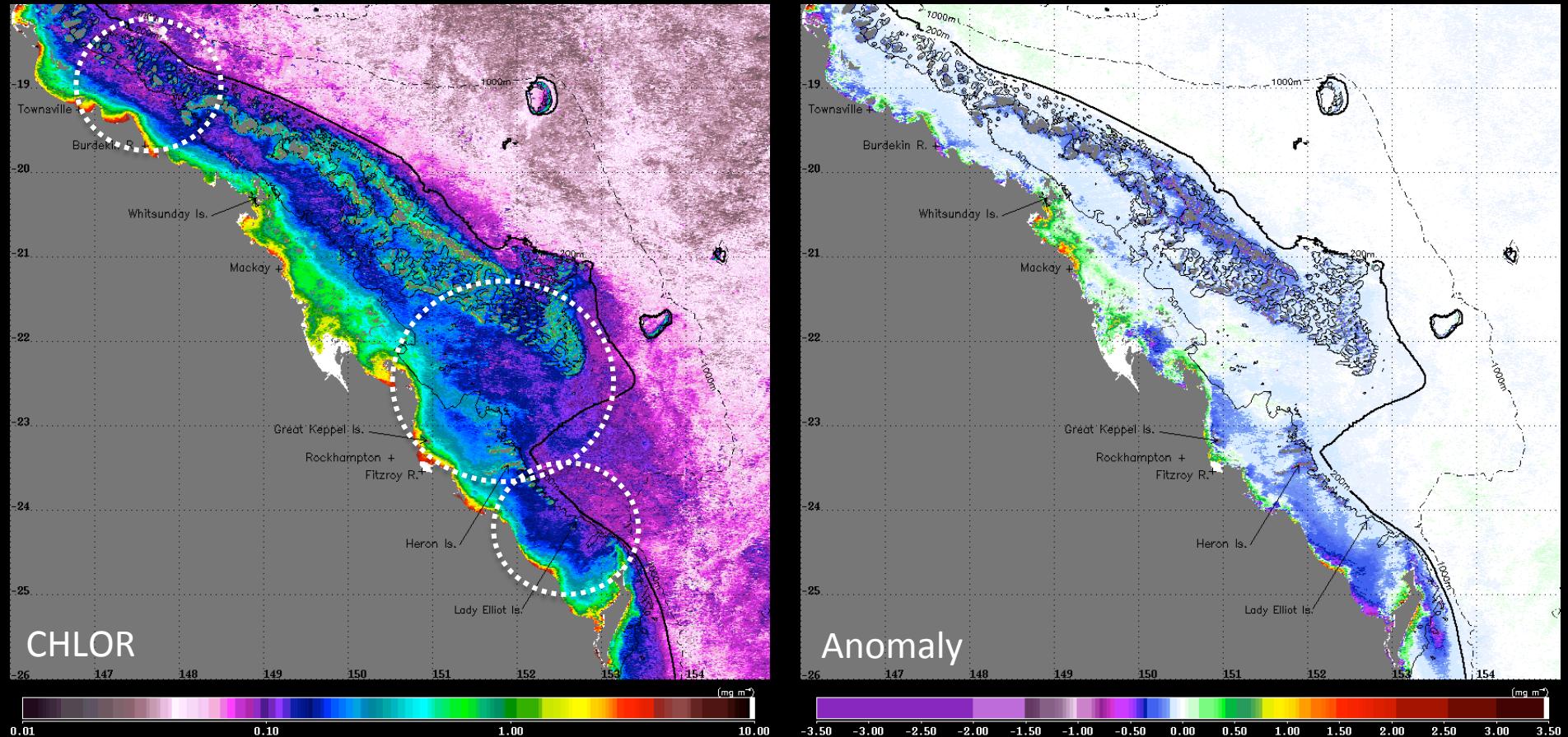


- Weekly images showing the southward progression of the EAC for the month of December with a more variable main current
- Surface expression of the Capricorn Eddy not evident similar to previous month
- Intense negative anomaly with patches of positive anomalies coincident with the path of the warm EAC which is more evident in the last week of the month when EAC appears most intense

# Southern GBR

## MODIS Chlorophyll-*a* concentration

December 2011

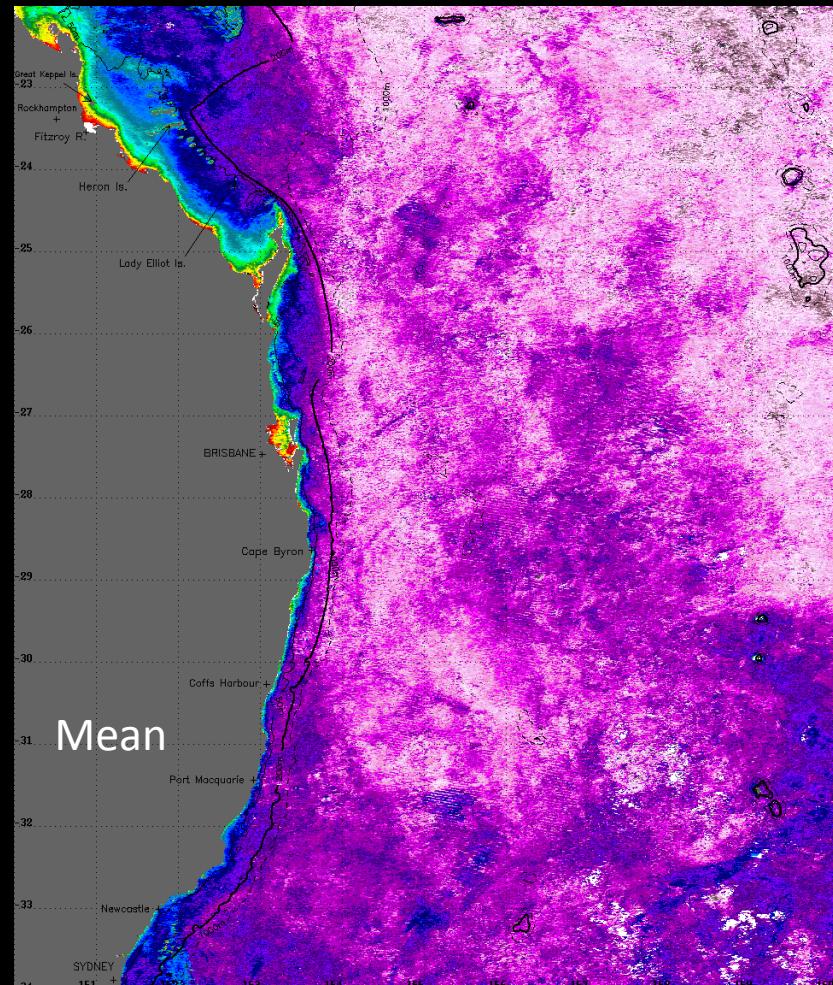


Note:

- Intrusions of low chlorophyll EAC waters into the GBR lagoon - still apparent through the Myrmidon & Capricorn channels, and on either side of Lady Elliot Island into Curtis Channel but not as intense as the previous month

# MODIS Chlorophyll-*a* concentration

## December 2011



Several manta sightings:

- NSI – big feeding activity at the start of the month (around 15 animals, 3<sup>rd</sup>-5<sup>th</sup> December) then regular sightings throughout the month (but never in big numbers)
- BB – few mantas (about five animals photographed and four more reported) around the 12-17<sup>th</sup> December
- SIMP – reported sightings around 24<sup>th</sup> December but no photos

NOTE: Weekly chlorophyll-*a* images not available due to high cloud cover contamination especially during the first week

Overall, monthly mean image on the left shows a sharp chlorophyll front very close inshore until 31°S (where it becomes much narrower) versus the oligotrophic open ocean waters

# OceanMAPS 15m Depth-Average Currents

## December 2011

**OceanMAPS** Ocean Modeling, Analysis and Prediction System was developed at CSIRO Marine and Atmospheric Research and the Bureau of Meteorology and it is part of the **Bluelink** project.

Intense southward EAC flow adjacent to the entire GBR shelf (resulting in GBR intrusions noted in chlorophyll images)

The southern extent of this western boundary current is less intensified with its core not as pronounced relative to previous month

The image also show at least two degrees difference in the latitudinal location (i.e.,  $\sim 30^\circ\text{S}$ , further north) where the current start to deflect eastward as compared to November (i.e.,  $\sim 32^\circ\text{S}$ , further south)

FERRET (alpha) Ver. 6.70  
NOAA/PMEL TMAP  
Jan 6 2012 14:28:04

DATA SET: OceanMaps\_current\_monthly\_means\_201112

