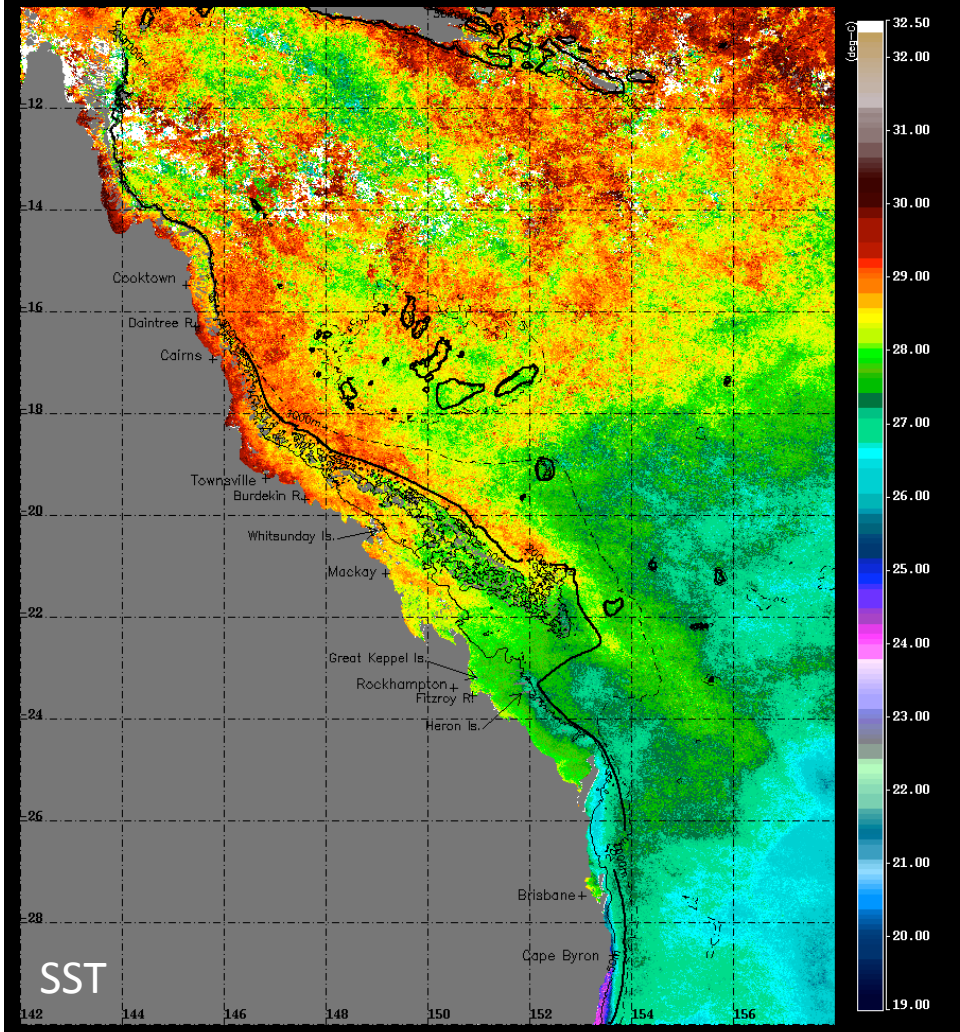
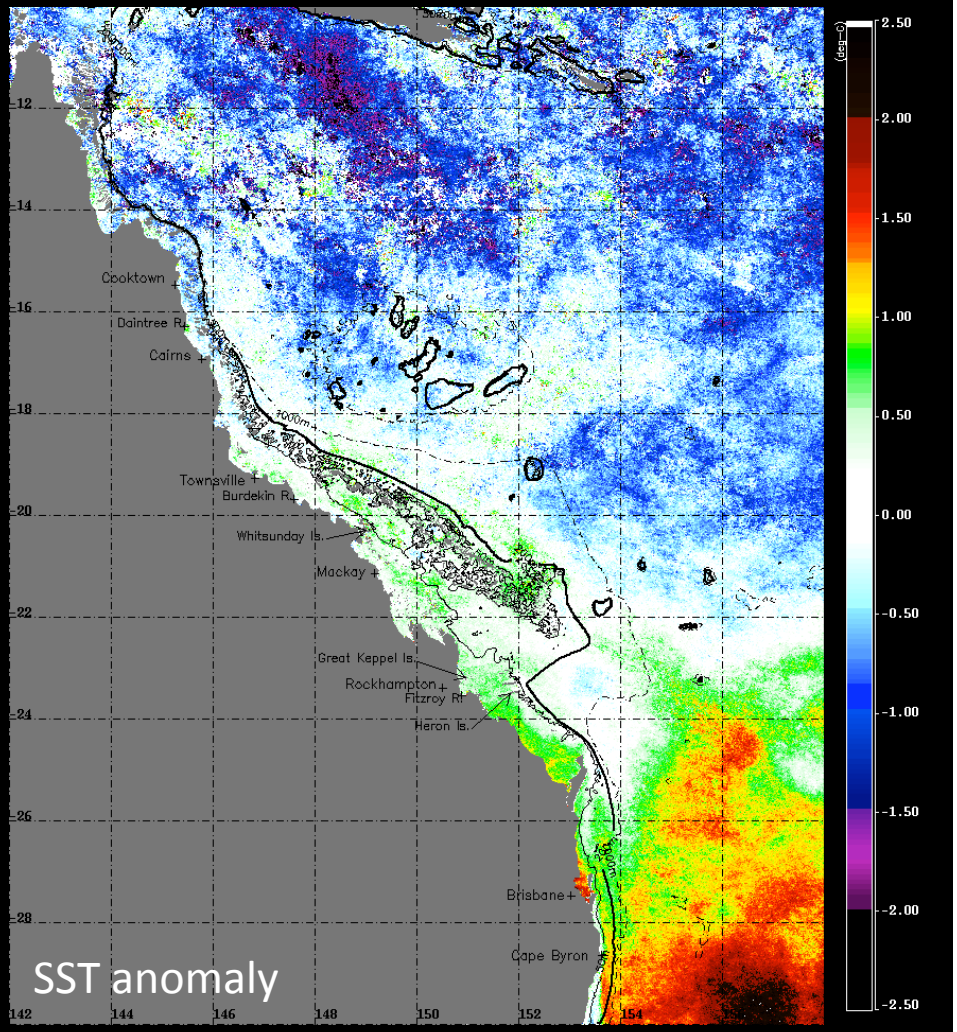
Modis SST (day+night): January 2010



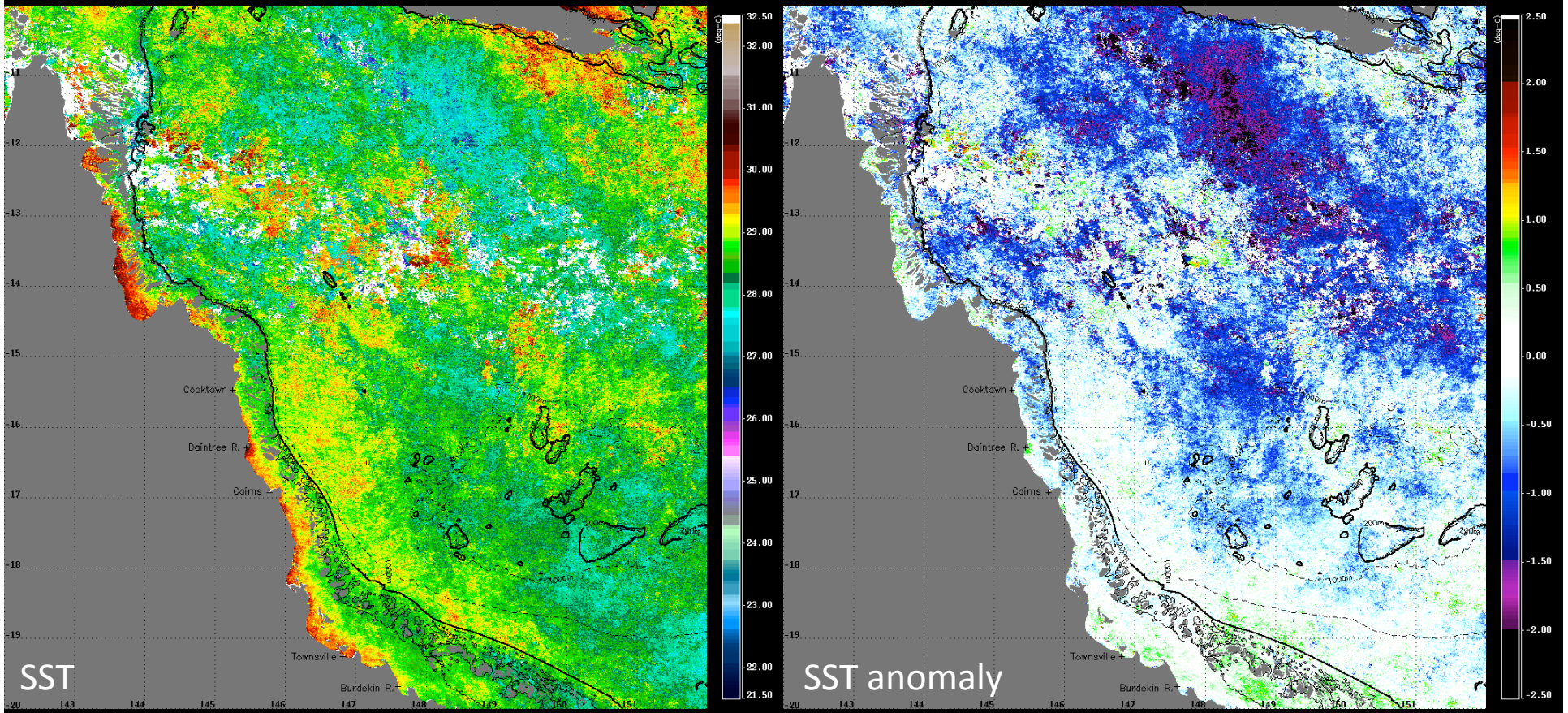


Note:

- negative anomalies in the N-GBR and Coral Sea region
- weak positive anomalies in the S_GBR, with anomalies in the Capricorn Bunker group remaining positive
- strong positive anomalies in EAC region to the south of the GBR

UQ_ OceanSpace group

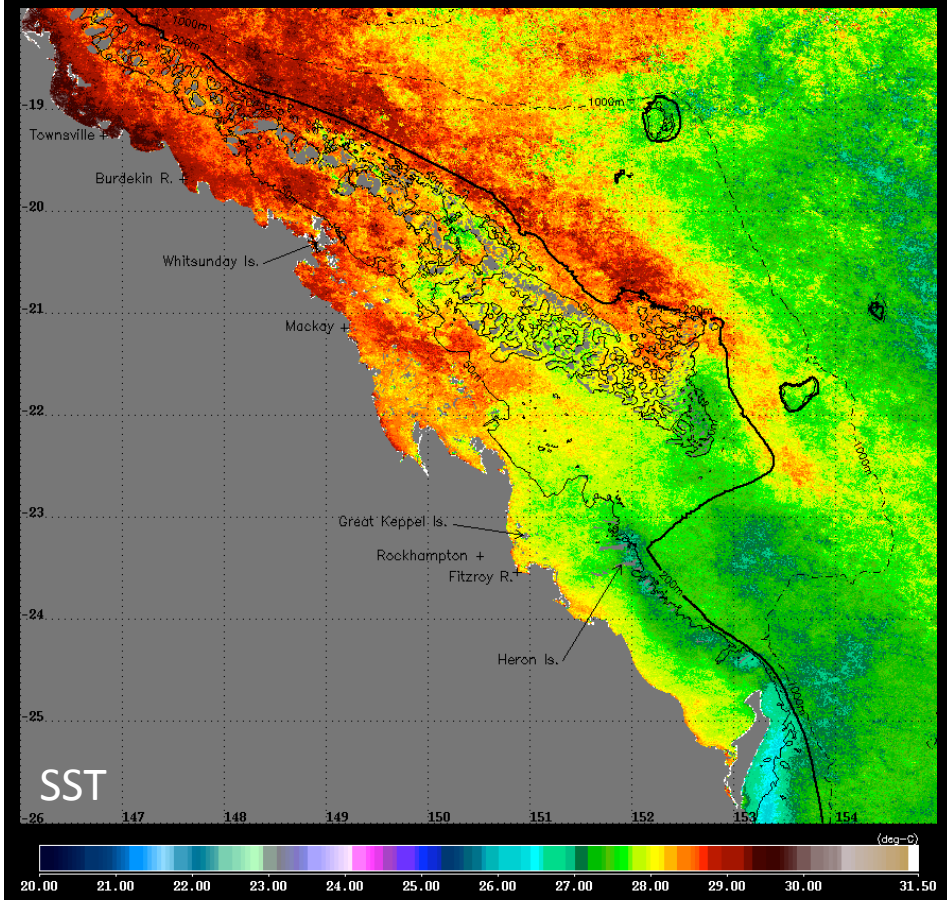
Northern GBR SST: January 2010

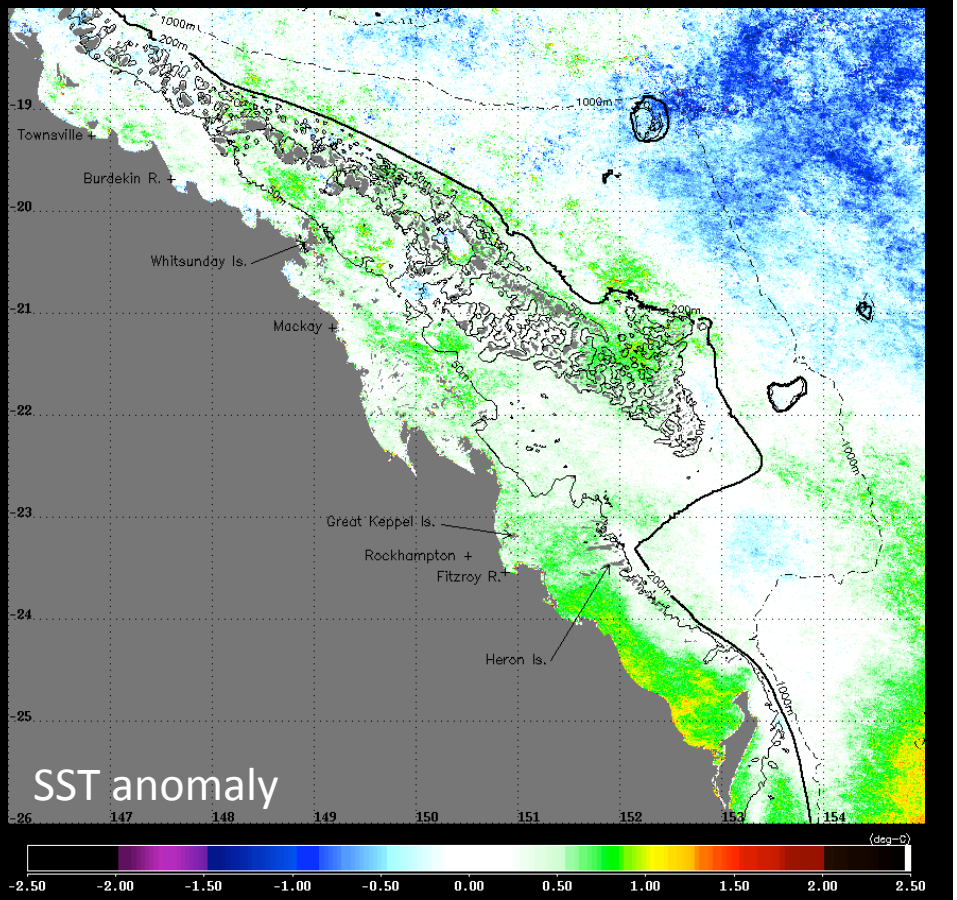


Note:

- considerable cloud in Coral Sea region during January 2010
- negative anomalies in the N-GBR and Coral Sea region

Southern GBR SST: January 2010

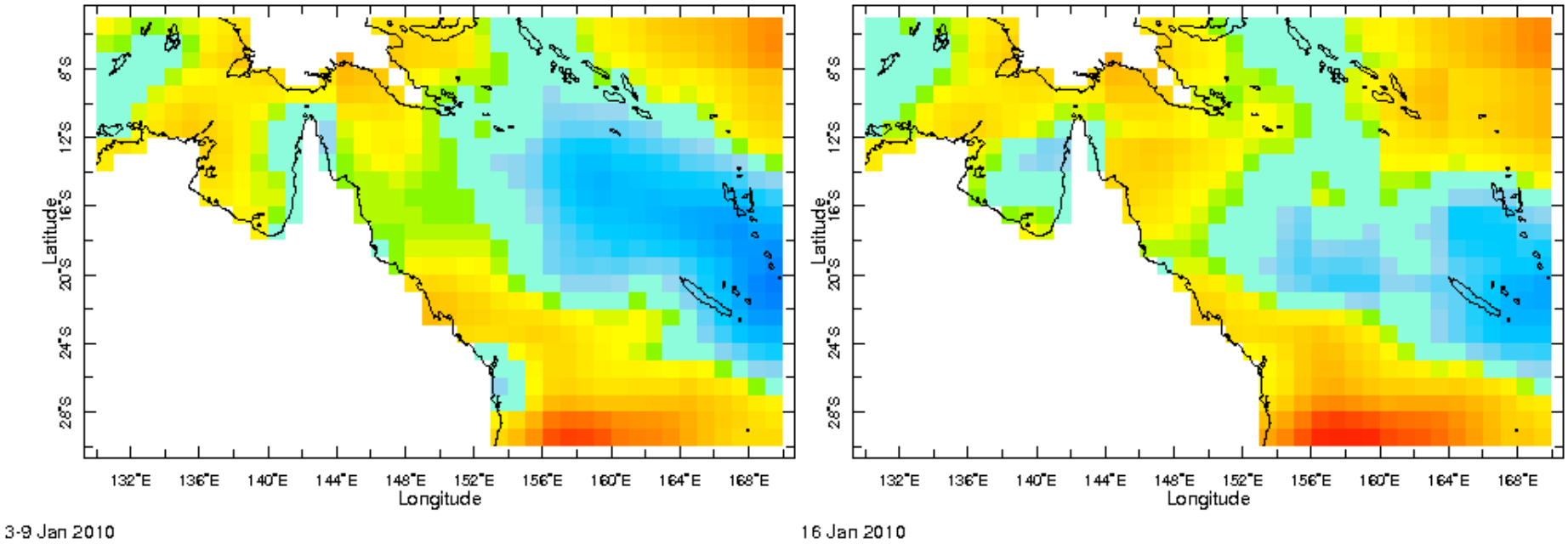




Note:

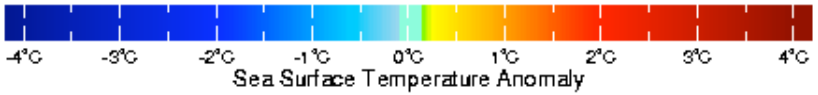
- weak positive anomalies in the S_GBR, somewhat stronger on the shelf to the north of Fraser island
- anomalies in the Capricorn Bunker group remains positive

NOAA NCEP EMC CMB GLOBAL Reyn_SmithOIv2 weekly ssta: Sea Surface Temperature Anomaly data



03 – 09 Jan 2010

10 – 16 Jan 2010

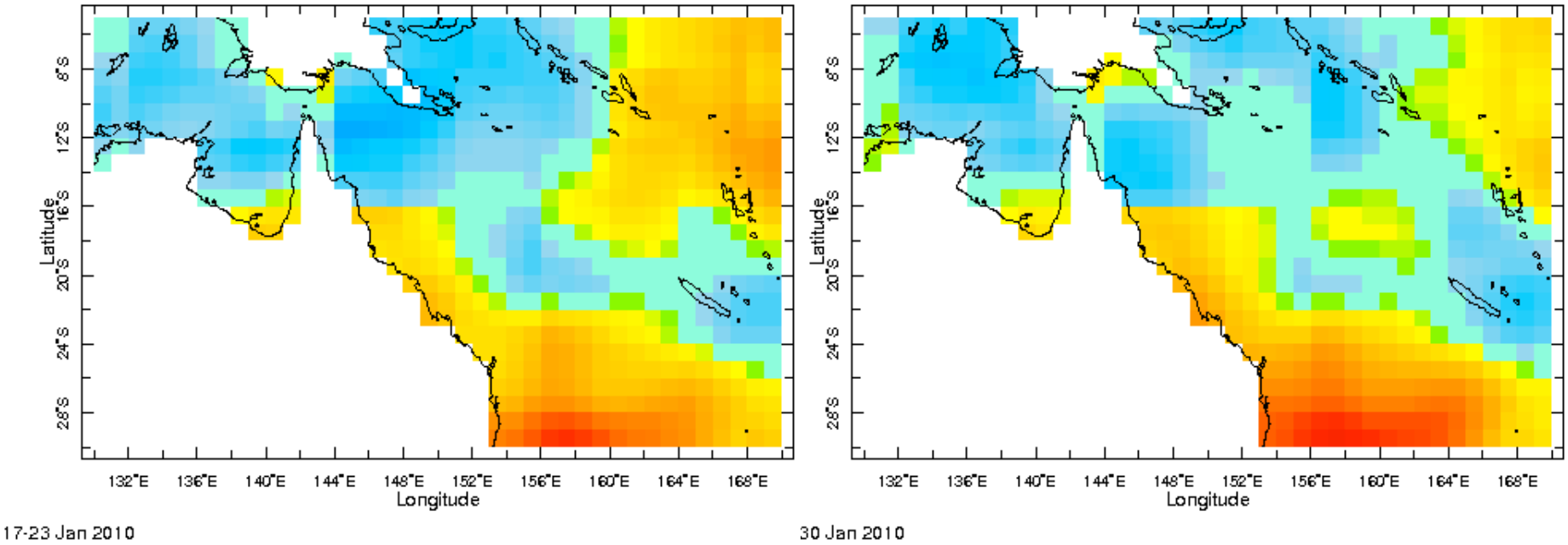


Note:

•In early January, NOAA Reynolds SST anomaly product shows a shift towards positive anomalies over the GBR.

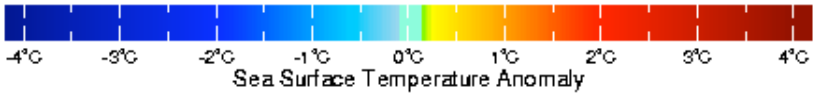
http://iridl.ldeo.columbia.edu/
SOURCES/.NOAA/.NCEP/.EMC/.CMB/.GLOBAL/.Reyn_SmithOIv2/.weekly/.ssta/

NOAA NCEP EMC CMB GLOBAL Reyn_SmithOIv2 weekly ssta: Sea Surface Temperature Anomaly data



17 – 23 Jan 2010

24 – 30 Jan 2010



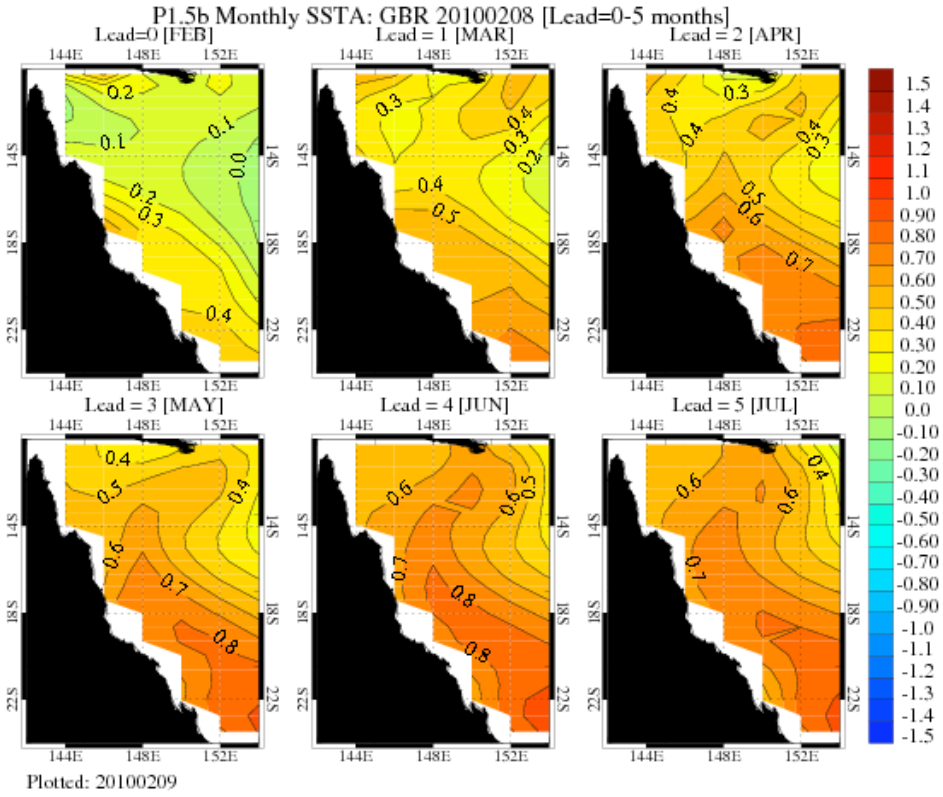
Note:

- Coincident with MODIS monthly SST, NOAA Reynolds SST anomaly product shows negative anomalies on the N-GBR and positive anomalies for the S-GBR

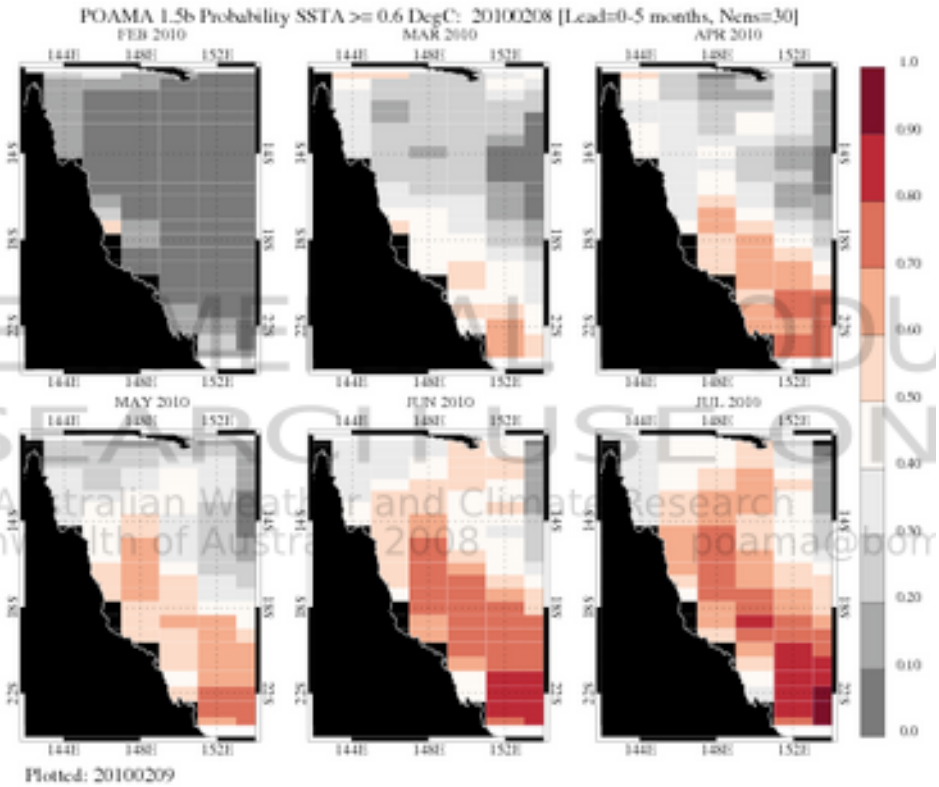
http://iridl.ldeo.columbia.edu/SOURCES/.NOAA/.NCEP/.EMC/.CMB/.GLOBAL/.Reyn_SmithOIv2/.weekly/.ssta/

Experimental Great Barrier Reef SST Anomaly Forecasts (POAMA)

POAMA SST anomalies forecast for the following 6 months.



New POAMA product highlighting the probability of SST anomalies greater than 0.6 deg C for the following 6 months.



Note:

- POAMA predicts that anomalies will be greater than 0.6°C in the very southern GBR in March, a month earlier than the previous POAMA forecast. The positive anomalies are forecast through to July.

http://poama.bom.gov.au/experimental/poama15/sp_gbr.htm

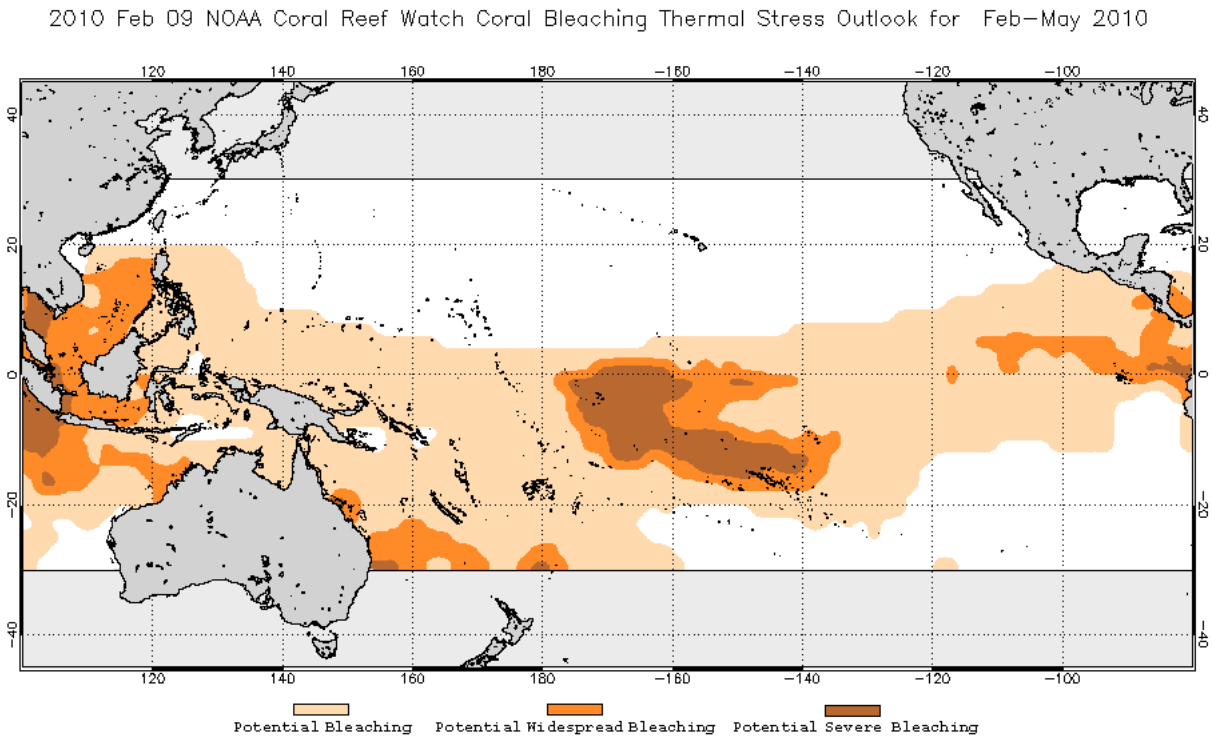
UQ_ OceanSpace group

NOAA Coral Reef Watch

Seasonal Coral Bleaching Thermal Stress Outlook

(Experimental product, 2x2 degree spatial resolution)

Outlook for February to June 2010



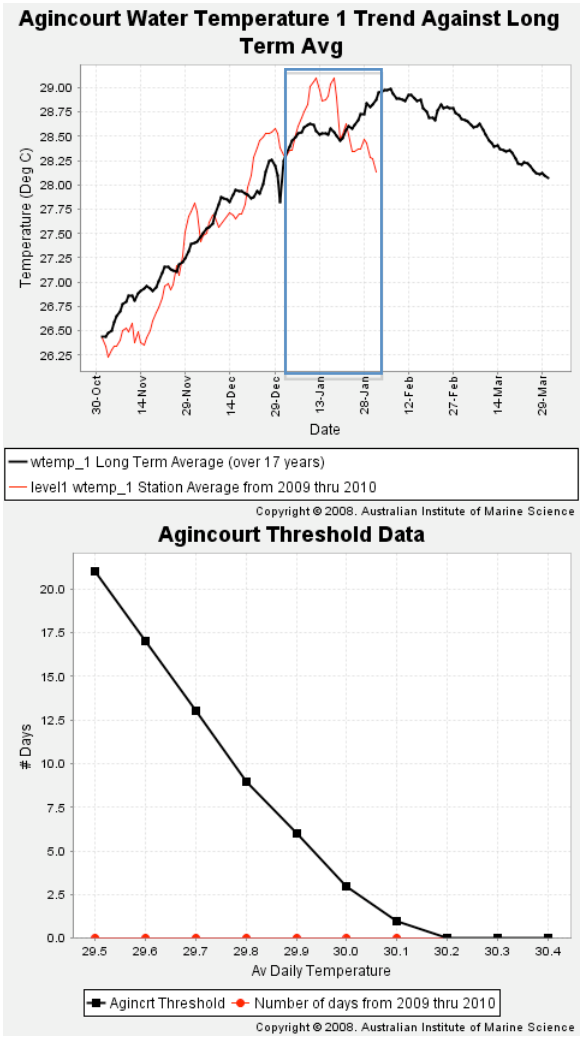
Note:

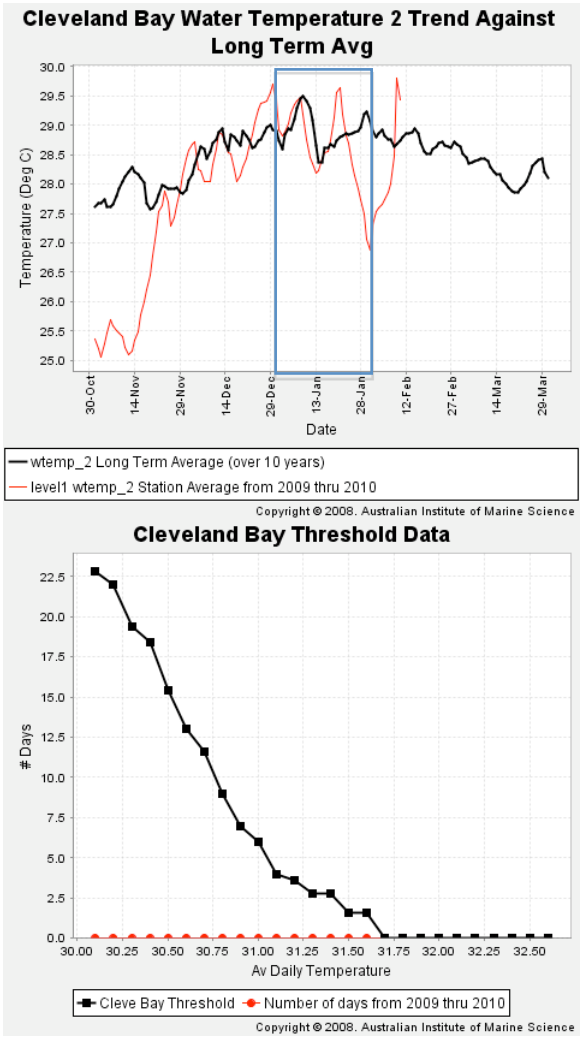
- the NOAA thermal stress Outlook for February to June has changed considerably since the last forecast
- this now predicts a potential widespread bleaching only in the S-GBR, coincident with the positive anomalies shown above

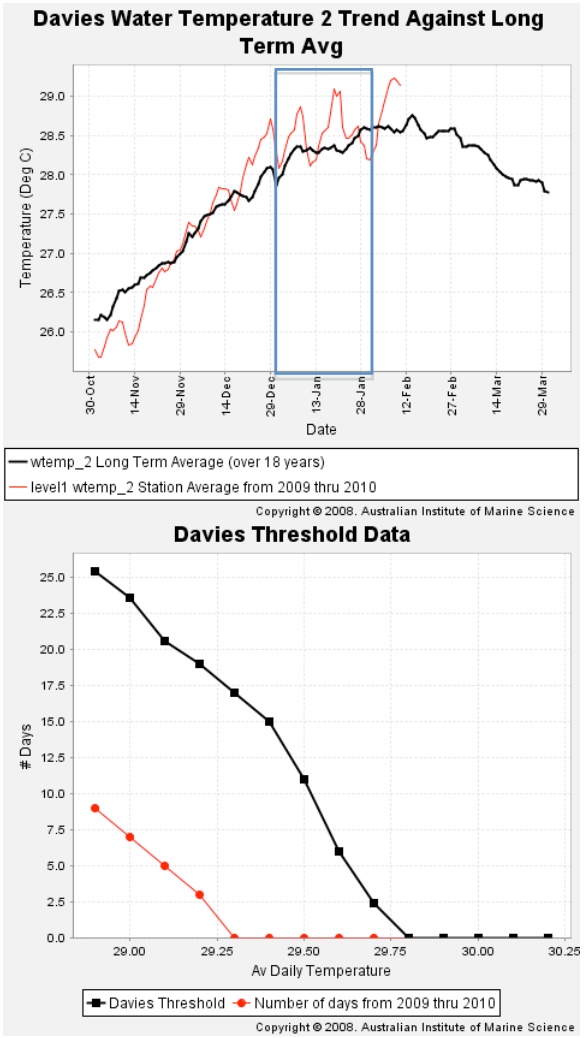
http://coralreefwatch.noaa.gov/satellite/bleachingoutlook/

UQ_ OceanSpace group

Weather Observing System: AIMS Data Centre



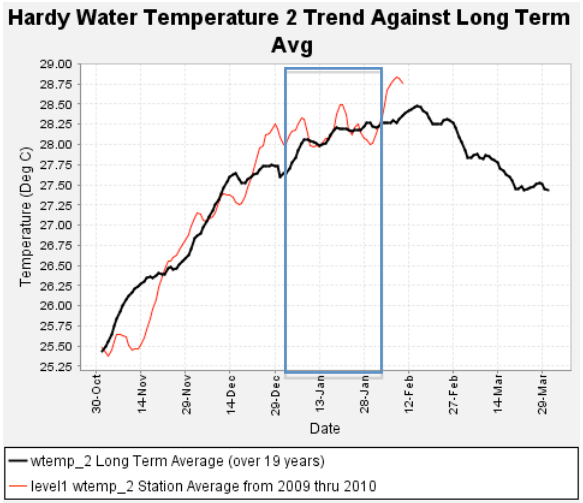


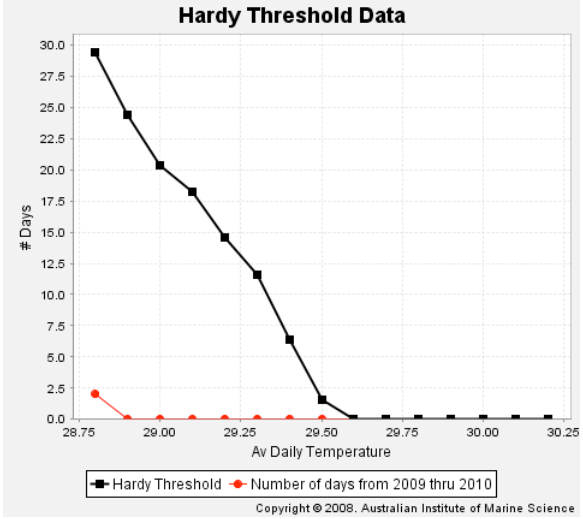


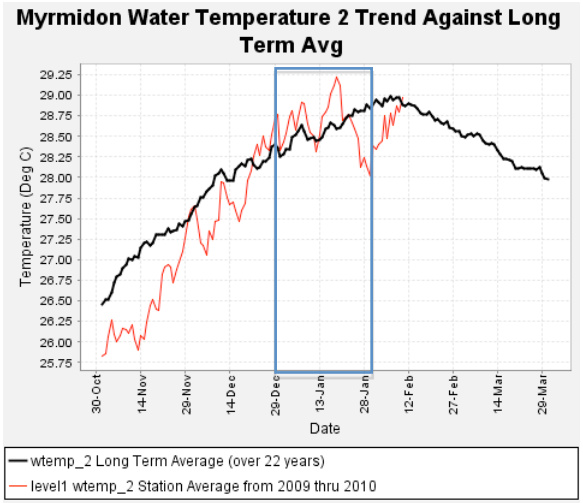
•The graphs in the lower panels show the number of days exposure to temperatures at or above those indicated on the x-axis and how they compare to bleaching thresholds. Bleaching thresholds are site-specific and are an interpolation of SST and exposure times between warmest non-bleaching summers and coolest bleaching summers. When the time-temperature curve exceeds the predicted bleaching threshold, sensitive corals are in danger of bleaching.

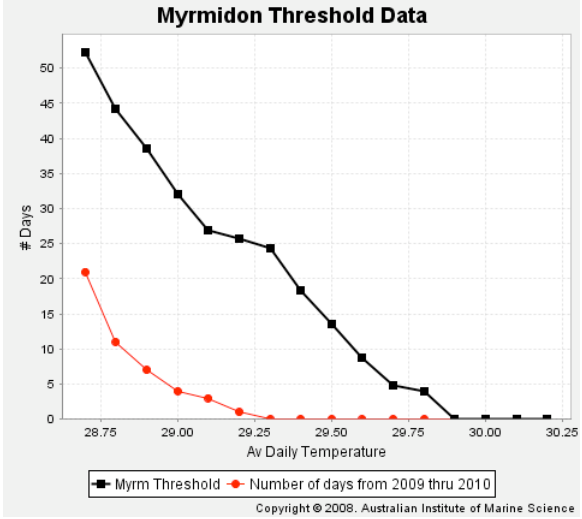
•The graphs in the upper panels show the trends of average daily temperatures against the long-term average. The number of years of data used in calculating the long-term average is shown in the legend.

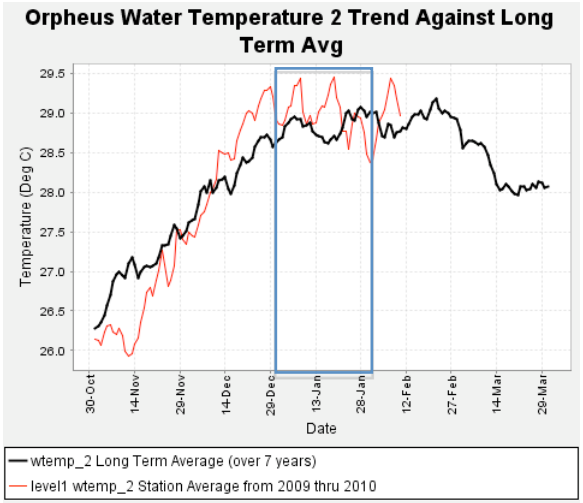
Weather Observing System: AIMS Data Centre

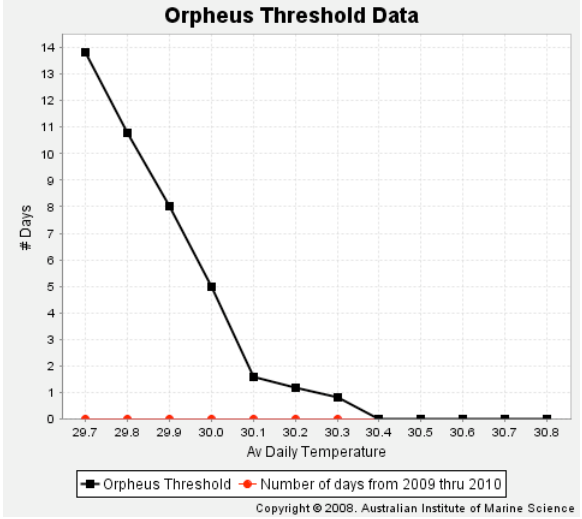










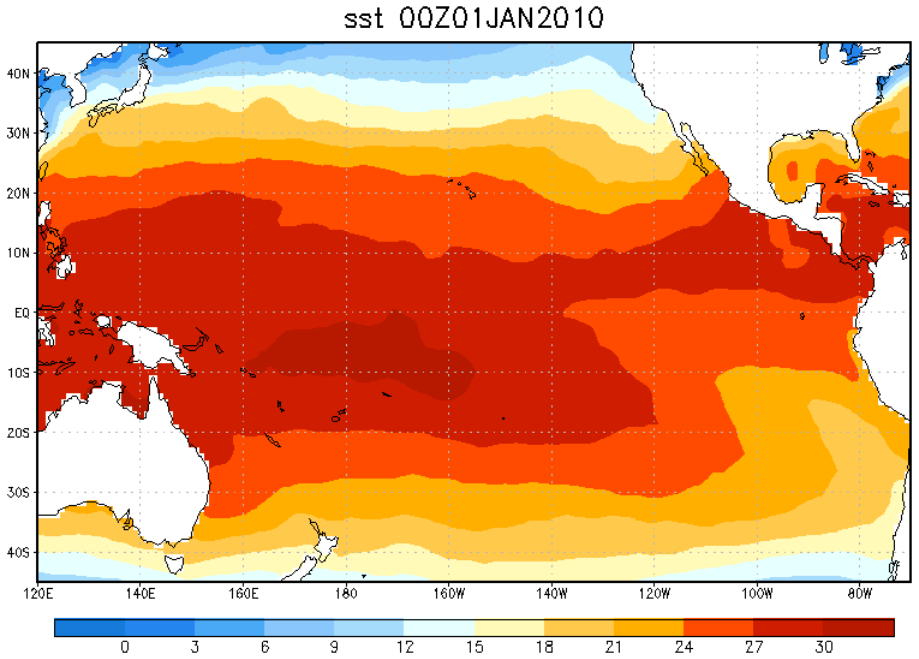


Note:

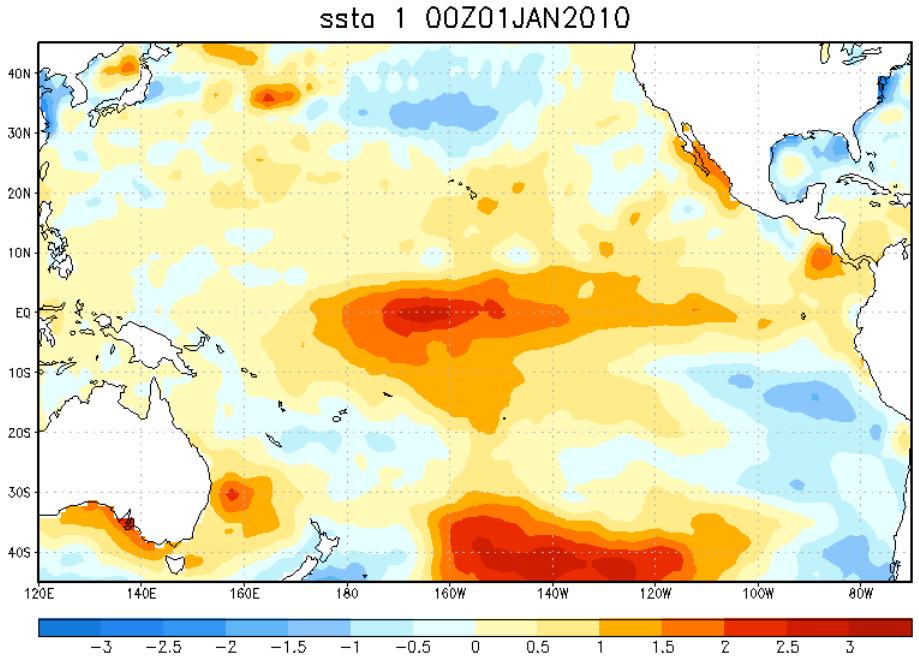
- The AIMS in-situ data also shows mostly close to average conditions for January.
- Towards the end of January, average daily temperatures do begin to exceed the long-term average in a few sites.

NOAA Optimum Interpolation Sea Surface Temperature Analysis:

OI SST: JANUARY 2010



OI SST ANOMALY: JANUARY 2010



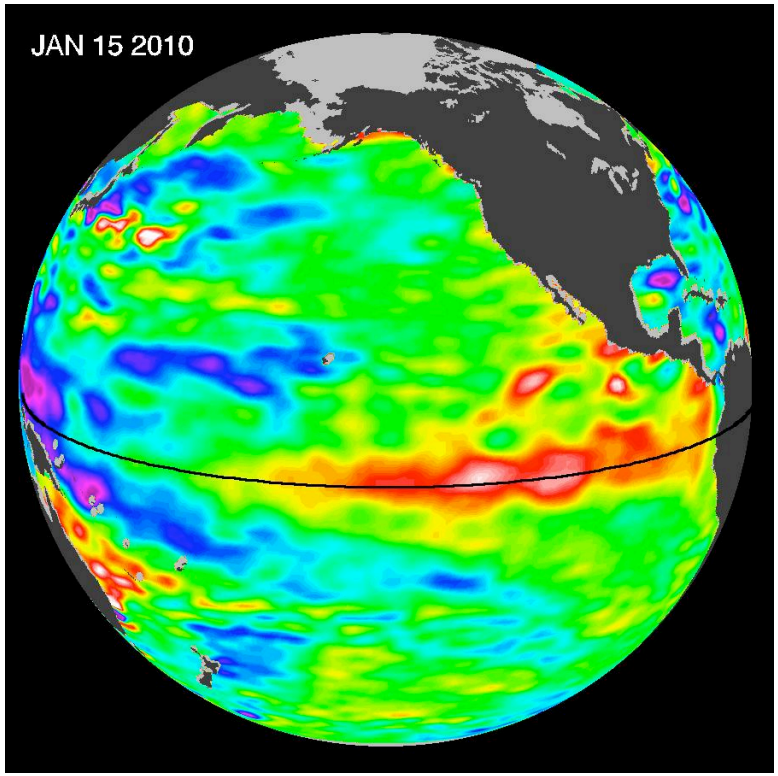
Note:

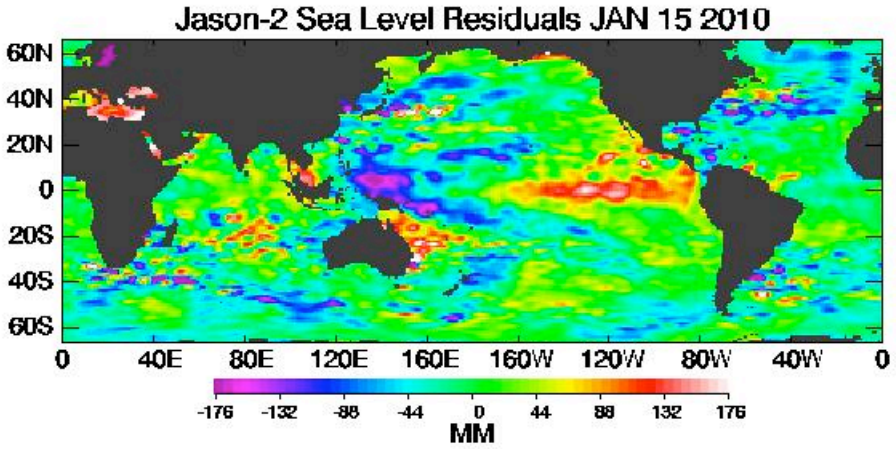
- The OI SST positive anomalies continues to be persistent in the Equatorial Pacific, still clearly indicative of an El Niño pattern.
- The positive anomalies in the EAC region have increased considerably, as per the Modis data.

http://www.emc.ncep.noaa.gov/research/cmb/sst_analysis/

Sea surface height anomalies from Ocean Surface Topography: Jason-1 and Jason-22 (NASA/French)

10-day data cycle centered around January 2010.





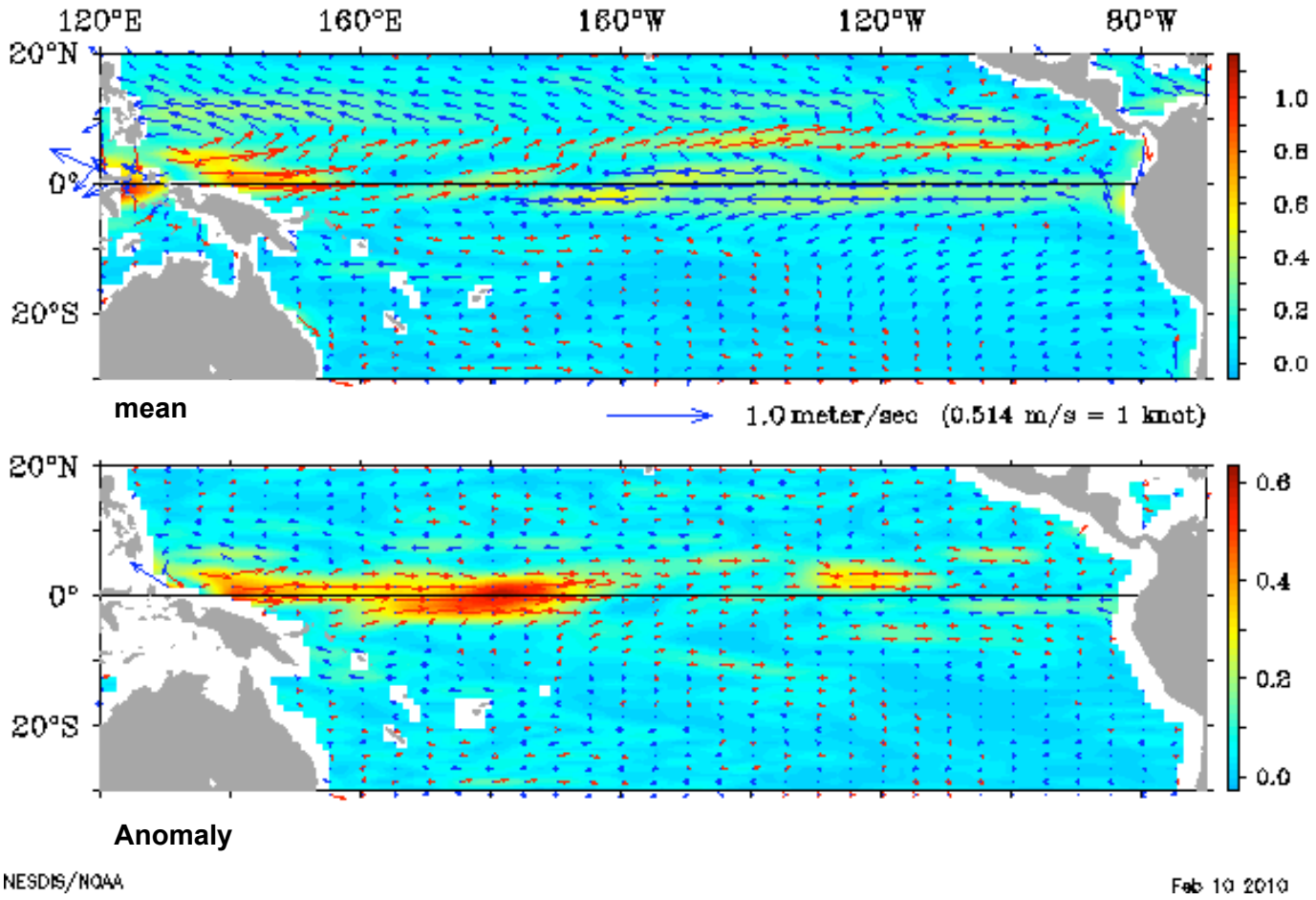
Note:

• The SSH anomalies continue to reflect an El Niño episode, associated with positive temperature anomalies across the eastern half of the equatorial Pacific

http://sealevel.jpl.nasa.gov/science/jason1-quick-look/

OSCAR: Ocean Surface Current Analysis - Real time

January 2010: monthly mean vs anomaly

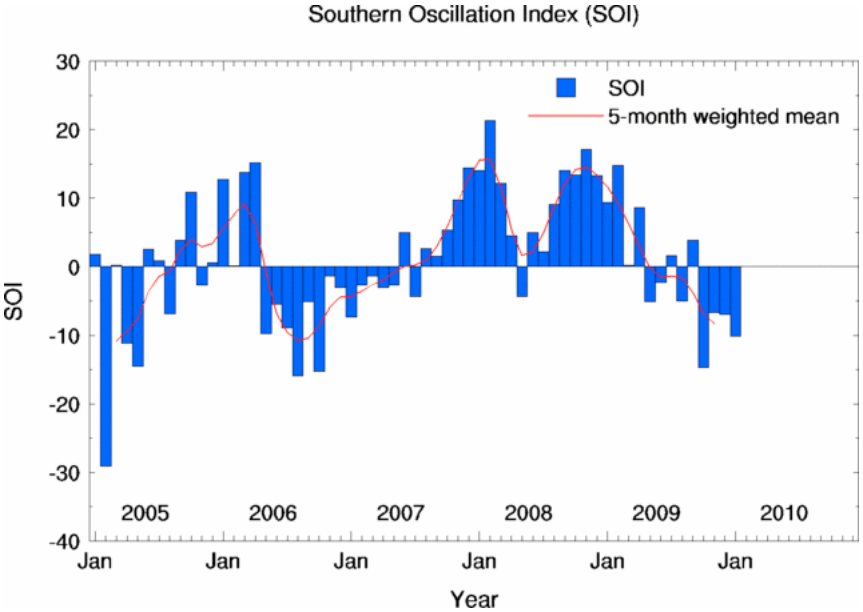


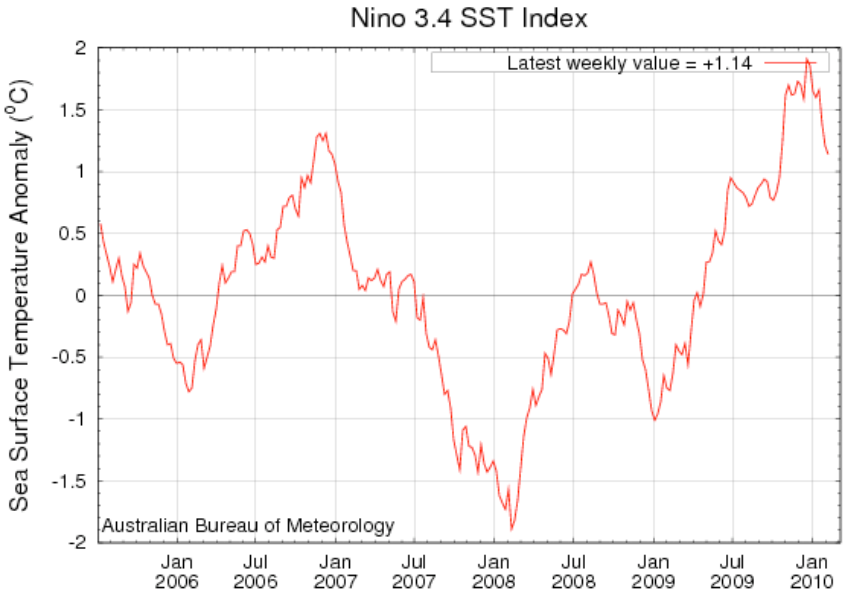
Note:

- Although weaker than in December, the SEC continues to show positive eastward anomalies in equatorial Pacific, characteristic of an El Niño event.

http://www.oscar.noaa.gov/datadisplay/

ENSO index





Negative SOI = El Niño

Positive Nino 3.4 index= El Niño

Note:

- Both indices still show an El Niño phase, although the Niño 3.4 index decreased in January.
- "*Nearly half of the models indicate the 3-month Niño-3.4 SST anomaly will drop below +0.5°C around April-May-June 2010, indicating a transition to ENSO-neutral conditions during Northern Hemisphere spring. However, predicting the timing of this transition is highly uncertain*." –excerpt from **ENSO Cycle: Recent Evolution, Current Status and Predictions Update prepared by Climate Prediction Center / NCEP 4 February 2010**