

Climate and Oceanographic Summary, Great Australian Bight 2015 - 7

Kirsten Rough – 11th January 2015

Summary:

GAB Sea Surface Temperatures continue to warm slowly. Latest satellite images suggest SST is currently very suitable for SBT anywhere west of longitude 137°E.

The upwelling systems of the South East of SA, along the southwest of Kangaroo Island and the west coast of Eyre Peninsula continue to be a prominent feature of satellite images over this last week. A number of thermal fronts are evident between longitudes 134°E and 135°E.

If anyone is flying in the western or central GAB please record approximate distance of sightings from the seismic vessels. There will be 3 operating by the end of this week, the longitudes they are working within are listed at the end of this update. Please also record any unusual observations such as water clarity other species behavior and approximate locations that this occurs.

GAB Sea Surface Temperature (SST):

The most recent 3-day composite satellite image of water temperatures through the central and eastern GAB area and the graph of actual temperatures along the shelf break are shown in Figure 1. The GAB area continues to warm slowly and upwelling in the South East remains a prominent feature. The leading edge for the majority of SBT along the outer shelf area is around longitude 134°30'E but conditions are very suitable to just east of 137°E. Forecasts indicate this is likely to continue to be the case over the next month.

The upwelling system is maintaining some nice contrasting temperature fronts between longitudes 134°E and 135°E.

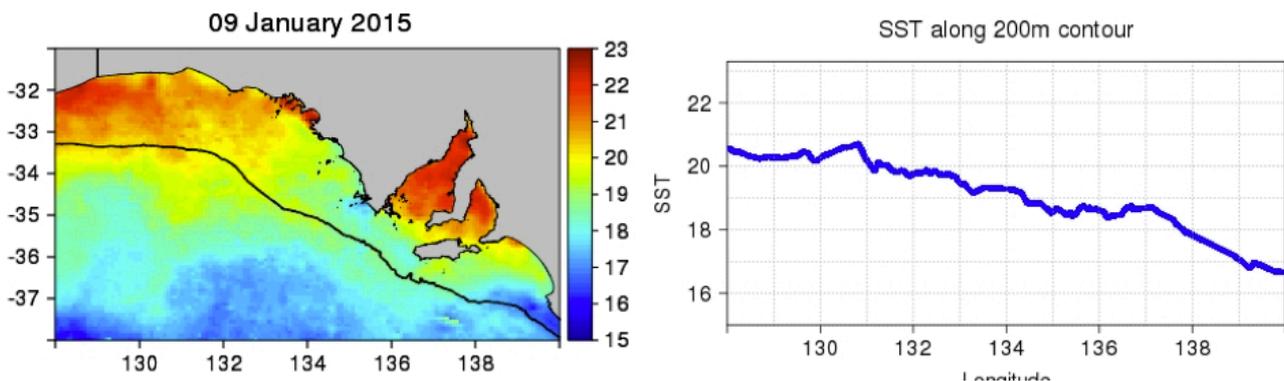


Figure 1: Sea Surface Temperatures through the GAB for the 3-day period to the 10th January 2015, satellite image on left and graph of temperature along the shelf-break right (CSIRO 2015).

Chlorophyll / Productivity:

Cloud cover has obscured most images over the past week; the 7th January had the least interference (Figure 2). Nutrients introduced to surface waters by upwellings over the past few weeks are enhancing algae growth in these areas (greener patches). Algae are the base food for just about everything else in the ocean, so it is likely that there will be higher concentrations of 'krill' and baitfish in these areas.

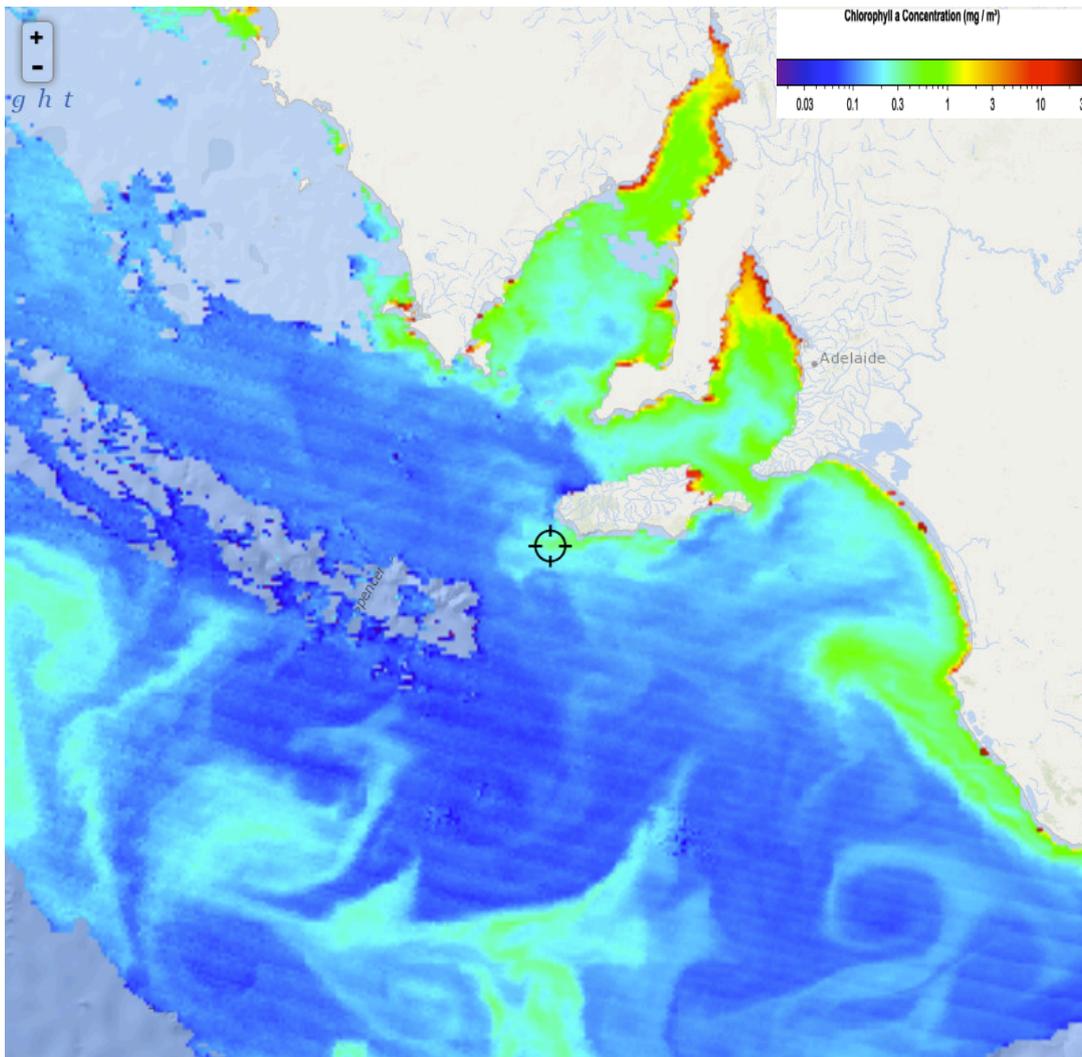


Figure 2: Chlorophyll levels through the eastern GAB area on the 7th January 2015 (FishTrack 2015).

Water Currents:

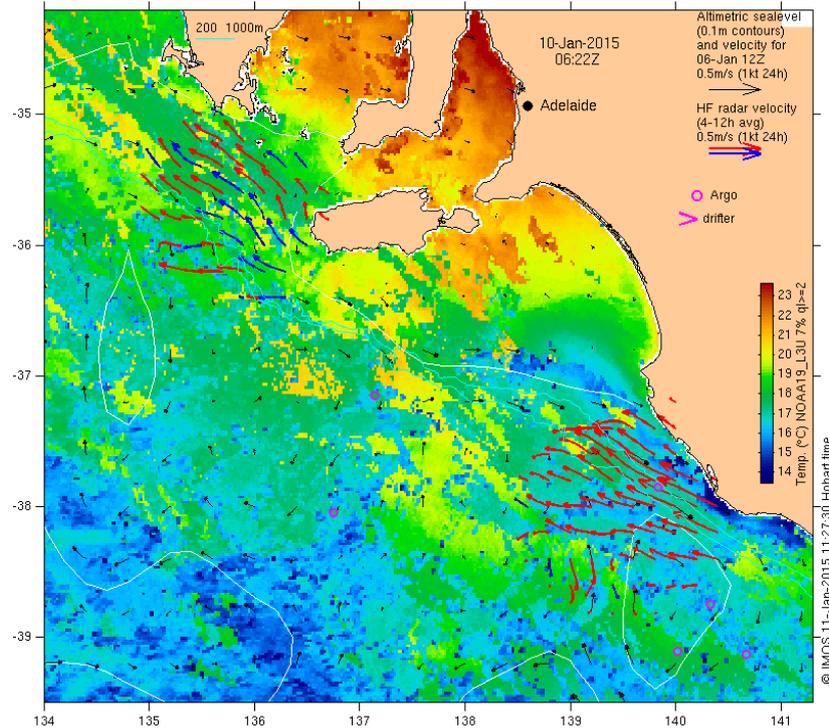


Figure 3: Direction of surface water currents measured by radar located on southern Eyre Peninsula and on the Bonney coast. The background colour represents sea surface temperature, but please be aware that the patchiness indicates this may be inaccurate due to cloud cover (IMOS 2015).

Seismic Surveys:

There has been very little seismic survey activity over the past week with vessels pulling in cables and heading in to Port Lincoln for re-fueling. Through this next week there will be 3 vessels operating.

PGS:

One vessel between longitudes 129°29' and 129°56'

TGS-NOPEC:

1st vessel between longitudes 131°28' and 132°14'

2nd vessel is likely to start midway through this week and will be operating to the south east of the 1st

If anyone would like to have a guided tour of a seismic vessel, please email or text on details below.

Useful Websites:

<http://www.bom.gov.au>

<http://www.csiro.au>

<http://www.fishtrack.com>

<http://www.oceancurrent.imos.org.au>

<http://www.cmar.csiro.au/gab-forecasts/index.html>

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