

Climate and Oceanographic Summary, Great Australian Bight 2014 - 20

Kirsten Rough – 16th February 2014

Summary:

The upwelling continues to influence water temperatures with coolest conditions in the southeast (16 - 17°C) and along the coastal fringe of Kangaroo Island and Eyre Peninsula (both around 17 - 19°C). The general shelf area and shelf break continue to exceed 20°C, and warmer pockets of water (19 - 20°C) persist to the south and southeast of Kangaroo Island.

Actual Sea Surface Temperature (SST) this past week:

- Western GAB at 130°E 33°30'S is 21.4°C
- Central GAB at 133°E 34°S is 20.4°C
- Eastern GAB at 135°E 35°S is 19.6°C
- Southwest KI at 136°30'E 36°30'S is 19.2°C
- Southeast SA at 138°E 37S is 17.1°C

The next full moon is on the 17th of March.

CSIRO Aerial Survey SBT sightings from 1st January 2014 to date (16th Feb) tonnage per longitude:

128°	129°	130°	131°	132°	133°	134°
51 tonnes	415 tonnes	951 tonnes	2470 tonnes	7516 tonnes	2158 tonnes	5182 tonnes

GAB Sea Surface Temperature (SST):

Sea temperatures around Australia and through the Great Australian Bight are shown in Figure 1. The upwelling continues to influence water temperatures through the GAB area. Water suitable for SBT remains in a band along the shelf break in the eastern Bight, as well as southwest and south of Kangaroo Island. The Bight (WA border to the west of KI) now ranges from 18 to 22.5°C, generally warmer along the shelf break and cooler inshore, due to upwelling along the coastal fringe.

Table 1: Sea Surface Temperatures at specific locations along the shelf and shelf break of the Great Australian Bight on the 16th February 2014, co-ordinates as degrees, minutes, seconds (CSIRO 2014).

130°E 33°30'S is 21.4°C	131°E 32°S is 19.8°C	131°E 33°S is 20.9°C	132°E 33°30'S is 20.9°C
133°E 34°S is 20.4°C	134°E 34°30'S is 19.6°C	135°E 35°S is 19.6°C	136°E 35°30'S is 19.0°C
136°30'E 36°30'S is 19.2°C	137°E 36°30'S is 19.5°C	138°E 37S is 17.1°C	139°E 37S is 16.9°C

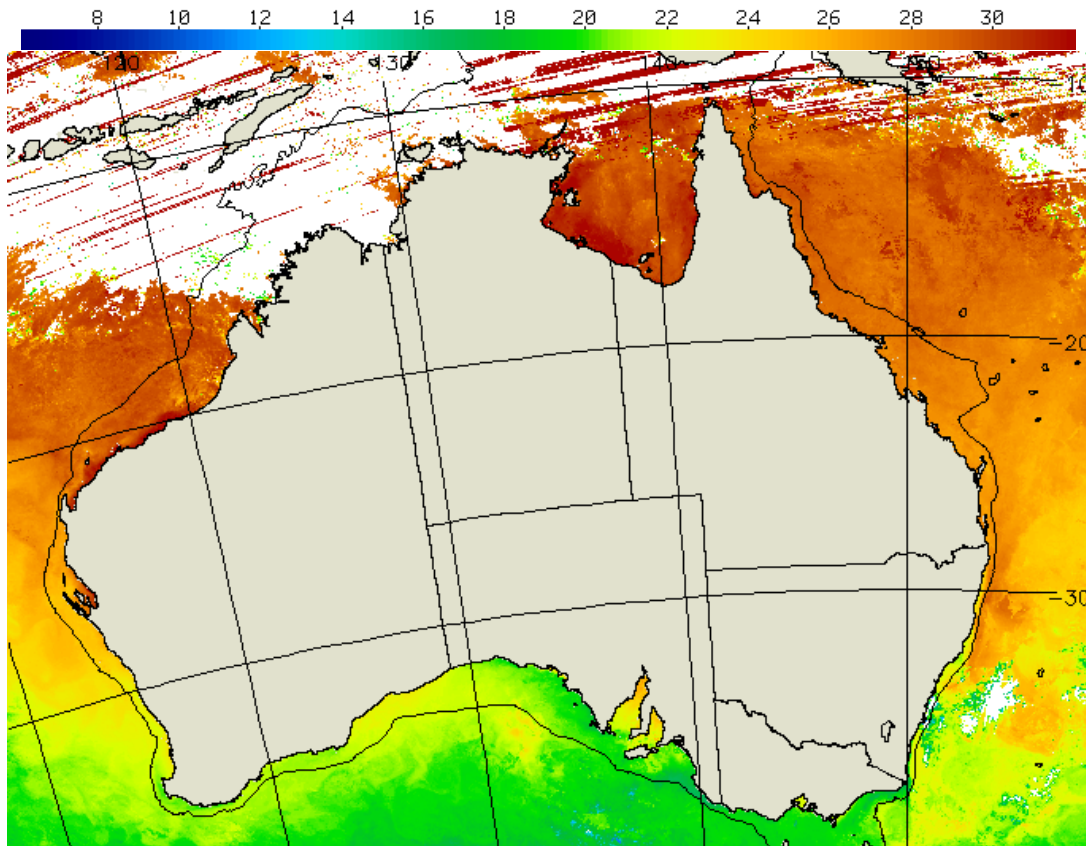


Figure 1: Sea Surface Temperature across southern Australia for the 5-days to the 16th February 2014 (source: CSIRO 2014).

SA Water Currents and Tide Times:

A plot of where the water currents are moving below Eyre Peninsula is shown in Figure 2, the blue and red arrows are real time surface currents measured from radar mounted on Cape Catastrophe.

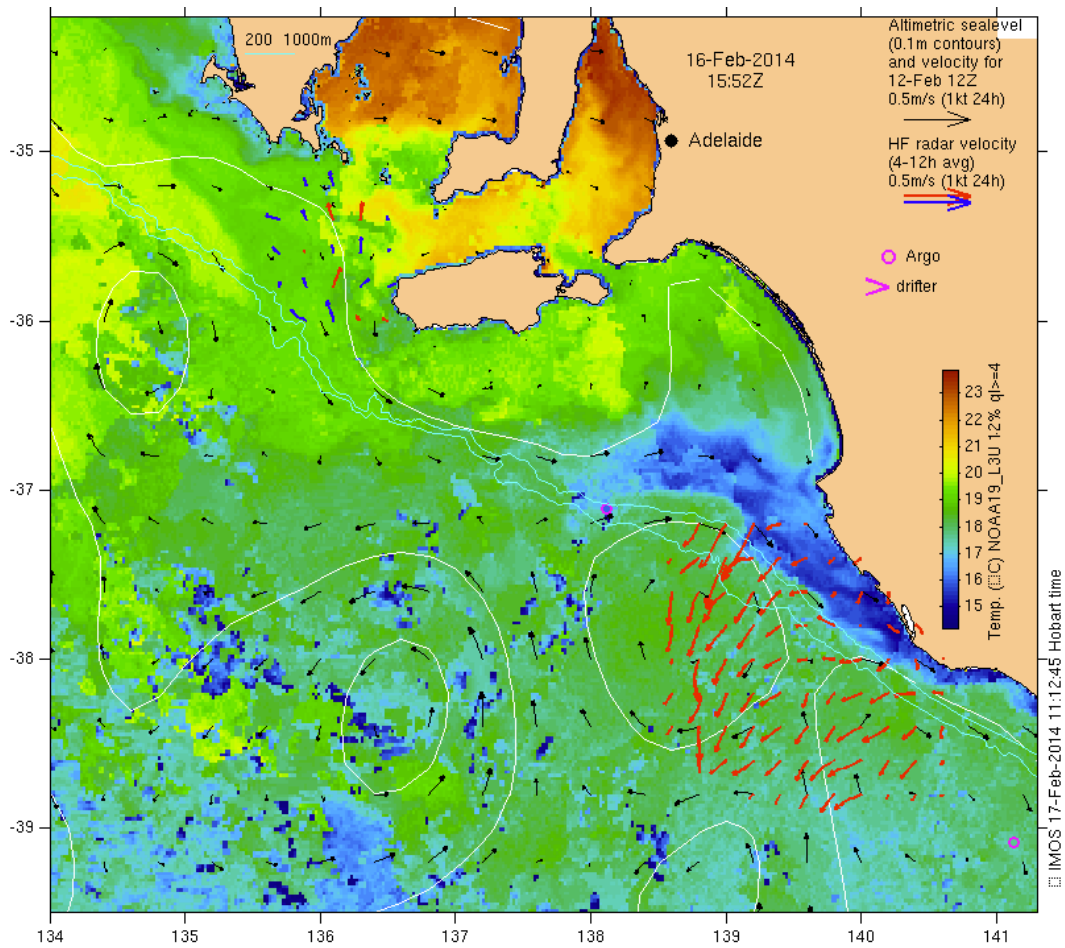


Figure 2: Water currents on the 16th February 2014, the arrows in blue below Eyre Peninsula are surface currents recorded by radar; the colour of the background is Sea Surface Temperature (IMOS 2014).

Table 2: Tide times for Port Lincoln for the next week. Note the time is in ‘Central Standard Time’ therefore add 1 hour to allow for daylight saving. Also note that Taylors Landing and Reevesby Island tides are 20-28 minutes behind Lincoln tides, so minus this to make these more representative of the Tuna Lease Zone.

Tuesday 18		Wednesday 19		Thursday 20		Friday 21		Saturday 22		Sunday 23		Monday 24	
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
0328	1.43	0349	1.34	0407	1.22	0423	1.08	0432	0.93	0259	0.80	0950	0.36
0948	0.10	1002	0.12	1015	0.16	1024	0.20	1028	0.26	1023	0.32	2230	1.11
1551	1.29	1611	1.31	1632	1.32	1656	1.29	1723	1.24	1756	1.14		
2155	0.24	2221	0.31	2249	0.41	2320	0.53	2358	0.69				

Chlorophyll and Productivity:

The best image of the past week is shown below, note the gray areas are obscured with cloud. Chlorophyll levels are higher along the coastal fringe and in the areas being fed by the recent upwelling, especially down the southeast of SA.

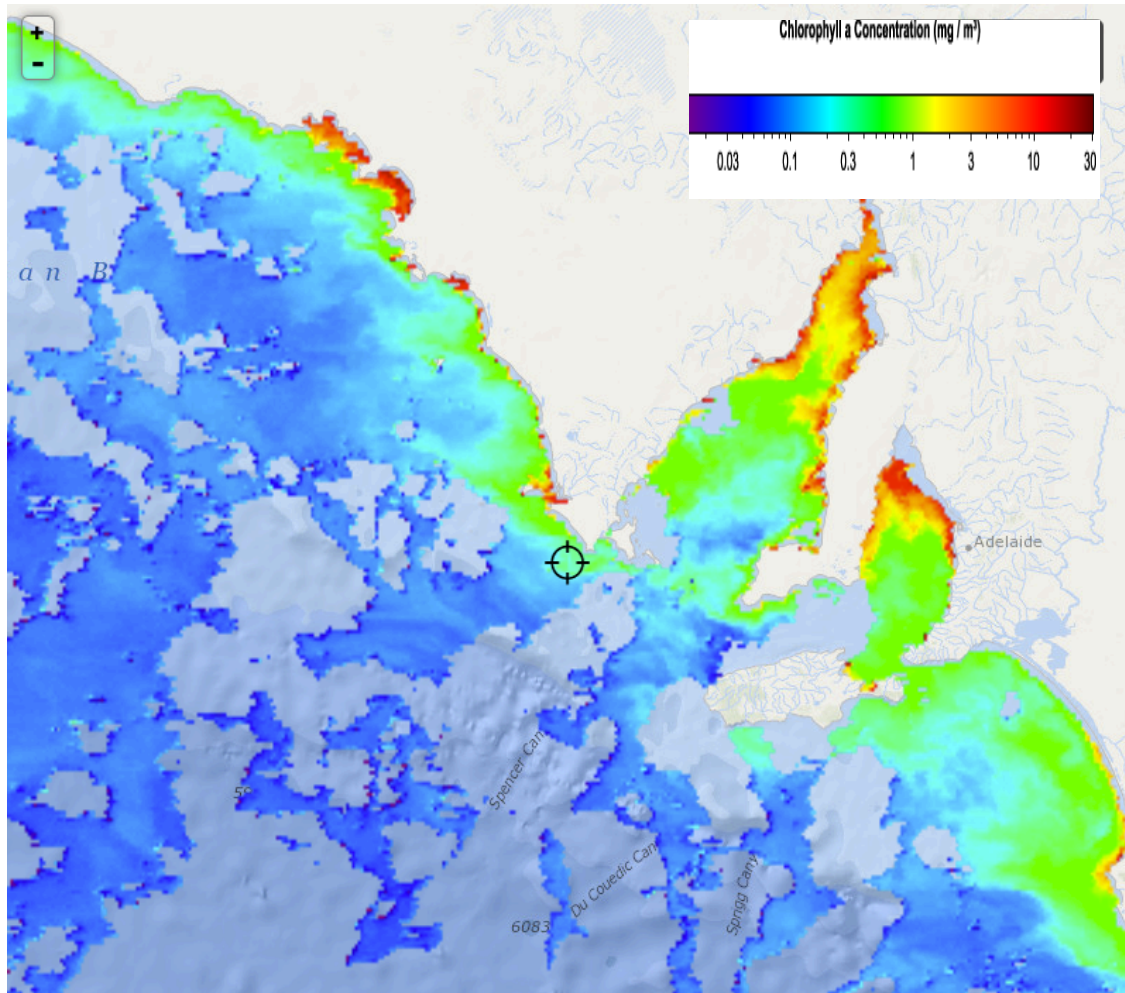


Figure 3: Areas of productivity within the GAB on the 16th February 2014 (Fish Track 2014).

Useful Websites:

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

<http://www.csiro.au>

<http://www.fishtrack.com>

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

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