

Climate and Oceanographic Summary, Great Australian Bight 2014 - 19

Kirsten Rough – 10th February 2014

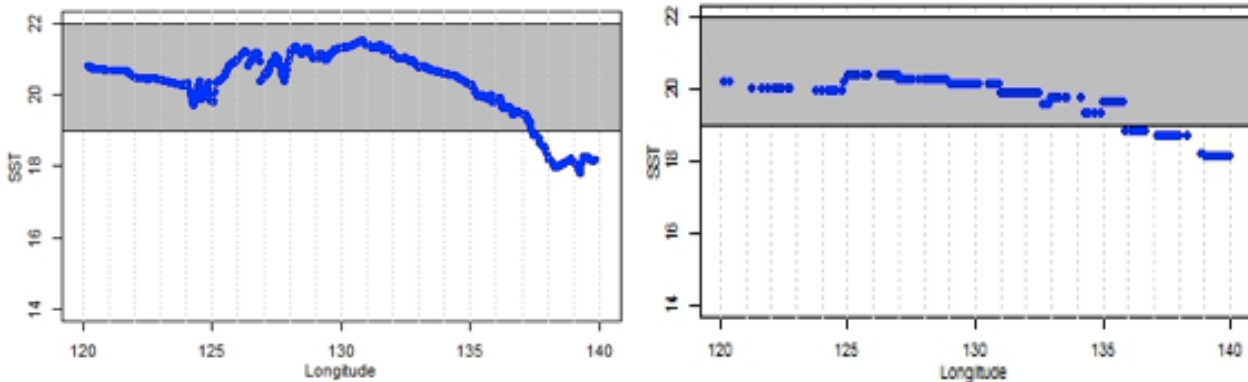
Summary:

The upwelling continues to influence water temperatures with coolest conditions in the southeast (15 - 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°S is 21.6°C
- Central GAB at 133°E 34°S is 20.3°C
- Eastern GAB at 135°E 35°S is 19.6°C
- Southwest KI at 136°30'E 36°30'S is 17.1°C
- Southeast SA at 138°30'E 37S is 15.8°C

SST along the shelf-break on 4th February (left) and the forecast of SST along shelf break for the month of March (right). This suggests conditions will remain suitable for SBT to occur east to around longitude 136°E through until well into the month of March.



The Leeuwin Current (LC) continues to have very little influence on the GAB fishing area. This fishing and aerial survey season remains under the influence of the Southern Ocean. Anyone interested in continuing to monitor the LC progress can do so on the web link provided later in this document.

The next full moon is on the 15th of February.

CSIRO Aerial Survey SBT sightings from 1st January 2014 to date (10th Feb) tonnage per longitude:

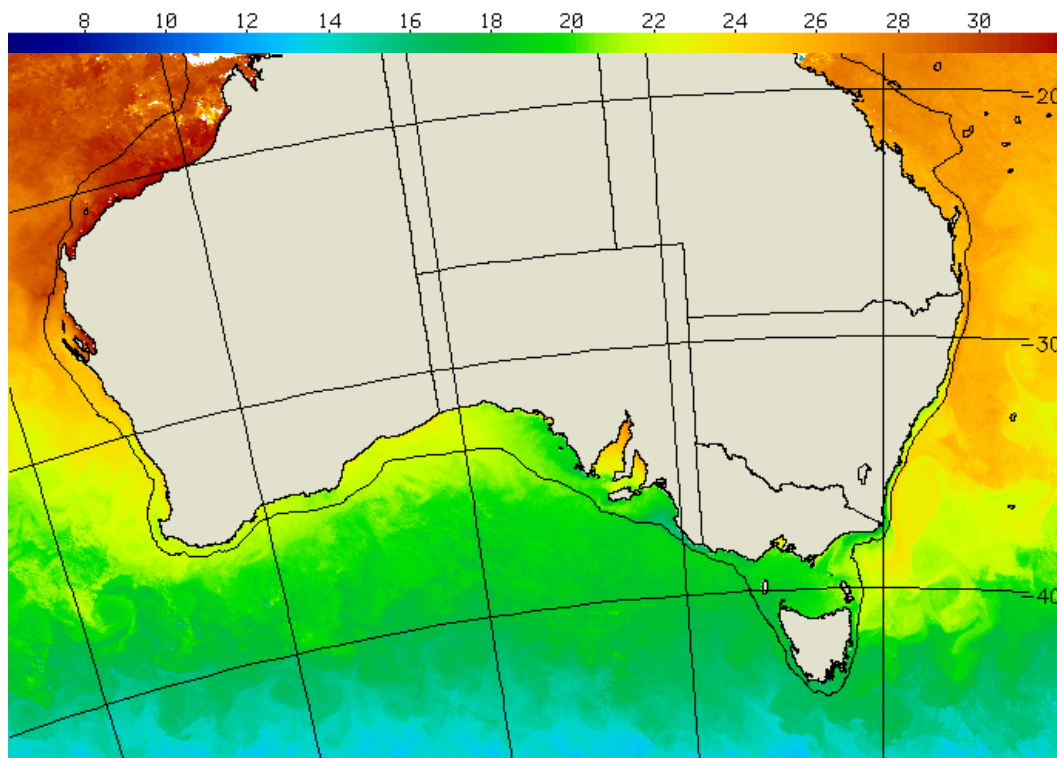
128°	129°	130°	131°	132°	133°	134°
51 tonnes	415 tonnes	250 tonnes	2345 tonnes	3357 tonnes	2158 tonnes	5182 tonnes

GAB Sea Surface Temperature (SST):

Sea temperatures around Australia and through the Great Australian Bight are shown in Figure 1 and Figure 2. 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 17 to 22.5°C, generally warmer along the shelf break and cooler inshore, due to upwelling along the coastal fringe. In Figure 2 from the GAB Habitat Forecasting project - it is the areas within the orange and yellow that are most suited to ideal ranch sized SBT. Note we are continue to refine these maps so they are easy for you to use into the future - if you have any comments please phone or email on the contact details at the end.

Table 1: Sea Surface Temperatures at specific locations along the shelf and shelf break of the Great Australian Bight on the 8th February 2014, co-ordinates as degrees, minutes, seconds (CSIRO 2014).

130°E 33°S is 21.6°C	131°E 32°S is 21.1°C	131°E 33°S is 21.1°C	132°E 33°30’S is 20.6°C
133°E 34°S is 20.3°C	134°E 34°30’S is 19.3°C	135°E 35°S is 19.6°C	136°E 35°30’S is 19.5°C
136°30’E 36°30’S is 17.1°C	137°E 36°30’S is 20.0°C	138°E 37S is 17.1°C	139°E 37S is 15.3°C



Mean SST from 03/02/2014 to 08/02/2014
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Figure 1: Sea Surface Temperature across southern Australia for the 5-days to the 8th February 2014 (source: CSIRO 2014).

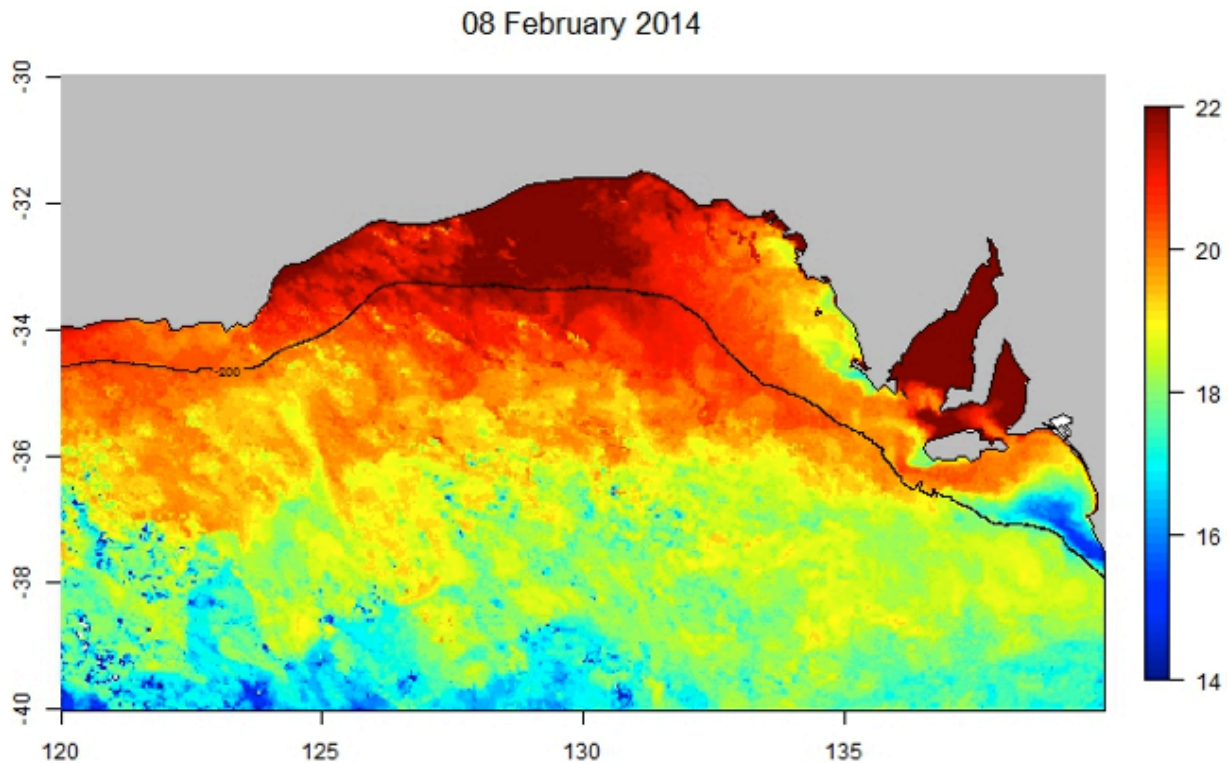


Figure 2: Sea Surface Temperature from the GAB SBT Habitat Forecasting project taken on the 8th February 2014 (source: CSIRO 2014).

Leeuwin Current Temperature:

Sea surface temperatures and ocean currents around the Western Australian coastline are available on the IMOS website if anyone wants to continue watching the progress of the Leeuwin Current (<http://www.oceancurrent.imos.org.au>).

SA Water Currents and Tide Times:

A plot of where the water currents are moving below Eyre Peninsula is shown in Figure 3, the blue arrows are real time surface currents measured from radar mounted on Cape Catastrophe. Please note the maps in previous issues were based on models of water movement not real measurements, but they are able to cover a wider area than the radar below. From the currents measured along the Bonney Coast it seems that the cool water from the recent upwelling will continue to be dispersed to the south and southwest, below the area holding the fish.

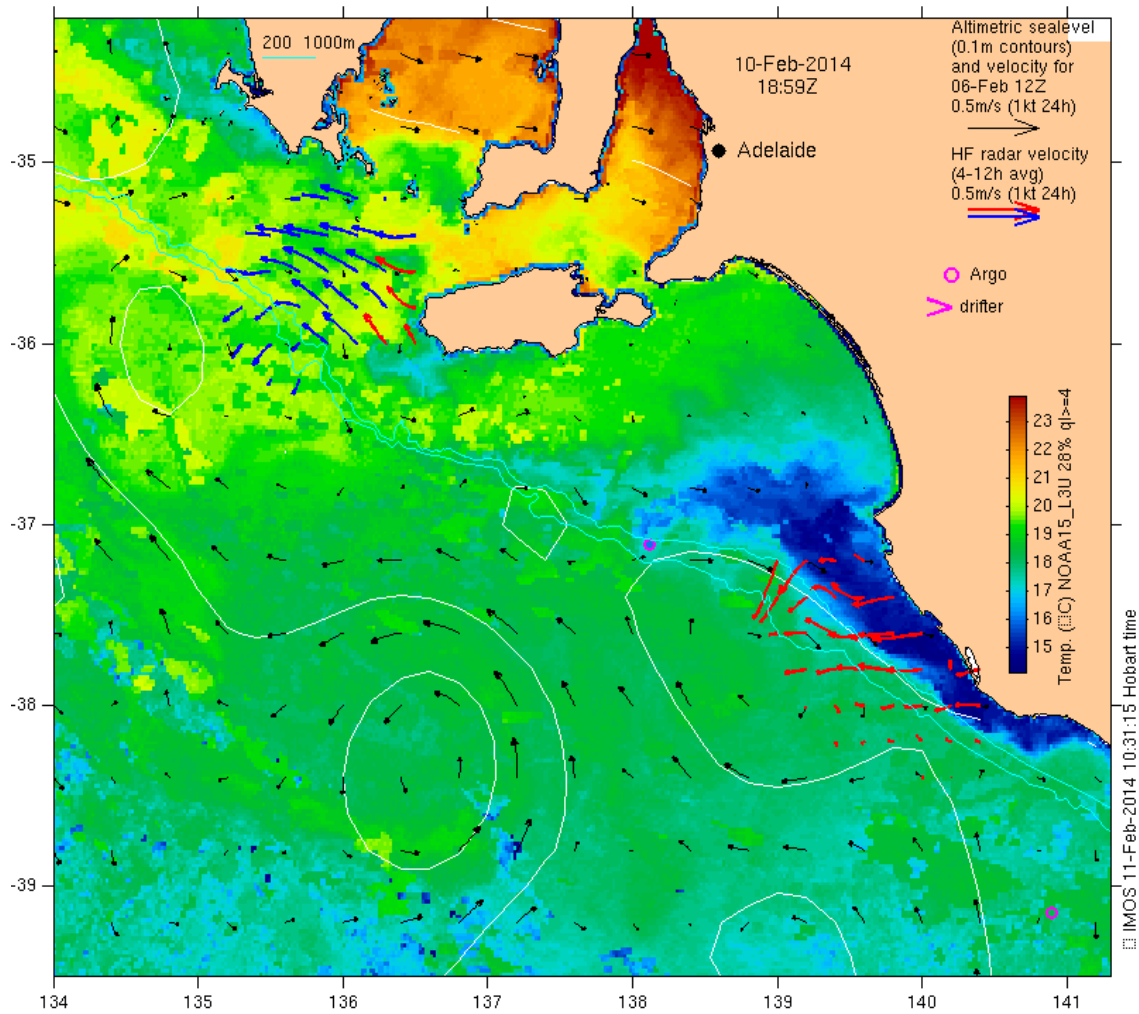


Figure 3: Water currents on the 10th February 2014, the arrows in blue below Eyre Peninsula are surface currents recorded by radar; the colour of the background is Sea Surface Temperature (IMOS 2014).

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.

Port Lincoln, SA – February 2014

TUE 11 FEB		WED 12 FEB		THU 13 FEB		FRI 14 FEB		SAT 15 FEB		SUN 16 FEB		MON 17 FEB	
HIGH	1:07 am 1.17 m	HIGH	1:49 am 1.28 m	HIGH	2:21 am 1.38 m	HIGH	2:50 am 1.46 m	HIGH	3:17 am 1.50 m	HIGH	3:43 am 1.52 m	HIGH	4:07 am 1.49 m
LOW	9:12 am 0.39 m	LOW	9:07 am 0.32 m	LOW	9:17 am 0.25 m	LOW	9:34 am 0.18 m	LOW	9:53 am 0.13 m	LOW	10:12 am 0.10 m	LOW	10:31 am 0.09 m
HIGH	3:14 pm 0.71 m	HIGH	3:06 pm 0.81 m	HIGH	3:18 pm 0.91 m	HIGH	3:34 pm 1.00 m	HIGH	3:53 pm 1.09 m	HIGH	4:12 pm 1.17 m	HIGH	4:32 pm 1.24 m
LOW	6:07 pm 0.64 m	LOW	7:53 pm 0.54 m	LOW	8:35 pm 0.42 m	LOW	9:07 pm 0.33 m	LOW	9:36 pm 0.25 m	LOW	10:04 pm 0.21 m	LOW	10:30 pm 0.21 m

Chlorophyll and Productivity:

Chlorophyll levels are higher along the coastal fringe and in the areas being fed by the recent upwelling, especially down the southeast of SA and southern coast of Kangaroo Island. Please email if you would like some GPS positions along the edges of the green and aqua-coloured areas (of interest for SBT).

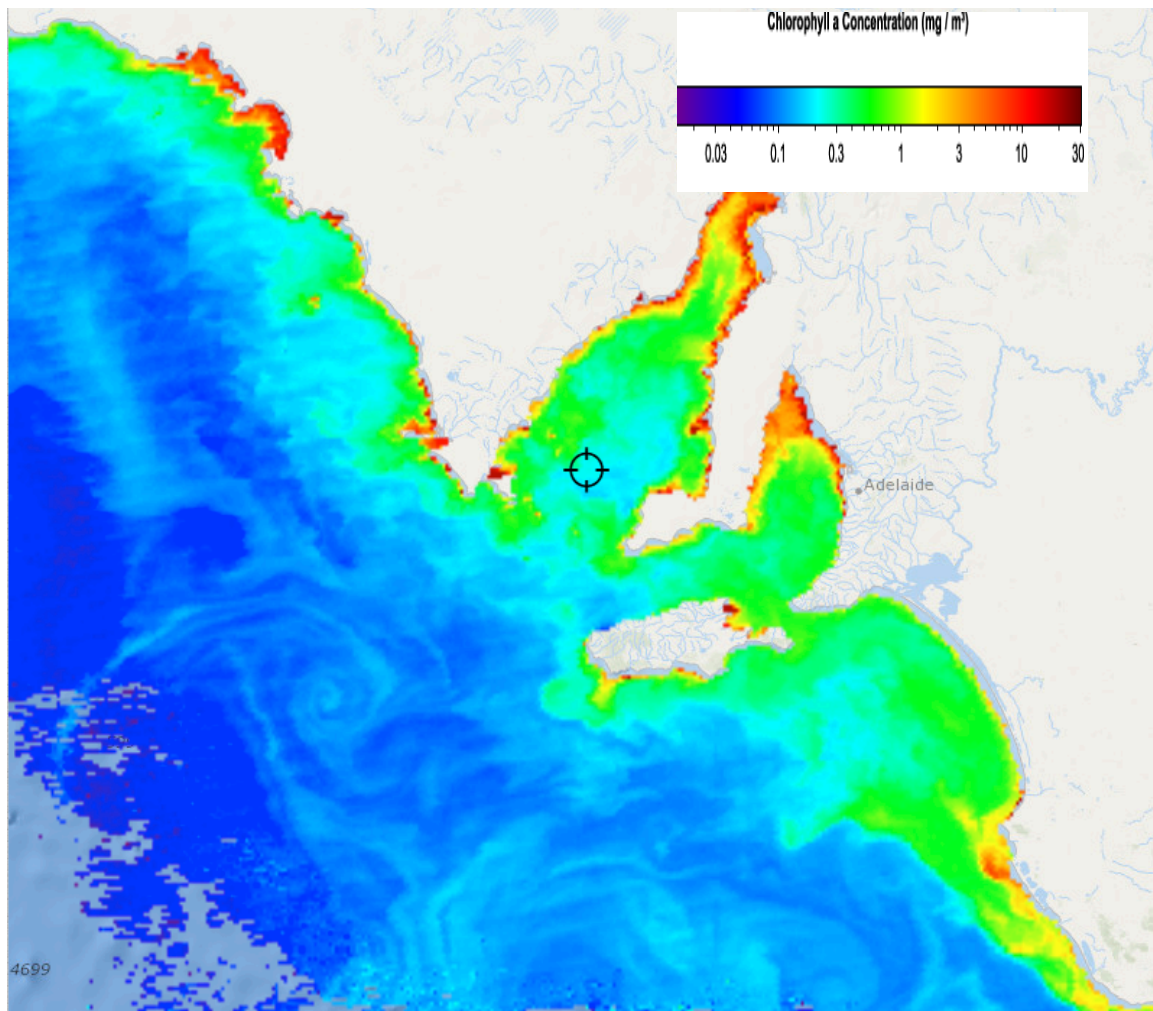


Figure 4: Areas of productivity within the GAB on the 10th February 2014 (Fish Track 2014).

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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