

Oceanographic Summary, Great Australian Bight 2016 - 16

Kirsten Rough – 11th February 2016

Please find following the latest update for recent and expected oceanic conditions for the 2016 fishing and aerial survey season.

Summary:

The sea temperatures of the GAB area continue to warm over a broad area; particularly unusual is the warm area through Bass Strait and south of the Bonney Upwelling in the South East of SA.

Along the shelf break (200m depth contour) conditions are highly suitable for SBT across the central GAB to longitude 135°30'E and between longitudes 136 and 137°30'E. Inshore (on the shelf) conditions are highly suitable to the south and southeast of Kangaroo Island, and areas south of the Cabbage Patch and Rocky Island.

Upwelling continues as a particular feature, influencing sea surface temperatures and chlorophyll concentrations along the South East “Bonney Coast” and the coastal fringe of lower and western Eyre Peninsula.

Weather conditions have precluded CSIRO Aerial Survey flights since the previous update.

GAB Sea Surface Temperature (SST):

The Sea Surface Temperature situation across southern Australia over the previous 3-days is shown in Figure 1, and in the central and eastern GAB over the past 2-weeks in Figure 2. The graphs of water temperature along the shelf break are showing suitable conditions for SBT along the 200m depth contour to longitude 135°30'E and between 136 and 137°30'E. Inshore from this conditions are highly suitable to the south and southeast of Kangaroo Island, south of Cabbage Patch and Rocky Island (Table 1).

The upwelling continues to be a significant feature of the conditions expressed this season, notably shown in Figure 3. Water temperatures along western Eyre Peninsula are around 16°C and in the cooler areas of the South East are around 14°C.

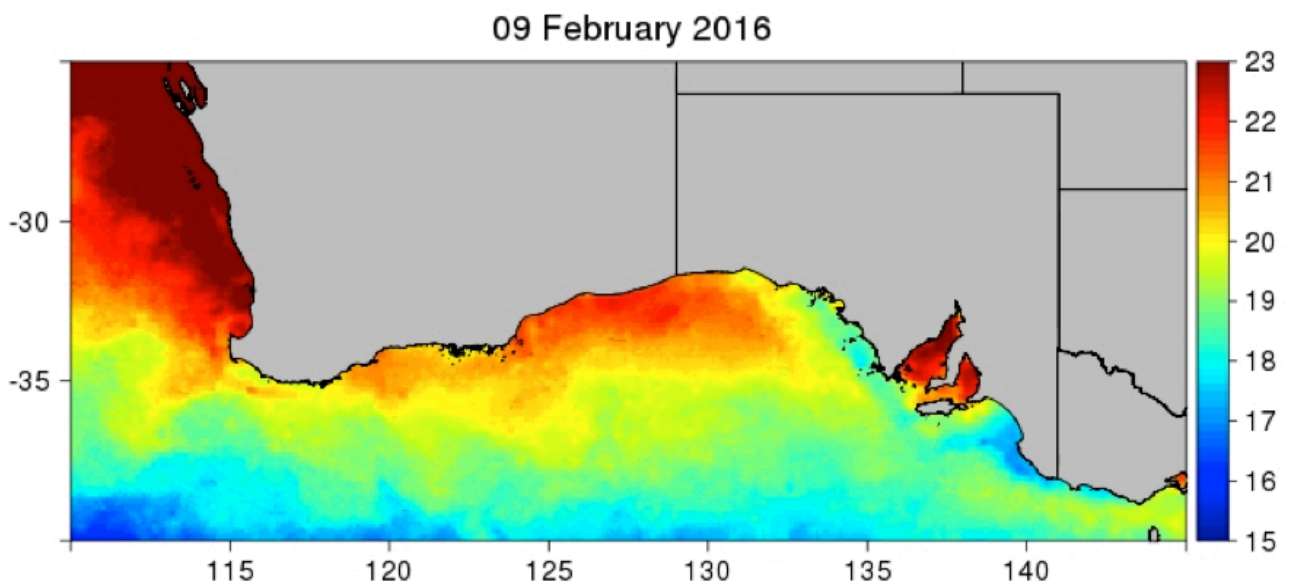


Figure 1: Sea Surface Temperature across southern Australia for the 3-day period around the 9th February 2016 (CSIRO 2016).

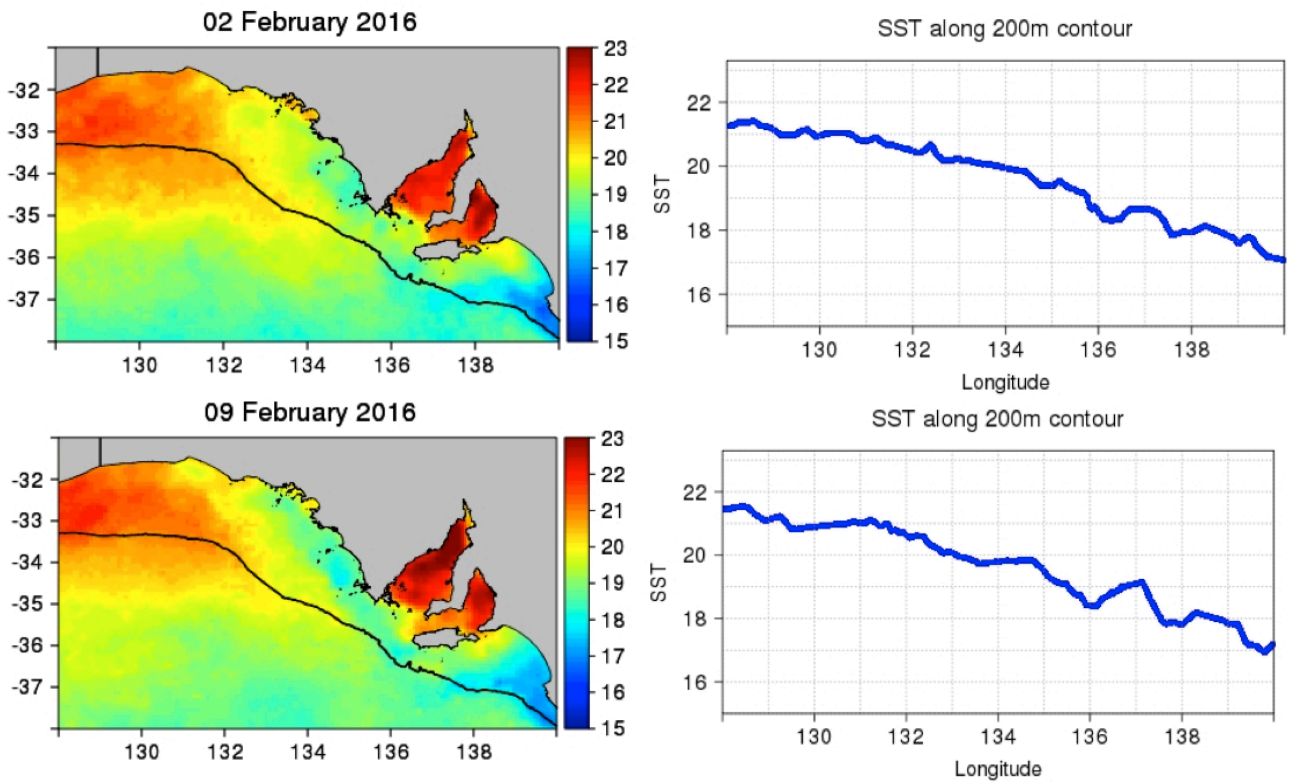


Figure 2: Snapshots of sea surface temperatures across the Eastern GAB over the past 2 weeks, satellite image on left and graph of temperature along the shelf break (black line) on the right (CSIRO 2016).

Table 1: Sea Surface Temperature for 9th February 2016, at some important historic and recent catching areas.

131°00'E 33°05'S = 21.4°C	132°00'E 33°23'S = 20.5°C
133°00'E 34°05'S = 19.5°C	134°00'E 34°15'S = 19.7°C
Yatala Reef 19.7°C	Cannan Reef 19.5°C
SW Rocky Island 19.6°C	Cabbage Patch area 18.7°C (to the south is 19.2°C)
SW Cape de Cudiac 18.1°C	Young Rocks area 19.3°C
SE Pelorus Rocks 19.0°C	Sanders Banks area 19.8°C

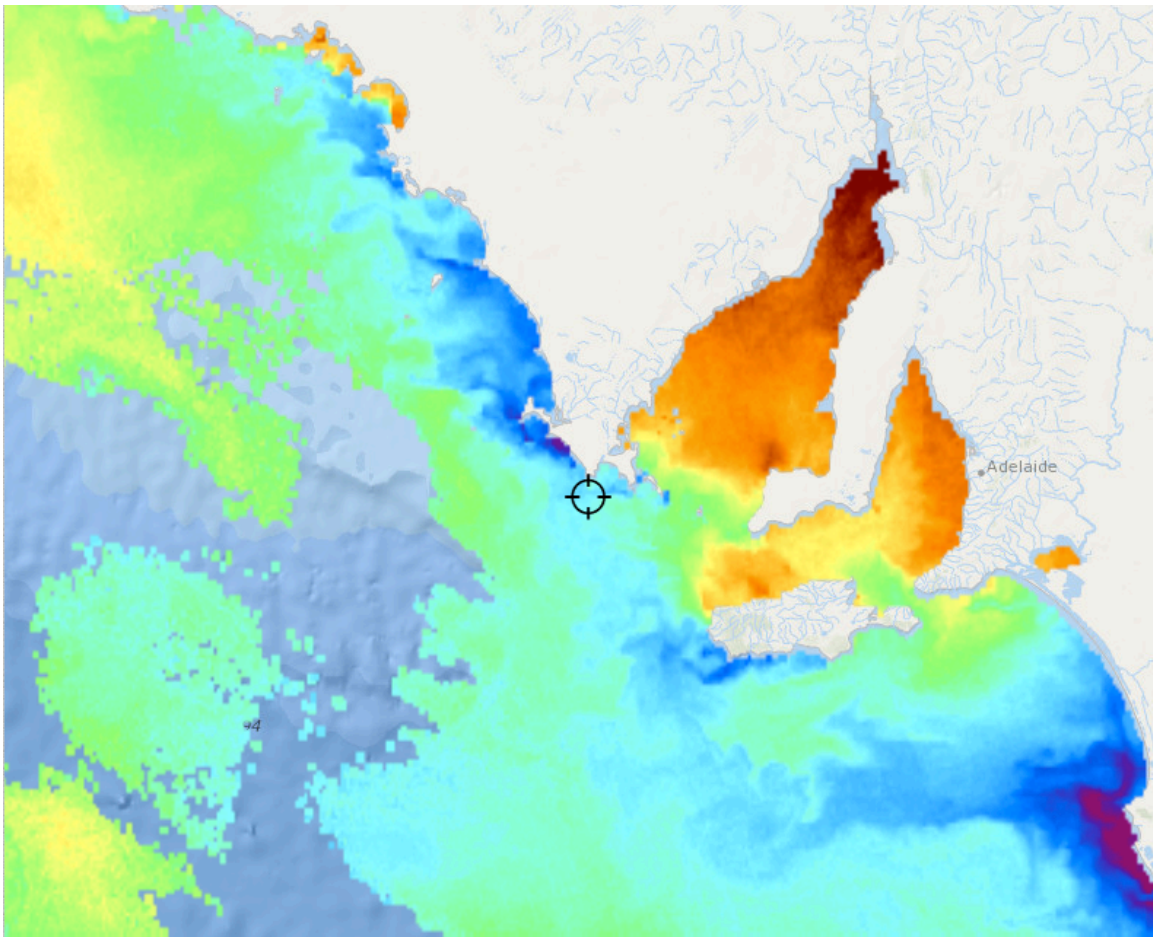


Figure 3: Most recent clear image (9th Feb 2016) of Sea Surface Temperature covering an area from the Head of the Bight to the South East of SA (Fishtrack 2016).

SBT Habitat:

From a habitat perspective, how the situation looked over the past 2-weeks is shown in Figure 4. An interesting change from previous weeks is the area to the south of the South East upwelling.

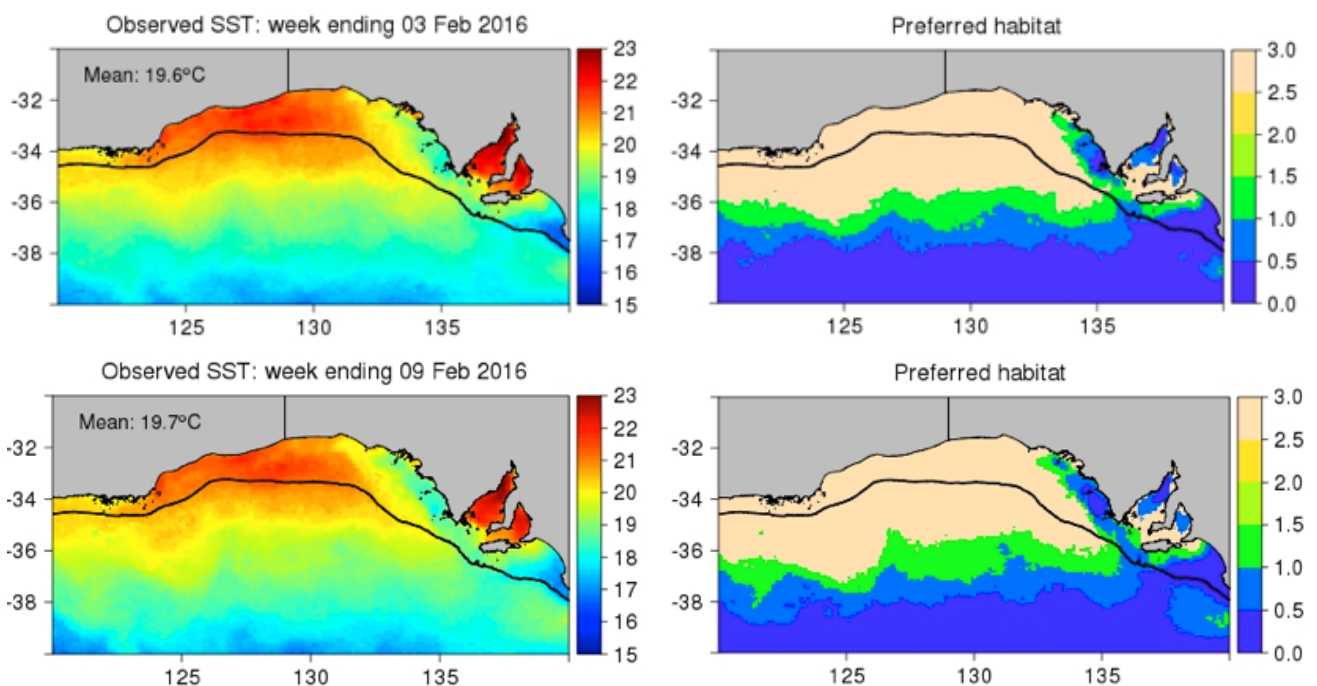


Figure 4: SST and preferred habitat distribution over the previous 2 weeks (CSIRO 2016).

Chlorophyll / Productivity:

Cloud cover has obscured large areas of most images over the past week. The best image of chlorophyll distribution around Kangaroo Island and across the greater GAB area was obtained on the 9th February (Figure 5). Highest levels continue to be associated with areas influenced by upwelling. Ideal areas for SBT are in the regions with light blue and aqua colour.

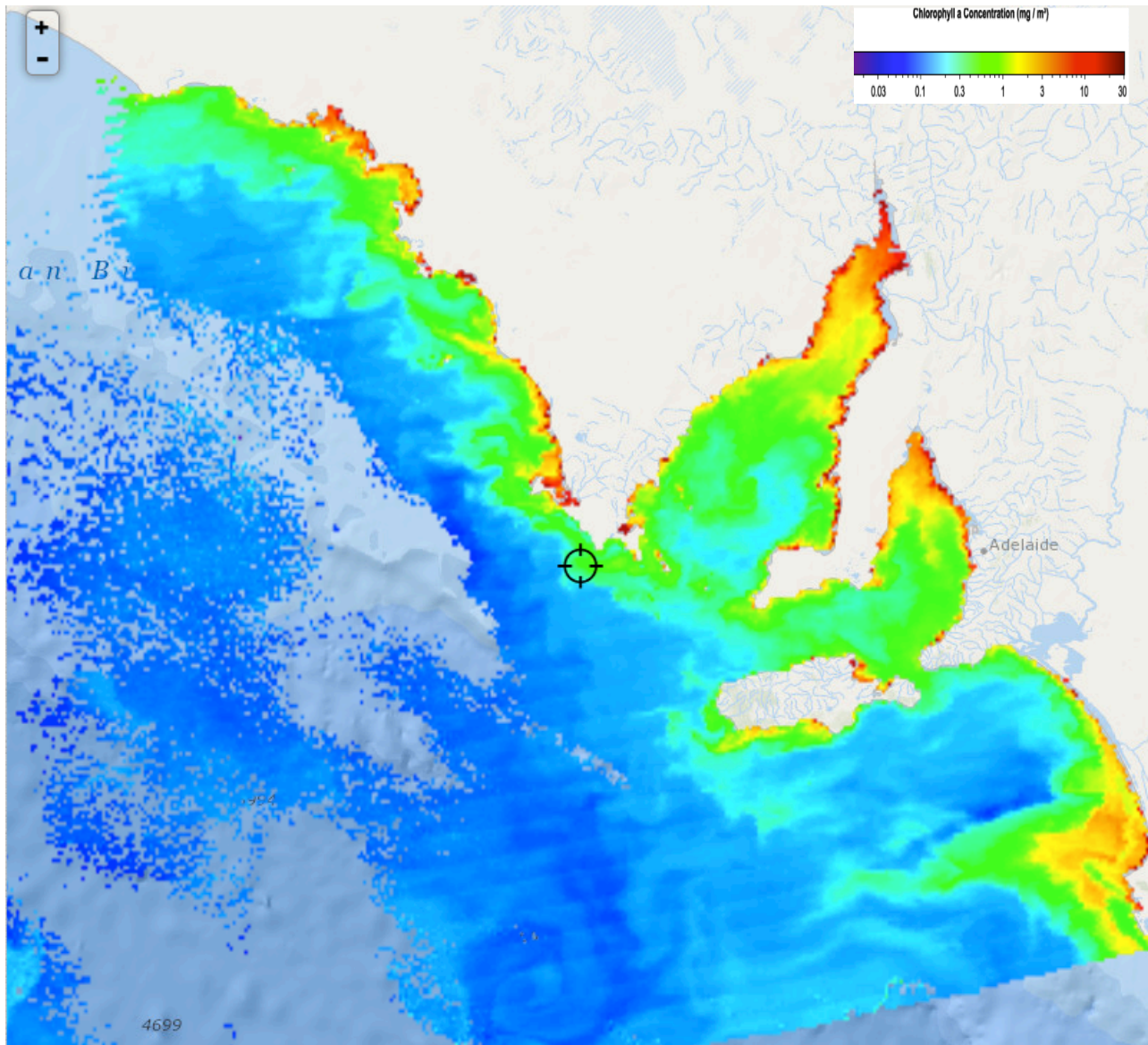


Figure 5: Distribution of chlorophyll concentrations from the Head of the Bight to the South East of SA on 9th February 2016 (FishTrack 2016)

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>

Further details contact:

Kirsten Rough 0429 833 697
ASBTIA – Research Office
Port Lincoln SA 5606
Email: kirstenrough@bigpond.com
SBT_Research@bigpond.com