

Climate and Oceanographic Summary, Great Australian Bight 2017 - 4

Kirsten Rough – 20th November 2016

Summary:

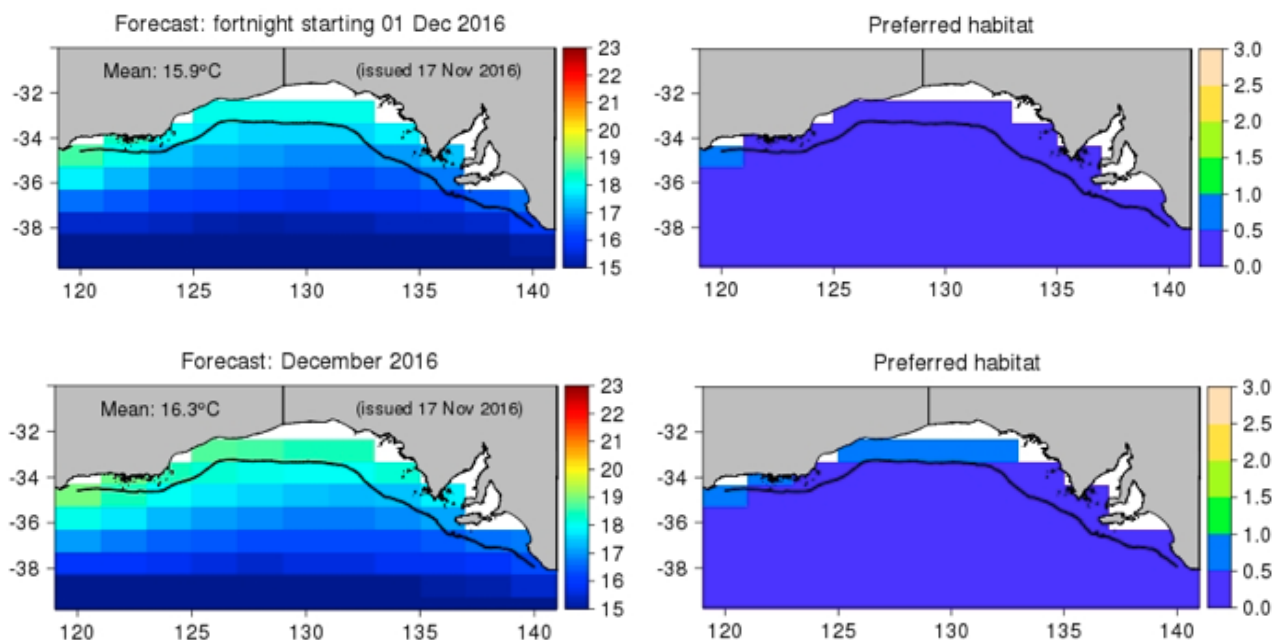
The Sea Surface Temperature situation in the Great Australian Bight remains cool.

Longer-term GAB forecasts are suggesting cooler conditions persisting through December, but improving considerably in January including areas closer to Port Lincoln.

There is a consultation opportunity for the seismic survey close to Lower Eyre Peninsula on the 24th November (10am).

Forecast Sea Surface Temperature and SBT Habitat:

The longer-term forecasts of conditions in the GAB coming into the 2017-fishing season can be seen in Figure 1. In these images the plot on the left shows forecasted sea surface temperature and the plot on the right shows the areas that have conditions suitable for ranch-sized Southern Bluefin Tuna. Preferred habitat includes areas with a value of one or more (i.e. green to bone colour). These are indicating that conditions will continue to warm slowly with some of the inshore areas likely to have early entry SBT in the latter half of December. But more importantly, through January the conditions will be suitable for the majority of SBT over a wide area including below Eyre Peninsula.



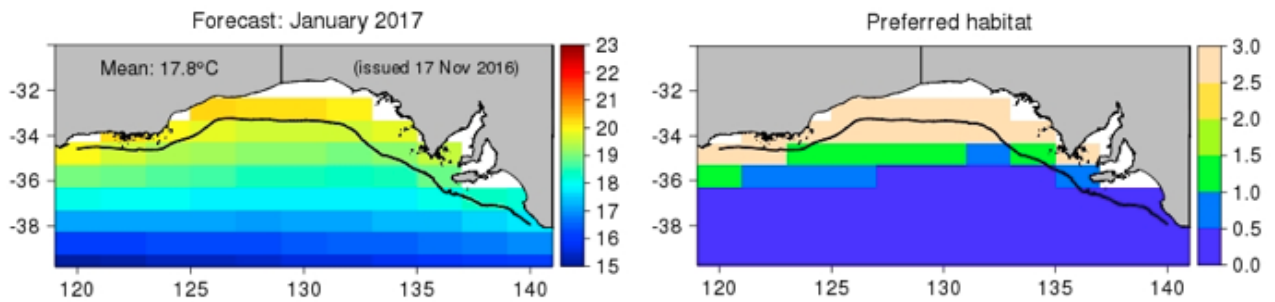


Figure 1: Sea Temperature and SBT Habitat forecasts issued on the 17th of November 2016 coming into the 2017-fishing season. Top image shows first half of December; middle image is second half of December and bottom image shows conditions through January (CSIRO 2016)

Through 2016 ASBTIA has contributed and been involved with developing short-term (1 to 5days) forecasting of GAB sea temperature conditions with SARDI and the Bureau of Meteorology. Part of this project will look at anomalies or how the current situation compares with the average situation for a similar point in time over the previous 5-years; see Figure 2. What is interesting from this is that the very eastern fishing areas of previous seasons are a comparable temperature at the moment to what they’ve been over the past few seasons, while the greater GAB area is substantially cooler.

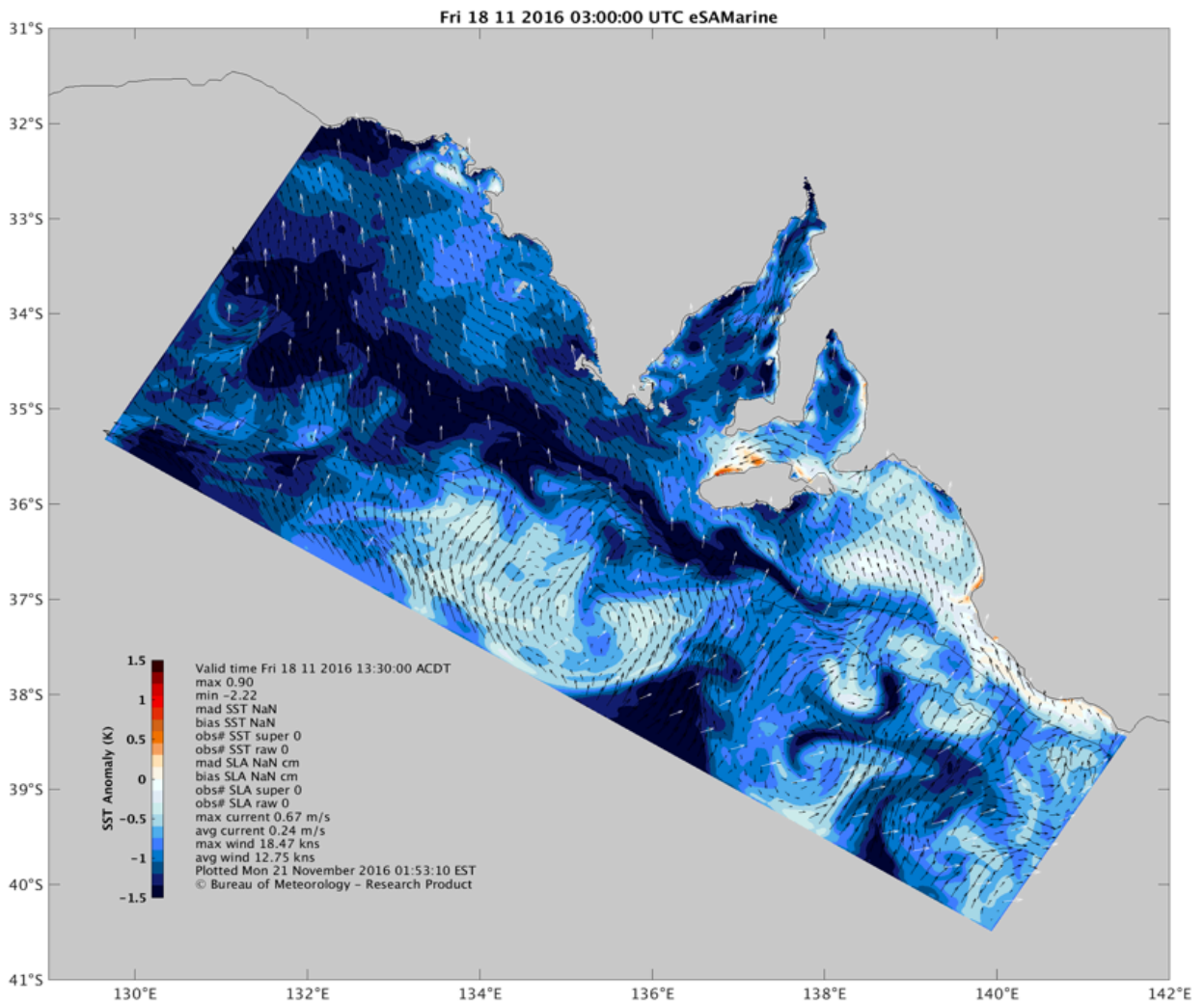


Figure 2: Snapshot of the Sea Surface Temperature anomaly on the 18th November 2016 taken from the draft e-SA Marine Project (this is how the situation now compares to average situation from a similar point in time over the previous 5 years). Also shown are water currents (black arrows) wind direction (white arrows) and information on the average and maximum water current and wind speeds for the sea area outlined (SARDI-BoM 2016).

GAB Sea Surface Temperature (SST):

The broader GAB area remains cool and there is a small amount of warmer water feeding around the southwest corner of Western Australia (Figure 3). Actual SST along the 200m-depth contour is shown in Figure 4.

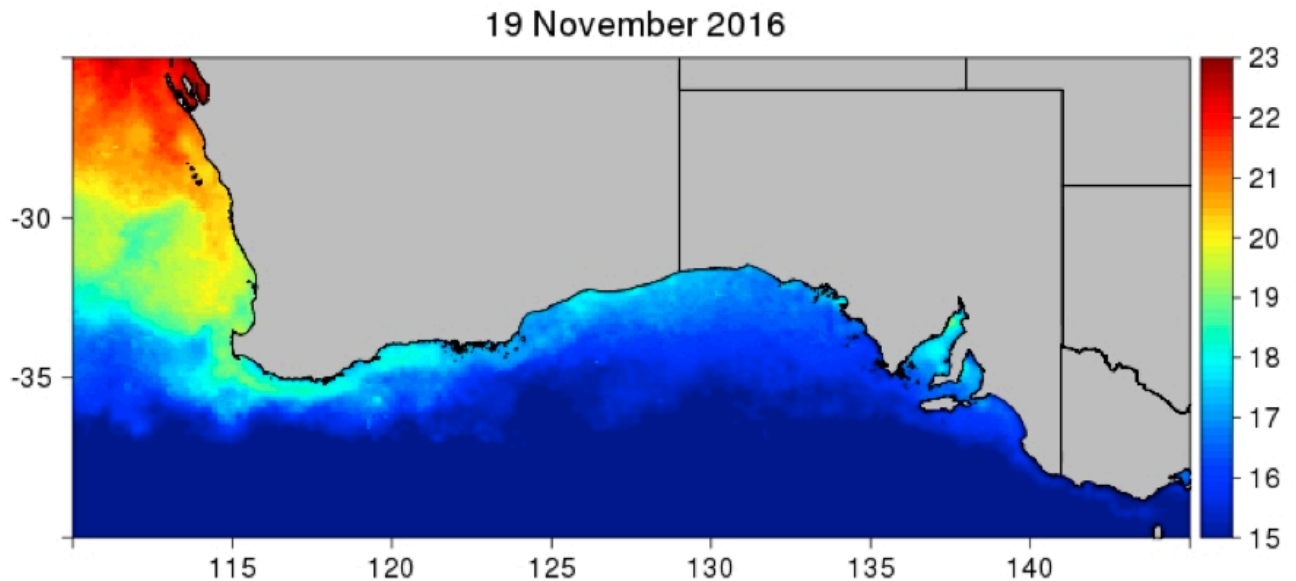


Figure 3: Sea Surface Temperature across southern Australia over the past week (CSIRO 2016).

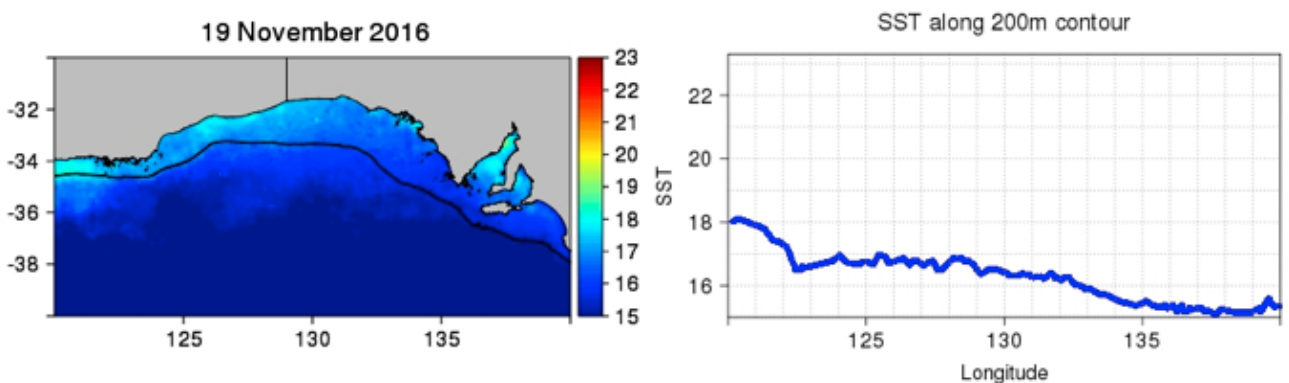


Figure 4: Most recent satellite image of Sea Surface Temperatures across the GAB between longitudes 120° to 140°E (left) and corresponding graph of SST along the 200m-depth contour, (right) (CSIRO 2016).

Oil & Gas Exploration Update:

As mentioned in the previous update → A seismic company will submit an application to NOPSEMA to undertake Marine Seismic Surveys in the areas outlined with black in Figure 5, below. The area in the right-hand box HAS approval to proceed from the 1st of March 2017; given the cold water and possible delay in catching we may need to delay this start time.

A meeting on this seismic survey will occur this week:

WHEN: 24th November 2016
 WHERE: Sarin Marine Farm, boardroom
 115 Verran Terrace Port Lincoln
 TIME: 10am

Please advise if you would like to participate – 0429 833 697 or kirstenrough@bigpond.com.

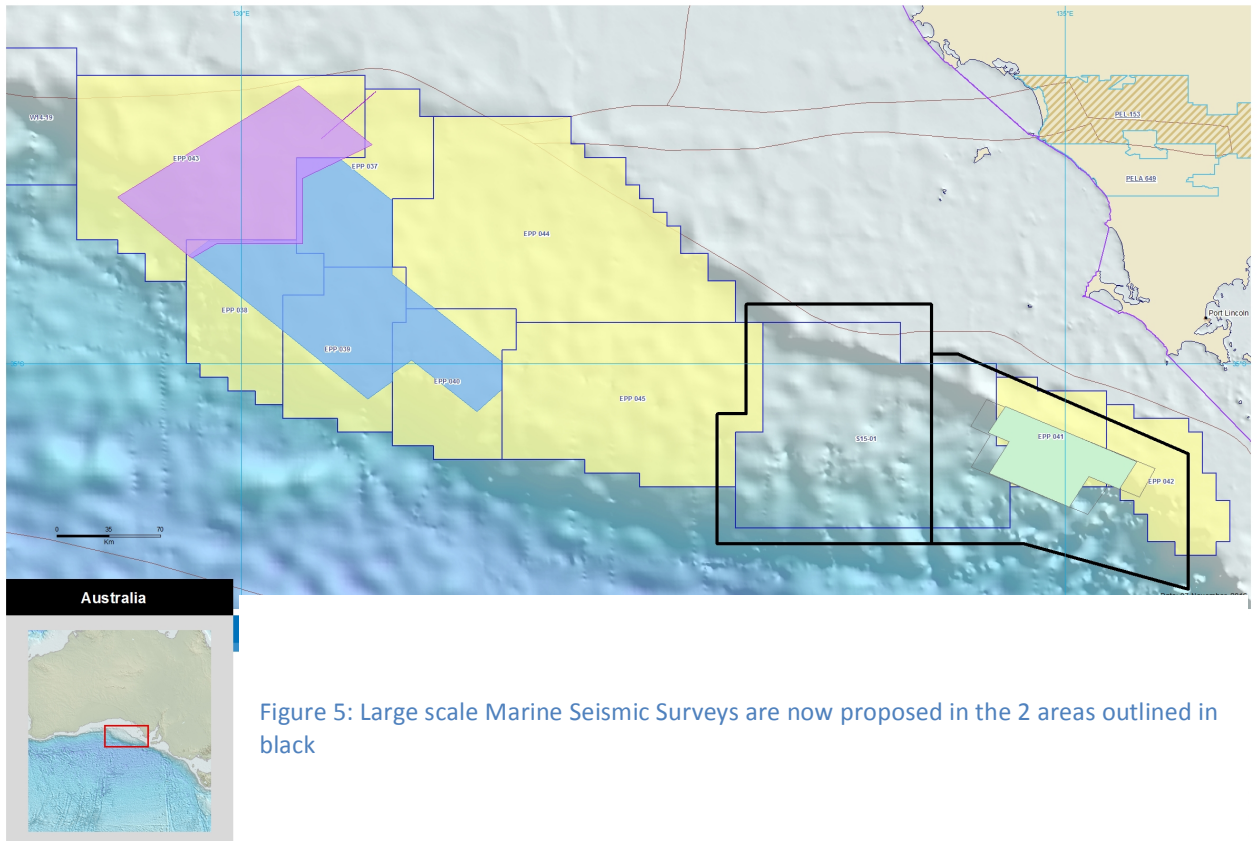


Figure 5: Large scale Marine Seismic Surveys are now proposed in the 2 areas outlined in black