

## BAMFORD REEF (UNION REEFS)

9°53'23.73"N, 114°31'56.36"E

### **Geographic area**

This unnamed reef is a submerged and oval coral reef platform located on the southeast-facing side of Union Reefs between Grierson Reef (around 1.66NM northeast) and Tetley Reef (just over 1NM southwest). It is also less than 2NM to Hughes Reef, marking the narrowest part of the elongated Union Reefs atoll. This reef platform extends 1.7km along its northwest-southeast axis and 1km along its northeast-southwest axis.

### **Land area above water**

There are no above-water land areas visible in this 2011 satellite image.

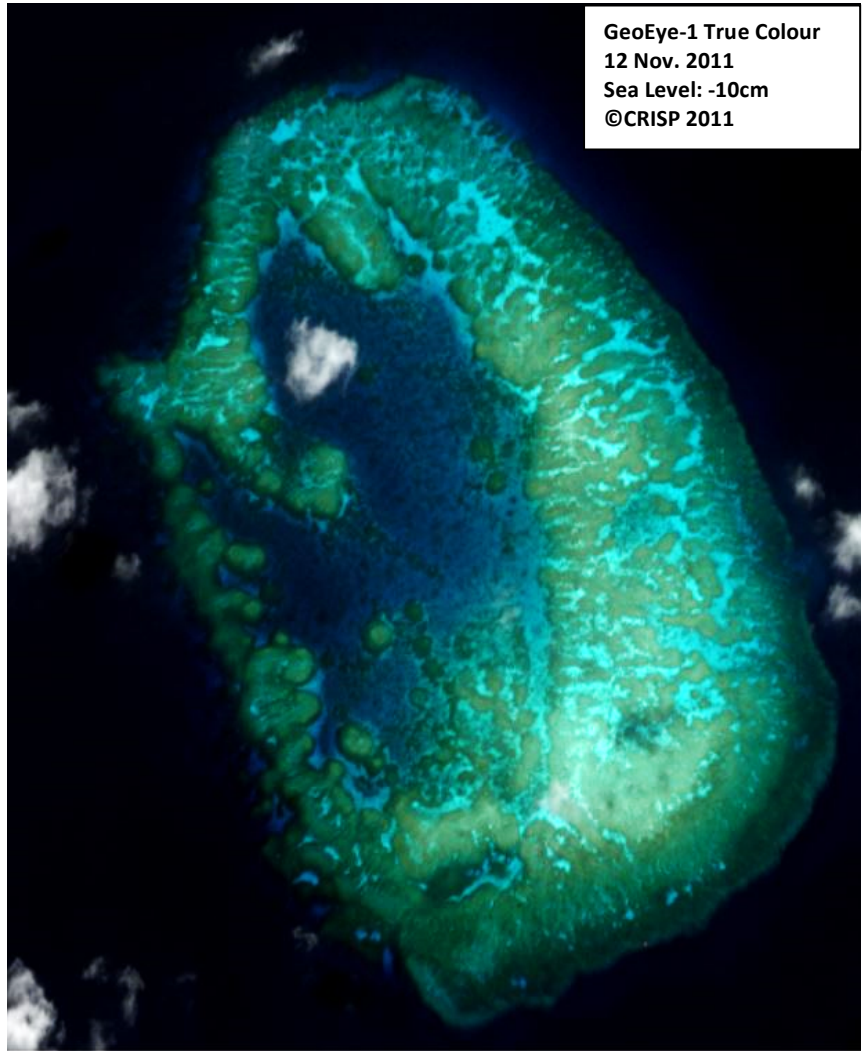
### **Human infrastructure**

There are no visible man-made structures visible on this reef platform as at 26 January 2015.

### **Intertidal and submerged area**

This oval reef platform comprises a reef flat that covers an area of 0.35km<sup>2</sup>, a lagoon that covers an area of 0.43km<sup>2</sup> and a reef slope that covers an area of 0.86km<sup>2</sup>. The reef flat is located on the southeastern side of the lagoon and is mostly 1.4-3.5m deep when the sea level is expected to be 10cm below Mean Sea Level, meaning that this coral platform is always fully submerged, even at Lowest Astronomical Tide (when the sea level is expected to decrease by 1m).

The lagoon is characterised by large knolls and a reticulate reef system. It is a 4-7m deep lagoon. Pronounced spurs and grooves are visible on the reef slope in areas totaling 0.47km<sup>2</sup>.



GeoEye-1 True Colour  
12 Nov. 2011  
Sea Level: -10cm  
©CRISP 2011

N  
0 0.125 0.25 0.5 Km

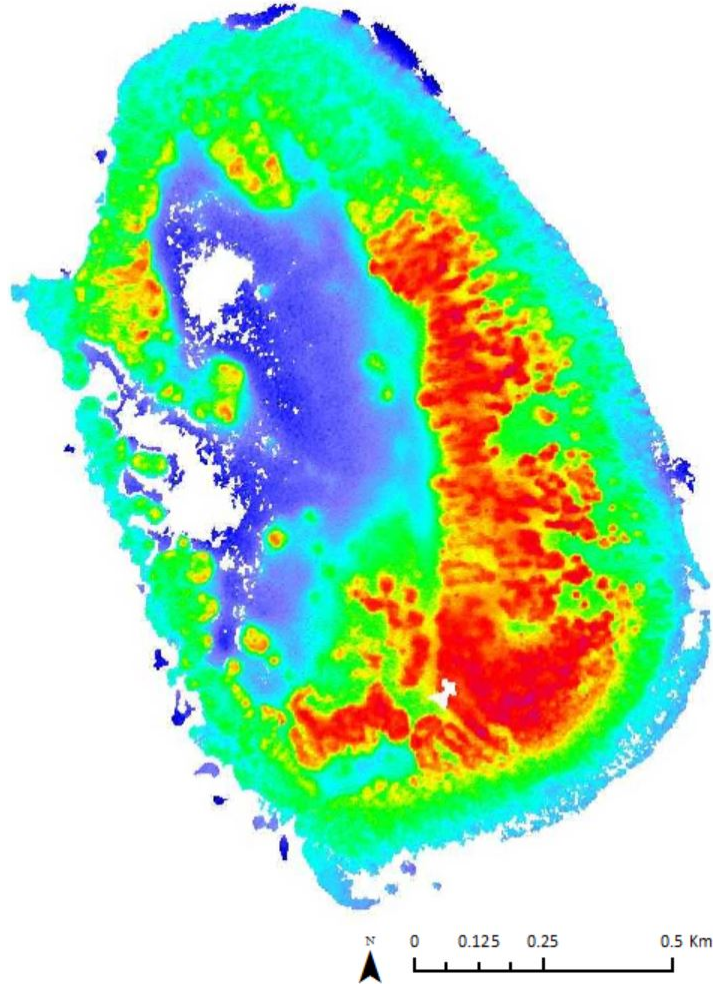
There are no traces of human activities visible in the 2011 satellite image or in the 26 February 2014 and 26 January 2015 satellite images viewable on Google Earth.

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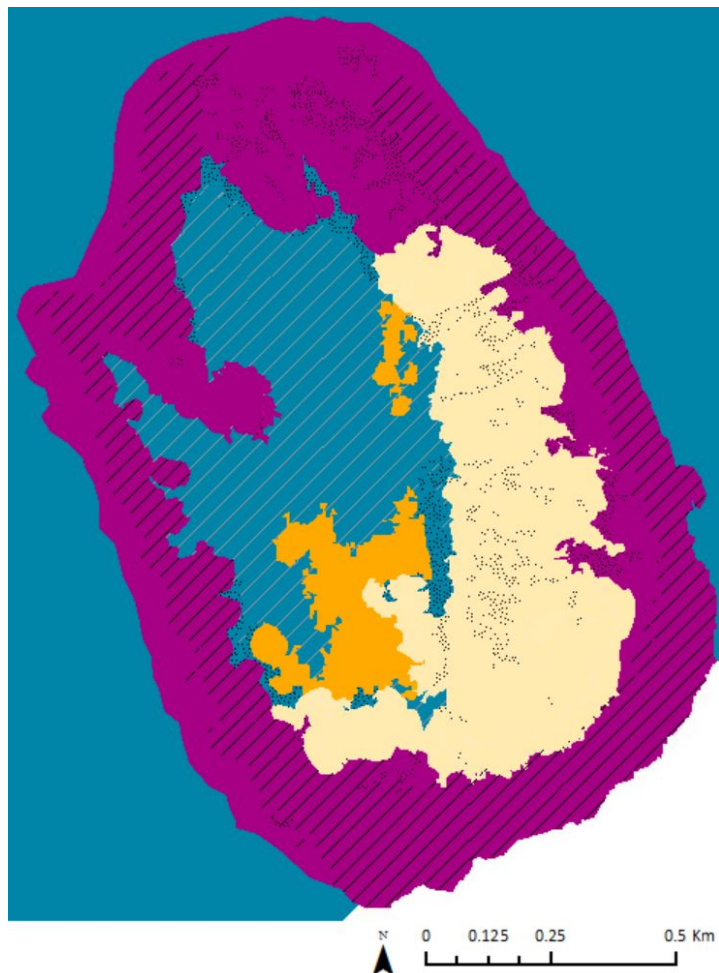
9°53'23.73"N, 114°31'56.36"E

Derived primarily from GeoEye-1 satellite data captured on 12 November 2011 [Sea Level: -10cm]

### Bathymetry Map



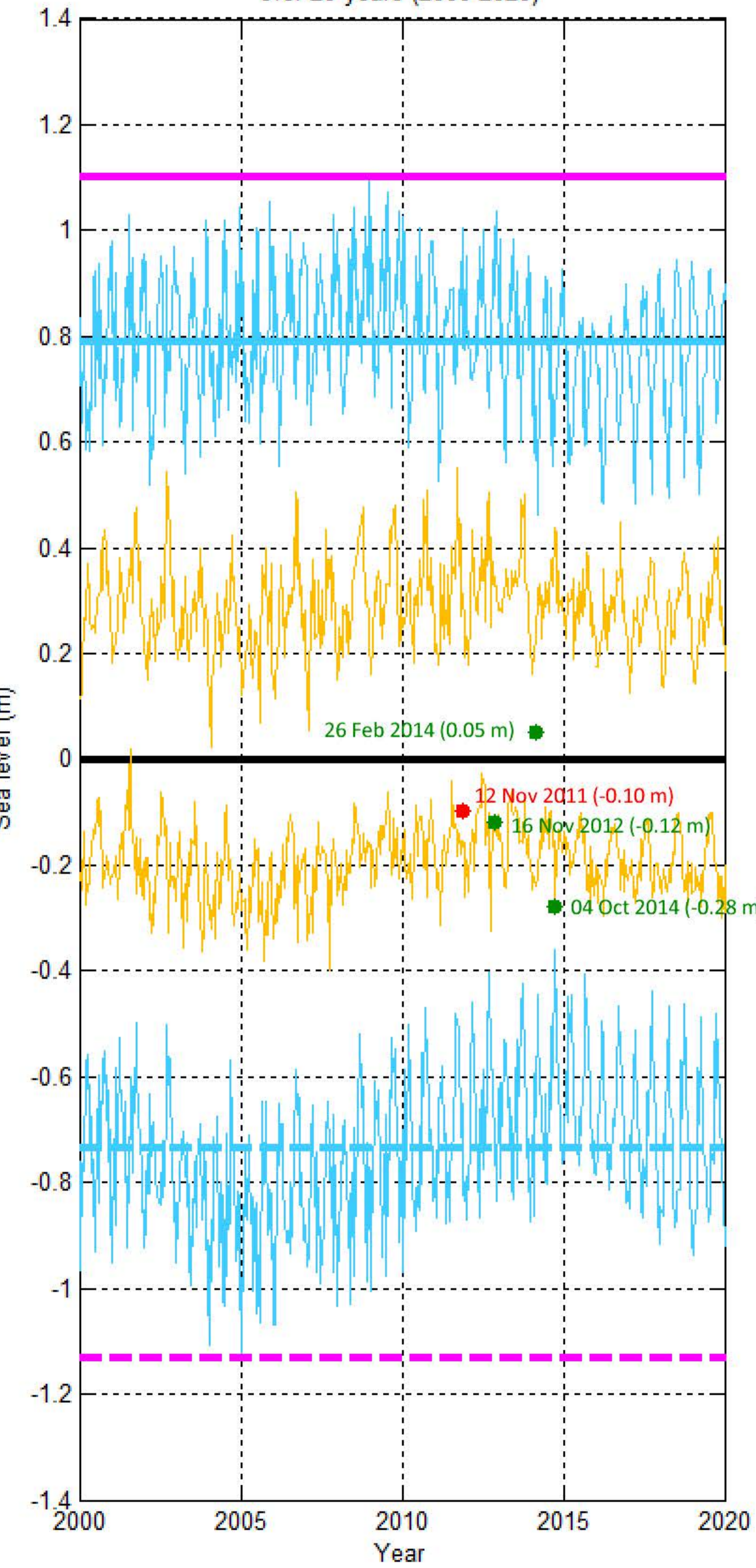
### Habitat Classification and Land Cover Map



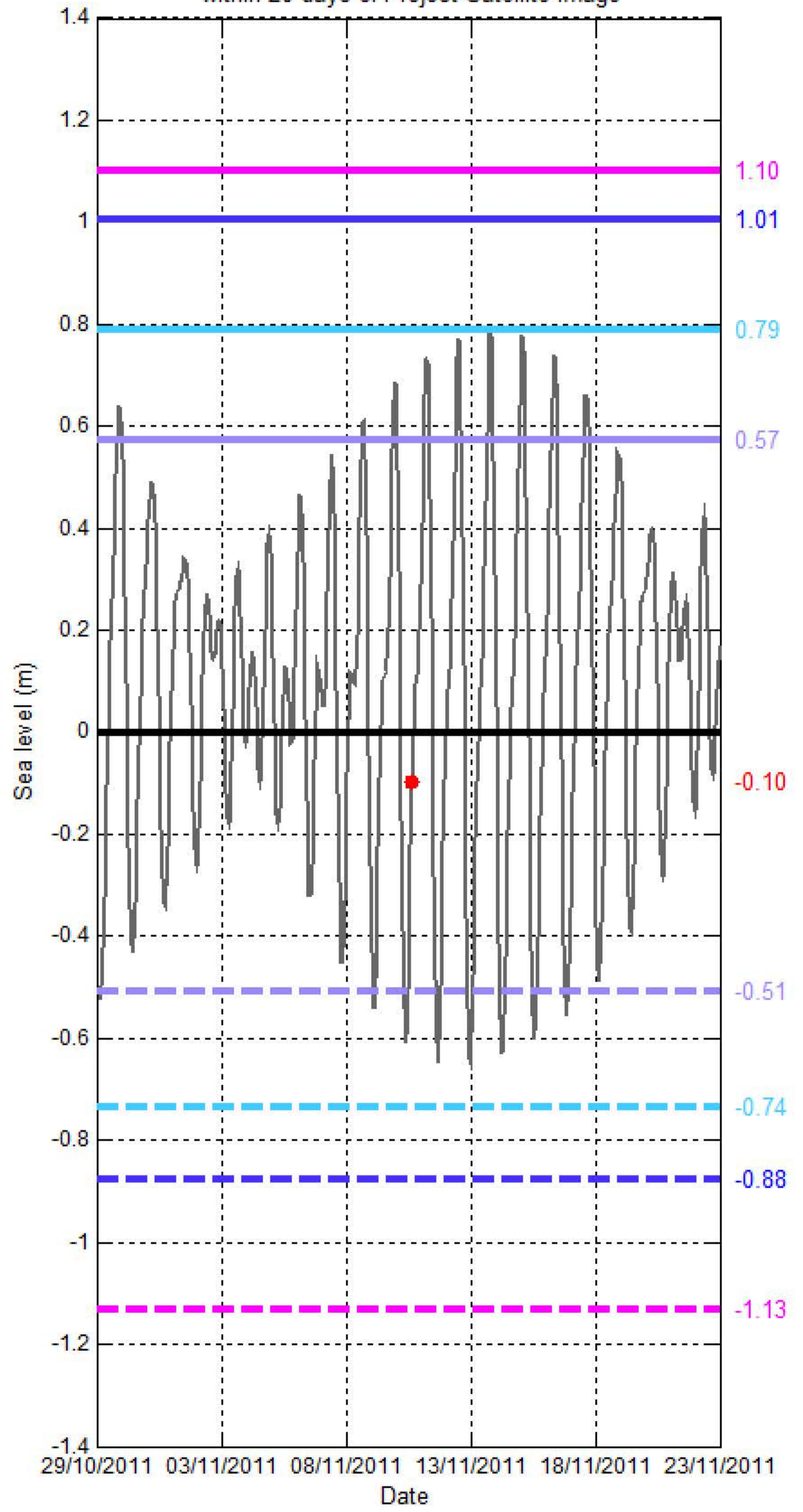
# Sea level (SL) at BAMFORD REEF (UNION REEFS)

[9°53'23.73"N, 114°31'56.36"E]

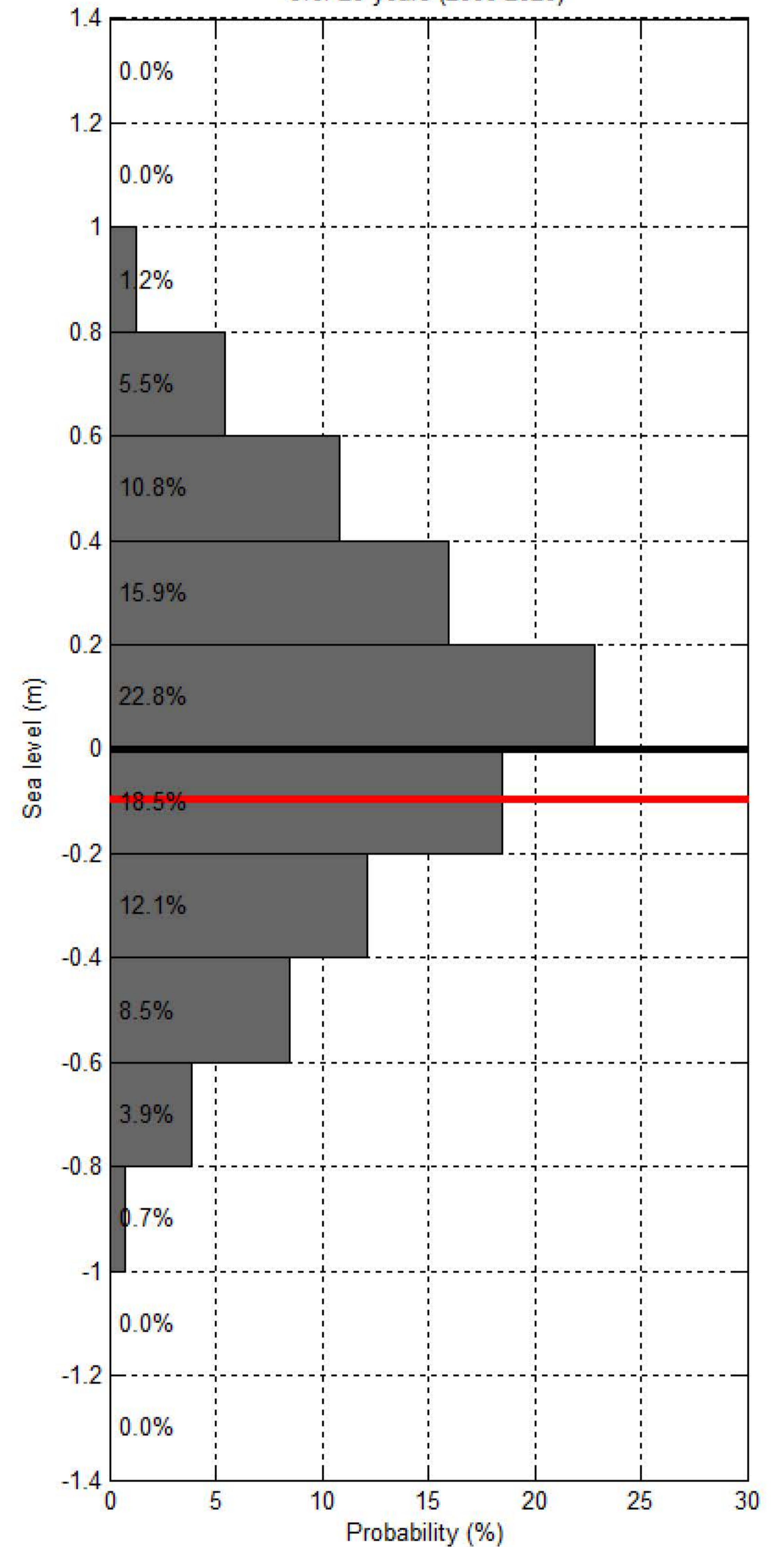
Sea level at spring/neap tide at UNION REEFS - BAMFORD REEF over 20 years (2000-2020)



Sea level at UNION REEFS - BAMFORD REEF within 20 days of Project Satellite Image



Probability of sea level at UNION REEFS - BAMFORD REEF over 20 years (2000-2020)



— Hourly sea level   
 — SL at spring tide   
 — SL at Mean High Water Spring   
 — SL at highest tide of the year   
 — SL at Mean Higher High Water   
 — SL at Highest Astronomical Tide   
 ● Project Satellite Image  
— Mean Sea Level   
 — SL at neap tide   
 — SL at Mean Low Water Spring   
 — SL at lowest tide of the year   
 — SL at Mean Lower Low Water   
 — SL at Lowest Astronomical Tide   
 ● Google Earth and Landsat satellite images