

## ARDASIER REEF (ARDASIER BANK)

7°37'13.90"N, 113°56'16.68"E

### **Geographic area**

Ardasier Reef forms the southwestern tip of Ardasier Bank, a 70km-long coral atoll located in the southeastern part of the Spratlys. It is located less than 155NM northwest of the island of Borneo and less than 200NM southwest of the island of Palawan. The closest shallow geographic features are Dallas Reef, just over 6NM west, Swallow Reef, close to 14NM southwest and Mariveles Reef, 18NM north. Shaped in the form of a triangular atoll with a central lagoon, the height of Ardasier Reef extends 4km (west-east axis) and its base is over 3km long (north-south axis).



WorldView-2 True Colour  
13 Mar. 2013  
Sea Level: +23cm  
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N 0 0.25 0.5 1 Km

### **Land area above water**

There are no visible above-water land areas in the 13 March 2013 satellite image, other than the platform constructed along the artificial harbour, which is further described below.

### **Human infrastructure**

An artificial harbour has been constructed on the southwestern side of the reef flat on the outer edge of the sandy deeper back reef. It is facing the lagoon, thereby allowing vessels access to and from the lagoon that has a natural opening to the open sea on the southeastern side of the atoll. A 1.4 to 1.6m-deep man-made channel is also visible south of the artificial harbour, through the reef flat, to allow access directly from the open sea. The harbour is around 3.5m deep, 200m long and less than 60m wide at the widest point. It is surrounded by a seawall. A 90m-long by 35m-wide platform is visible on the southeastern side of the harbour, along the seawall with two buildings constructed on a 25m by 20m area. A 25m by 25m helipad can also be observed south of the buildings. A 20m-long by 10m-wide patch of vegetation is visible on the eastern side of the two buildings.

### **Intertidal and submerged area**

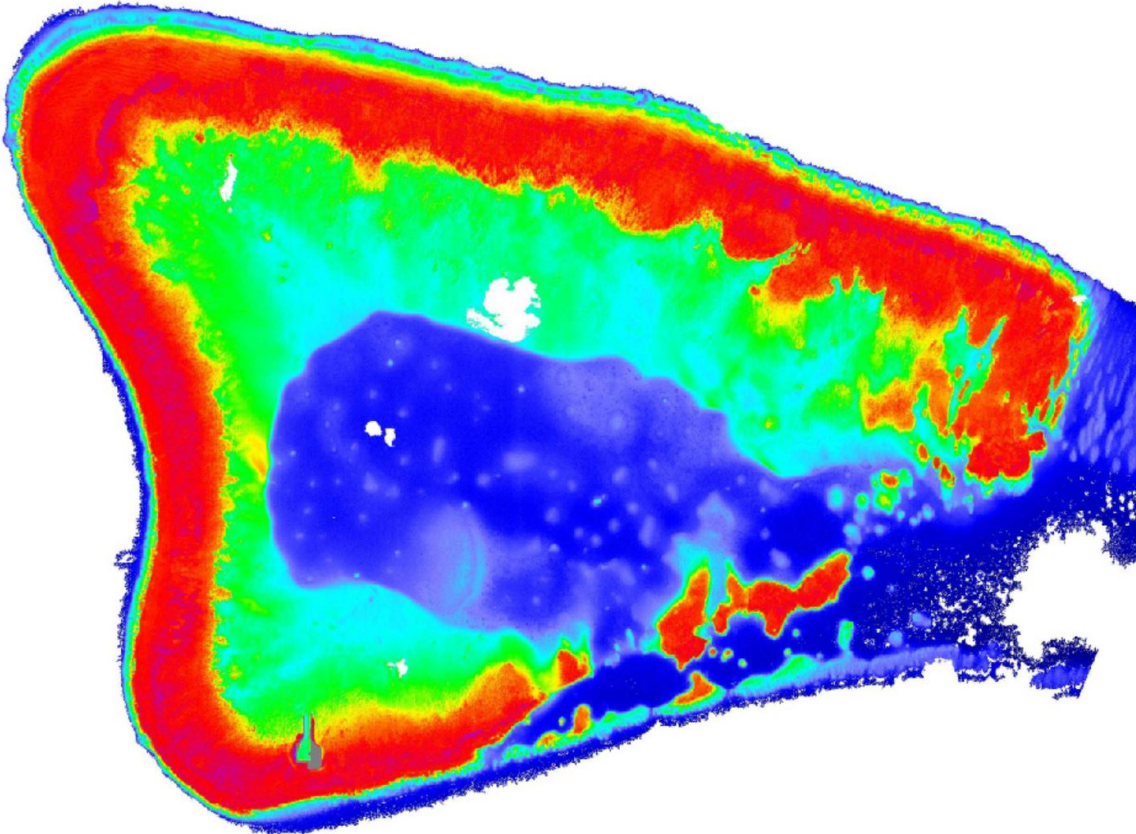
Ardasier Reef is composed of a reef flat (7.19km<sup>2</sup>), a reef slope (0.80km<sup>2</sup> adjoining this part of Ardasier Bank only) and a shallow lagoon (2.67km<sup>2</sup>). The shallow part (1.2-1.6m deep) of the reef flat is a 300 to 400m-wide band on the outer part of the reef flat along the start of the reef slope. Some small areas along the harbour and on the southwestern part are closer to 1m in depth. Areas that are 1.4m deep or less are expected to uncover at Lowest Astronomical Tide. The back reef that links this outer shallow part of the reef flat to the lagoon is 3-4m deep and is mostly sandy with coral patches. The lagoon, which is 6-10m deep, is characterised by a reticulate reef system. The reef slope extends less than 100m all around (except off the northwestern end of the atoll, where it is slightly longer); pronounced spurs and grooves are visible throughout as well as sand terraces, which suggests a very steep lower part of the reef slope. Few clear dredging marks are visible in the 13 March 2013 satellite image. However, numerous areas of the reef flat appear degraded. Tracks created by human activities are also visible. Areas of distinctive seagrass/algae/cyanobacteria cover can also be seen (0.23km<sup>2</sup>).

**ARDASIER REEF (ARDASIER BANK)**

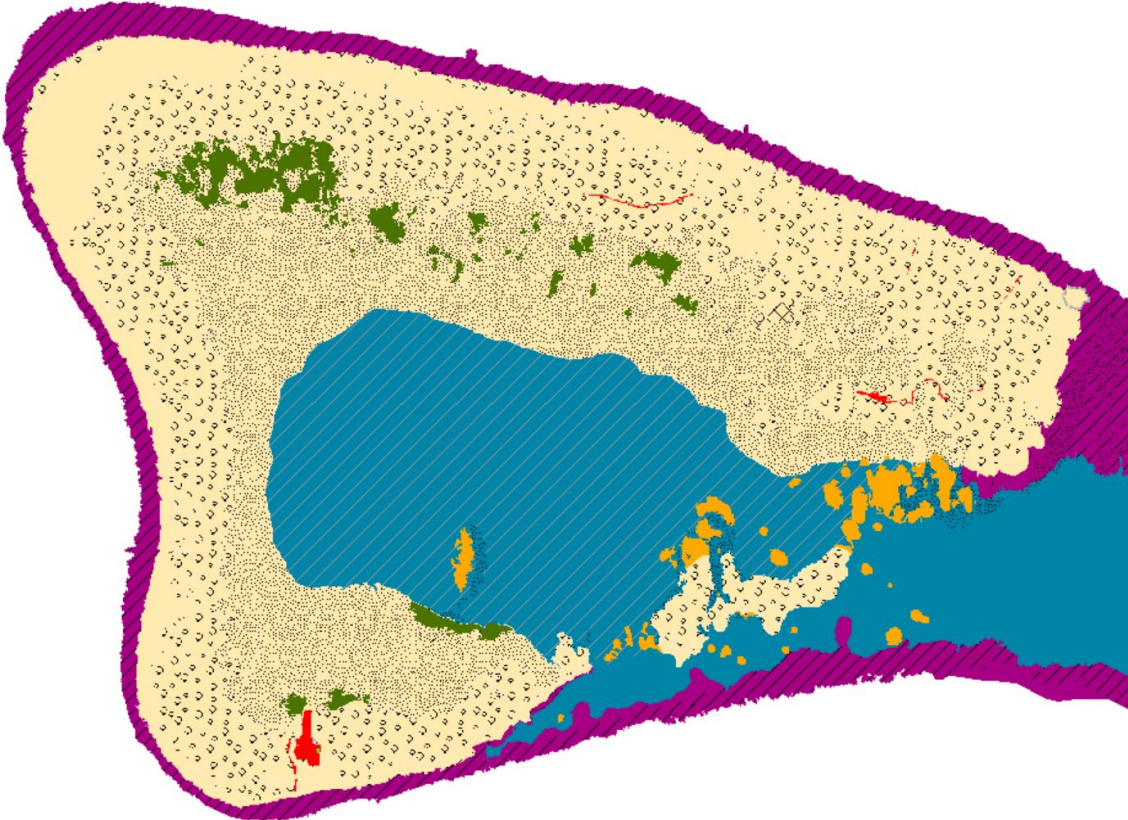
7°37'13.90"N, 113°56'16.68"E

Derived from WorldView-2 satellite data captured on 13 March 2013 [Sea Level: +23cm]

**Bathymetry Map**



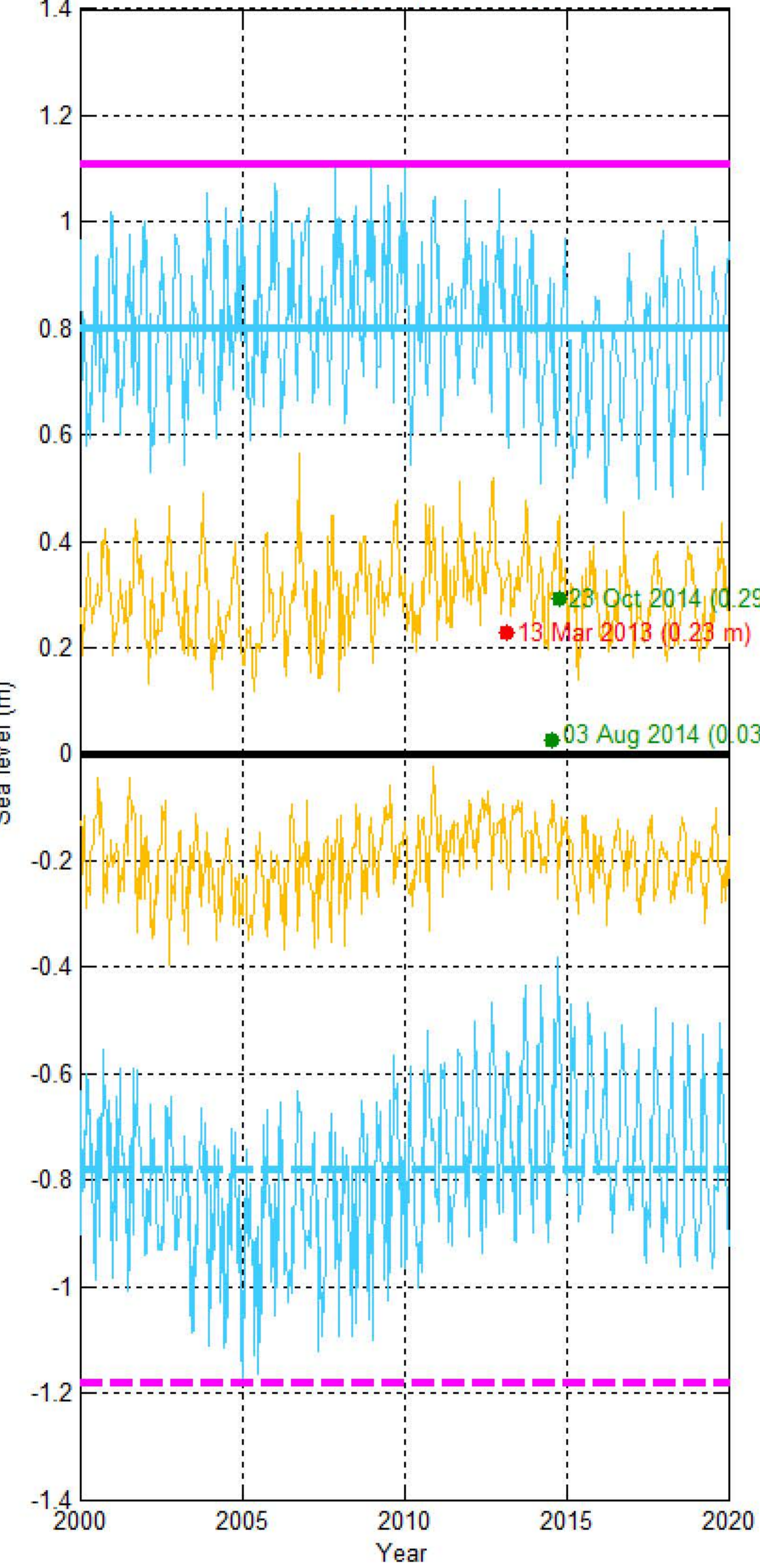
**Habitat Classification and Land Cover Map**



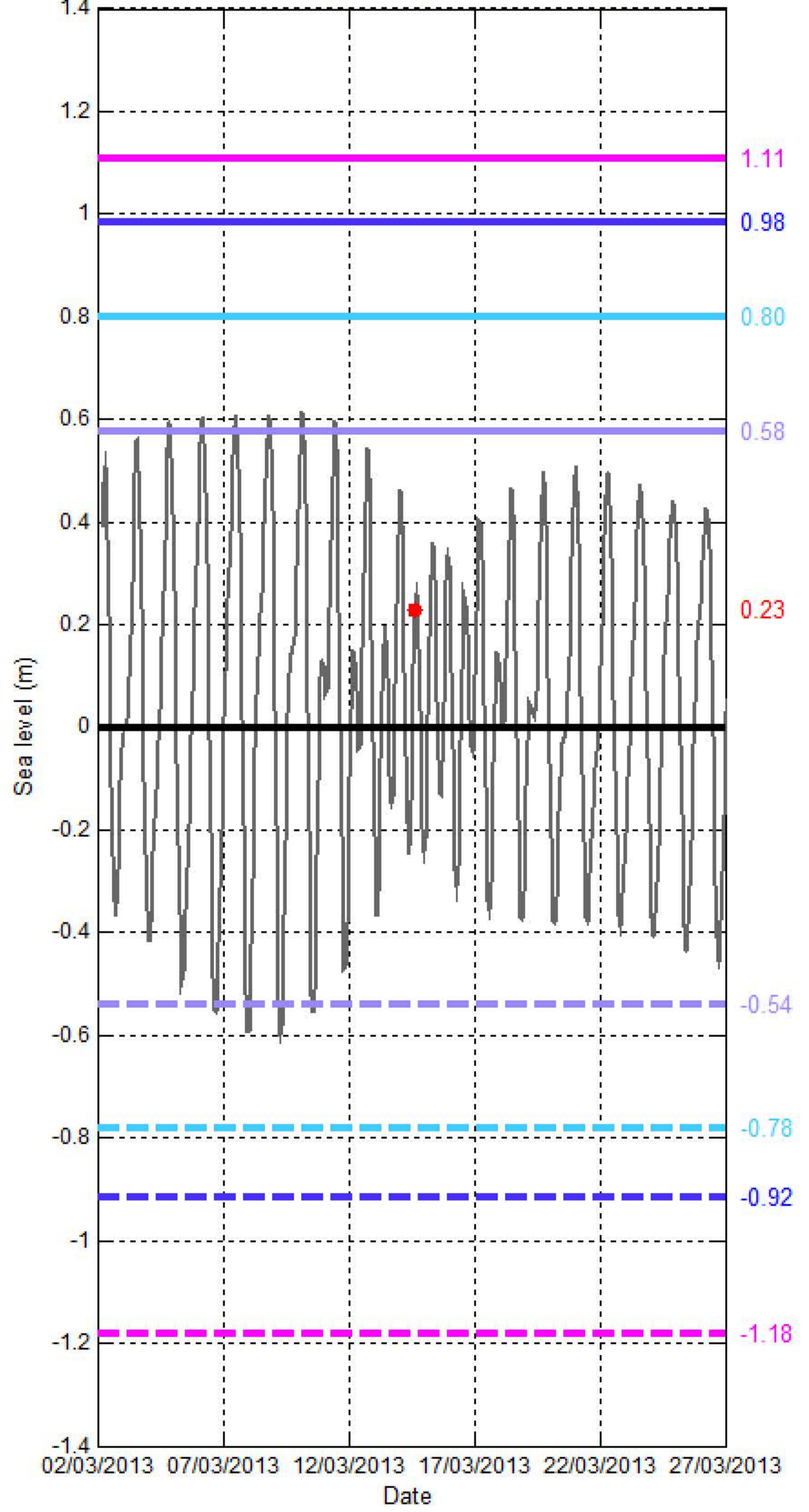
# Sea level (SL) at ARDASIER REEF (ARDASIER BANK)

[7°37'13.90"N, 113°56'16.68"E]

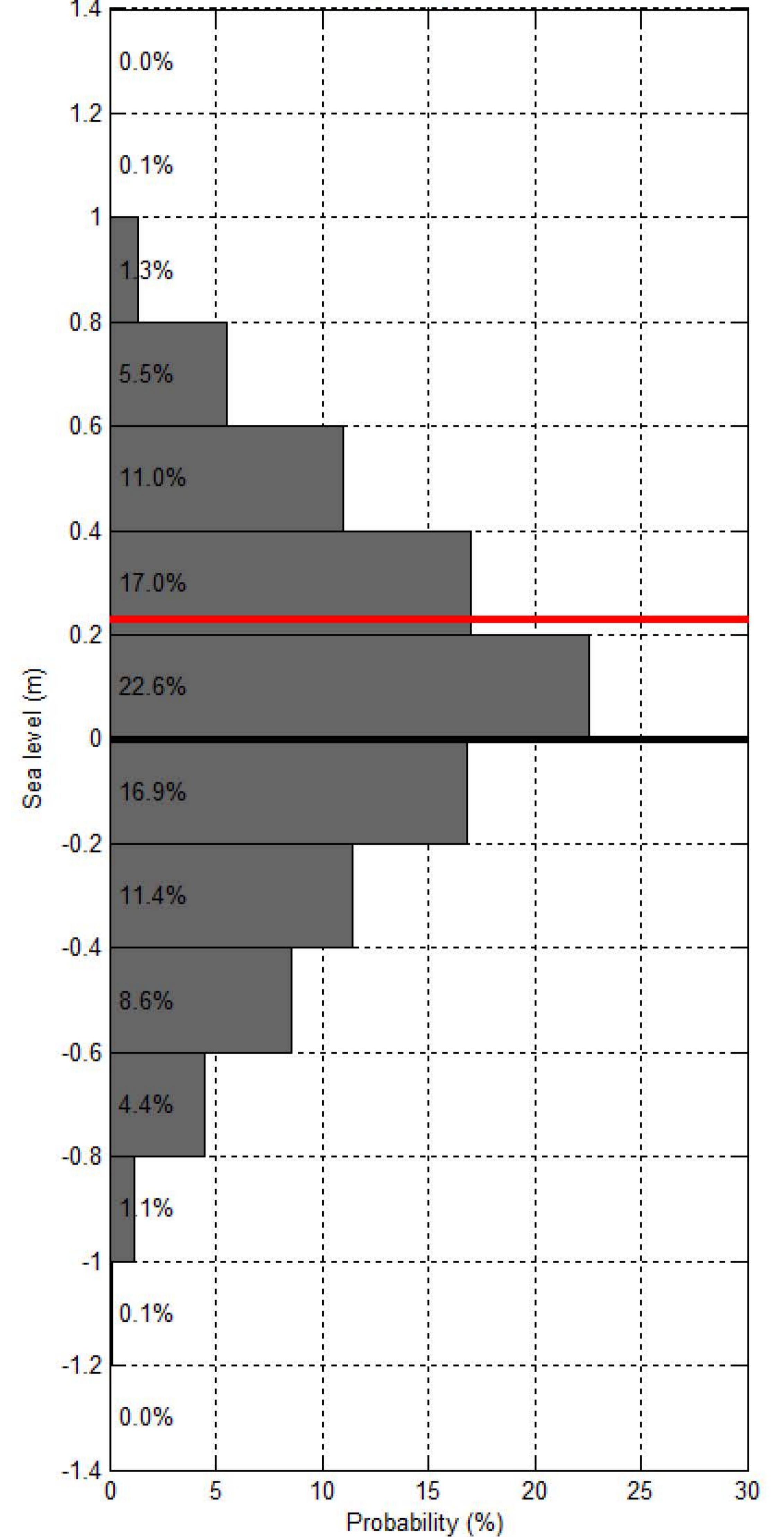
Sea level at spring/neap tide at ARDASIER BANK- ARDASIER REEF over 20 years (2000-2020)



Sea level at ARDASIER BANK- ARDASIER REEF within 20 days of Project Satellite Image



Probability of sea level at ARDASIER BANK- ARDASIER 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