

ERICA REEF

8°06'23.55"N, 114°07'57.06"E

Geographic area

Erica Reef is an oceanic coral atoll of an oval shape that developed on top of a seamount in the southern part of the Spratlys. It is located less than 170NM northwest of the island of Borneo and around 180NM southwest of Palawan. The closest shallow geographic features are Mariveles Reef, 13.5NM southwest, Investigator Shoal, around 23NM east and Ardasier Bank, 22NM south. The atoll extends 3.4km along its southwest-northeast axis and reaches 2km along its northwest-southeast axis.

Land area above water

There is one above-water land area in the 12 May 2011 satellite image that measures 80m by 50m and is located next to an artificial harbour, suggesting that it may have been formed by the sand and coral debris deposited when the reef flat was excavated to build the harbour. This sand bank is also visible in the 11 November 2014 image viewable on Google Earth.



Human infrastructure

A rectangular man-made structure is visible on the southeast-facing side of the coral reef that comprises a 25m by 30m building, a 25m by 25m helipad on the northeastern side of the building and an artificial harbour on all the other sides. The artificial harbour is bordered by a seawall and is 80m wide. It is connected to the open sea by a 70m-long channel. The harbour and the channel are 3-4m deep, whereas the surrounding reef flat is mostly less than 1.5m deep.

Intertidal and submerged area

The aerial coverage of this coral atoll is 4.94km² comprising a reef flat of 3.44km², a reef slope of 0.58km² and a lagoon of 0.92km². The shallow (1-2m) part of the reef flat is a 250m-wide band on the outer part of the reef flat where the seaward edge meets the start of the reef slope. In addition to the above-water sand bank contiguous to the harbour, several shallow (where the water is 1m deep or less) sand banks can be observed on the northeastern part of the reef flat. They are expected to uncover at Lowest Astronomical Tide where the sea level decreases by 1.38m. The inner part of the reef flat that is mostly sandy and slopes into the lagoon (the back reef) is 2-3m deep. The lagoon is 4-5m deep and characterised by a reticulate reef system that connects numerous shallow coral heads and patch reefs together (many of which are 20m wide or more). The reef slope is very narrow on the southwestern side (50m or less) and extends farther on the northern side (around 200m in three areas). Spurs and grooves are visible throughout, as well as sand terraces and chutes and buttresses.

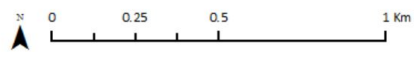
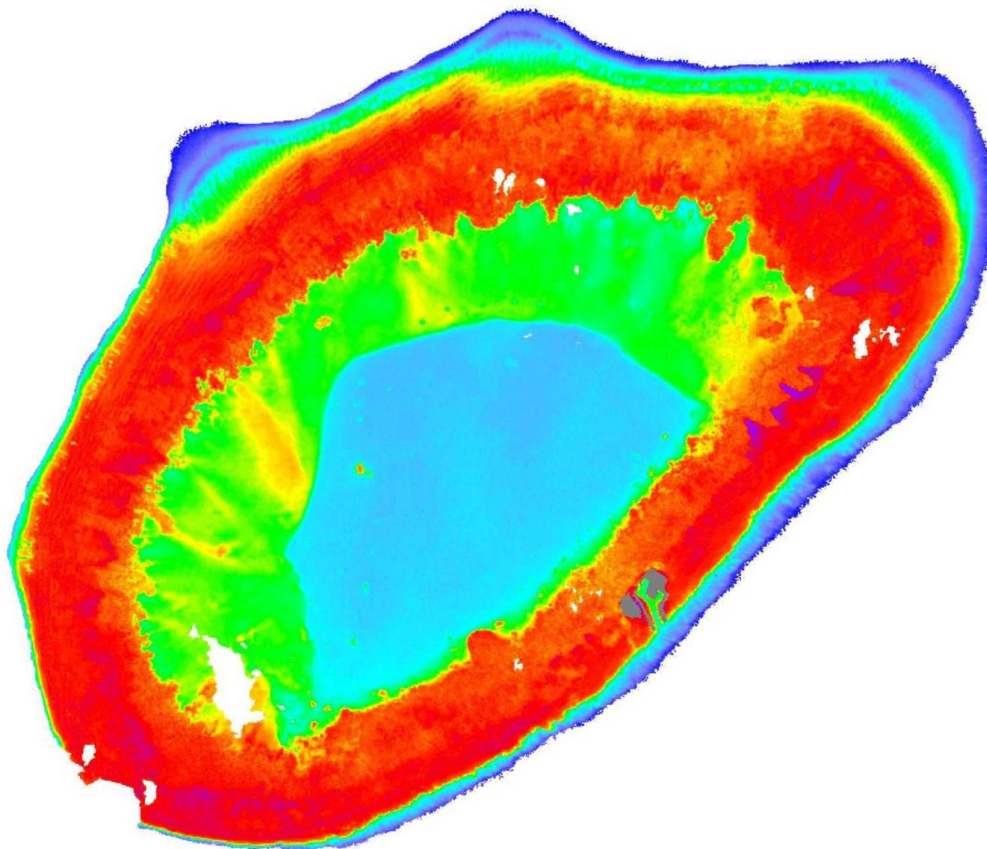
No dredging marks are visible in the 12 May 2011 or 11 November 2014 satellite images.

ERICA REEF

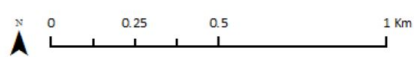
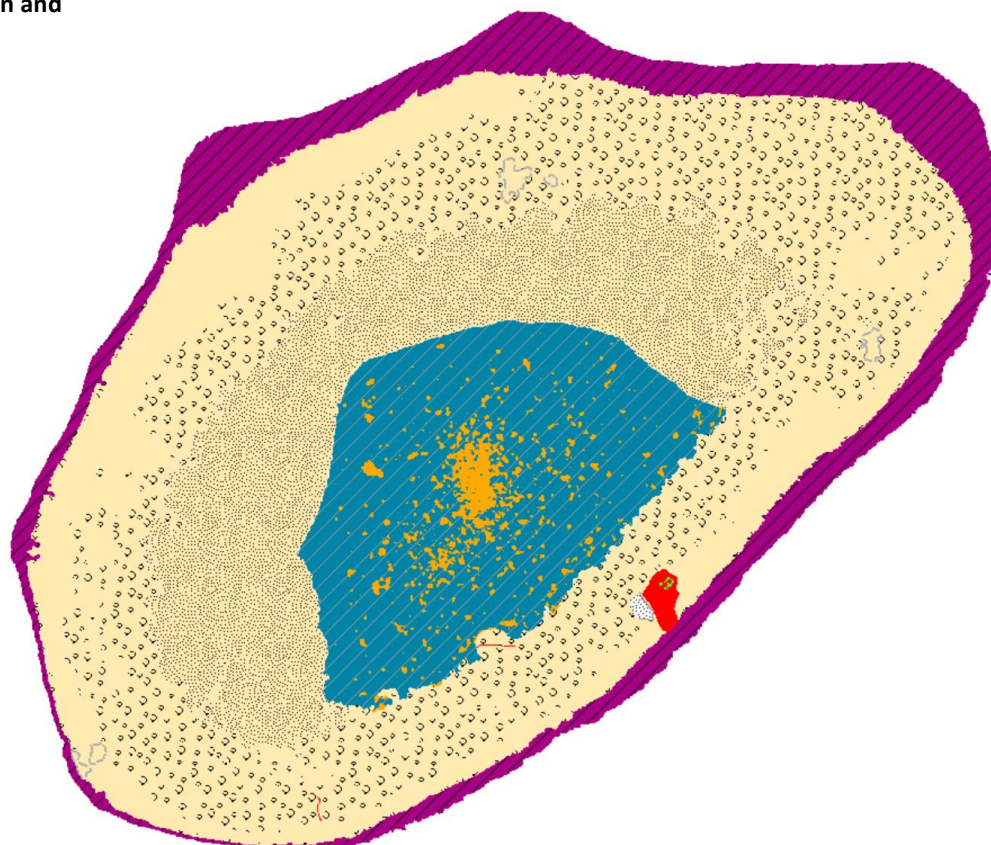
8°06'23.55"N, 114°07'57.06"E

Derived from WorldView-2 satellite data captured on 12 May 2011 [Sea Level: +22cm]

Bathymetry Map



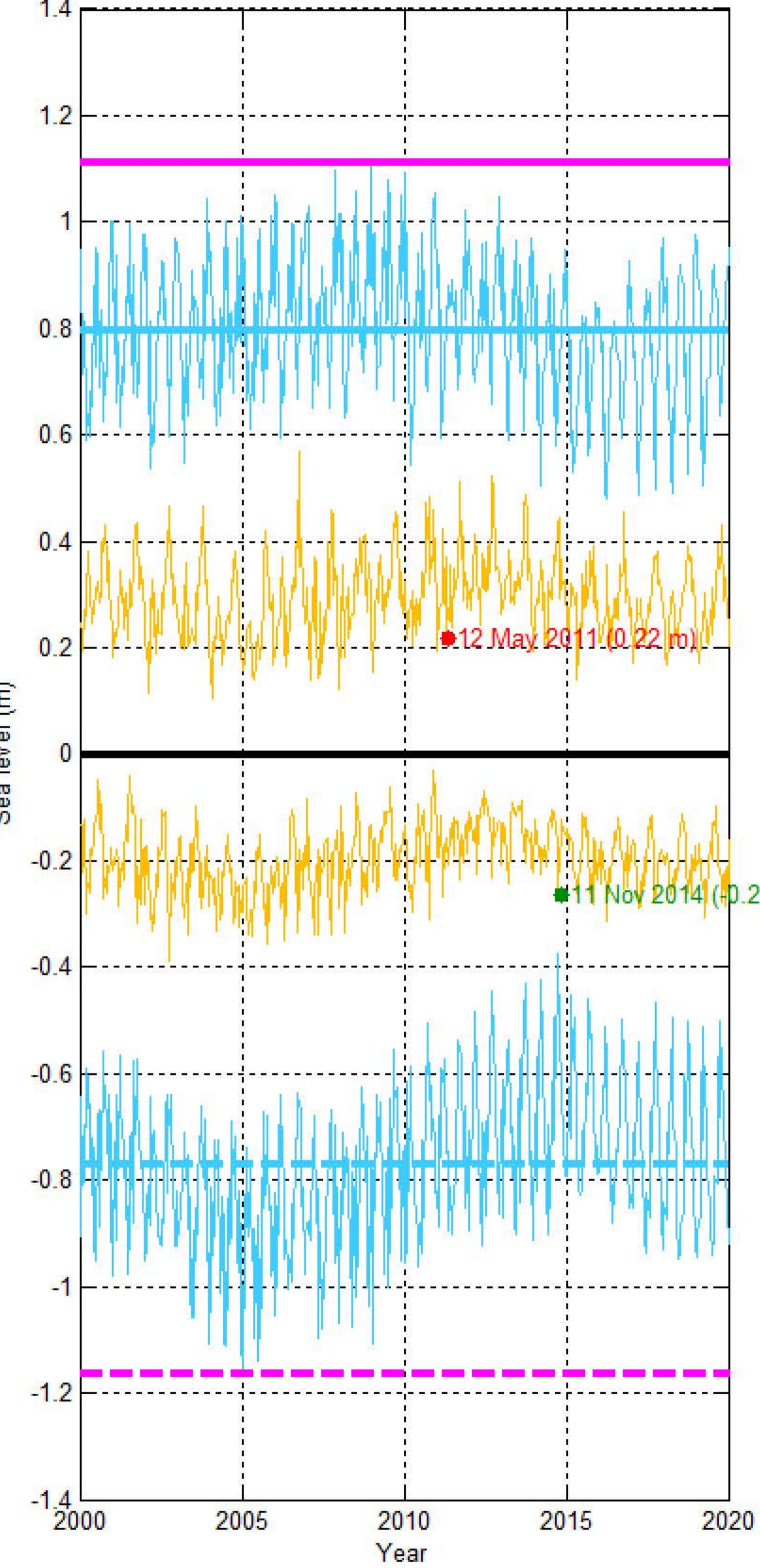
Habitat Classification and Land Cover Map



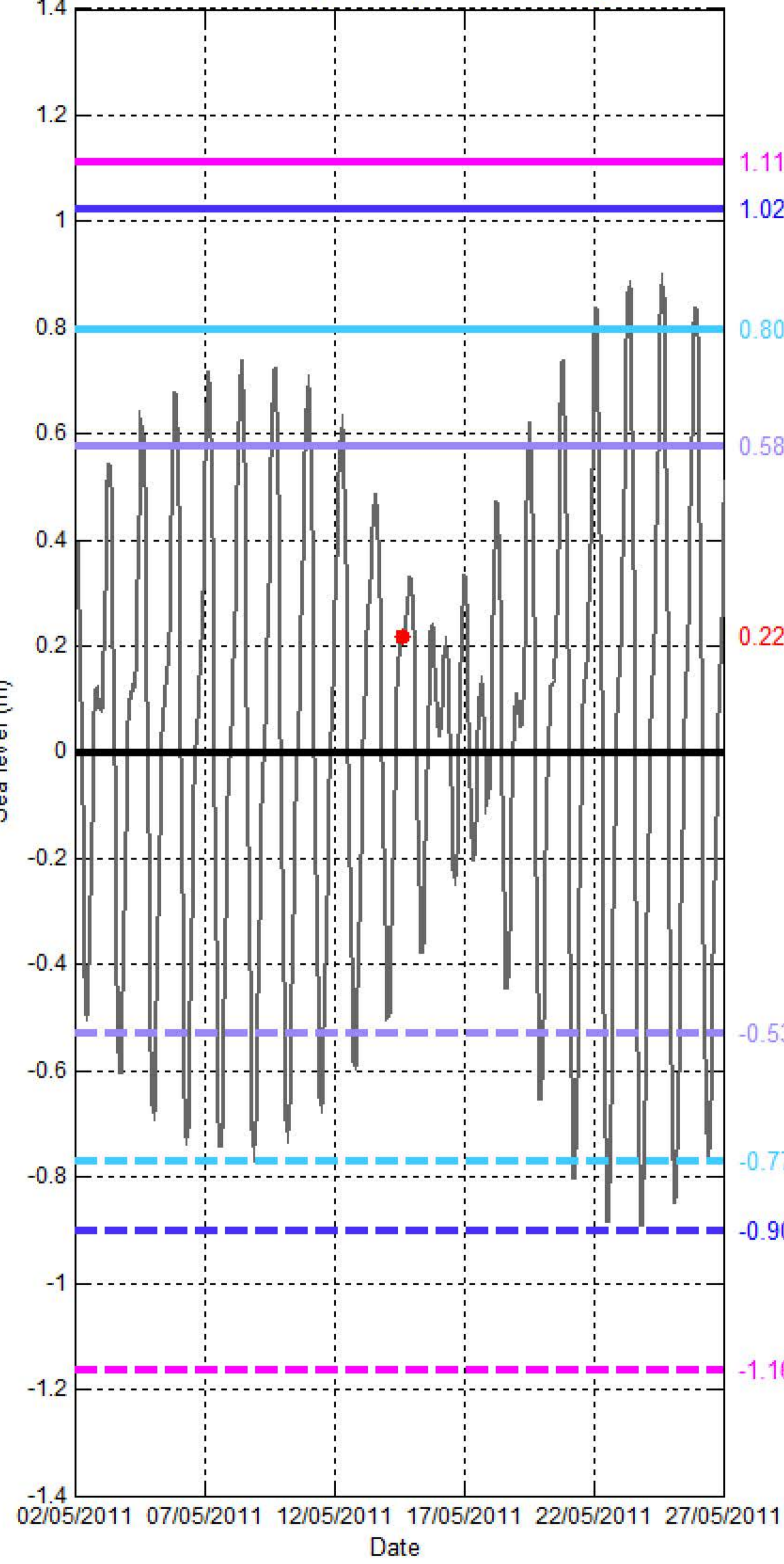
Sea level (SL) at ERICA REEF

[8°06'23.55"N, 114°07'57.06"E]

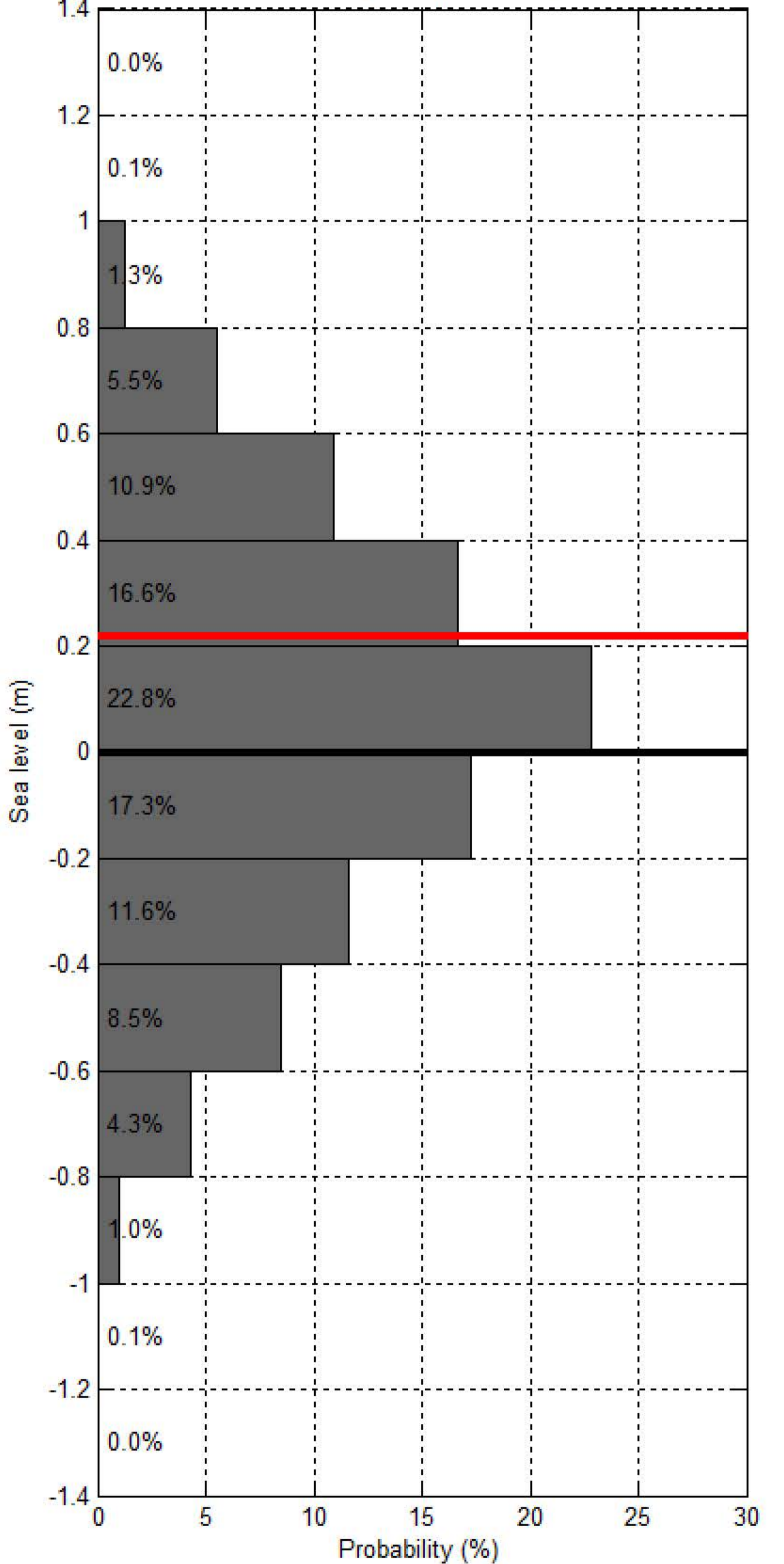
Sea level at spring/neap tide at ERICA REEF over 20 years (2000-2020)



Sea level at ERICA REEF within 20 days of Project Satellite Image



Probability of sea level at ERICA 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