

SOUTHWEST CAY (NORTH DANGER REEF)

11°25'48.94"N, 114°19'52.28"E

Geographic area

Southwest Cay is located on the northwestern side of North Danger Reef, on its own shallow reef platform that is located 1NM northeast of Northeast Cay and 2.2NM southwest of South Reef. These shallow reef platforms are connected by a shared reef slope. The reef platform on which Southwest Cay is located extends 1.5km along its southwest-northeast axis and over 800m wide along its northwest-southeast axis (the deeper reef slope that connects it to Northeast Cay and North Reef is excluded from these measurements).

Land area above water

Southwest Cay is the only vegetated above-water land area on this platform. In the 13 March 2013 satellite image, it has a crab-like shape, the front legs of which encircle a man-made harbour. The main above-water area is 650m long by 270m wide. However, together with the harbour area constructed along the northeastern side, they occupy the greater part of the width of the reef flat. In the 2013 satellite image, the entire above-water area is enclosed by a wide seawall. However, in the 27 January 2005 satellite image, the above-water land area was of a different shape. The main part of it had a similar size (even possibly larger) but it was not enclosed in a seawall and the harbour area had not been constructed, nor the southeastern tip now sticking out to the outer edge of the reef flat. The vegetation also looked sparse and drier.

WorldView-2 True Colour
13 Mar. 2013
Sea Level: +25cm
©DigitalGlobe 2013



N 0 0.125 0.25 0.5 Km

Human infrastructure

As at 14 March 2013, there is a network of roads and buildings within the vegetated area; close to 30 buildings can be counted as well as an additional 20 man-made structures, many of which support solar panels. A 100m long by 55m wide football pitch can also be seen in the centre. The 120m wide by 200m long southwestern extension to Southwest Cay appears to be still under construction although several trees have been planted. A 30m-long jetty is also visible off the southeast-facing side. The man-made harbour is 180m by 115m and 3.5m deep. It can be accessed from the open sea through a 250m long by 40m wide man-made channel that cuts through part of the shallowest part of the western reef slope and reef flat.

Intertidal and submerged area

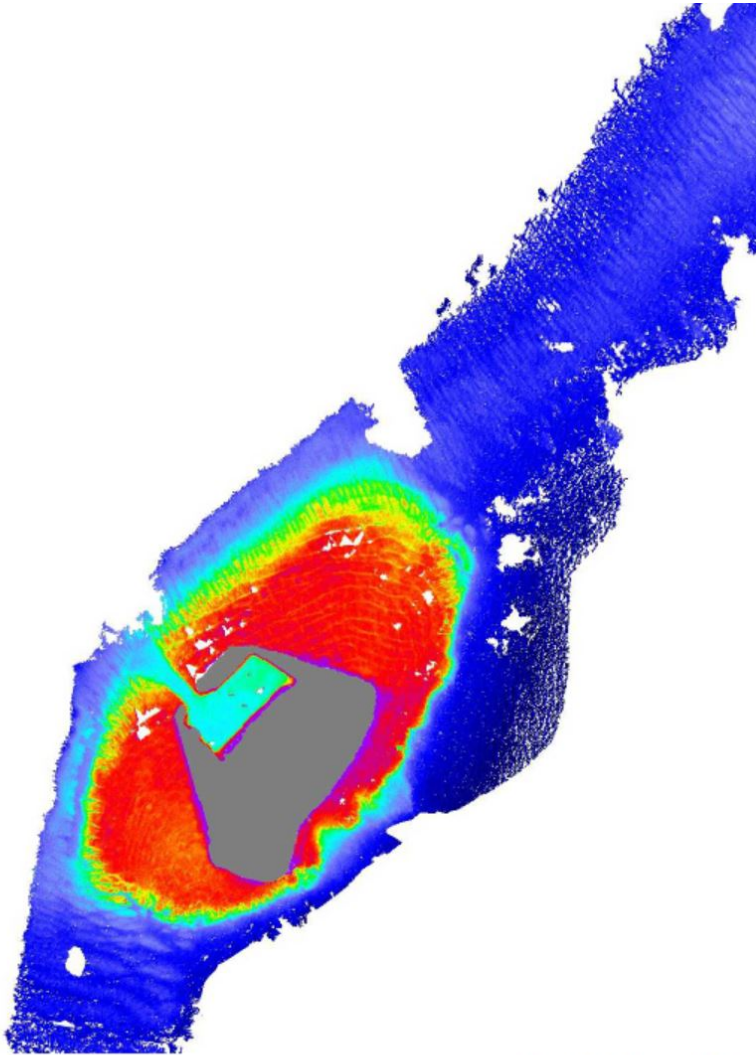
The aerial coverage of the reef flat is 0.45km². It is mostly 1.5-2m deep, except on the southeastern edge of the reef flat (along the outer seawall of Southwest Cay) where it is closer to 1m. The reef flat is therefore not expected to uncover much at Lowest Astronomical Tide, except the areas that are 1.30m deep or less. The reef slope extends 230m in the seaward direction off the southeast- and northwest-facing sides of the reef flat. The northeastern and southwestern parts of the platforms are part of the coral ring that surrounds the atoll of North Danger Reef and connects the shallow platforms together. Spurs and grooves are particularly visible on the northern, western and southern parts of the reef slope. No dredging marks are visible on the reef flat.

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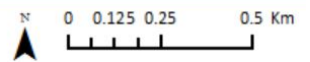
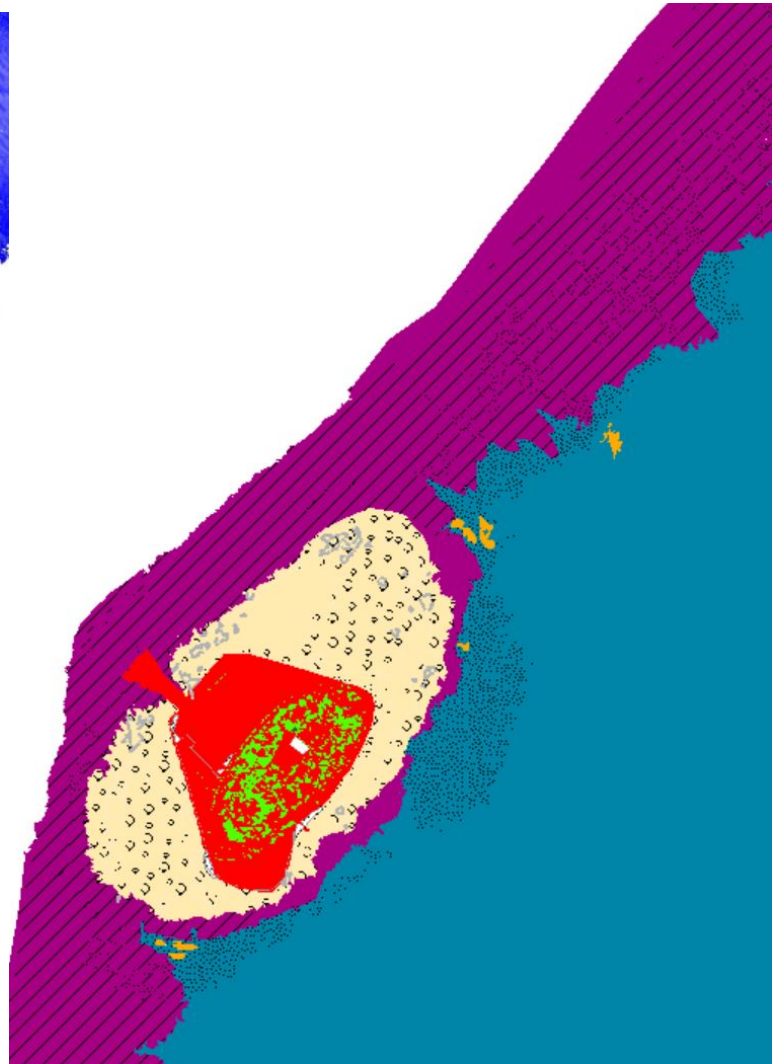
11°25'48.94"N, 114°19'52.28"E

Derived from WorldView-2 satellite data captured on 13 March 2013 [Sea Level: +25cm]

Bathymetry Map



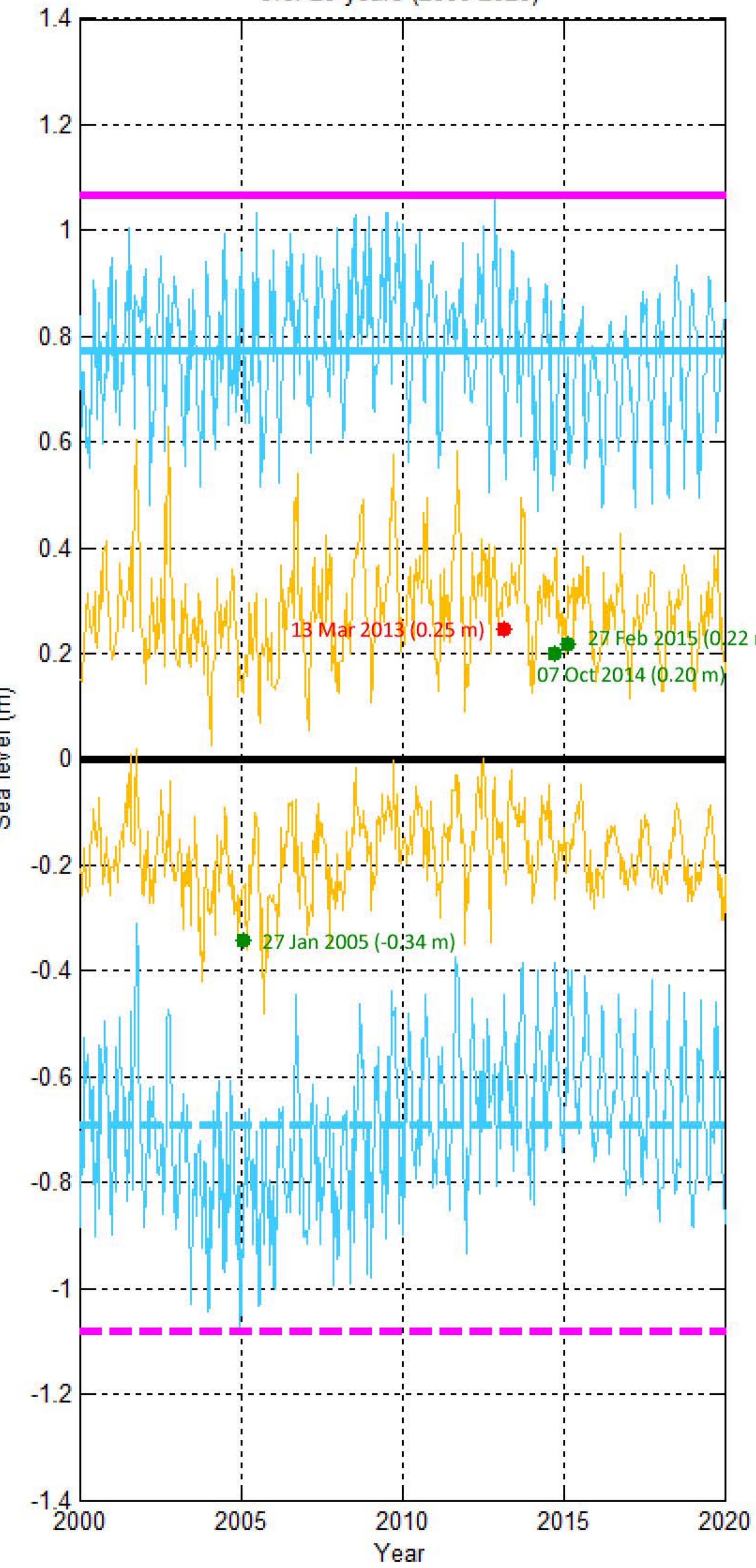
Habitat Classification and Land Cover Map



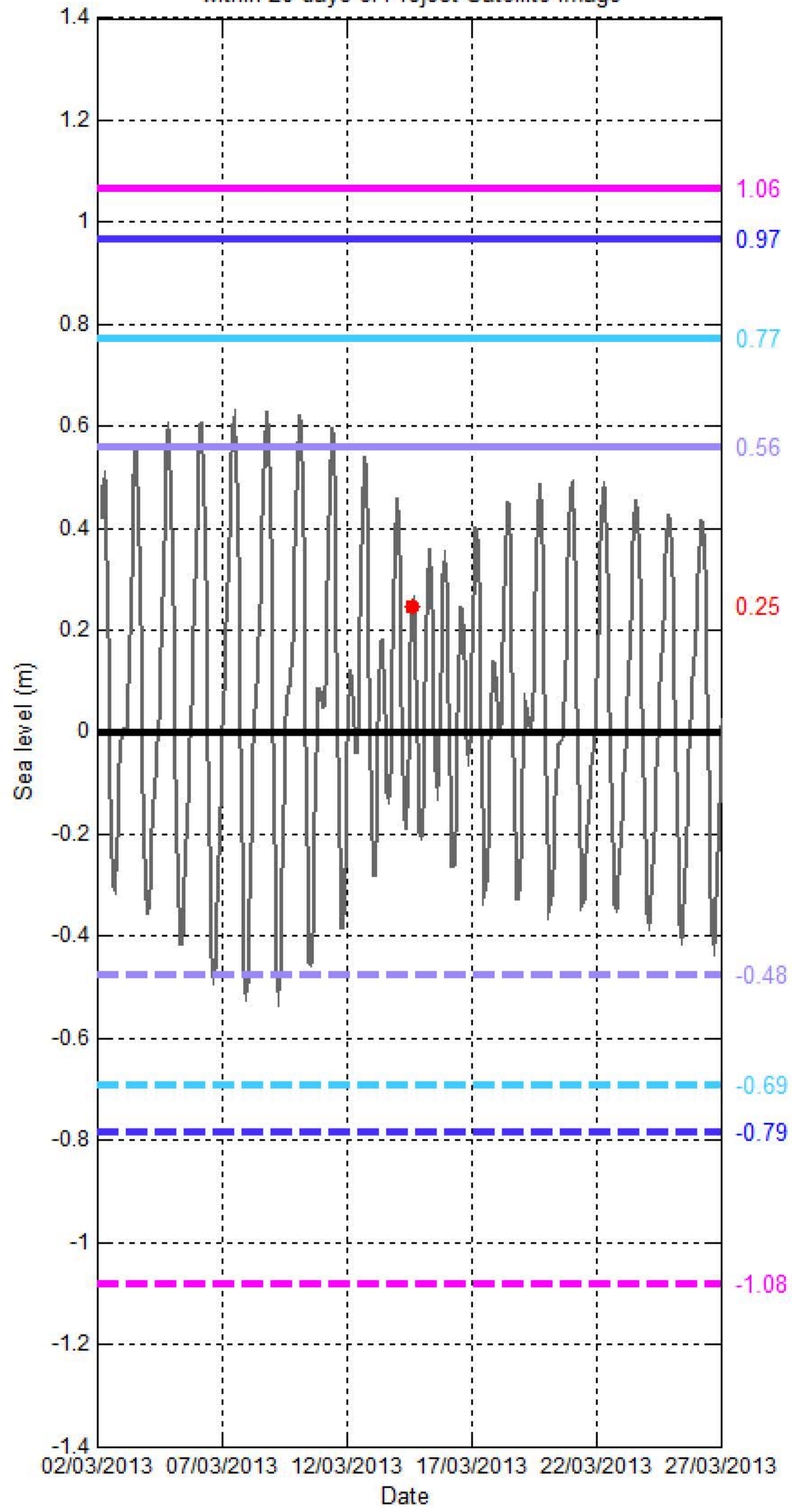
Sea level (SL) at SOUTHWEST CAY (NORTH DANGER REEF)

[11°25'48.94"N, 114°19'52.28"E]

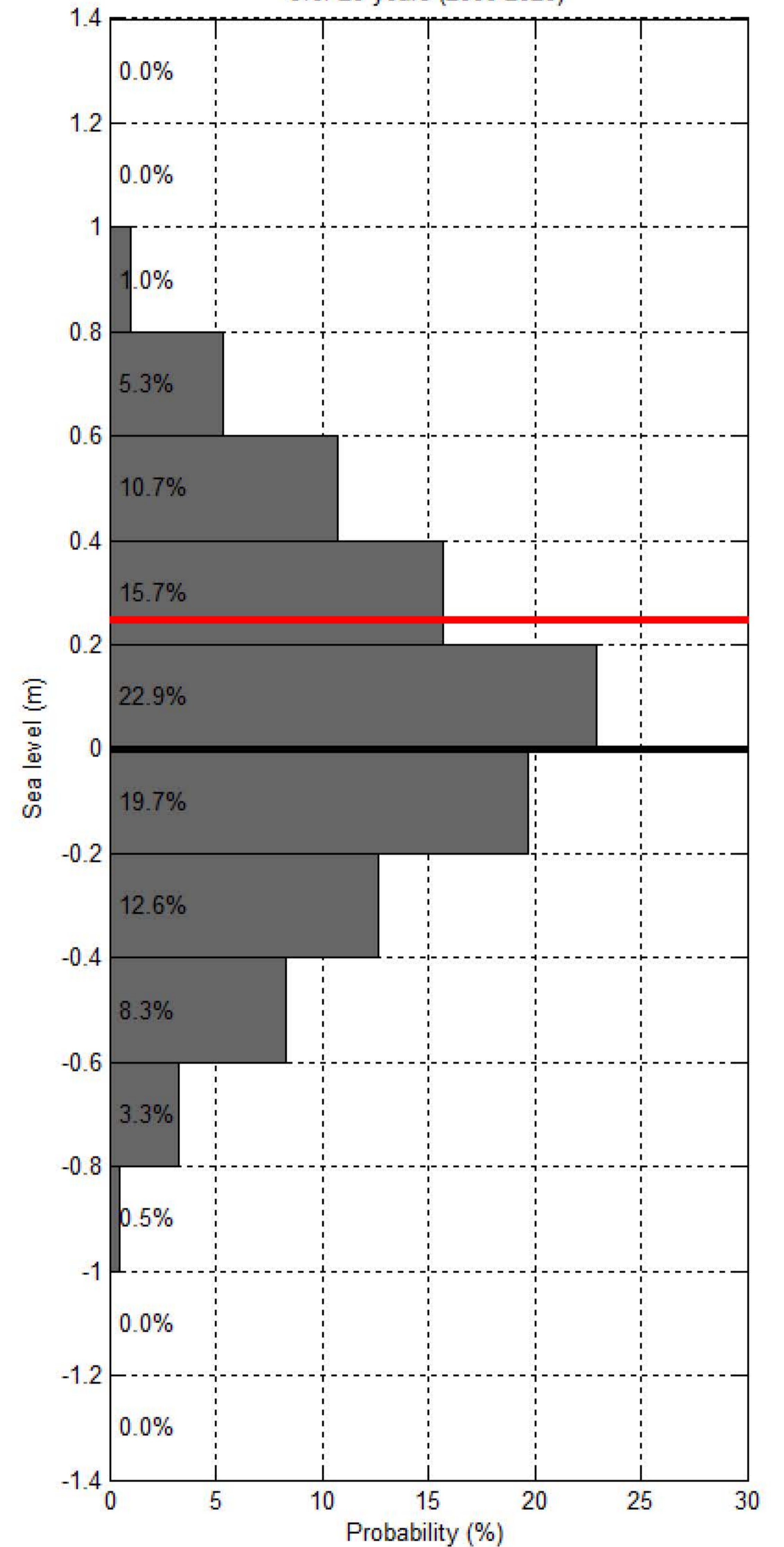
Sea level at spring/neap tide at NORTH DANGER REEF - SOUTHWEST CAY over 20 years (2000-2020)



Sea level at NORTH DANGER REEF - SOUTHWEST CAY within 20 days of Project Satellite Image



Probability of sea level at NORTH DANGER REEF - SOUTHWEST CAY 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