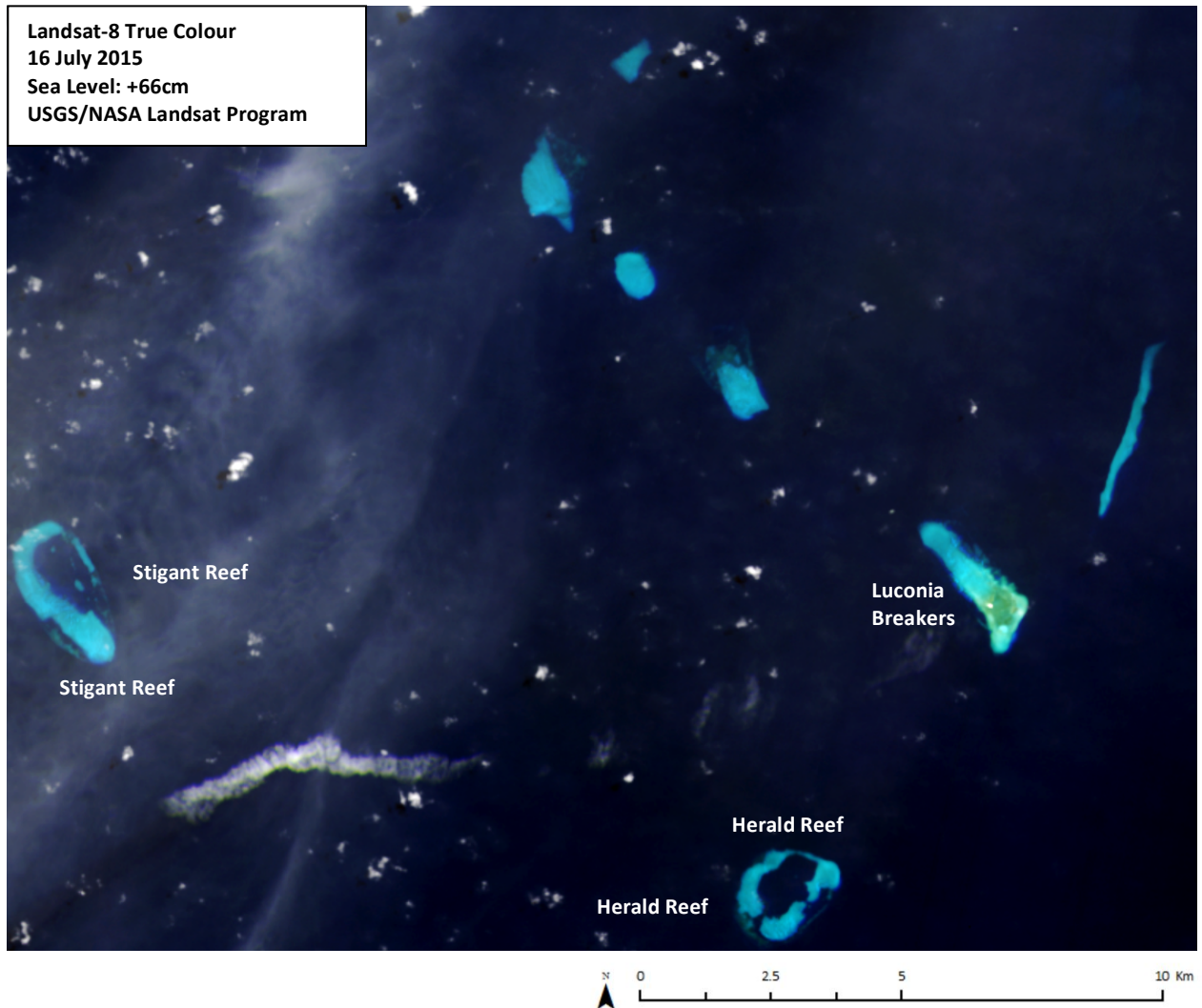


SOUTH LUCONIA SHOALS OVERALL

5°01'49.76"N, 112°35'39.06"E

Geographic area

South Luconia Shoals comprises a collection of coral reef platforms and small atolls located in the southernmost part of the Spratlys, over 20NM south of South Luconia Shoal. Based on the global bathymetry database FTP SRTM 15 PLUS, this shoal is (like North Luconia Shoals) located on the Sunda Shelf (the same continental shelf as the island of Borneo) rather than in the deep sea basin of the South China Sea (like most of the geographic formations in the Spratlys). The mostly deep reef platforms and submerged atoll rings that make up South Luconia Shoals appear to be scattered and disconnected. Three of them are named: Luconia Breakers, Herald Reef and Stigant Reef. The overall shoal extends close to 18km along its north-south axis and over 20km along its west-east axis.



Land area above water

Luconia Breakers is the shallowest of the visible geographic formations of South Luconia Shoals and is the only one with an above-water sand bank that may or may not be submerged at high tide (see Luconia Breakers Description Sheet).

Human infrastructure

There are no man-made structures on this shoal based on the satellite images available for this study.

Intertidal and submerged area

Luconia Breakers is the only reef of South Luconia Shoals that is partly exposed at low tide. The others can be locally 3-4m when the sea level is 40cm below Mean Sea Level but are mostly 4-6m deep and therefore fully submerged at all times. They are all characterised by pronounced spurs and grooves. Visible coral formations in South Luconia Shoals cover a total area of 12.86km² (including the small lagoons of Herald and Stigant Reefs). Based on the images available for the study, no dredging marks or traces of human activity are visible on geographic features other than Luconia Breakers.

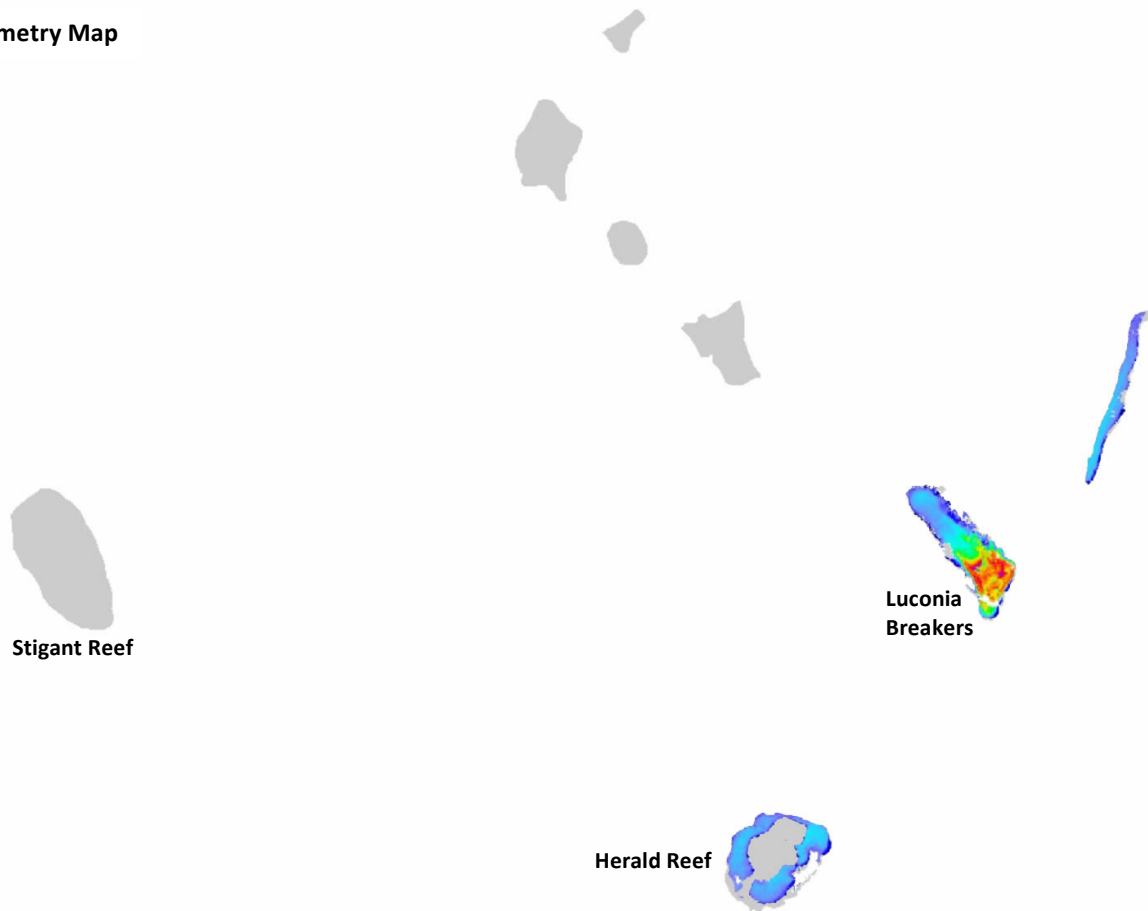
SOUTH LUCONIA SHOALS OVERALL

5°01'49.76"N, 112°35'39.06"E

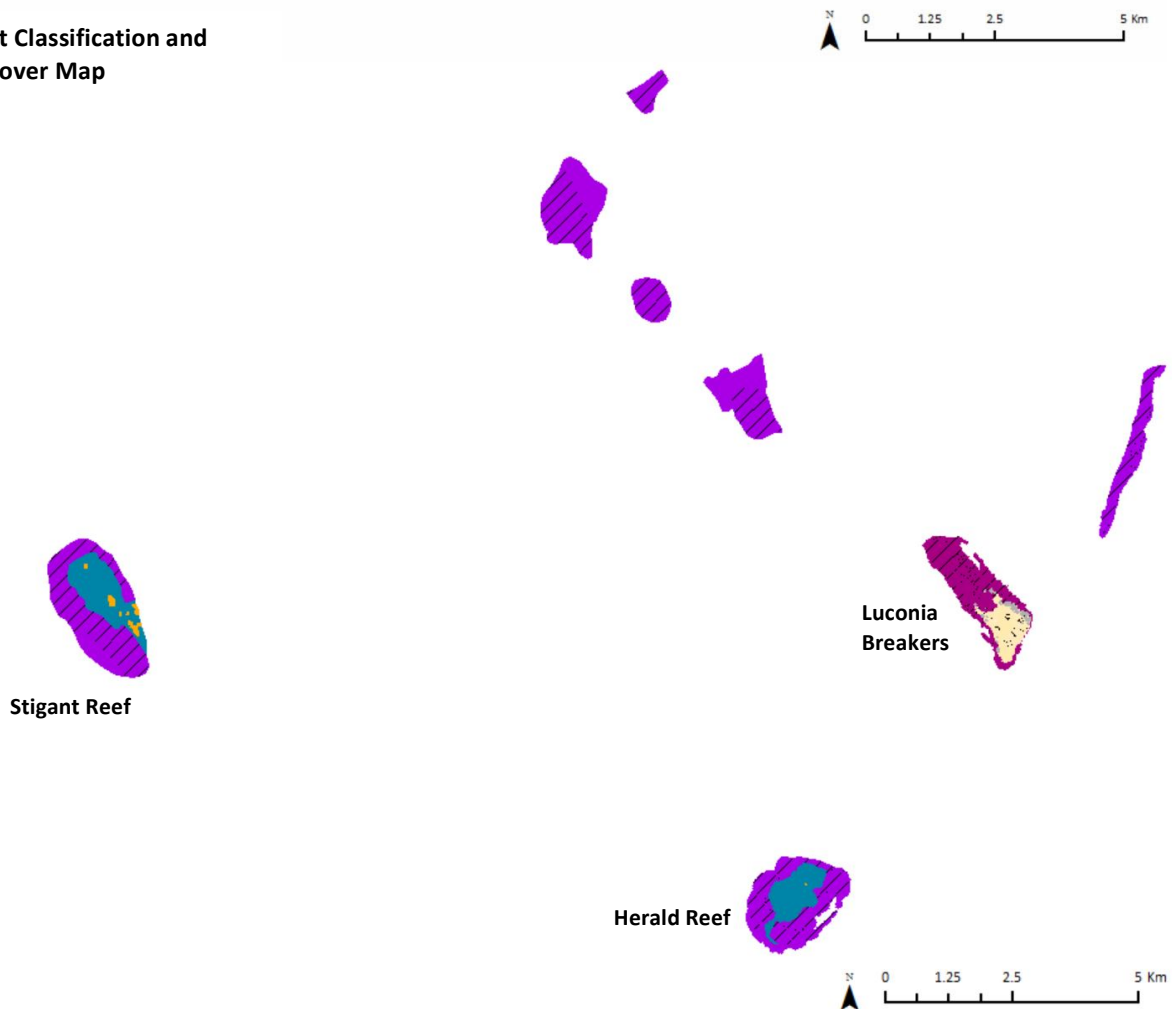
Derived from WorldView-3 and Landsat-8 satellite data captured on 13 December 2014 and 16 July 2015

[Sea Level: -30cm, +66cm]

Bathymetry Map



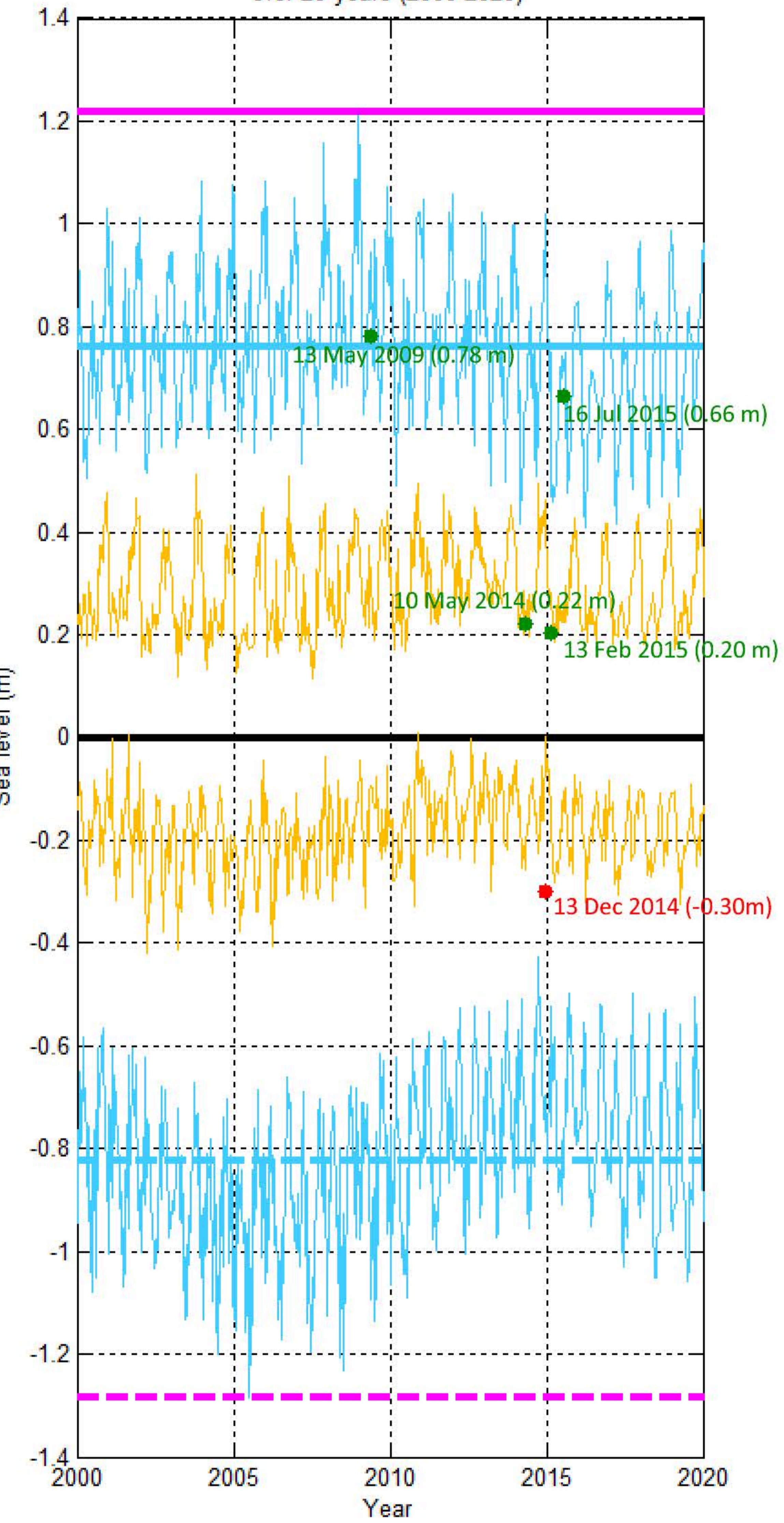
Habitat Classification and Land Cover Map



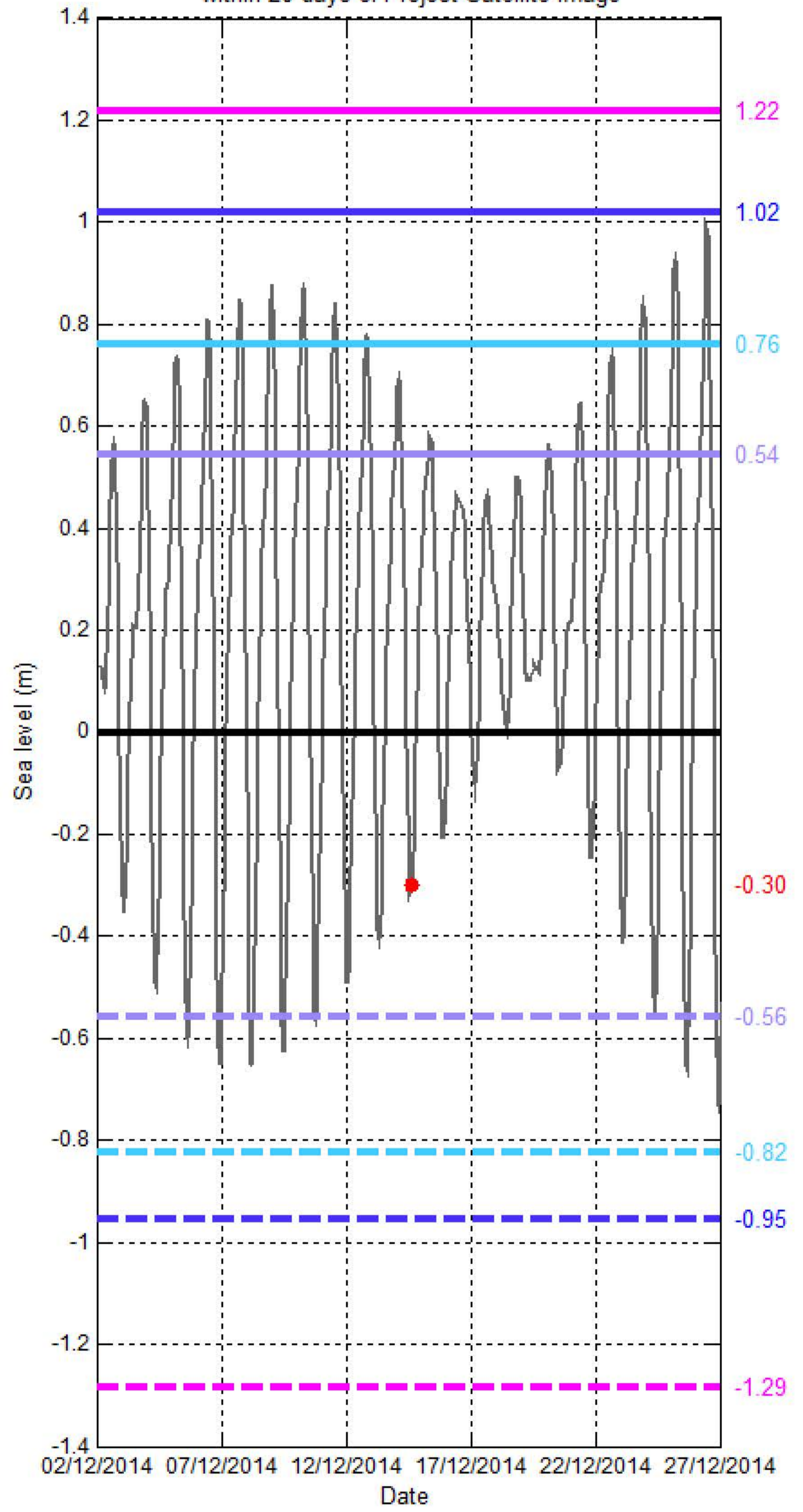
Sea level (SL) at SOUTH LUCONIA SHOALS

[5°01'49.76"N, 112°35'39.06"E]

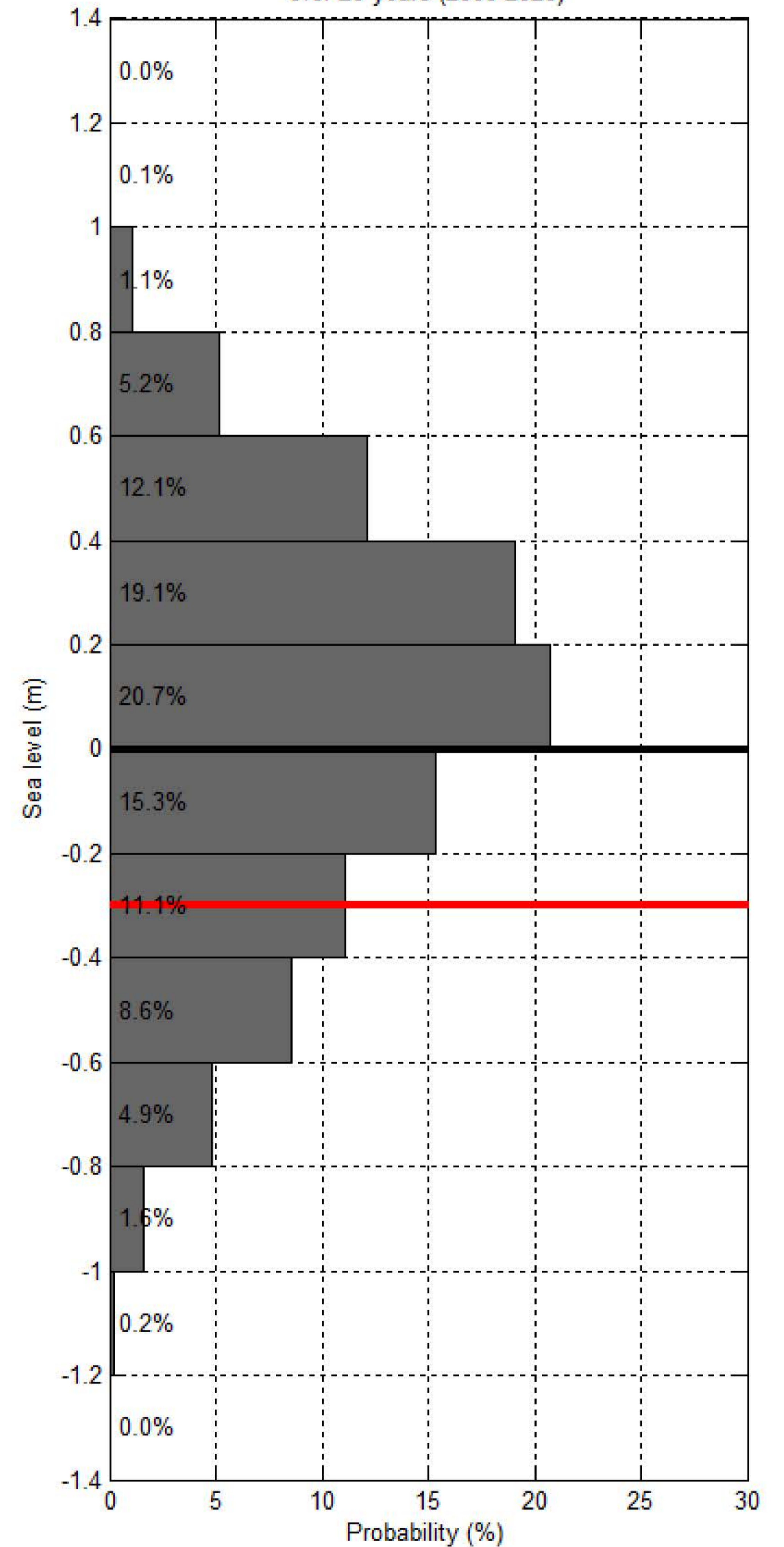
Sea level at spring/neap tide at SOUTH LUCONIA SHOALS over 20 years (2000-2020)



Sea level at SOUTH LUCONIA SHOALS within 20 days of Project Satellite Image



Probability of sea level at SOUTH LUCONIA SHOALS 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