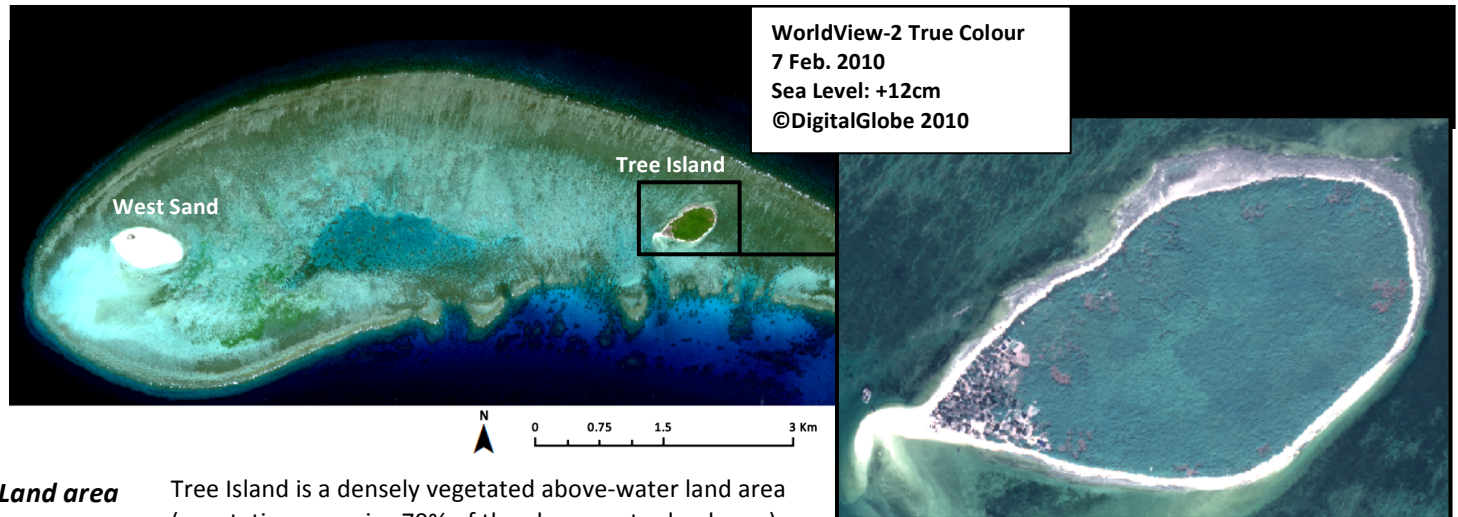


TREE ISLAND (AMPHITRITE GROUP)

16°58'47.27"N, 112°16'16.40"E

Geographic area Tree Island is located in the northeastern part of the Paracels, on the northwesternmost reef platform of the Amphitrite Group, close to 220NM northeast of Vietnam's mainland and 146NM southeast of the island of Hainan. The closest shallow geographic features are West Sand, 3NM west, on the same reef flat (northern reef flat) and North Island, less than 2NM southeast, on the southern reef flat of the same reef platform. All the above-water land areas located on this reef platform are within approximately 5NM of Tree Island. Woody Island is less than 9NM Southeast. Shallow geographic features outside the Amphitrite Group are more than 30NM away. The reef platform Tree Island is located on extends over 3.6km and is composed of two reef flats (see Description Sheet of Amphitrite Group Overall).



Land area above water

Tree Island is a densely vegetated above-water land area (vegetation occupies 70% of the above-water land area) that is shaped like a tear-drop and extends close to 800m along its northeast-southwest axis and reaches 400m along its northwest-southeast axis (surface area of 0.2km²). In the 7 February 2010 satellite image, several small clearings can be observed that are not more than 10-20m wide, except for a larger area with mostly buildings in the southwestern tip of Tree Island. A narrow band of white sand surrounds the island. Seaward of this, the water's edge is characterised by distinctively darker sedimentary formations (beachrock) that extend 10-50m all around and might be partly intertidal.

Human infrastructure

More than 60 buildings can be counted in the 7 February 2010 satellite image, clustered at the southwestern end of Tree Island. A few tracks are also visible through the vegetation, primarily on the northern side. However, a new circular road system is visible along the coastline in the 30 January 2013 satellite image viewable on Google Earth, as well as new buildings that replace previous ones, organised in parallel rows. Construction work off the southwestern tip is also visible, including a seawall and a new above-water platform over the reef flat. Subsequent reports and satellite images suggest that an extension has subsequently been constructed (since December 2015): <https://medium.com/satellite-image-analysis/china-is-building-a-helicopter-base-in-the-paracel-islands-and-manufacturing-land-at-two-more-6550b6f8f2d6#.lgcayw6ig>

Intertidal and submerged area

Tree Island is located on the same reef flat as West Sand. This reef flat has a total aerial coverage of 20.92km² and surrounds a small lagoon of 1.04km². The reef flat is mostly less than 2m deep. The north-facing side is shallowest (1m or less) and dominated by hard coral/algae cover over a 3.7km-long by 250 to 500m-wide band along the seaward edge. A smaller stretch of 1km by 100m along the southern seaward edge is also around 1m deep as is the southeastern edge of the reef flat. All areas that are 1.08m or less are expected to uncover at Lowest Astronomical Tide. Distinctive seagrass/algae patches are visible in the 2010 satellite image on the southern part of the reef flat. The lagoon is 4-6m deep and characterised by a dense reticulate reef system linking numerous coral heads into a mesh of reef segments. The visible part of the reef slope extends for only 100-150m off the western and southwestern sides of the reef flats. However, it extends over 600m or more off the northeastern side. Pronounced and regularly-spaced spurs and grooves are visible along the northeast-southwest axis.

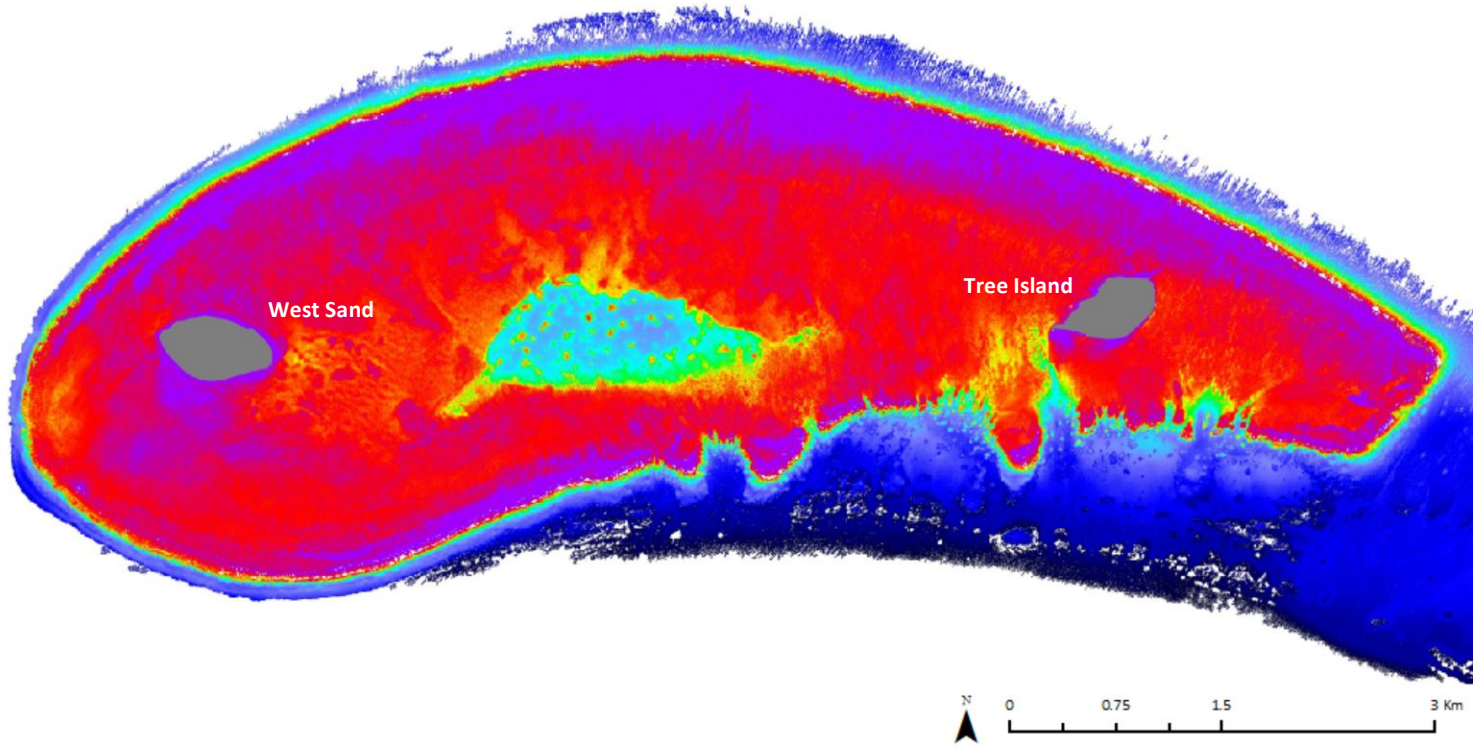
Several tracks of human activities are visible on the southern part of the reef flat, one of which may be a channel from the southern reef slope into the lagoon. Few dredging marks are clearly visible (8600m², or 0.04%, of the reef flat) but 47% of the reef flat looks degraded (unknown causes).

TREE ISLAND (AMPHITRITE GROUP)

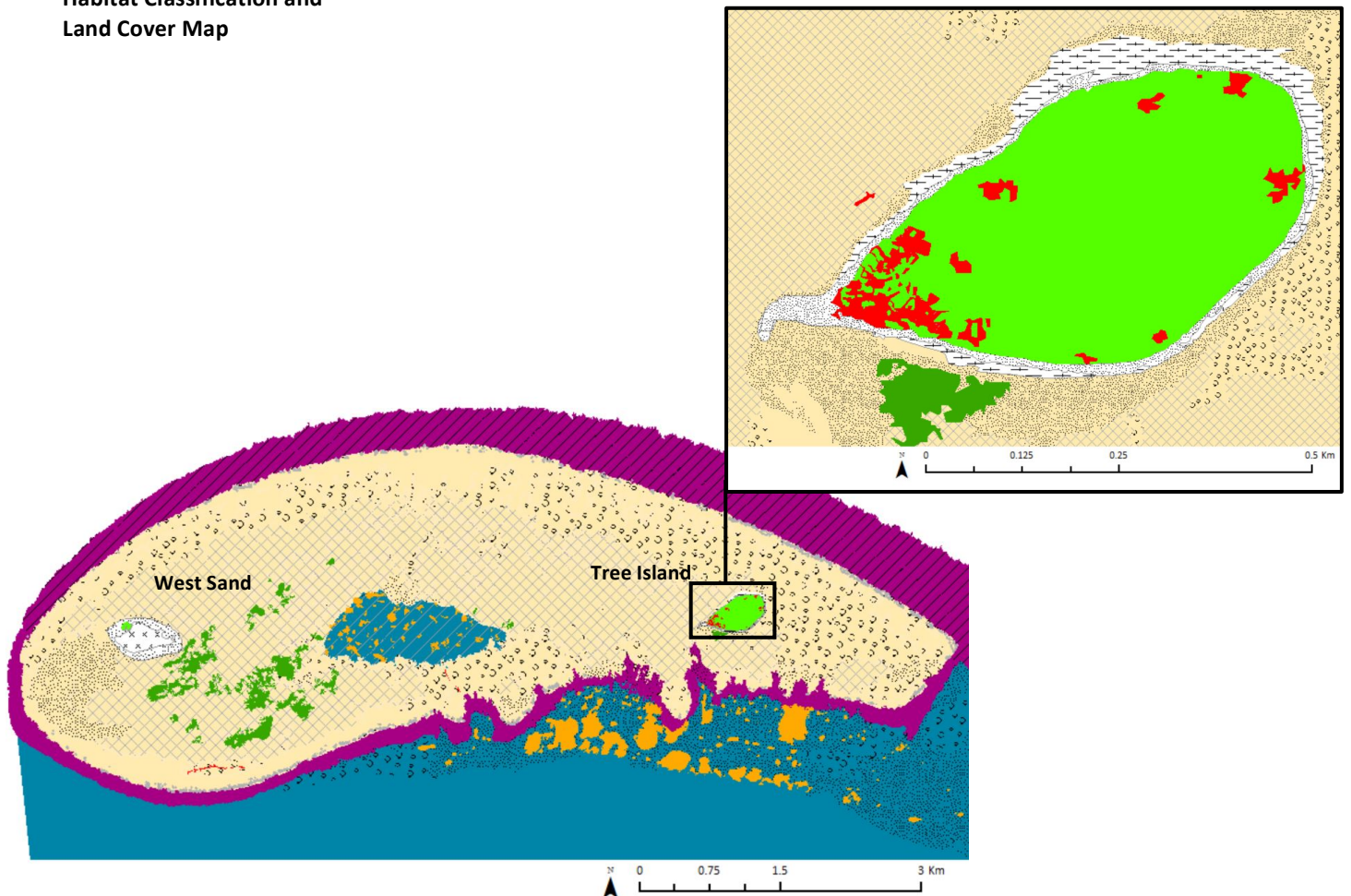
16°58'47.27"N, 112°16'16.40"E

Derived from WorldView-2 satellite data captured on 7 February 2010 [Sea Level: +12cm]

Bathymetry Map



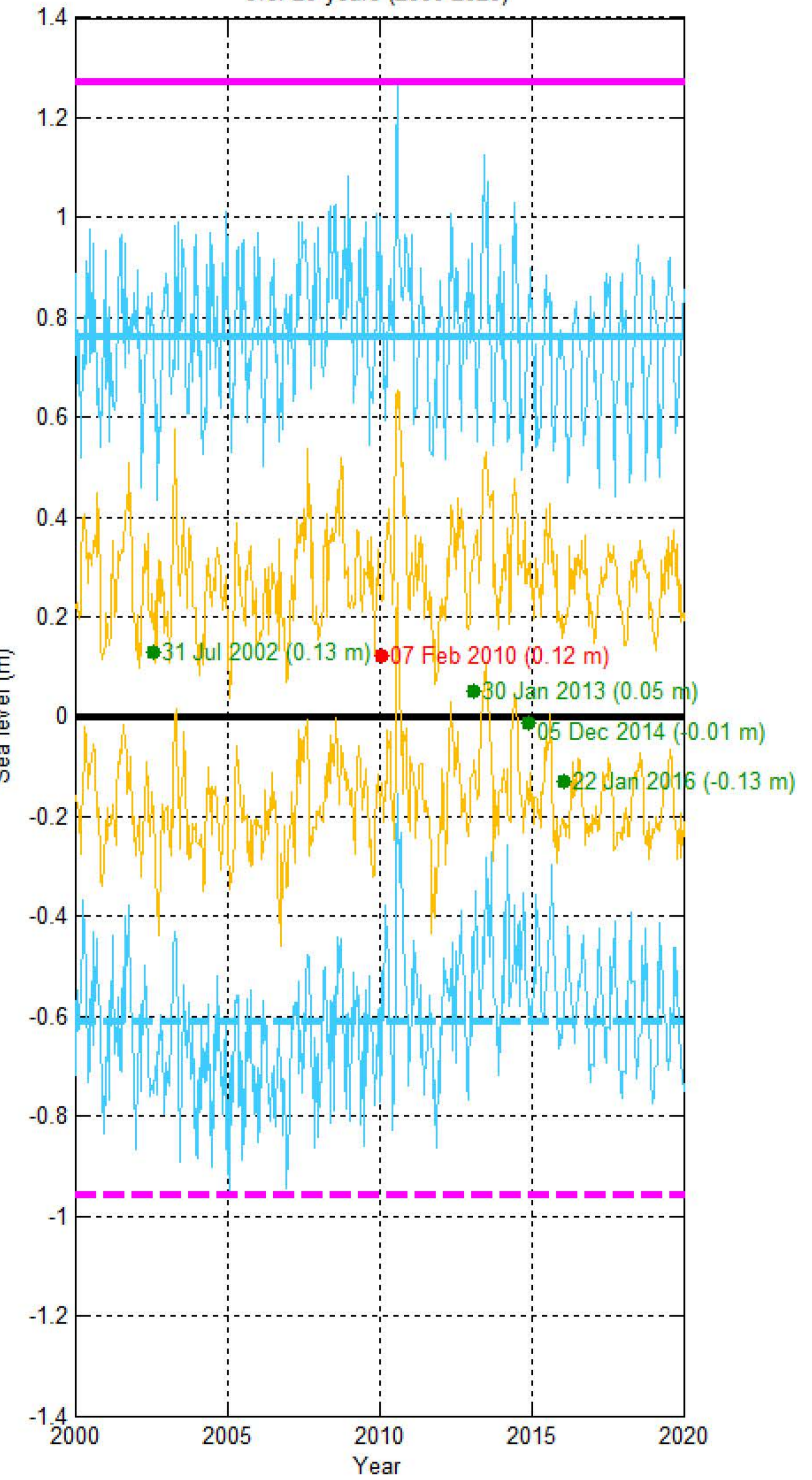
Habitat Classification and Land Cover Map



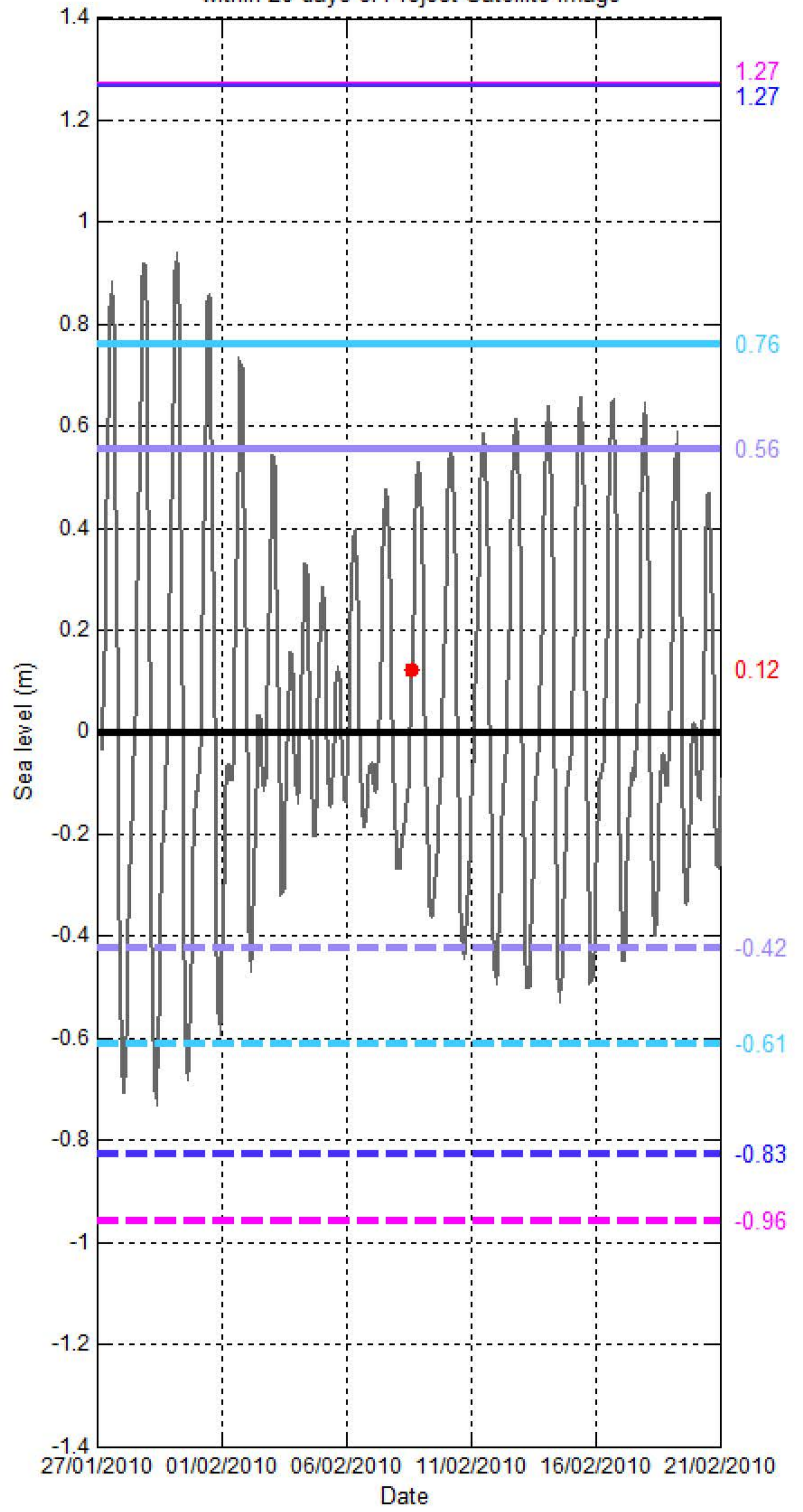
Sea level (SL) at TREE ISLAND (AMPHITRITE GROUP)

[16°58'47.27"N, 112°16'16.40"E]

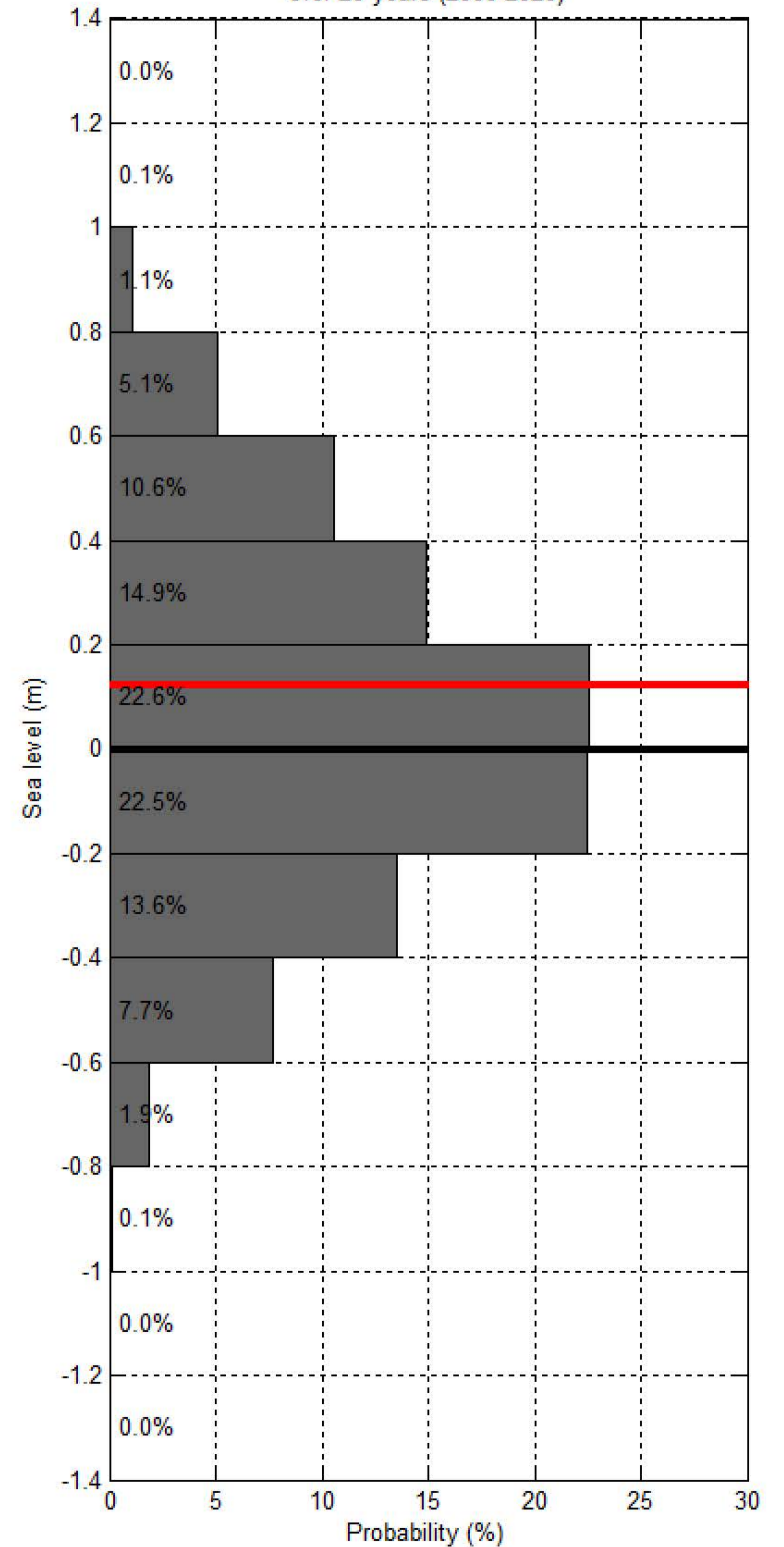
Sea level at spring/neap tide at AMPHITRITE GROUP - TREE ISLAND over 20 years (2000-2020)



Sea level at AMPHITRITE GROUP - TREE ISLAND within 20 days of Project Satellite Image



Probability of sea level at AMPHITRITE GROUP - TREE ISLAND 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