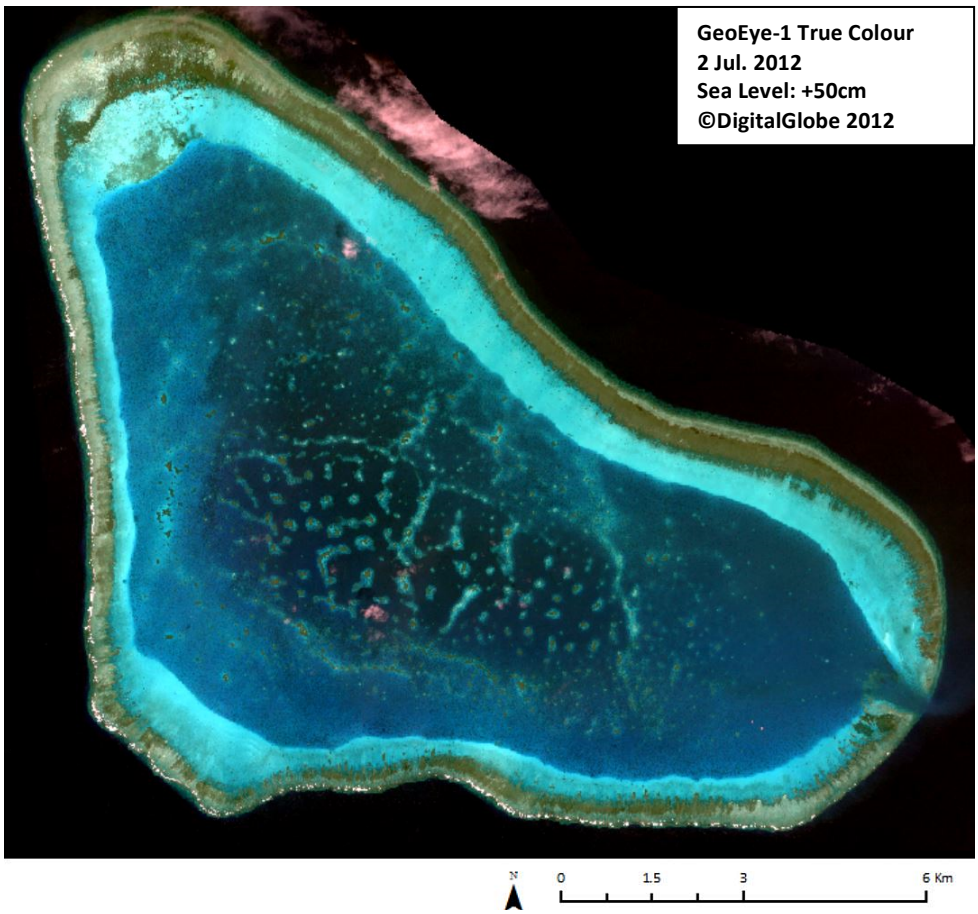
SCARBOROUGH SHOAL

15°09’12.18”N, 117°46’12.49”E

Geographic area

Scarborough Shoal is an oceanic coral atoll that developed on top of a seamount in the eastern part of the South China Sea, over 250NM northeast of the Spratlys. It is located 120NM southwest of Luzon (Philippines). This atoll extends 18km along its northwest-southeast axis and reaches 10km along its northeast-southwest axis.



Land area above water

There are no above-water land areas in the 2 July 2012 satellite image captured when the Sea Level is expected to have been 50cm above Mean Sea Level, and 22cm below the Mean High Water Spring. There may be above-water small reef rocks, although these cannot be seen clearly in the satellite image if they are less than 5m wide.

Human infrastructure

There are no man-made structures visible on this atoll as at 15 July 2014.

Intertidal and submerged area

The atoll is composed of a reef flat of 45.56km^2 that surrounds a lagoon of 78.42km^2 and a reef slope of 4.81km^2. The reef flat is a 44km-long band that surrounds the lagoon and separates it from the reef slope. It is composed of two adjoining rings: an outer ring that follows the contours of the reef slope and an inner sandy ring that follows the contours of the lagoon (the back reef). The outer ring is 300-350m wide and is shallowest (generally 1.5-1.8m, but 1m or less in a few localised areas). Areas that are 1.49m deep or less are expected to uncover at Lowest Astronomical Tide. Visible wave action on the northwestern and southeastern sides of the atoll suggests the possible presence of (small) shallow or even above-water rocks at the time the image was captured. The inner ring is mostly sandy and 3-4m deep. It is 1km wide along the northeast-facing side and narrower (300m) along the northwest and south-facing sides. The northwest tip of the reef flat is shallow and has a large sandy area that has been heavily dredged. The 15 July 2014 and 11 November 2014 satellite images viewable on Google Earth show that the entire northeastern side has also been dredged, as well as selective areas on the southwestern side, in particular where the back reef is wide and sandy. The lagoon appears to be 5-7m deep (although it could be deeper if there are suspended sediments in the water-column which can lead to an underestimated depth) and characterised by a dense reticulate reef system, which includes numerous shallow coral heads (6.75km^2) and together form a network of coral ribbons that can extend for several hundred metres. The visible part of the reef slope extends around 150-200m seaward except off the southern side where, for the most part, it does not extend more than 30m. Pronounced spurs and grooves are visible all around, as well as sand terraces at 4-5m depth, along the northeastern side.

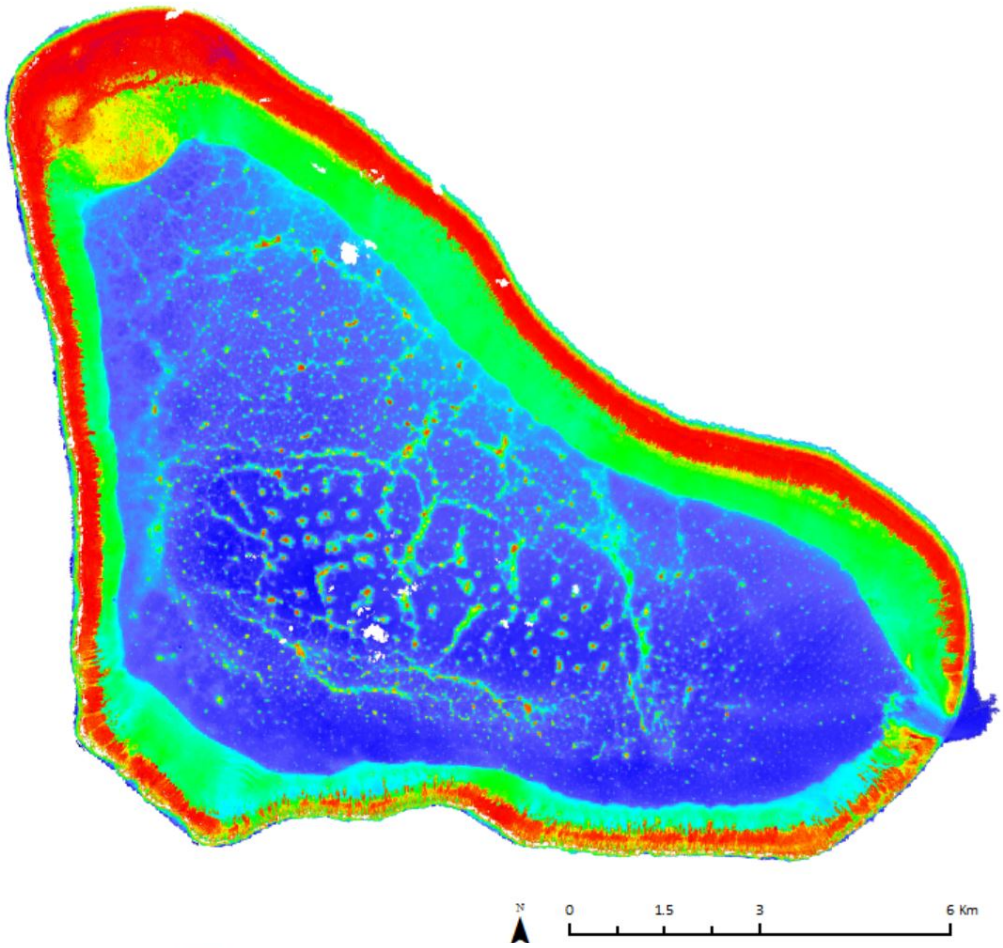
A 400m-wide channel through the southeastern side of the reef flat looks naturally formed and connects the lagoon with the open sea. A fishing net stretched across this channel can be observed on 2 July 2012. Its shape shows that the tide is going out when the image was captured. Dredging marks and areas of degraded reef cover 2.83km^2 in the 2 July 2012 satellite image. However, later images show substantial increase in the total area affected by dredging and other human activities.

SCARBOROUGH SHOAL

15°09’12.18”N, 117°46’12.49”E

Derived from GeoEye-1 satellite data captured on 2 July 2012 [Sea Level: +50cm]

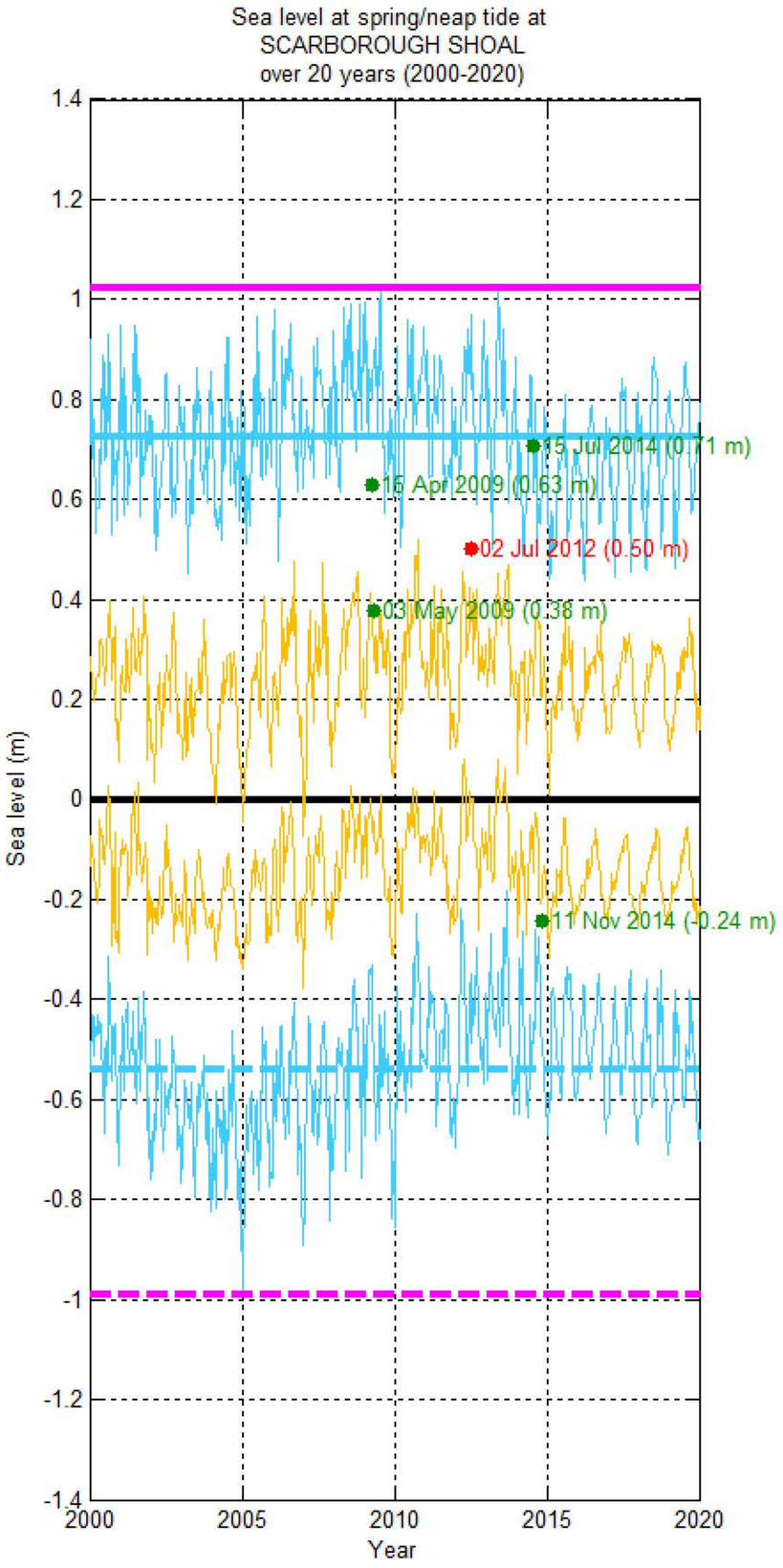
Bathymetry Map

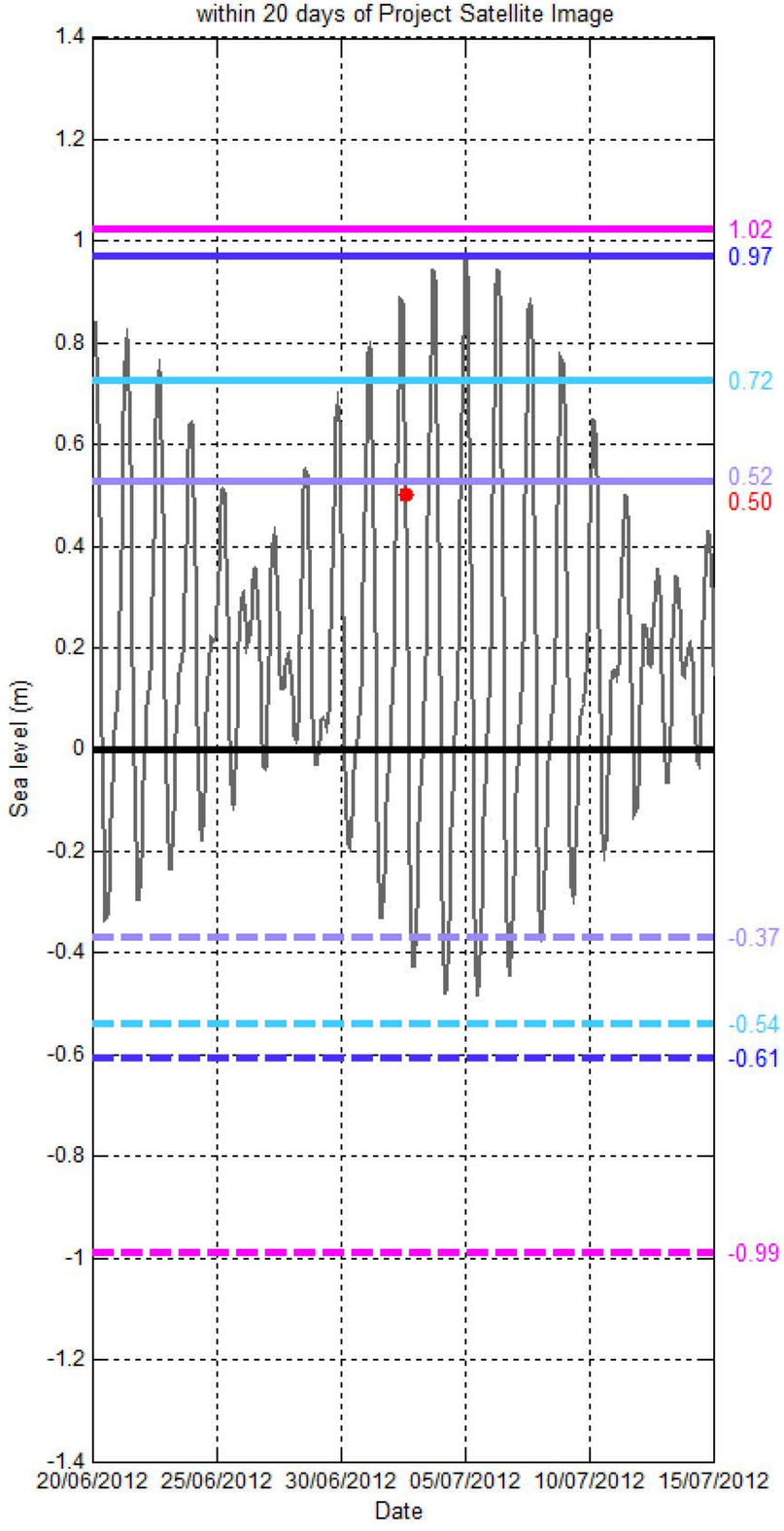


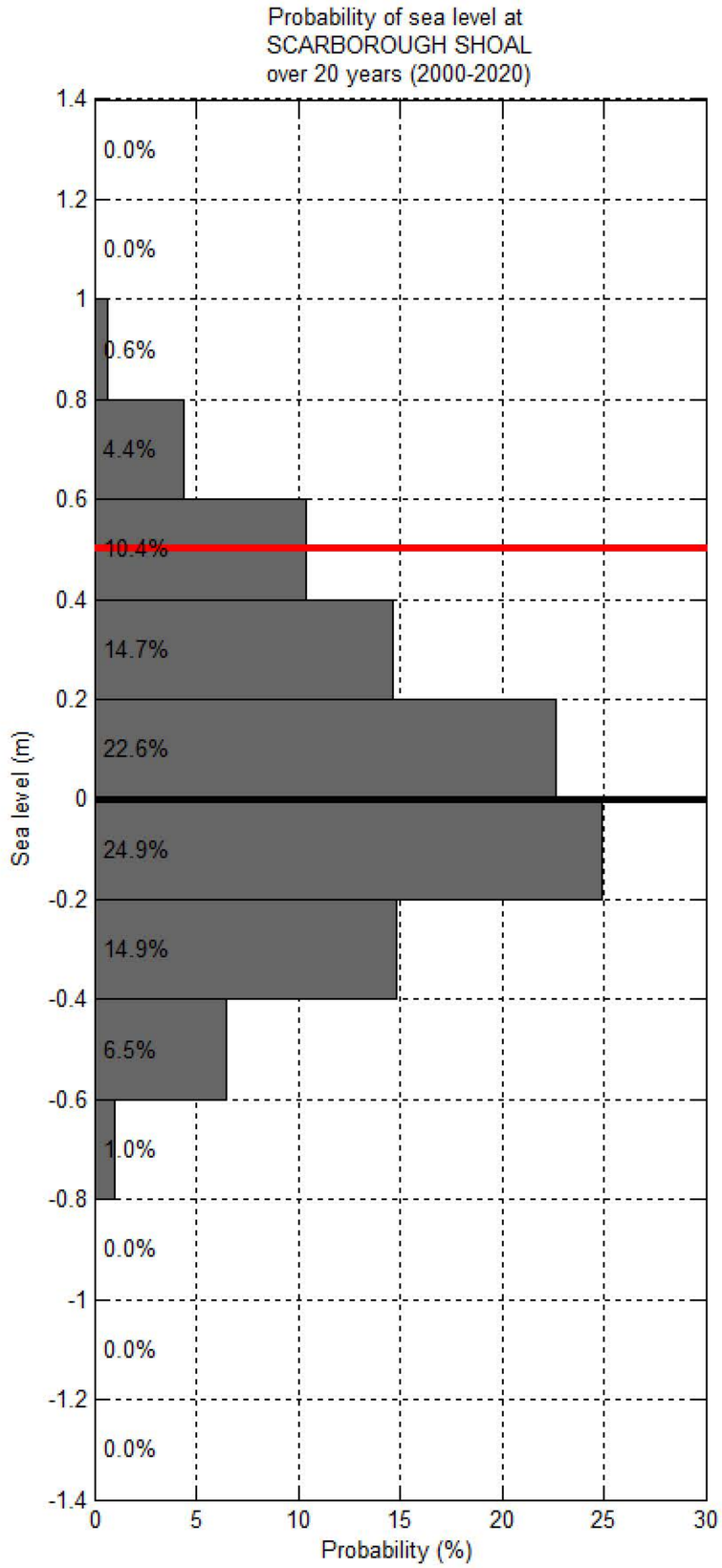
Habitat Classification and Land Cover Map

Sea level (SL) at SCARBOROUGH SHOAL

[15°09'12.18"N, 117°46'12.49"E]







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