

EDMUND REEF (UNION REEFS)

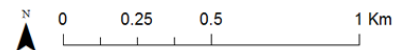
9°53'49.21"N, 114°23'39.57"E

Geographic area

Edmond Reef is a shallow coral reef platform located in the northwest of Union Reefs between Sin Cowe Island (around 3.2NM southwest) and Mc Kennan Reef (around 3.4NM east). It is shaped in the form of a crescent that is 5.5km long (between northwestern and southeastern extremities) and reaches 1.4km in width along its northeast-southwest axis. However, 3.5km of this is made of deep coral formation. The shallow and most visible part of this coral reef platform has a rough oval shape and is close to 1km wide (longest north-south axis) and 1.6km long (longest west-east axis).

Land area above water

Two small above-water sand banks (less than 10m by 10m) are visible in this 18 January 2012 satellite image. They are located on shallow sand formations that surround the sandy central part of the reef flat. Comparison of these sand banks in the 2012 satellite image with satellite images from 2 February 2004, 26 February 2014 and 22 February 2015 (viewable on Google Earth) shows that they are dynamic, as the sand banks that are visible in each image are in different locations or are different sizes or shapes as a result of the combined effect of astronomic tides, storm surges and wind-waves. On the basis that the 2011 WorldView-2 satellite data was captured when the sea level was 4cm below Mean Sea Level, it is expected that these sand bank are submerged at Mean High Water Spring with an increase in sea level of more than 80cm.



Human infrastructure

There are no human infrastructures on this reef platform as at 22 February 2015.

Intertidal and submerged area

The aerial coverage of the coral reef area is 3.31km², of which 1.07km² is reef flat and 2.24km² is reef slope or deeper reef formation. The shallowest part of the reef flat is a 100m-wide ring of sand that adjoins the reef slope and is around 1m deep. It surrounds the sandy central and slightly deeper part of the reef flat (1-2m deep). The shallowest parts of the outer ring are expected to uncover at Lowest Astronomical Tide. Coverage by coral/seagrass/algae occupies 0.27km² of the reef flat. The reef slope that extends 1.5km northwest and 2km south of the reef flat has pronounced spurs and grooves at a depth of 6-9m.

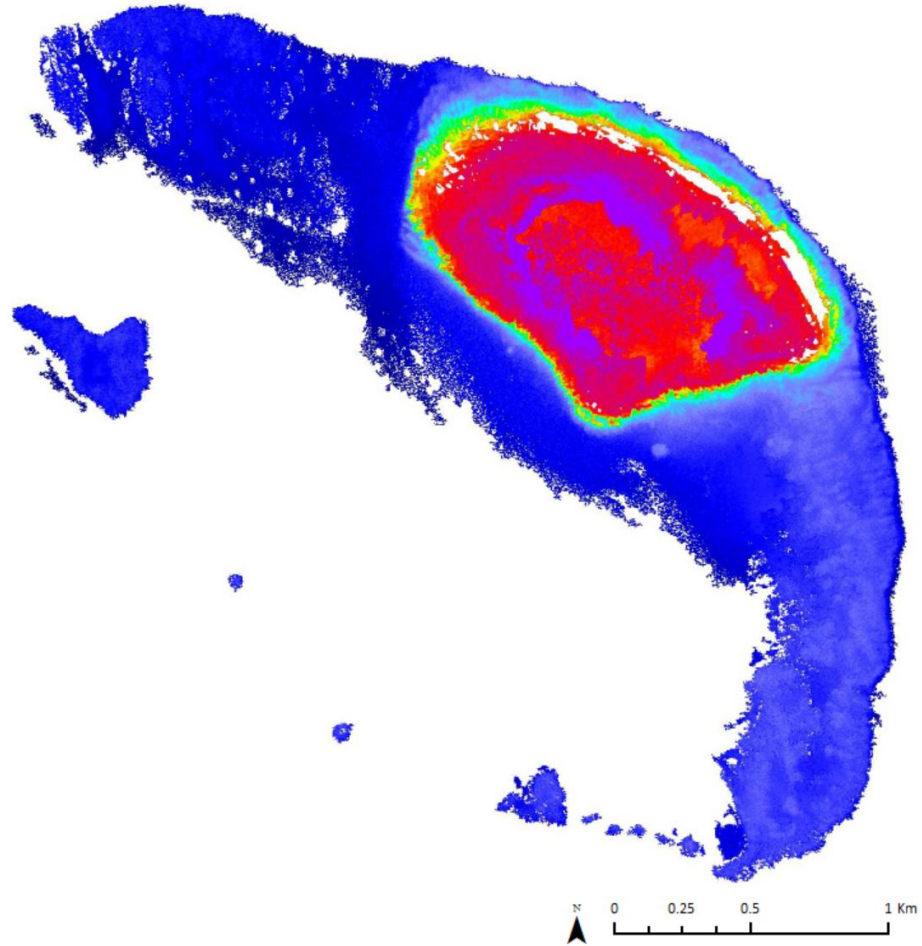
As at 18 January 2012, there were severe dredging marks on the central part of the reef flat (0.22km²). As recently as 22 February 2015, the satellite image viewable on Google Earth shows evidence of further dredging activities that occupy the entire central part of the reef flat.

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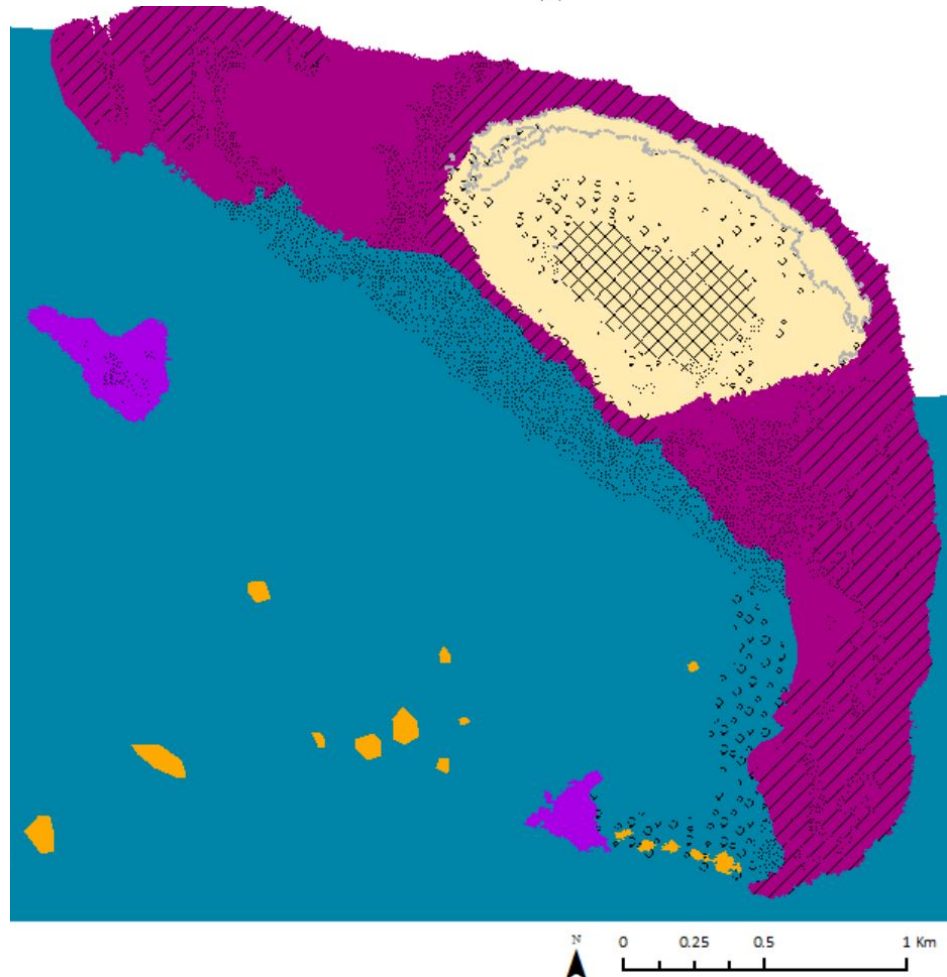
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Derived from WorldView-2 satellite data captured on 18 January 2012 [Sea Level: -4cm]

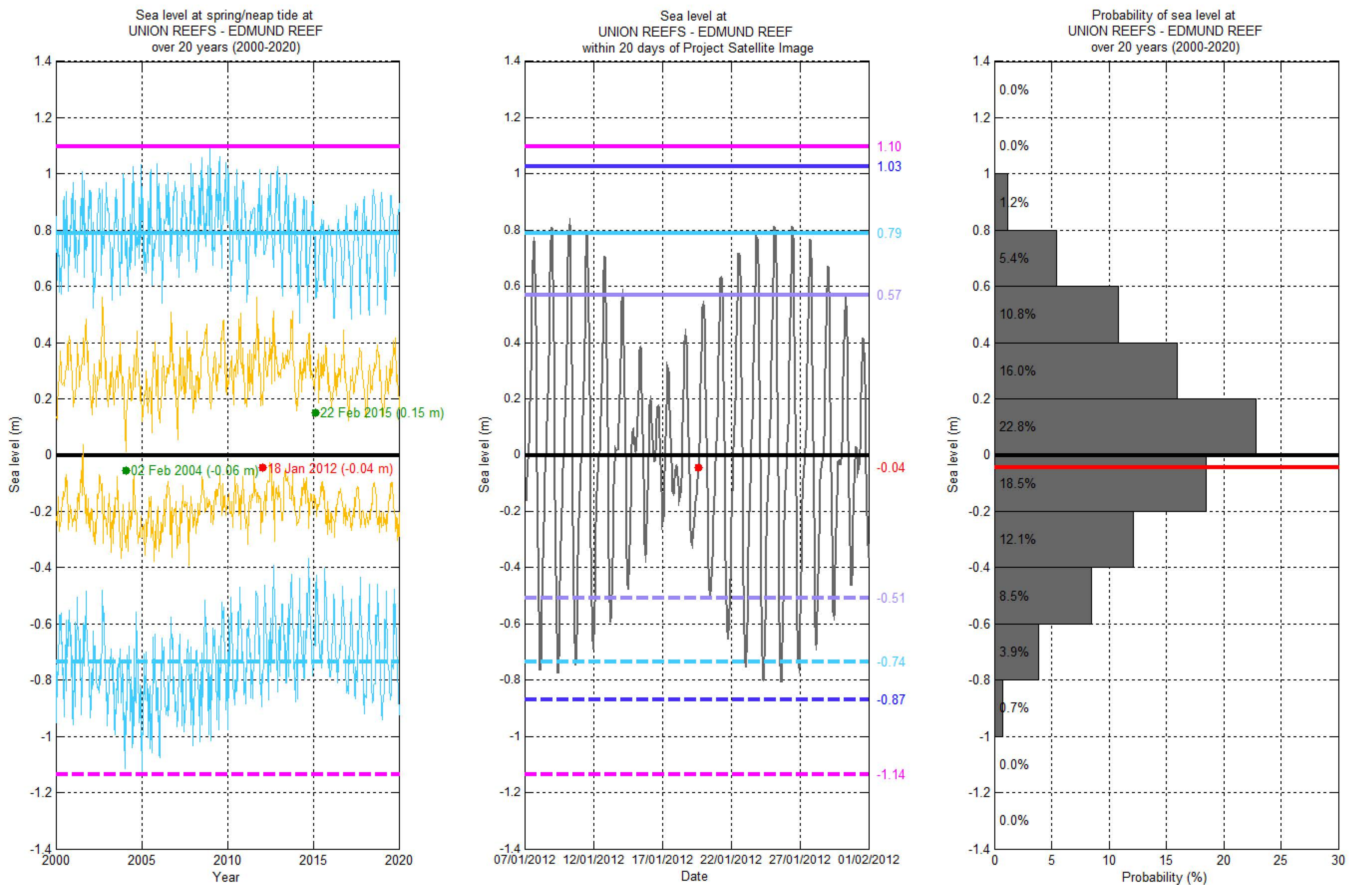
Bathymetry Map



Habitat Classification and Land Cover Map



Sea level (SL) at EDMUND REEF (UNION REEFS)
[9°53'49.21"N, 114°23'39.57"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