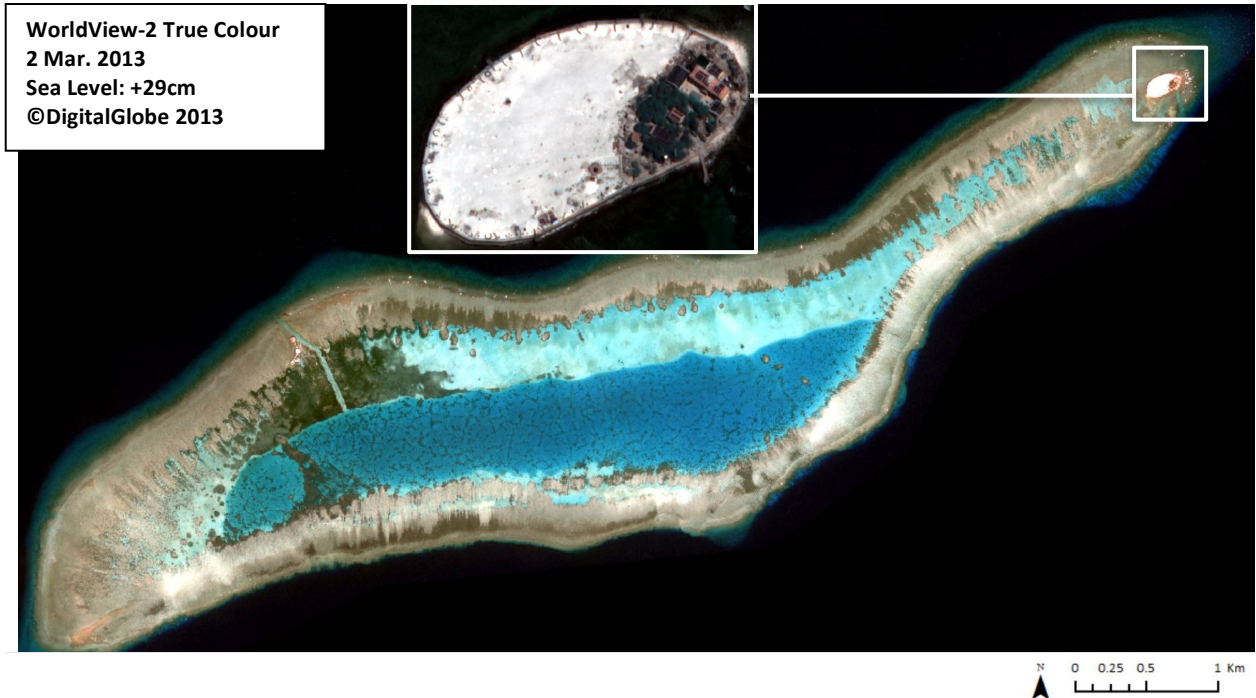


PEARSON REEF

8°57'27.39"N, 113°40'15.63"E

Geographic area

Pearson Reef is located in the centre of the Spratlys, approximately 185NM southwest of the island of Palawan Island and 215NM northwest of the island of Borneo. The closest shallow geographic features are Maralie Reef (13.7NM northwest) and Alison Reef (14.3NM southeast). It is an elongated and closed ring reef, which extends close to 10km along its northeast-southwest axis.



Land area above water

An above-water land area is located on the reef flat close to the northeastern tip ($29,000\text{m}^2$). This area has the shape of a regular oval, is flat and enclosed by a seawall. The long axis measures approximately 270m and the maximum width is 130m. It is composed of a small built-up area surrounded by its own seawall and located in the northeast of the above-water area, and a larger barren area (twice the size of the built-up area) in the 2 March 2013 satellite image, although new man-made structures can be observed in the 16 November 2014 satellite image viewable on Google Earth. The built-up area is covered with $2,000\text{m}^2$ of terrestrial vegetation (33% of the built-up area) growing between approximately 10 man-made structures and a small road network. A 180m by 30m sand bank is also visible on the southwestern tip of the reef flat. It is unconfirmed but possible that it is submerged when the sea level increases by 50cm as is expected at Mean High Water Spring.

Human infrastructure

There seems to be small vegetable gardens within the seawall of the above-water area although their small size does not allow for clear identification. Most of the roofs have solar panels and approximately 25 wind turbines surround the above-water area. A jetty extends 22m from the southeastern side to the start of the channel cut in the reef flat to connect the above-water area to the open sea. The channel is 157m long and 27m wide. Three connected offshore platforms - accessible via a 842m-long by 18m-wide man-made channel linking the open sea and the lagoon - are visible on the shallow part of the northwest-facing reef flat, around 6km from the above-water land area. These installations cover a total area of 3700m^2 . Five sets of non-accessibility devices can also be seen; three are located north, east and south of the above-water land area and the other two are located on each side of the channel to the offshore platforms.

Intertidal and submerged area

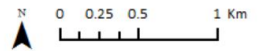
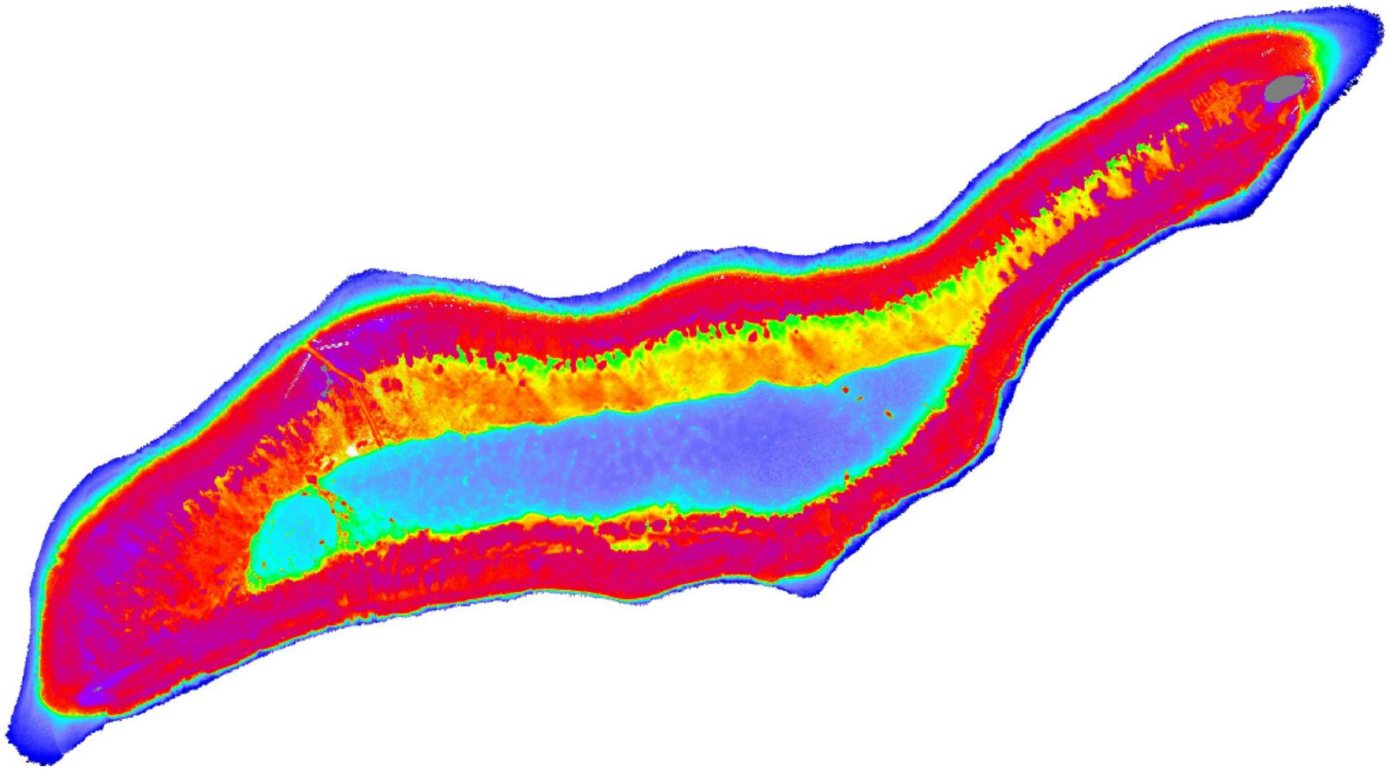
The aerial coverage of the coral reef area is 14.75km^2 , comprising a lagoon of 2.72km^2 (3-6m deep), a reef flat of 9.63km^2 and a reef slope of 2.40km^2 . The reef flat is composed of two adjoining rings that separate the reef slope from the lagoon. The outer-ring, which is 200-400m wide and is located along the reef slope, is characterised by mixed hard coral rubble/seagrass/algae cover. It is less than 1.5m deep when the sea level was estimated at 29cm above Mean Sea Level and is therefore expected to dry at Lowest Astronomical Tide. The inner-ring of the reef flat is sand dominated and deeper (1.5-2.5m) as it slopes into the lagoon. A distinctive patch of seagrass/algae/cyanobacteria, which covers an area of 0.59km^2 is visible on the northwestern part of the reef flat. The longest reef slope areas extend 610m northeast, 430m southwest, and 300m north. Spurs and grooves are visible on the northern reef slope and the most pronounced ones are located on the northwestern reef slope. The lagoon is shallow and characterised by a dense reticulate reef system. Dredging marks are visible, approximately $80,000\text{m}^2$, on the western edge of the above water area of built up land. A 55m long stranded vessel is visible on the reef crest, north of the offshore installations.

PEARSON REEF

8°57'27.39"N, 113°40'15.63"E

Derived from WorldView-2 satellite data captured on 2 March 2013 [Sea Level: +29cm]

Bathymetry Map



Habitat Classification and Land Cover Map

