

# New Construction On Mischief Reef

Analysis By Similarity In Collaboration  
With AllSource Analysis

February, 2021

# Similarity's Monitoring Process



This anomaly heat map, for sites 5 and 6 in the analysis that follows, was generated by AIADS. It is shown overlaid onto a Sentinel 2 image. The anomalies are the red squares. After reviewing the imagery, our analyst then drew the pink polygons around the areas that need further investigation.

High resolution imagery was obtained for these areas, and Allsource Analysis helped interpret what those high resolution images revealed.

Please contact us at [info@similarity.com](mailto:info@similarity.com) to chat about your monitoring project.

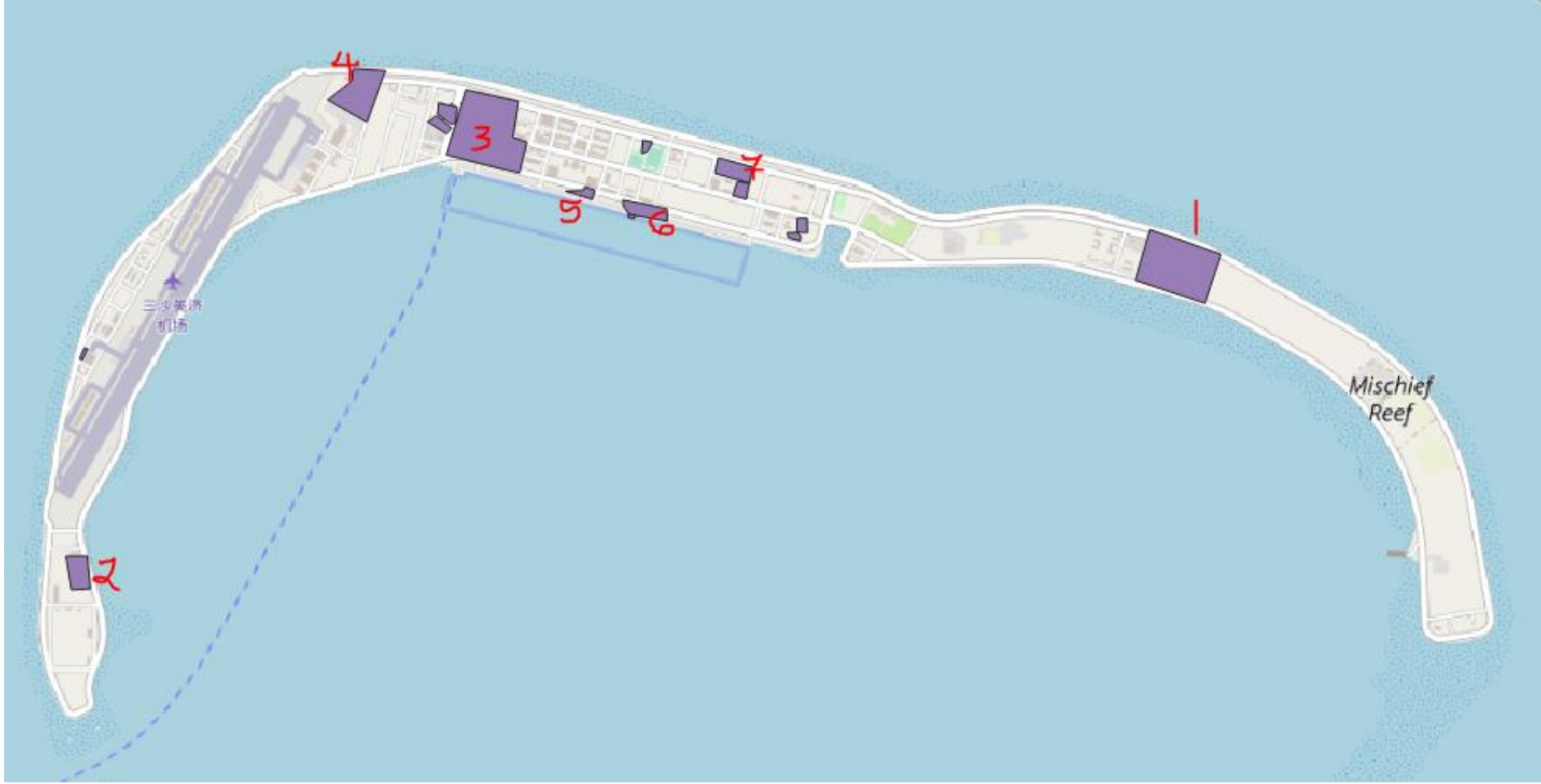
Similarity is a software company that uses AI and Geospatial data to determine when significant changes have happened to an area. Our software, Automated Image Anomaly Detection System (AIADS), enables us to automate the scanning of large areas, such as the South China Sea, for unusual activity.

Our South China Sea monitoring project helps us demonstrate the value of our software. We check for new Sentinel 2 imagery of the South China Sea every week. When new images arrive, they are automatically downloaded and analyzed by AIADS in **just minutes**.

A human analyst then reviews the results of the AIADS analysis, an “anomaly heat map” that highlights significant changes in red. By looking at the new image, the anomaly heat map, and historical images, our human analyst determines where there are changes that deserve a closer look. Those are indicated in this report with the red polygons.

**It takes less than a day for our analyst to review all the anomaly images generated each week.** Running AIADS on free Sentinel 2 imagery makes it possible for us to inexpensively monitor a very large area.

- Mischief Reef
- Locations of New Construction



# Mischief Reef, May 7, 2020

Location: 9.92208, 115.56175



This is the “Before” picture.

Imagery credit: © CNES 2019-2021,  
Distribution AIRBUS DS

# Mischief Reef, February 4, 2021

Location: 9.92208, 115.56175



Construction of a permanent cylindrical structure 16 meters in diameter started in early December 2020. This is a possible antennae mount structure.



Imagery credit: © CNES 2019-2021,  
Distribution AIRBUS DS

# Mischief Reef, May 7, 2020

Location: 9.9053, 115.5006



This is the “Before” picture.

Imagery credit: © CNES 2019-2021,  
Distribution AIRBUS DS

# Mischief Reef, February 4, 2021

Site Number 2

Location: 9.9053, 115.5006



This area has been cleared, and AllSource observed a structure: a concrete structure (9.90565, 115.50053) with a large radome cover located 20 meters to the south (9.9053, 115.5006).

These objects appeared between October 22 and November 23, 2020. The concrete structure may have undergone additional internal construction between November 23 and February 1, 2021. This is possibly a fixed radar structure.





This is the “Before” picture.

Imagery credit: © CNES 2019-2021,  
Distribution AIRBUS DS



# Mischief Reef, February 4, 2021

Location: 9.92853, 115.52394

This area has been cleared, with perhaps some preparation for additional construction.

To the south, at (9.92853, 115.52394), there is an expanded, raised, rectangular area that could mark preparation for additional construction. The clearing and the establishment of this raised area was started between October 22 and November 23, 2020.

# Mischief Reef, May 7, 2020

Location: 9.93244, 115.51593



This is the “Before” picture.

Imagery credit: © CNES 2019-2021,  
Distribution AIRBUS DS

# Mischief Reef, February 4, 2021

Location: 9.93244, 115.51593



This area has been cleared (9.93244, 115.51593), with no indication of preparation for additional construction.

# Mischief Reef, May 7, 2020

Location: 9.92668, 115.52853



This is the  
“Before” picture.

# Mischief Reef, February 4, 2021

Location: 9.92668, 115.52853



This appears to be a new area of possible construction portside, started between October 22 and November 23, 2020.

There appears to be construction equipment and a raised, rectangular area constructed adjacent to the port quay.

# Mischief Reef, May 7, 2020

Location: 9.92668, 115.52853



This is the “Before” picture.

# Mischief Reef, February 4, 2021

Location: 9.92668, 115.52853



This appears to be a new area of possible construction portside, started between October 22 and November 23, 2020.

There appears to be construction equipment and a raised, rectangular area constructed adjacent to the port quay.

# Mischief Reef, May 7, 2020

Location: 9.92776, 115.53707



This is the “Before” picture.

Imagery credit: © CNES 2019-2021,  
Distribution AIRBUS DS



# Mischief Reef, February 4, 2021

Location: 9.92776, 115.53707



This area has been cleared, with no indication of preparation for additional construction.

Imagery credit: © CNES 2019-2021,  
Distribution AIRBUS DS