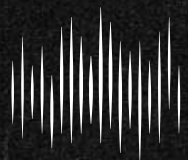


LumoScan

China's Maritime Militia in Mischief Reef

November 2024



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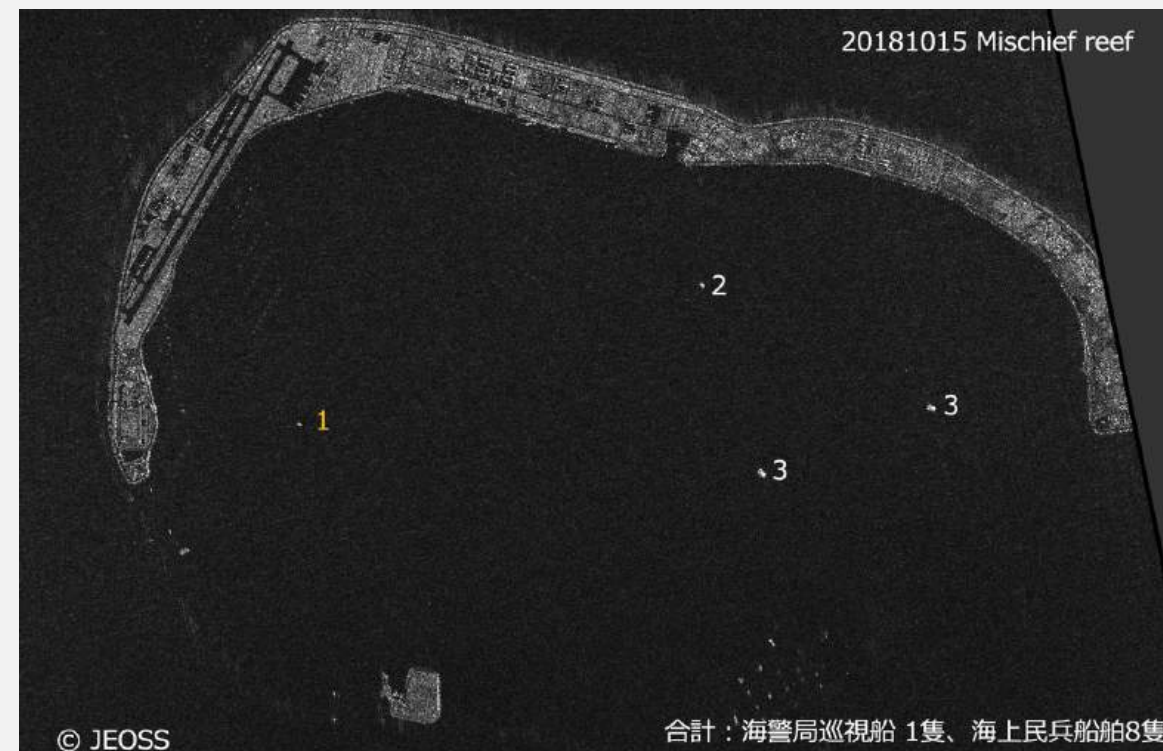
The Institute for Digital Investigations

Based on an analysis of the pattern of ups and downs in the number of China's maritime militia vessels anchored at Mischief Reef, and their anchorage formation, it is possible that a large-scale operation by the maritime militia will take place by the beginning of 2025.

In “Pulling Back the Curtain on China's Maritime Militia,” released in November 2021 by CSIS, a U.S. think tank, noted that “Since completing the construction of its artificial island outposts in the Spratly Islands in 2016, China has shifted its focus toward asserting control over peacetime activity across the South China Sea.” Maritime militias are naval units ostensibly engaged in commercial fishing, but in reality working with law enforcement and the PLA to achieve China's political goals in the disputed waters.

Currently, a certain number of maritime militia vessels are always anchored at what the U.S. calls the Big 3: Mischief Reef, Subi Reef, and Fiery Cross Reef. They are thought to be using these artificial islands as bases to deploy to Second Thomas Shoal and Sabina Reef, over which China and the Philippines are in "sovereignty dispute." The CSIS report suggests that support such as replenishment for the maritime militia has been provided in the Big 3 since 2016. However, the analysis in this report reveals that China did not necessarily begin supporting maritime militia vessels on these artificial islands immediately after their completion.

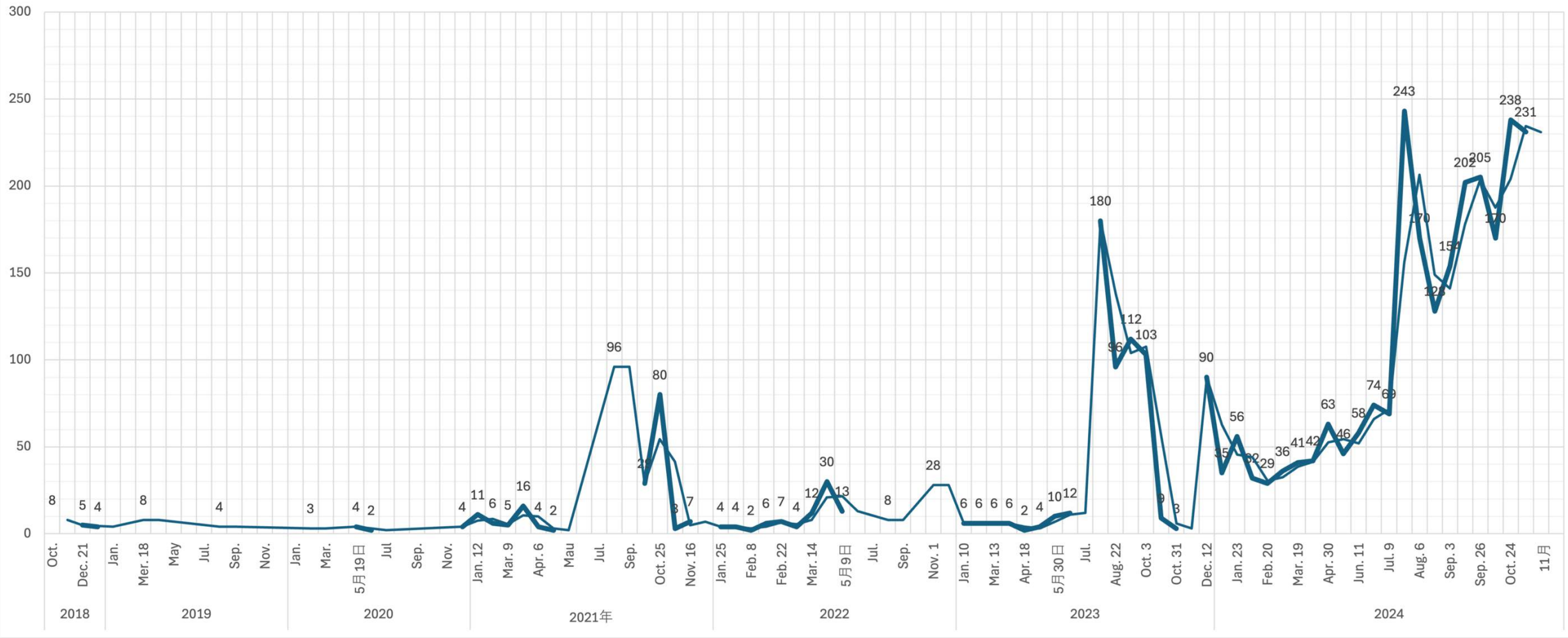
October 28, 2024 Drafted.
Bonji Ohara, DEEP DIVE



Imagery 1

Graph 1 shows the results of the analysis of the number of vessels staying on Mischief Reef using available satellite imagery. The satellite imagery of Mischief Reef since October 2018 were available for use in this analysis, and the number of maritime militia vessels anchoring at the reef has remained in single digits at least until June 2020.

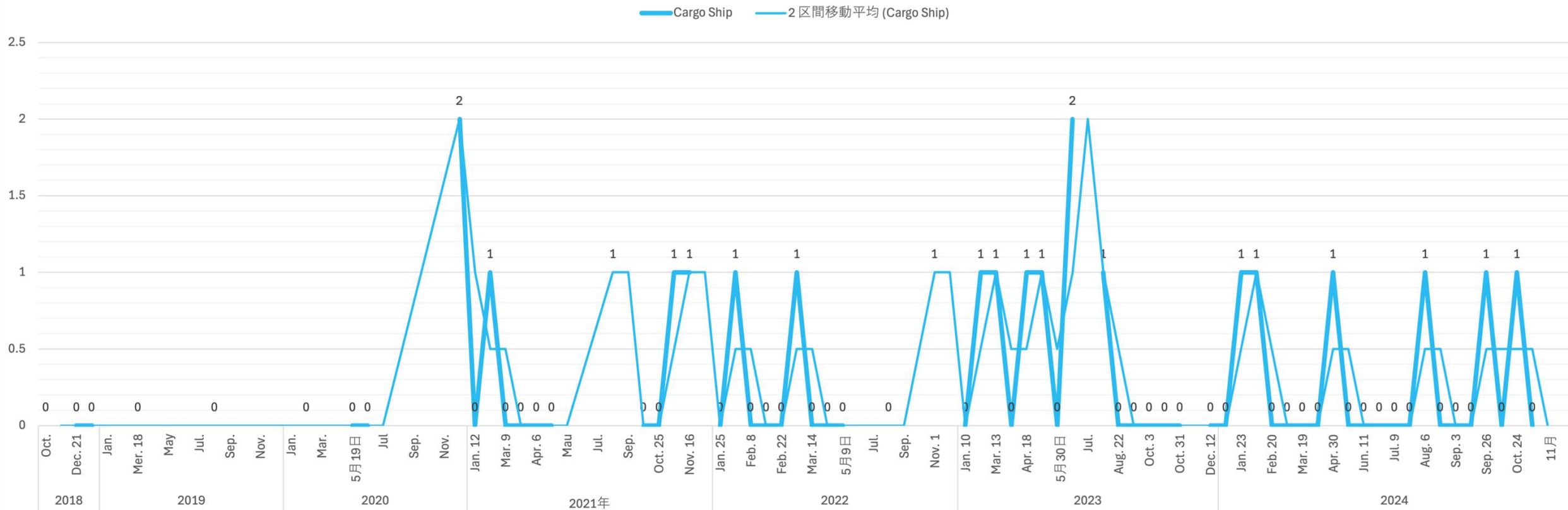
Graph 1. Number of China's Maritime Militia Ships in Mischief Reef



Imagery of December 15, 2020, show cargo ships carrying containers and vehicles unloading at the berth, and by the beginning of 2021, double-digit numbers of marine militia vessels can be seen.

An analysis of the number of cargo ships staying at Mischief Reef for the period 2018 to October 2024, using available satellite imagery, is shown in Graph 2.

Graph 2. Number of Cargo Ships in Mischief Reef

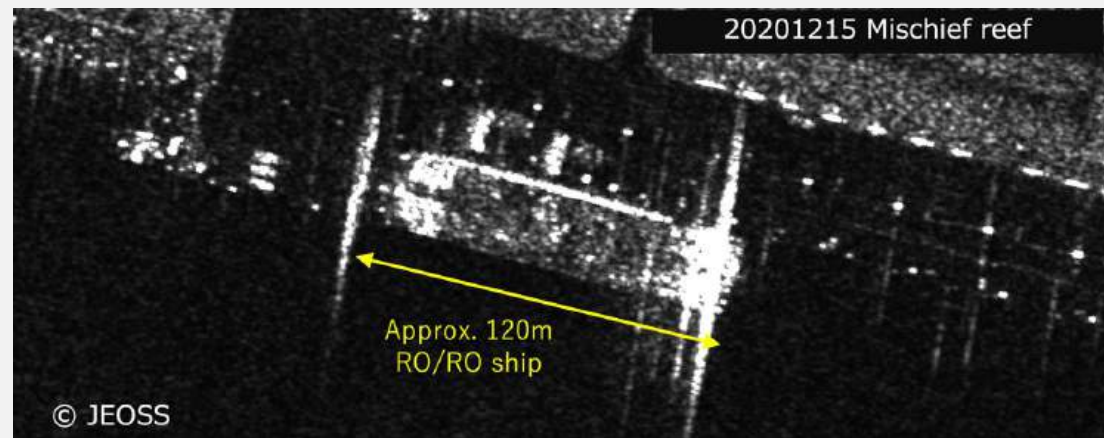


Although we cannot make a definite determination because of the limited data, a comparison of Graph 1 and Graph 2 shows the presence of cargo ships at Mischief Reef before and after the significant increase in the number of maritime militia vessels, suggesting that Mischief Reef is used as a supply base for maritime militia vessels. Therefore, analysis of the movement of cargo ships may allow us to predict the operations of maritime militia vessels in the South China Sea.

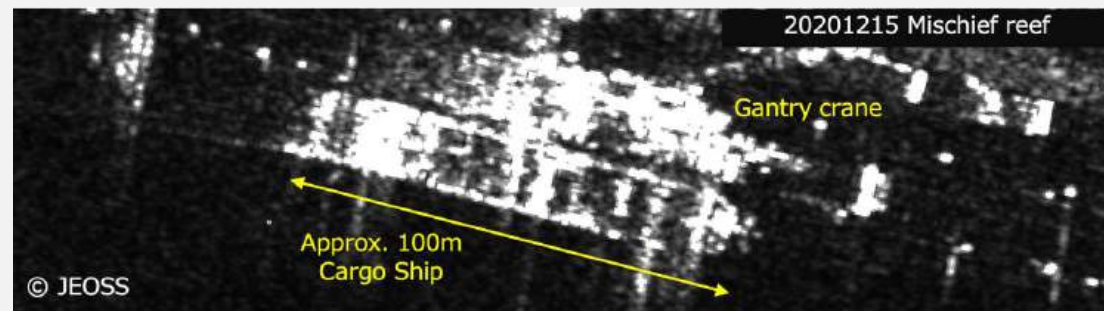
Figure 2 is the imagery of Mischief Reef on December 15, 2020, with circling by the two red lines are cargo ships. The ship at west side appears to have a passageway in the bow, as seen in Figure 3. The vehicle is moored to a berth without a gantry crane because the vehicle is designed as RO/RO ship. The ship at east side, which can be seen in Figure 4, is moored next to the gantry crane, and it appears that many of the containers on board have already been brought ashore.



Imagery 2



Imagery 3



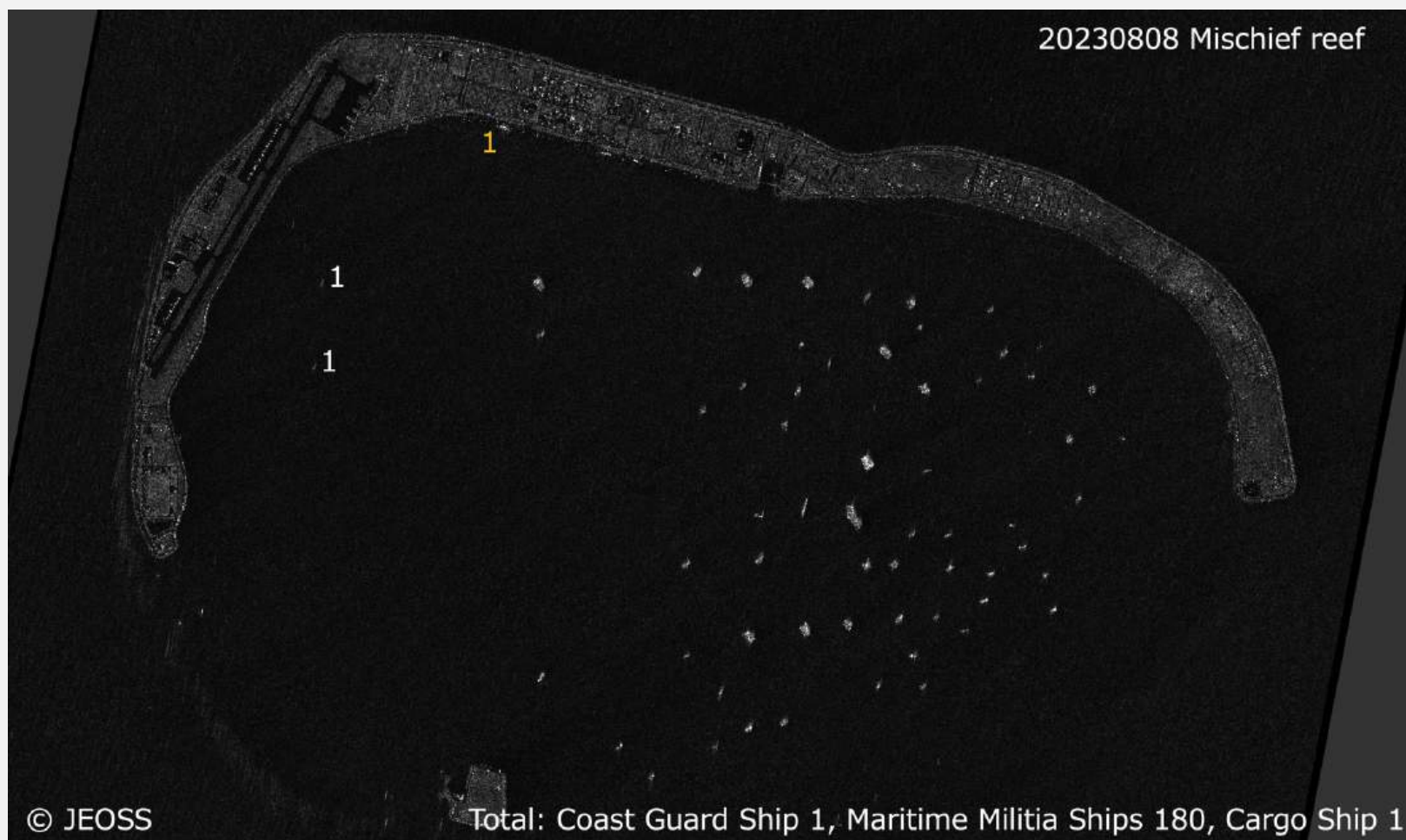
Imagery 4

The number of maritime militia vessels staying at Mischief Reef increased in 2021 after the transportation of vehicles and supplies by cargo ships. Media reported that, in March 2021, China deployed as many as 220 maritime militia vessels to occupy Whitson Reef, which it was disputing with the Philippines over “territorial rights,” and Mischief Reef and other artificial islands began to be used as a waiting area for the maritime militia vessels engaging these operations. It can be assumed that Mischief Reef and other artificial islands began to be used as logistic support bases for the maritime militia ships that engaged these operations.

Subsequently, on October 19 of the same year, the number of marine militia vessels staying at the reef decreased to 29, and on October 25 of the same year, the number increased again to 80.

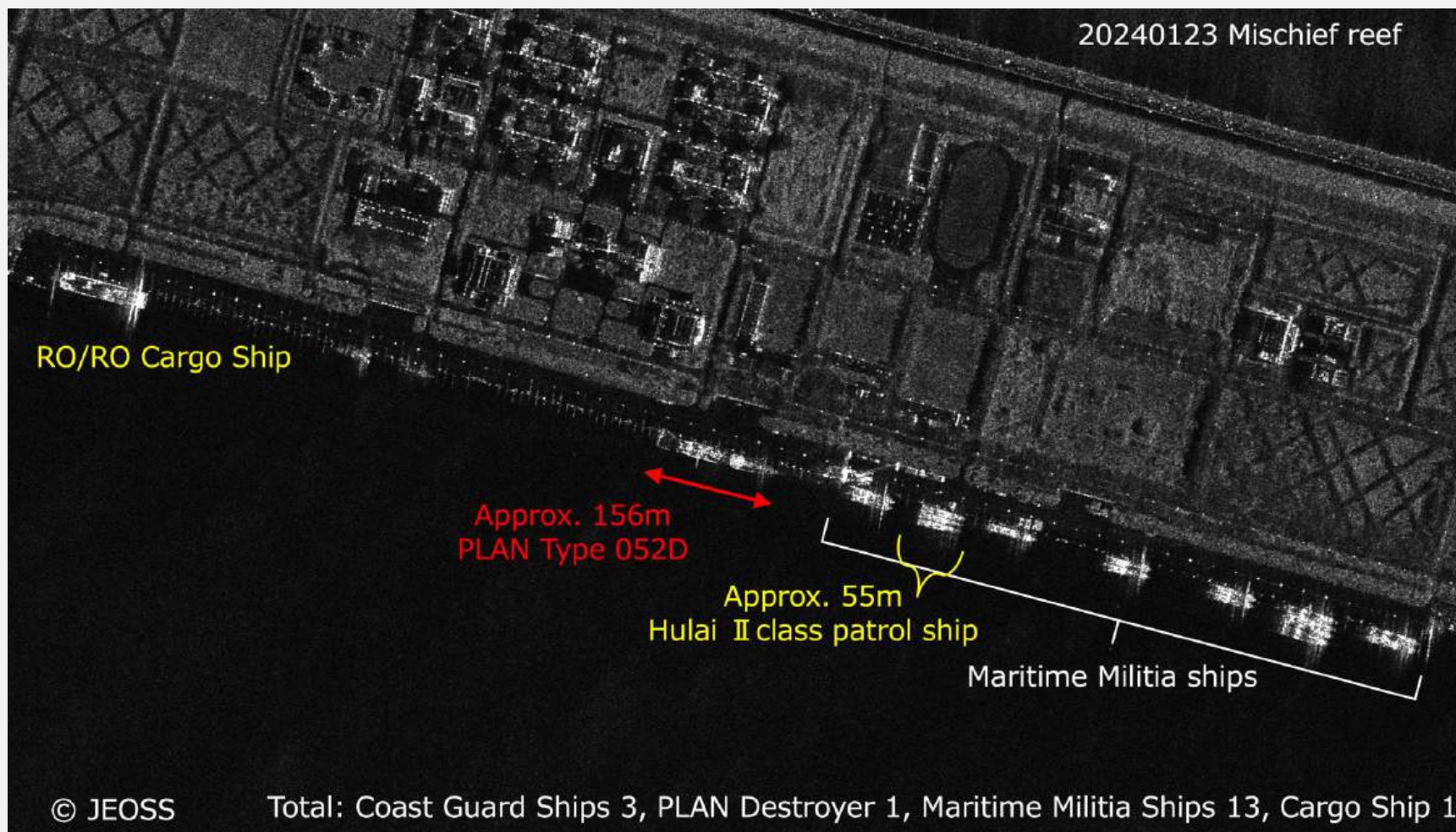


Although the number of maritime militia vessels remained relatively low in 2022, 180 vessels were observed at the reef on August 8, 2023, after confirmed the cargo ship in March and June 2023 (Figure 6). When compared to optical satellite imageries, it can be confirmed that these cargo ships unloaded many containers. In the following months of the same year, 96, 112, and 103 maritime militia vessels were anchored in the reef on August 22, September 19, and October 3, respectively, but the number began to decrease in October, with only 7 and 3 vessels anchored on October 7 and October 31, respectively. Thereafter, 94 marine militia vessels were identified on December 12, followed by 31 on January 9, 2024, and 54 on January 23, 2024.



Since this analysis only covers Mischief Reef, satellite imageries of the disputed waters, including Second Thomas Shoal and Sabina Reef, as well as the home ports of the vessels, are needed to analyze what kind of operations/activities were conducted by the maritime militia vessels that left the reef.

On December 12, 2023 and January 23, 2024, several maritime militia vessels were observed moored at the berth and engaged in what appeared to be supply activities (Figure 7).



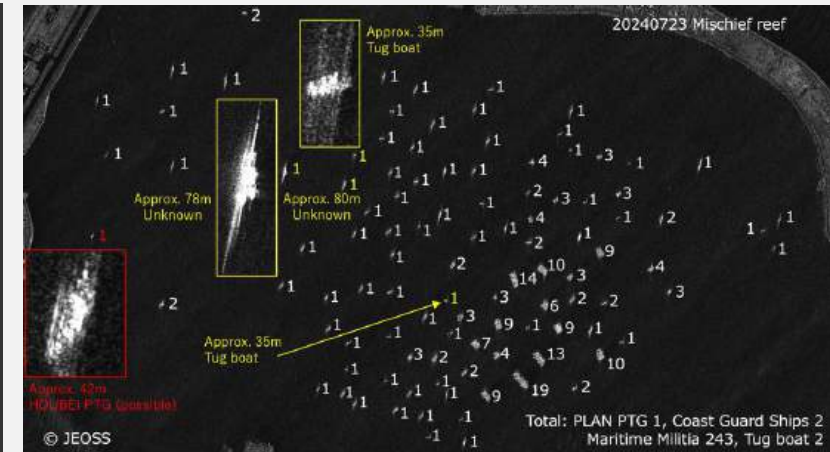
Perhaps because of the need to take turns receiving replenishment, the satellite imagery of December 12, 2023, shows a breakdown of the formation in which a large number of vessels are mooring side by side, which is characteristic of maritime militia vessels anchored at sea (Figure 8). Since each vessel cannot immediately begin sailing in this formation, a change in formation where the number of vessels moored to each other decreases may be taken as a sign that a maritime militia vessel is about to begin replenishment or operational activities.



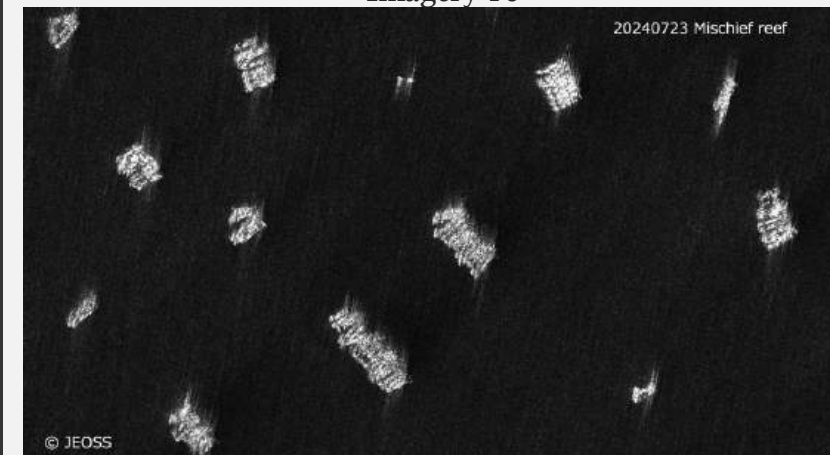
From January to March 2024, the number of marine militia vessels anchored within Mischief Reef decreased (35 on January 9, 54 on January 23, 27 on February 6, 29 on February 20, 36 on March 5, and 36 on March 19). However, the number of vessels then began to increase, reaching 152 on September 3, 243 on July 23, and 205 on September 26. These vessels which are anchoring with mooring side by side, are considered to be on standby. However, the situation in which a large number of maritime militia vessels are standing by in Mischief Reef suggests that China is about to launch a large-scale operation using the Maritime Militia.



Imagery 9



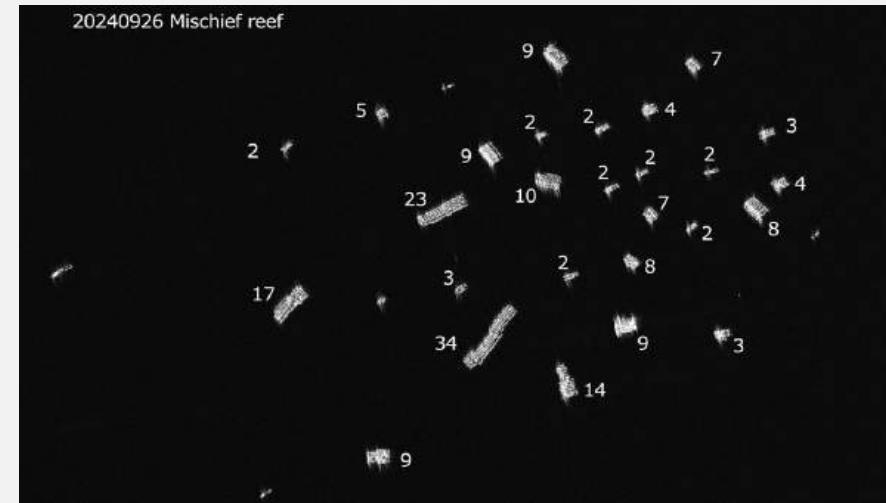
Imagery 10



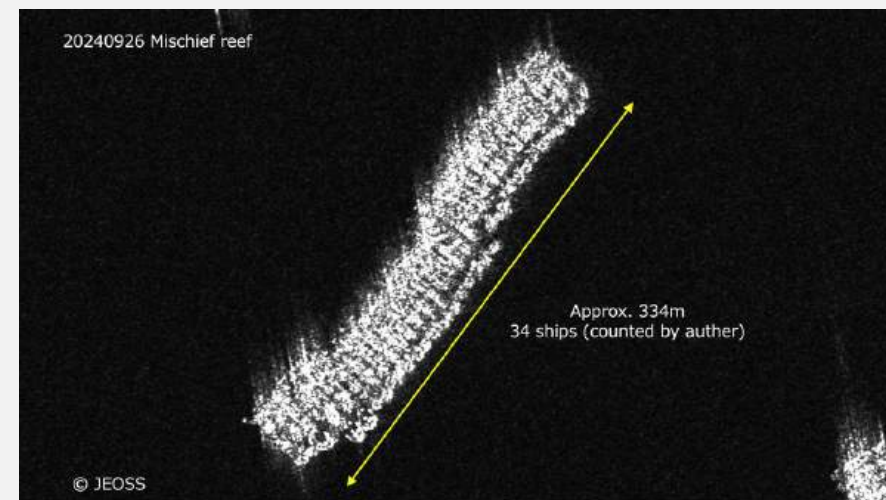
Imagery 11



Imagery 12



Imagery 13

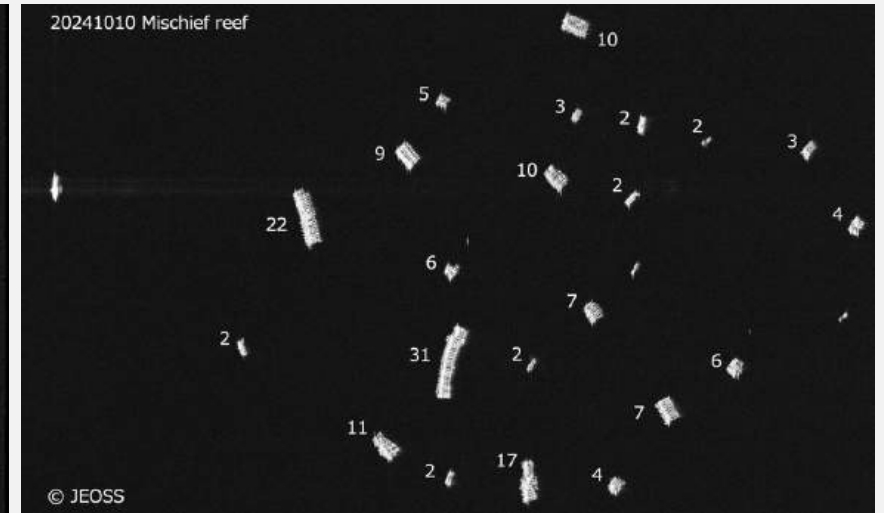


Imagery 14

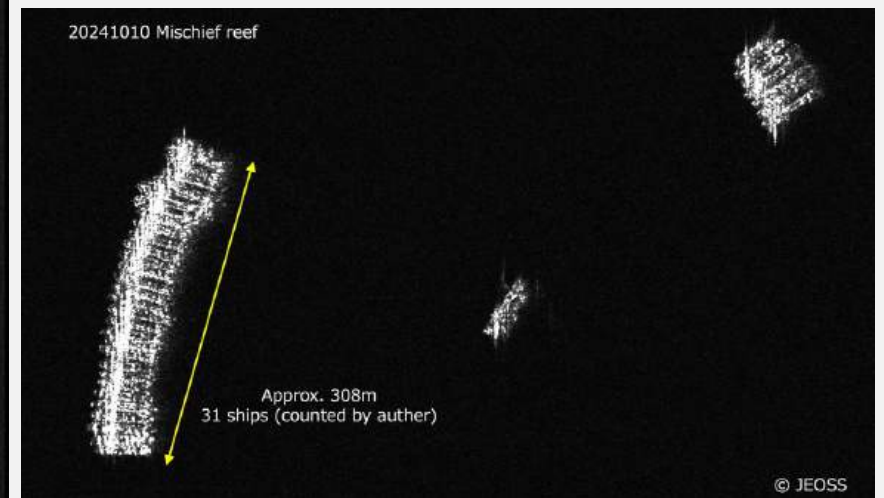
On October 10, 2024, there were still 170 marine militia vessels anchored in several groups (Figure 10). As can be seen from Graph 1, since June 2024, more than 150 marine militia vessels have been permanently anchored within Mischief Reef; since August 2023, the number of marine militia vessels within Mischief has continued to increase in average.



Imagery 15



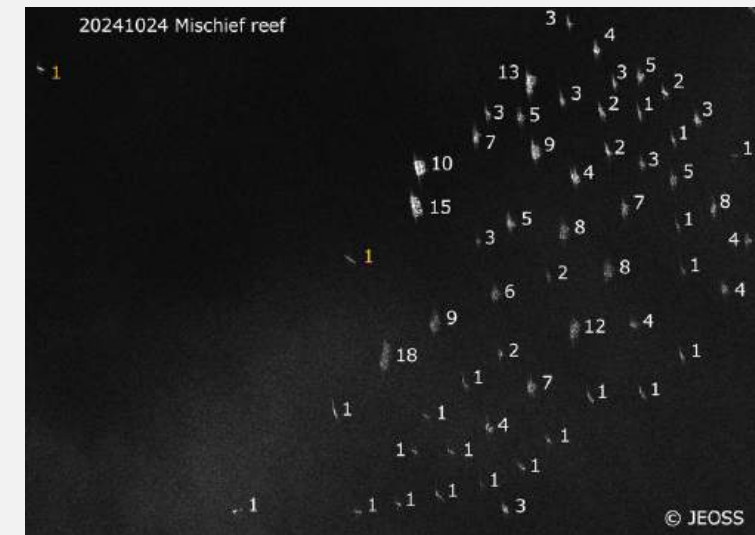
Imagery 16



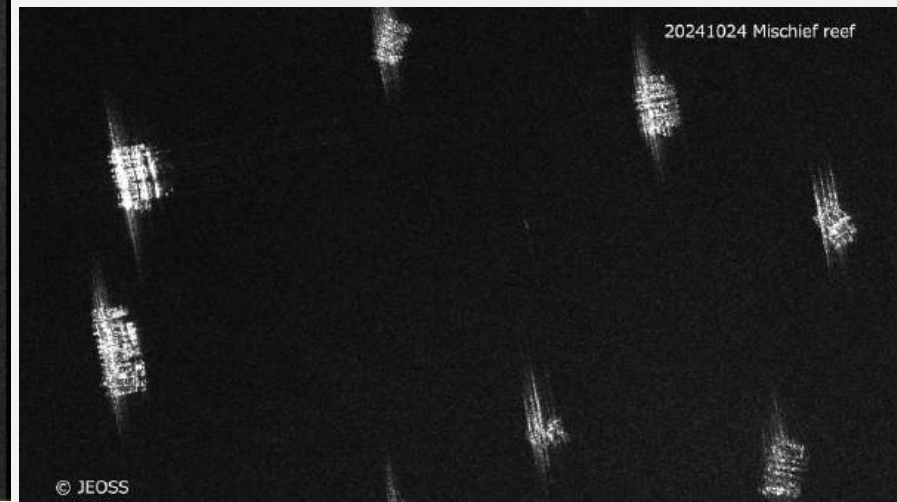
Imagery 17



Imagery 18



Imagery 19



Imagery 20

On the other hand, it is possible that the pattern of a decrease in the number of maritime militia vessels within Mischief Reef from around January to March will be repeated in 2025. Possible reasons for the decline in the number of maritime militia vessels anchored in Mischief from January to March include the return of vessels to their home ports on the mainland in time for Chinese New Year, or large-scale operations in the Spratly Islands and other areas during the same period. If China is returning a large number of vessels in time for Chinese New Year, it is possible that it will use a those vessels for operations before returning to their home port. Otherwise, China would have had a large number of maritime militia vessels waiting at Mischief Reef in vain.

The satellite imagery of October 24, 2024 also shows a partial breakup of the formation anchored with mooring side by side. They are separating into small groups or single vessel. These changes can be seen as preparations for vessels to begin their activities, and a large-scale action using maritime militias may be deployed by January 2025.

At this stage, there are three major actions by maritime militias that we should be wary of

- 1 Blocking nearby Philippine Navy and Coast Guard vessels to obstruct their work in removing the Philippine warship Sierra Madre, which is stranded on the Second Thomas Shoal.
- 2 Deploy large numbers of maritime militia vessels in and around those coral reefs to prevent the Philippines from deploying Coast Guard patrol vessels to Scarborough and Sabina reefs again.
- 3 When starting dredging, etc. for the construction of artificial islands at either Scarborough Shoal, Second Thomas Shoal, or Sabina Reef, block the approach of other countries' vessels to approach the construction area.

In the future reports, we will improve the accuracy of predicting the behavior of Chinese maritime militias in the South China Sea by conducting detailed analysis of the pattern of increase and decrease of maritime militia vessels over the course of a year, container transport by cargo ships, supply to maritime militia ships, and the correlation between activities on Second Thomas Shoal, Scarborough Shoal and Sabina Reef, among others.



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