

# China's activities in the South China Sea

No.8

July 17, 2024

[Bonji OHARA](#)

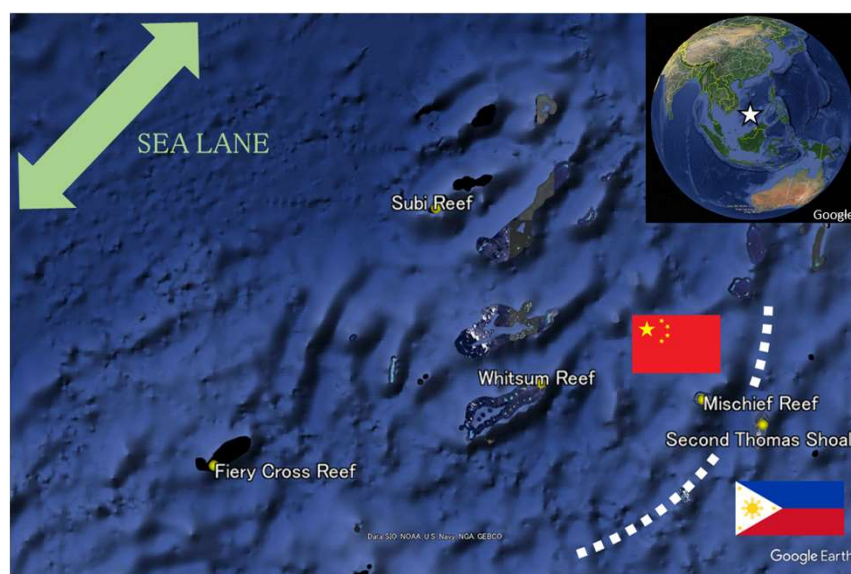
China is trying to make the South China Sea its own territory, similar to what the Sea of Okhotsk is for Russia. "Nuclear triad" includes: ground-launched intercontinental ballistic missiles (ICBM), ballistic missile submarine nuclear-powered (SSBN), and strategic bombers. Of these, SSBNs, whose location cannot be exposed, have the possibility of being the final guarantee of nuclear deterrence.

China has six Type 094 · 094A SSBNs deployed at the Yalong Naval Base on Hainan Island. In addition, at the Bohai Shipyard, they are building a new Type 096 SSBN with Russia's technological support. The JL-3 ballistic missile which is equipped on Type 094A and will be equipped on 096 SSBNs has an estimated range of 13,000 to 14,000 kilometres. It means that JL-3 can cover the U.S.'s East Coast even if it is launched in the South China Sea. Satellite imageries shows that China began the construction of two additional submarine piers in the Yalong Naval Base around April 2022, in order to accommodate its increasing numbers of SSN and SSBN. The imageries make us understand the construction method they used in that process, and the piers has been in operational status .

However, we must also consider that the situation in the South China Sea and it in the Sea of Okhotsk are different. While the Sea of Okhotsk is mostly surrounded by Russian territory, the South China Sea is surrounded by South-East Asian countries, in addition to China. China cannot control the entirety of the South China Sea by surround it militarily. Because of this, China is claiming all atolls, reefs, and other structures in the South China Sea as their territory, and is attempting to rob reefs etc. which are effectively controlled by other countries.

In April 2023, the BBC reported that patrol vessels of the China Coast Guard had conducted highly dangerous acts against Philippine Coast Guard patrol vessels and transport crafts in the waters around Second Thomas Shoal. This reef is located approximately 200 kilometres west of Philippines' s Palawan Island. In order for effective control of the reef, the Philippines has run aground the decommissioned Sierra Madre, and has stationed personnel there as well. China is interfering with the deliverance of supplies to the Sierra Madre.

There have been subsequent, repeated reports concerning China's dangerous acts against the Philippine patrol and transport vessels, including the use of powerful water cannons. In particular, US President Biden's statement on October 26 of the same year, concerning how "[a]ny attack on the Filipino aircraft, vessels, or armed forces will invoke our Mutual Defense Treaty with the Philippines", seems to have struck a chord, in that there is now concern that China will perceived the reef to be the "red line" that they must challenge.



A partial satellite image of the Earth, showing the Western Pacific Ocean and parts of East Asia, is positioned in the top-left corner of the page. The image is in a dark blue and black color scheme.

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From the satellite imageries, we can see that China deployed at least 27 Coast Guard patrol vessels and maritime militia ships to the waters east of the reef on 10 November, and has repeatedly dispatched numerous vessels, thereafter, using tactics such as water cannons and vehicle-ramming in order to block Philippine transportation. However, one can also understand from these imageries that China is not taking any action to occupy the reef in of itself. Rather, China appears to be probing the US reaction through the repeated increases and decreases in the number of Chinese vessels in the area.

In addition to Second Thomas Shoal, China is also planning to occupy Scarborough Shoal and Sabina reef, and the China Coast Guard and maritime militia have committed dangerous acts against Philippine vessels around the reef. These atolls are located in the South China Sea, and are close to maritime transportation routes used by countries such as Japan and South Korea. If a collision were to arise in these waters, or if China were to restrict the navigation of ships, it would have a serious impact on maritime transport, as they would have to bypass the South China Sea, and would also be a major blow to the Japanese economy. On top of this, even if these acts do not end up resulting in a collision, if it is deemed to be dangerous to navigate in these waters, insurance fees could skyrocket, and transport costs could rise significantly.

In order to protect Japan's economic interests, it is necessary to detect changes in the area, especially those pertaining to increased danger, as soon as possible. For this purpose, continuous monitoring using satellite-mounted synthetic-aperture radar (SAR) imagery is effective. By using SAR, even if you capture a wider area, it can clearly depict even the small vessels at sea, and continuous observation of the imageries can make it easy to understand the changes of numbers and positions of the vessels present in that particular area of the ocean.

The reason one must monitor a wider portion of the sea is due to how tracking the fluctuation of Chinese vessels in only the waters around specific reefs is insufficient when attempting to detect a crisis from an early stage. As noted above, China has repeatedly increased and decreased the number of vessels it deploys near the Second Thomas Shoal, but these vessels do not necessarily come from mainland China. Since it has nearly completed the militarisation of the artificial islands in the Spratly Islands in 2016, China has been able to deploy large numbers of ships with maritime militia into the wider waters of the South China Sea.

After sabotaging Philippine vessels in the waters around Second Thomas Shoal, the maritime militia ships are thought to have been replenished supplies at the militarised artificial islands. Therefore, we are continuously monitoring the movements of those involving the maritime militia at these artificial islands. In the following sections, we will conduct satellite imagery analysis on Mischief Reef, Subi Reef, and Fiery Cross Reef, which the U.S. refers to as the "Big Three" .

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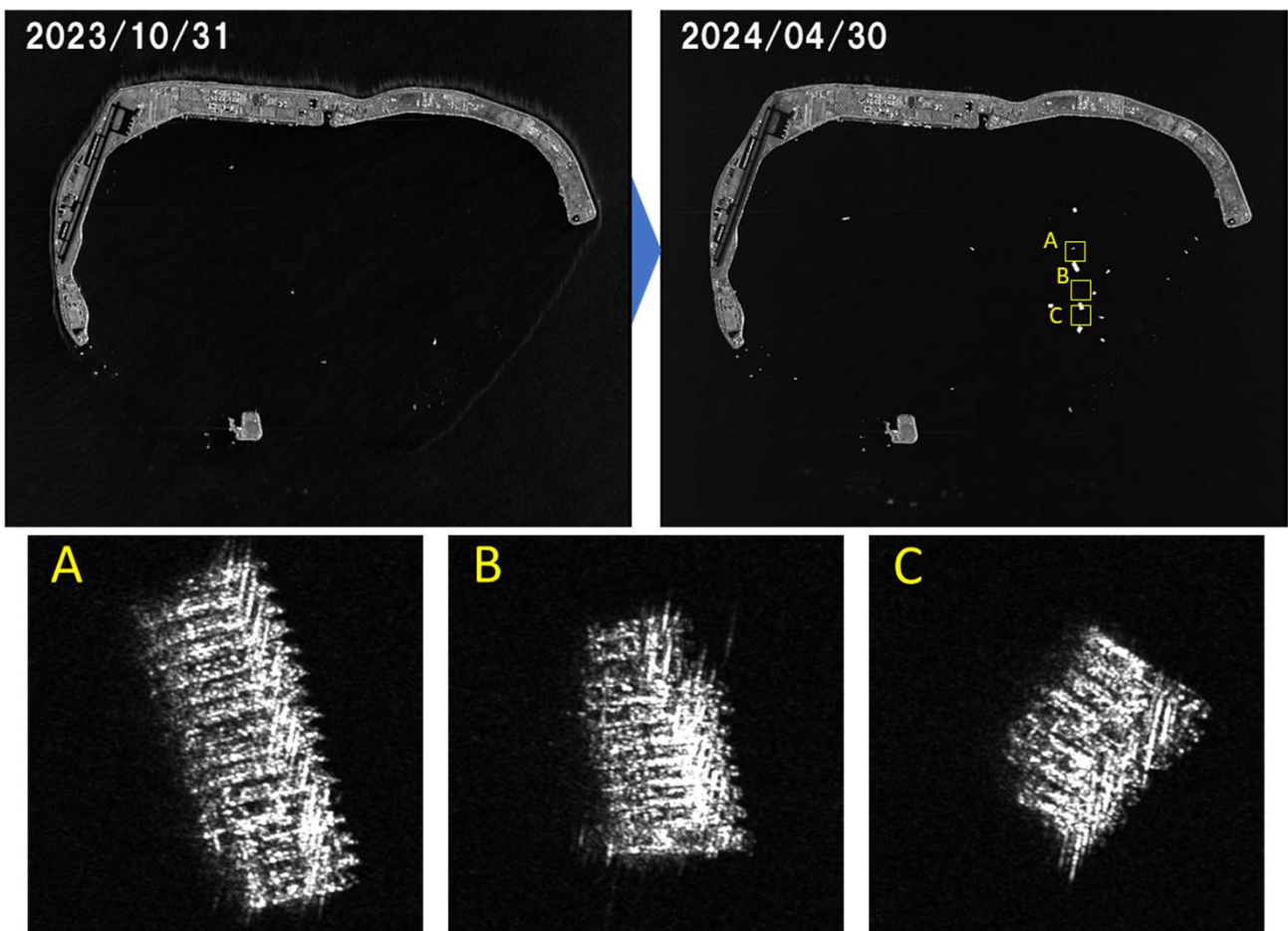
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## Mischief Reef

The upper right one in the following imageries shows more than 60 maritime militia vessels anchored in the waters inside Mischief Reef. In image A, there are 12 vessels with a length of approximately 60 metres, 4 with a length of approximately 50 metres, and 1 with a length of approximately 40 metres. For image B, there are 8 vessels with a length of approximately 60 metres and 3 with a length of approximately 40 metres. Finally, for image C one can see that there are 7 vessels with a length of approximately 60 metres and 2 with a length of approximately 45 metres. These ships are separated into some groups, and ships in each group are anchoring side by side. Vessels with a length of approximately 60 metres make up the largest proportion of the vessels in Mischief reef, and the shape of these vessels suggest that most of them are Type FT-16s belonging to Sansha City' s maritime militia.

Many FT-16s have also operated in waters around Second Thomas Shoal. Mischief Reef, being the closest artificial island to Second Thomas Shoal out of the Big Three, is suitable for operations such as the refuelling of vessels from the China Coast Guard and the maritime militia that have been active around Second Thomas Shoal. Images taken on a different day showed more than 25 vessels are tied up with alongside at the quay, possibly conducting a replenishment of their supplies. The difference in the number of ships on the water around the Second Thomas Shoal depending on the day seem to suggest that vessels of the China Coast Guard and the maritime militia are using this reef as a base of operations for their activities in the South China Sea.



SAR image © JEOSS



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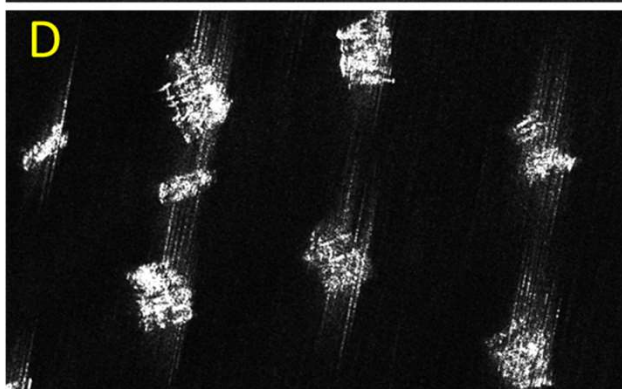
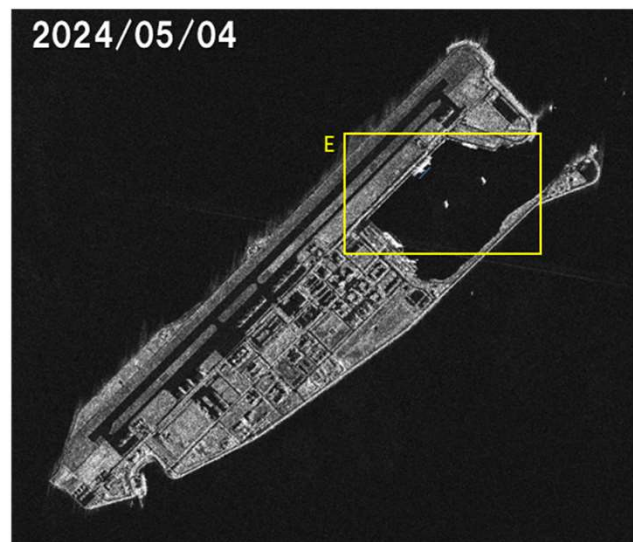
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## Subi Reef and Fiery Cross Reef

The SAR satellite imageries on the left are ones captured the Subi Reef, while the ones on the right for the Fiery Cross Reef (Refer to the first image of the region map). From the satellite images, one can confirm that on December 21, 2023, there were 50 to 60 vessels of the maritime militia in several groups, anchored side by side on the inner waters of the Subi Reef. Optical satellite imagery from the same time frame shows only part of the anchored vessels due to heavy cloud cover, while the SAR imageries are clear and contain identifiable details because the frequency which is used by SAR can penetrate the clouds.

The satellite imagery on the bottom right is the one captured where China has constructed an artificial island inside of Fiery Cross Reef. Just south of the flame E in the imagery, one can see what appears to be a large quay crane, and the quay on the southwest side is thought to be used for unloading transported goods, with what appears to be a berthed shipping vessel.

A vessel of approximately 100 metres in length is berthed on the northeastern quay, which may be a Zhaolai-class patrol cutter belonging the China Coast Guard, confirmed to be active near this reef and Second Thomas Shoal. On the northwestern quay, a vessel of approximately 150 metres in length is berthed, which may be a Type 052D Destroyer or a Type 054A Frigate. On the north side of the Reef, which has not been reclaimed as an artificial island, more than 50 maritime militia vessels were also observed.



SAR image © JEISS

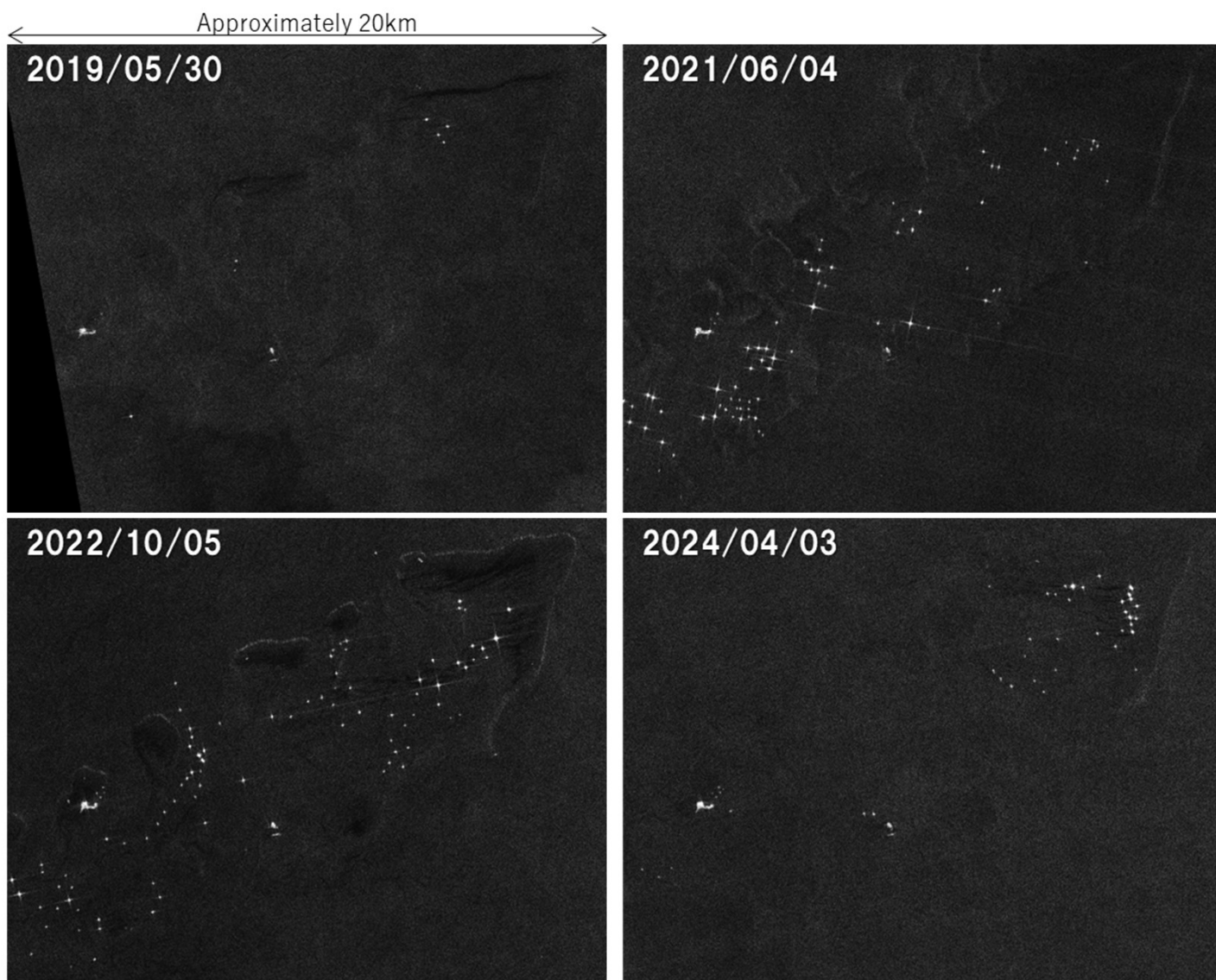


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### Whitsum Reef

In the past, China has occupied atolls effectively controlled by another country by massing numerous numbers of maritime militia vessels into the reef, and making many barriers by anchoring ships side by side. In March of 2021, China used maritime militia vessels to occupy Whitsum Reef, which was effectively controlled by the Philippines, and took effective control over it. For this event, the Philippines stated that China used more than 220 maritime militia vessels. The following SAR imageries depict Whitsum Reef before and after the event caused by China, and after three months into its period of effective control in June 2021, one can still see that there continues to be a numerous numbers of anchoring vessels. Some of the bright spots in the imageries indicate where the vessels have been anchoring side by side.

China has the potential to occupy other atolls using its maritime militia as well, so there is a need to continuously monitor things such as the fluctuation of the number of vessels at the militarised artificial islands.



SAR image © JEOSS