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ARE WE SEEING THE CONSTRUCTION OF THE PLA NAVY'S NEW NUCLEAR SUBMARINE BASE?

Rear Admiral Monty Khanna (Retd) – 'Dabolim Diaries' Issue No 7 dated 10 Feb 2025

The PLA Navy's nuclear attack submarine fleet is growing exponentially with an estimated six to nine Type 09III-B SSNs having being launched since May 2022, when the first one rolled out from the newly constructed eastern expansion of the Bohai Shipyard at Huludao. Existing berthing arrangements at 1st Base in Jianggezhuang and 2nd Base in Longpo will soon begin to fall short, in spite of two piers having been recently added to the existing four in Longpo. In my recently published ORF Research Paper titled 'China's Nuclear Submarine Bases – a Stocktaking' (https://www.orfonline.org/research/china-s-nuclear-submarine-bases-a-stocktaking), I had made the observation that The PLA Navy had three options to increase berthing capacity. These were to augment either Jianggezhuang or Longpo, or to build a brand-new greenfield base at a location which had easy access to the South China Sea as this is the main deep-water operating space for the submarine fleet and offered the most options for breaking out beyond the Second Island Chain without being detected, should there be a need to do so.

From the latest image of Yulin on Google Earth Pro dated 20 Dec 2024 (Posn 18° 12'.5 N, 109° 33'.7E), it would appear that I was partially correct.

Fig 1: Construction Activity at Yulin Probably for a New Nuclear Submarine Base

The layout of the piers under construction at Yulin gives credence to it being a greenfield base designed to support nuclear powered submarines. This activity, however, is not taking place at a distant location from Longpo as I had suggested, but just 7.25 nautical miles West of it.

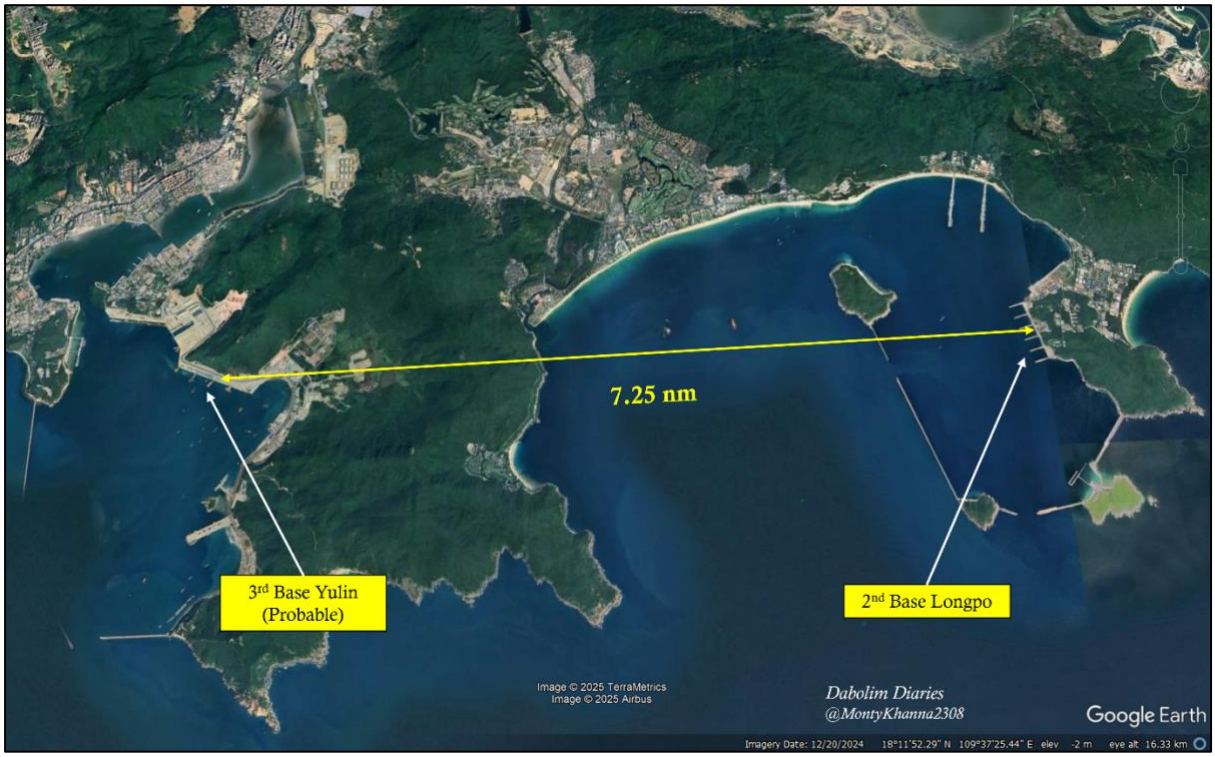

Fig 2: Location of Probable 3rd Base in Relation to 2nd Base, Longpo

Doing so has the advantage of having a limited amount of dispersion of key assets while simultaneously allowing submarines located at the new base to use existing technical and maintenance facilities created to support submarines based in Longpo. Nonetheless, there is considerable activity with regards to creation of administrative infrastructure in the close vicinity of the under-construction piers as seen in the image below.

Fig 3: Creation of Administrative Infrastructure Adjacent to Piers

A broad layout of existing facilities of the PLA Navy in the Yulin area is shown in the image below: -

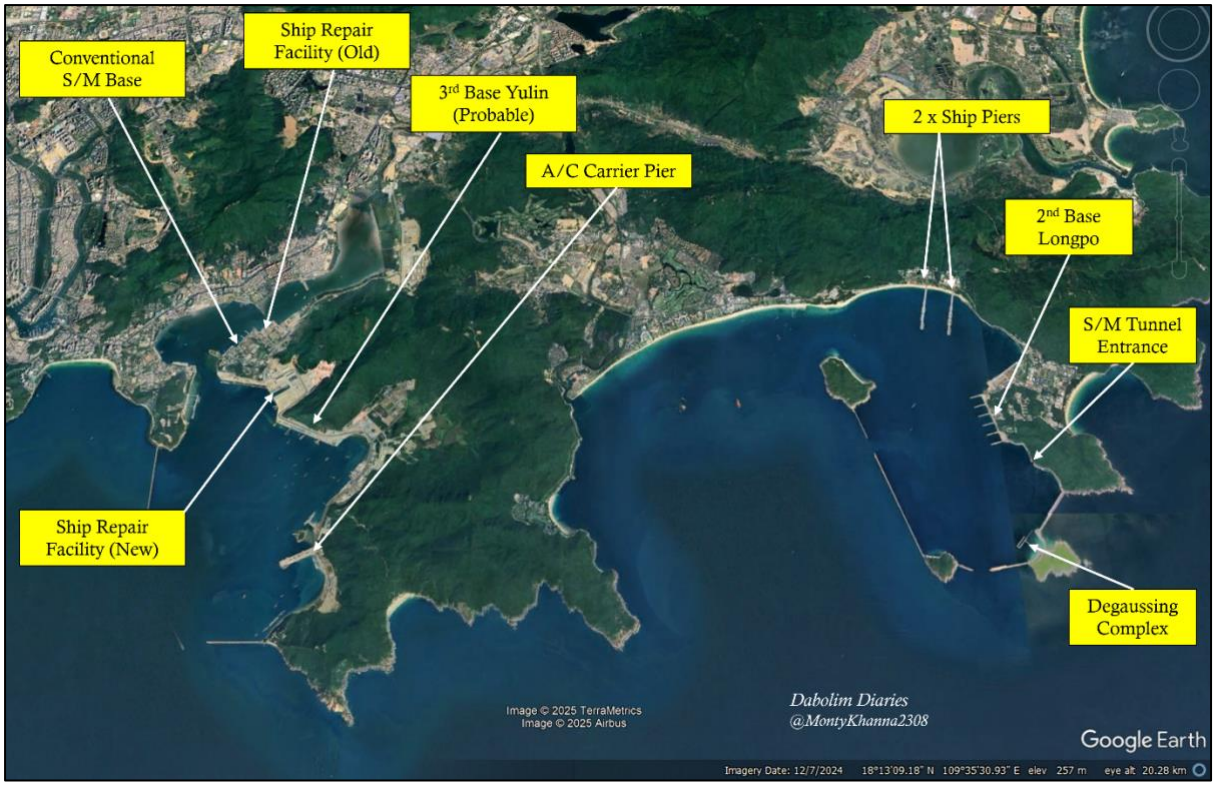

Fig 4: Broad Layout of PLA Navy Facilities in Yulin Area

The similarity in the layout of piers at the new base under-construction (3rd Base) and the existing base at Longpo (2nd Base) is evident in the figure below: -

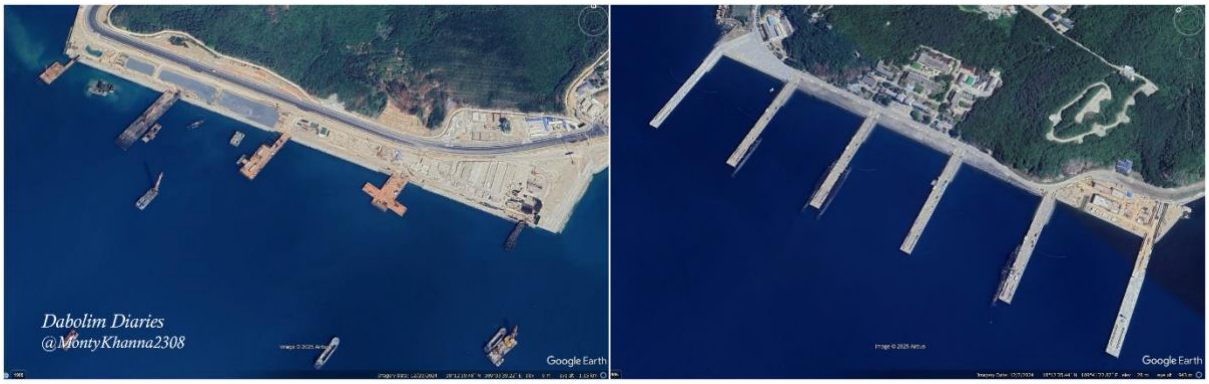

Fig 5: Layout of Piers at Probable 3rd Base (Left) and 2nd Base, Longpo (Right)

There are, however, some dissimilarities. The piers at the new base are substantially wider (40 m versus the 20 m at Longpo) and are likely to be longer than the 230 m of 2nd Base, Longpo.

Fig 6: Dimensions of Piers at Probable 3rd Base (Left) and 2nd Base, Longpo (Right)

In addition, the spacing between the piers in the new base is considerably greater at 268 m versus the 178 m in Longpo. Further, while the six piers at Longpo were built in three phases with the first three coming up together by 2006, a fourth being added in 2010 and the final two in 2022-23, the five piers at the new base are all coming up simultaneously.

Fig 7: Phased Augmentation of Piers at 2nd Base, Longpo

Assessment

Currently 2nd Base, Longpo is being used to support both Type 09IV/A Jin Class SSBNs and Type 09III/A Shang Class SSNs. Once the 3rd Base is functional at Yulin, it is likely that rather than

have both types of submarines i.e. SSNs and SSBNs operate from both the bases, the PLA Navy may decide to segregate these boats in specialised bases, one each for SSBNs and SSNs, akin to the manner in which the U.S. Navy functions. Towards this end, it is more likely that the Jin Class SSBNs will continue to operate from the 2nd Base while the Shang Class SSNs shift to the newly constructed 3rd Base. This is based on the proximity of the 2nd Base to the tunnel complex inside which the loading and unloading of strategic missiles on SSBNs is undertaken.