



CHINA'S SILENT SERVICE ENTERS THE FOURTH GENERATION CLUB

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Reportedly, China's fourth generation Nuclear Attack Submarine (SSN) is now ready. According to Du Wenlong, a military expert, this would be capable of high performance.¹ But, the report is otherwise quite vague and does not mention the name of the boat, nor does it provide any useful details on the submarine. It could possibly be the Type 095 SSN which is supposed to be the next SSN. In 2009, a report published by the U.S Office of Naval Intelligence (ONI) speculated that China will add five Type 095.² China already has the Type 091 Han class and Type 093 Shang class SSNs. Besides nuclear attack submarines, People Liberation Army Navy (PLAN) has over fifty diesel- electric attack submarines including the 12 kilo class boats.³

One of the main problems with the Chinese SSNs is its high acoustic signature. In 2009, the ONI published a chart which compares the acoustic signatures of Chinese submarine with Russian boats. As per the chart the Chinese Han Class and Shang class SSNs have much higher noise level than the older Russian Victor III class SSNs.⁴ At present, not much information is available on the design and role for the new boat. It is possible that the new SSN

¹ Development of China's fourth-generation nuclear submarine completed, People Daily Online, 22 September 2013.

² The People's Liberation Army Navy: A Modern Navy with Chinese Characteristics, Office of Naval Intelligence (U.S), August 2009, pp-22.

³ Ronald O'Rourke, China Naval Modernisation: Implications for U.S Navy Capabilities- Background and Issues for Congress, Congressional Research Service, 05 September 2013, pp- 17

⁴ *ibid*, pp- 15

might just have one PWR reactor and one turbine for its propulsion, unlike, the previous Han and Shang which was modeled on the twin reactor, twin turbine Russian Victor III SSN.⁵ In an SSN, the reactor and the turbine are the main source of narrow band acoustic signature and these submarines with twin reactors and turbine obviously emitted higher acoustic signature. The Chinese could have possibly reduced the noise levels in the new boat with Russian help and through technology obtained by other means like espionage. However, Hans M. Kristensen says that the Type 095 is expected to be noisier than the Russian Akula I built 20 years ago.⁶

There are incidents where the Chinese SSNs were tracked for several days by the allies. In November 2004, a Chinese Han class SSN which entered Japanese territorial waters was tracked by the Japanese Maritime Self Defence Force (JMSDF) continuously for two days using P-3C patrol planes, AWACS aircraft, and Anti-Submarine Warfare (ASW) capable destroyers and SH-60J helicopters. During the Cold war, one of the primary roles of the JMSDF is to perform ASW operations against the Soviet Union. Now, the focus of the JMSDF ASW operations has shifted towards China.

The ASW capability of the JMSDF and the US should have tremendously improved compared to the cold war days. During the cold war the USN vessels, aircrafts and the hydrophones would detect and track the Soviet submarines and collect their signatures, which could possibly be used during times of crisis. At present, this practice is being continued against the Chinese silent services, particularly, against the SSBNs and SSNs. The USS Impeccable incident may be pointed out as an example. Nevertheless, the PLAN has some geographical advantages in some areas of the waters around Chinese mainland. The northern part of the South China Sea and the East China Sea are too shallow (roughly 600 feet) which generally affect ASW operations.⁷

Role of the SSNs

James. R. Holmes and Toshi Yoshihara have argued in one of their books *The Red Star Over the Pacific*, that the Chinese will adopt the Soviet Bastion strategy. This bastion strategy is part of China's larger Anti-Access and Area Denial (A2/AD) Strategy, which attempts

⁵ Janes Fighting Ships 2011-2012 edition.

⁶ Hans M. Kristensen, China's Noisy Nuclear Submarines, FAS Strategic Security Blog, 21 November 2009.

⁷ Owen R. Cote Jr., Assessing the Undersea Balance Between the U.S. and China, SSP Working Paper, February, 2011, pp - 6.

to deny the entry of external forces into the region against China in any future conflict with Taiwan or any of its neighbours. PLAN already operates more than fifty diesel electric submarines and it is speculated that China may build additional 15 Yuan class submarines with German engines and, these boats could be equipped with Air Independent Propulsion (AIP).⁸ China has also ordered four Russian Lada class diesel electric submarines.⁹ Diesel electric and AIP equipped submarines give out much lower acoustic signature compared to SSN's and together with the geographical advantage of the littoral background noise these boats could fit the A2/AD role much better than their noisier SSNs.

However, China's determined pursuit of building a better performing SSN might be because of its expanding economic and political interests across the globe and great power ambitions. The primary advantage of a nuclear powered submarine is its endurance. A nuclear propelled submarine can operate under water for months without surfacing with only stores and crew fatigue, being its only limitations. A nuclear propelled submarine can operate for longer time and longer distance with comparatively less logistic requirement in comparison to diesel electric submarines. Early this year, reports from U.S and India said that at least 22 PLAN submarine contacts had been made in the Indian Ocean Region (IOR).¹⁰ This is an indication of expanding Chinese strategic reach, interest and ambition. The new SSN with improved stealth could serve in fulfilling these Chinese aspirations. It is no surprise that the PLAN intends to build and deploy aircraft carrier battle groups in the future. There are speculations that China is planning to build nuclear powered aircraft carriers.¹¹ Nuclear powered aircraft carriers can be used to project power across the globe (This capability depends on the ability of China to maintain a secure logistical capability in peacetime and during times of crisis). This new SSN could be part of the PLAN's future carrier battle group.

Other possible roles might be a long distance anti-shipping task well beyond the protected waters which could be part of a layered offensive- defence. In a layered offensive- defence the quieter SSNs would slip out into the vast ocean and hunt down enemy ships and soften the enemy forces before they enter the well defended waters around Chinese mainland.

⁸ Chankaiyee2, China to build 15 more Yuan- class submarines with German engines, China Daily Mail, 11 April 2013.

⁹ China buys some new ideas, Strategy page, 08 April 2013.

¹⁰ J. Michael Cole, Red Star Over the Indian Ocean, The Diplomat, 09 April 2013

¹¹ China must not make nuclear aircraft carriers recklessly: expert, IBN Live, 20 December 2012.

However, the recent CRS report for U.S congress publication on the Chinese naval modernisation claims that the Type 095 would be a SSGN with land attack capability combined with anti-shipping functions.¹² Hence, the boat could also be employed for multi-axis cruise missile strikes against China's adversaries.

In conclusion, the Chinese pursuit of the indigenous nuclear powered submarine is one strong indication of China's military and larger strategic ambition. However, even if the new boat has improved stealth capability it cannot be expected to be good enough to escape the extensive and sophisticated U.S and Japanese ASW capability. Nevertheless, this new boat, if operationalised, would certainly increase the PLAN's strategic reach. This development would also lead other countries around China to increase their submarine and ASW capability.

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¹² No.3, pp- 13.