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Understanding the SLBM Test by India

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Introduction

On October 14, 2022, India tested its Submarine Launched Ballistic Missile (SLBM) from the INS Arihant. The Ministry of Defence in its statement said, "INS Arihant[1] carried out a successful launch of a Submarine Launched Ballistic Missile (SLBM) on October 14, 2022. The missile was tested to a predetermined range and impacted the target area in the Bay of Bengal with very high accuracy. All operational and technological parameters of the weapon system have been validated."[2] Sometime after the beginning of the Cold War, the thinking was that in order to have a survivable nuclear arsenal, one should have a second-strike capability. For a second-strike capability, the Ship Submersible Ballistic Nuclear (SSBN) is the best. China is moving quite fast in this arena. They have got the JL-2 in this space. The JL-2 is a Chinese SLBM with an intercontinental range of 8000-9000km.[3] The Government of India has not put out much information about the SSBN in the public domain.

K4 and K15 SLBM

K4 is an intermediate-range SLBM developed by the DRDO. The letter 'K' stands in honour of the Missileman and former President APJ Abdul Kalam. It is powered by a solid rocket propellant and is considered to be highly accurate with a strike range of 3500kms.[4] This missile is manoeuvrable and it has an innovative system of interlacing in three dimensions. As a result, for the adversary, it would be difficult to track and destroy the K4 using ballistic missile defence. This strategic missile will add more firepower to the Indian Navy when it would be inducted when the next SSBNs come up. The K4 is critically required, as in the coming ten years China would expand its reach in the Indian Ocean Region (IOR). China would like to have the IOR as its stronghold, similar to its hold over the South China Sea (SCS). So once India operationally deploys the K4 then China would be deterred.

As far as the K15 SLBM is concerned, it has a range of 700km. Thus, its damage is limited to the lower parts of Pakistan near the Arabian Sea leaving China out of its reach. Therefore, the land and air domains of the Strategic Forces Command are doing the heavy lifting work for India's nuclear deterrent at the present.

SLBM – Indian Nuclear Doctrine

From a strategic perspective, the K4 is a very important development. The K4 will be placed in an SSBN. This SSBN needs to maintain a safe physical distance from China. Hence, idealistic place

for India to exhibit a secure second-strike capability would be if this SSBN is stationed in the Bay of Bengal[5] during an India-China strategic crisis or conventional war. In certain scenarios, it would be possible for the INS Arihant loaded with K15s be stationed in the SCS, but that would involve a considerable amount of risk.[6] The cornerstone of the Indian Nuclear Doctrine is 'No First Use', so one has to be very sure about the ability of India to conduct a secure second-strike on the adversary. The Ministry of Defence said, "The successful user training launch of the SLBM by INS Arihant is significant to prove crew competency and validate the SSBN programme, a key element of India's nuclear deterrence capability. A robust, survivable and assured retaliatory capability is in keeping with India's policy to have 'Credible Minimum Deterrence' that underpins its 'No First Use' commitment."[7] That is why SSBN is a critical leg of the nuclear deterrence because even if an adversary takes out India's land and air based nuclear arsenal, assets and arsenals underwater is very difficult to detect and by extension, destroyed. This helps in maintaining nuclear deterrence.

Conclusion

For India, in the maritime domain, China has come up and will further come up as a dangerous adversary. This is because China has world's largest navy, and the Chinese continue to invest a lot in their navy. As External Affairs Minister Jaishankar said in 2021 that the Indian Ocean and Pacific Ocean cannot be viewed distinctly,[8] the existing QUAD indirectly admits to it that the Indian Ocean and Pacific Ocean are equally important because global trade passes both these Oceans.[9] Rapid Indian economic growth that has been achieved since the '1991 economic reforms' is due to Indian imports and exports (trade)[10] conducted through the Indian Ocean with the rest of the world. In such a situation, it is obvious that China would like to dominate the entire Indo-Pacific region; this also seems to be their goal. This would only be possible with a powerful navy, which is why to counter the Chinese navy in the IOR, it is necessary that India tries to quickly have SSBNs worth deterring China. In this context, the K4 SLBM is very important because in the times to come, the Chinese belligerence will increase, and not decrease in the IOR.[11]

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NOTES:

[1] Ministry of Defence, "INS Arihant carries out successful launch of Submarine Launched Ballistic Missile", PIB, October 14, 2022, https://pib.gov.in/PressReleasePage.aspx?PRID=1867778#:~:text=Posted%20On%3A%2014%20OCT%202022%204%3A23PM%20by%20PIB,the%20Bay%20of%20Bengal%20with%20very%20high%20accuracy. Accessed on October 24, 2022.

[2] Ministry of Defence, "INS Arihant carries out successful launch of Submarine Launched Ballistic Missile", PIB, October 14, 2022, https://pib.gov.in/PressReleasePage.aspx?PRID=1867778#:~:text=Posted%20On%3A%2014%20OCT%202022%204%3A23PM%20by%20PIB,the%20Bay%20of%20Bengal%20with%20very%20high%20accuracy. Accessed on October 24, 2022.

[3] Missile Defense Project, "JL-2," Missile Threat, Center for Strategic and International Studies, July 31, 2021, https://missilethreat.csis.org/missile/jl-2/. Accessed on October 24, 2022.

[4] Lt General Prakash Menon, "Launch of missile from Arihant a milestone. But India's nuclear triad isn't complete yet", The Print, October 18, 2022, https://theprint.in/opinion/launch-of-missile-from-arihant-a-milestone-but-indias-nuclear-triad-isnt-complete-yet/1171365/ Accessed on October 24, 2022.

[5] Ibid

[6] Ibid

[7] Ministry of Defence, "INS Arihant carries out successful launch of Submarine Launched Ballistic Missile", PIB, October 14, 2022, https://pib.gov.in/PressReleasePage.aspx?PRID=1867778#:~:text=Posted%20On%3A%2014%20OCT%202022%204%3A23PM%20by%20PIB,the%20Bay%20of%20Bengal%20with%20very%20high%20accuracy. Accessed on October 24, 2022.

[8] Jay Desai, "QUAD must act and stop China from starting World War III", The Kootneeti, September 28, 2021, https://thekootneeti.in/2021/09/28/quad-must-act-and-stop-china-from-starting-world-war-iii/ Accessed on October 24, 2022.

[9] Ibid

[10] Ibid

[11] Ibid