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Pentagon's Annual China Report from Nuclear Prism

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On December 18, 2024, the US Department of Defense (DoD) released its annual report on "Military and Security Developments Involving the People's Republic of China". Also known as the China Military Power Report, it is released by the US DoD in order to assess the current and future trends and capabilities of military-technological development of the People's Liberation Army (PLA) since the year 2000.[1] This paper examines the report for the nuclear dimensions of China's military modernisation.

The report mentions that China is continuously modernising, diversifying and expanding its nuclear force. It estimates that China has surpassed 600 operational warheads in 2024 and is projected to get over 1000 operational nuclear warheads by 2030.[2] In the previous report in May 2023, the estimate was 500 nuclear warheads.

Main Points from the Report on China's Nuclear Modernisation:

Triad-Modernisation

In the **land-based** system, China currently has approximately 400 ICBMs (Intercontinental Ballistic Missiles) in its arsenal. China's silo-based ICBMs consist of liquid-propelled DF-5 class and solid-propelled DF-31 class. China is constructing around 30 new DF-5 class silos in the central part and extensively renovating the legacy facilities of the DF-5 class. This development indicates China is building more silos for DF-5 class ICBMs and increasing the number of brigade-level units (BDEs) while adding more launchers to each unit. However, it does not seem like this project will reach the same scale or number of solid-propellant missile silos. In terms of road-mobile systems, China has DF-31 and DF-41 class ICBMs. In the road-mobile category, China is working towards enhancing accuracy and increasing the number of launchers per unit.[3]

In the **sea-based** development, the report suggests China has likely deployed the extended-range JL-3 submarine-launched ballistic missile (SLBM) on its JIN class submarines. China has enhanced its sea-based deterrence with the capability to target the continental US from coastal water. Presently, China is operating six operational JIN class submarines, each capable of carrying up to 12 JL-2 or JL-3 SLBMs. China continues to build more JIN class submarines than the next generation type 096 SSBN. [4]

For the **air component** of the nuclear triad, China has fielded H-6N bombers. Compared to H-6 bombers, H-6N has air-to-air refuelling capability and can carry an external-nuclear capable ALBM (Air-Launched Ballistic Missile). The report claims China is probably developing strategic stealth bombers.[5]

Posture-Change

The PLA is working to implement "early warning counterstrike capabilities", which is the term for its Launch on Warning Posture (LOW) posture, by the end of this decade. China probably seeks to keep at least one part of its force, especially silo-based force, on LOW posture. China is also enhancing its missile defence capability of the HQ-19 ballistic missile defence system. It has improved the mid-course interception capabilities of the ICBMs and IRBMs (Intermediate Range Ballistic Missiles). [6]

Cooperation with Russia

China has likely finished building one of its two sodium-cooled fast breeder nuclear reactors (CFR-600) in Xiapu and is still working on the second one. Russia is helping by supplying highly enriched uranium (HEU) assemblies. The report also claims that China will use its fast breeder reactor and reprocessing facilities to produce plutonium for nuclear weapons.[7] In the air domain last November, China also, for the first time, deployed the H-6N bomber in its "Joint Strategic Air Patrol" with Russia.[8]

China's Response to the Report

China's Ministry of Defence spokesperson, Zhang Xiaogang, criticised the report as an exaggeration and an excuse for the US's own military development. He said China's nuclear weapons "is not intended to threaten other countries, but rather for defense and self-protection, to safeguard our strategic security".[9] Although China has not denied growing its nuclear arsenal, it dismisses US concerns about the matter, claiming Washington is using it as a cover for its goal of "absolute strategic predominance". [10]

Reasons for China's Nuclear Expansion

One of the main reasons for changing China's nuclear force structure is its attempt to ensure that the US should have no doubts about its ability to retaliate after a nuclear attack, especially as the US plans its nuclear modernisation. [11]

Andrew Erikson argues China's nuclear build-up demonstrates its commitment to having practical military options at every level of escalation. He highlights a growing perception in China of potential crises or even war with the United States over the Taiwan issue. As a result, China has shifted from maintaining numerical restraint in nuclear weapons to making its expansion a top priority. This shift aims to discourage US and allied intervention in Taiwan-related situations and to manage escalation if it occurs.[12]

Another reason is to demonstrate credibility. The credibility of People's Liberation Army Rocket Force (PLARF) came under question after US intelligence reported large-scale corruption and non-functionality of

silos in western China. [13]Since 2022, China has purged several high-ranking military officials in charge of graft, including removing top leadership from PLARF and the disappearance of two defence ministers. Despite these setbacks, the PLA's ability to continue with the modernisation drive is significant.[14] After a gap of 40 years, last year, on September 25, China also conducted a full-range test of ICBM in the Western Pacific Ocean.[15] This test was also intended to send the signal to the domestic and external audiences that everything is on track within the PLA as China aims to achieve its "centennial goal of building modern military by 2027".[16]

Conclusion

China's threat perception and ambition to achieve status parity with the US are the main reasons for its nuclear expansion. It is not directed towards India, but as a neighbouring country with existing border disputes, India should closely monitor these developments. For India, the major concern can be the development of IRBM and the enhancement of mid-course interception capabilities. In terms of India's response, Sethi argues, India's focus should not be on achieving numerical parity in nuclear warheads but rather on advancing technologies that ensure robust second-strike capability and assured retaliation.[17]

NOTES:

[1] David Sacks "Six Takeaways From the Pentagon's Report on China's Military", *Council on Foreign Relations*, December 20, 2024, https://www.cfr.org/blog/six-takeaways-pentagons-report-chinas-military. Accessed on December 30, 2024.

[2] U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2024,* December 18, 2024, https://media.defense.gov/2024/Dec/18/2003615520/-1/-1/0/MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2024.PDF. Accessed on December, 31, 2024.

[3] U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2024*, December 18, 2024, https://media.defense.gov/2024/Dec/18/2003615520/-1/-1/0/MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2024.PDF. Accessed on December, 31, 2024.

[4] Ibid., p.101–11.

[5] Ibid., p.105.

[6] U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2024*, December 18, 2024, https://media.defense.gov/2024/Dec/18/2003615520/-1/-1/0/MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2024.PDF. Accessed on January 2, 2025.

[7] U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2024*, December 18, 2024, https://media.defense.gov/2024/Dec/18/2003615520/-1/-1/0/MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2024.PDF. Accessed on December, 31, 2024.

[8] Yu-Cheng Chen, "PLA Steps up Security Cooperation With Russia in 2024", *China Brief*, vol. 24, no.24 (December 2024). https://jamestown.org/program/pla-steps-up-security-cooperation-with-russia-in-2024/. Accessed on January 1, 2025.

[9] Global Times, "China's Defense Ministry Slams Pentagon Report on China's Military Development as Deceptive, Hypocritical", *Global Times*, December 21, 2024, https://www.globaltimes.cn/page/202412/1325516.shtml. Accessed on December 31, 2024.

[10] Demetri Sevastopulo, "China Is Rapidly Expanding Nuclear Forces, Says Pentagon", *Financial Times*, December 18, 2024, https://www.ft.com/content/5290c045-09d1-4da1-844b-166bf227584b. Accessed on January 1, 2025.

[11] Fiona S. Cunningham et al., "China's Nuclear Arsenal Is Growing. What Does That Mean for U.S.-China Relations?" *Washington Post*, November 11, 2021, https://www.washingtonpost.com/politics/2021/11/11/chinas-nuclear-arsenal-is-growing-what-does-that-mean-us-china-relations/. Accessed on January 2, 2025.

[12] Andrew Erickson "What the Pentagon's New Report on Chinese Military Power Reveals About Capabilities, Context, and Consequence", *War on the Rocks*, December, 19, 2024, https://warontherocks.com/2024/12/what-the-pentagons-new-report-on-chinese-military-power-reveals-about-capabilities-context-and-consequences/. Accessed on January 2, 2025.

[13] Peter Martin and Jennifer Jacobs, "US Intelligence Shows Flawed China Missiles Led Xi to Purge Army", *Bloomberg.Com*, January 6, 2024, https://www.bloomberg.com/news/articles/2024-01-06/us-intelligence-shows-flawed-china-missiles-led-xi-jinping-to-purge-military. Accessed on January 2, 2025.

[14] Cate Cadell et al., "Pentagon Warns of China's Rapid Military Buildup despite Corruption," *Washington Post*, December 18, 2024, https://www.washingtonpost.com/national-security/2024/12/18/china-military-power-report-pentagon/. Accessed on January 1, 2025.

[15] Prahlad Kumar Singh "China's ICBM Test: An Analysis", *CAPS*, October 18, 2024, https://capsindia.org/chinas-icbm-test-an-analysis. Accessed on January 2, 2025.

[16] Liu Caiyu "China's Centennial Goal of Building a Modern Military by 2027 in Alignment with National Strength" *Global Times*", October 31, 2020, https://www.globaltimes.cn/content/1205238.shtml. Accessed on January 1, 2025.

[17] Manpreet Sethi, "Xi's Nuclear Garden: Of Sprawling Silos and Sobering Messages," *AIR POWER Journal* vol.16, no. 4, 2021, pp.1–16.