



Delhi Policy Group

Advancing India's Rise as a Leading Power

DPG POLICY BRIEF

Emerging Strategic Equations in Southern Asia and India's Response Options

Author

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A file photo of China's DF-21D ballistic missile. Source: Military Today

DRDO successfully flight tests New Generation Agni P Ballistic Missile, June 28, 2021. Source: Twitter/DRDO_India.

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Introduction

Continuing border tensions with China and Pakistan, resulting in an incipient arms race that includes military and nuclear capability enhancement, along with a shifting strategic balance in the Indo-Pacific, have once again brought renewed focus on conflict escalation and nuclear deterrence stability in Southern Asia.

Several recent reports published by Western think tanks have sought to review and analyse the state of strategic stability in the broader Southern Asia regional context, which includes both Pakistan and China dyads. These reports look at nuclear equations in terms of doctrines, force development, command and control, employment options and their impact on regional strategic stability. This paper aims to examine, from an Indian perspective, the conventional and nuclear threat that China and Pakistan pose to India's security.

The analysis will also focus on mitigating strategies in terms of capability enhancement, external balancing, or both. A related area of examination will be how far the US, while banking on India as a credible strategic partner, will invest in enhancing Indian deterrence.

Nuclear Posturing and the Ukraine Conflict

A good way to understand the potential play out of nuclear dynamics is through the example of posturing by Russia. The Ukraine conflict is a direct military confrontation between Russia and Ukraine. It is also a proxy war between Russia and the US/NATO alliance. By putting its nuclear forces on high alert and subsequent political statements, Russia has played its nuclear card to prevent conflict escalation by threatening devastating retaliation were the US/NATO to directly intervene in the on-going conflict.

This direct threat, and subsequent statements by the American leadership that they cannot risk a nuclear confrontation, can be construed as nuclear deterrence at play in preventing escalation. While this may be true in terms of preventing direct NATO intervention, it has not prevented major military support to Ukraine which continues to grow. So, the question arises, what has

been the efficacy of the deterrence? Apart from sabre rattling, the Russian nuclear threat has been one of limited utility.

The important lesson that can be drawn from the above is that nuclear weapons are political instruments which can be leveraged to prevent escalation to some effect, but with questionable advantage, unless one adversary is willing to cross the opponent's nuclear threshold. This is not an easy political decision, but one based upon perceptions of nuclear balance and an assessment of likely consequences, particularly if the antagonists possess credible nuclear capability. This in a sense substantiates the value of nuclear weapons as political, rather than military, deterrence.

Another element is that of nuclear threat perception. If one side perceives that it is losing out in nuclear competition, or fears vulnerability to a nuclear first strike, this might induce it to enhance the security of their arsenal through dispersal and shelters, as also to upgrade weapons and vectors, to hold at bay the opponents most critical counter value and counter force targets.

The above perspective, related to the functionality of nuclear deterrence drawn from the Ukraine conflict, has direct relevance for our subsequent analysis of Southern Asian nuclear equations, both in terms of doctrines and force development.

Southern Asian Nuclear Scenario

Security competition in the China-India-Pakistan triad relates to bilateral India-China and India-Pakistan nuclear equations, but more importantly also to the collusive China-Pakistan dyads. In so far as the India-China nuclear dyad is concerned, it is not merely a function of the nuclear capabilities of both sides, but also needs to be contextualised within the overall threat matrix from China, including its collusion with Pakistan. Fundamental to the evolving strategic equations is the perception of nuclear deterrence, in the overall construct of the strategic challenge from China and Pakistan.

With Pakistan, given the conventional force superiority, Indian policy planners are reasonably comfortable with the NFU doctrine of massive retaliation. The situation with China is the reverse. With strategic asymmetry increasing, how does India maintain deterrence stability based on the 'No First Use' doctrine? Is there a case for "first use" to seek similar leverage for deterrence stability like Pakistan is attempting to against India? It is thus useful to look at China's experience and drivers of its nuclear modernisation in the above context.

In contrast, Pakistan's nuclear capability is essentially India-centric. Pakistan, unfettered by any political or international restraint and supported by China and North Korea, is building the most diversified nuclear arsenal in the region. "Pakistan's nuclear programme is driven less by India's nuclear capabilities, but by imagined Indian capabilities and its expansive conception of its nuclear requirements"¹.

This analysis will take all the above scenarios into account to understand their impact on strategic stability in Southern Asia and even more importantly how it impacts Indian deterrence.

China's Doctrinal Mindset

China's decision to go nuclear was taken in the backdrop of nuclear threats during the Korean war. The central logic of nuclear capability in Chinese political thought is to prevent nuclear coercion or attack from another nuclear weapon state. Thus, China's core thinking on deterrence is dictated by the need to meet the demands of the US-China rivalry. Increasingly, China is also considering India's growing nuclear capabilities, although without publicly acknowledging this as such.

China has followed a policy of "Minimum Deterrence", aimed at deterring nuclear aggression and countering coercion. Its regards nuclear weapons are part of a "punishment strategy" of assured retaliation and unacceptable damage. China's leaders look upon nuclear weapons as political tools for deterring nuclear aggression principally from the United States. The underpinning of their doctrine of 'punishment strategy' is based upon the basic principles of survivability, credibility, and unacceptable damage.

There are two basic criteria that determine Chinese response: first, the sufficiency of "strategic warning", and second the damage inflicted by a first strike, including damage to the command-and-control system that may require reconstitution under attack.

For China, the 'certitude of response' is the epitome. This translates into absorbing the first strike and its concomitant damage, and yet retaining adequate response capability. In China's calculation, the availability of nuclear response options, rather than the number of weapons necessary to inflict unacceptable damage, is more central.

¹ Ashley Tellis, "Striking Asymmetries: Nuclear Transitions in Southern Asia", CarnegieEndowment.Org

China's Post-Cold War Doctrinal Thinking

With the US assuming the mantle of the leading post-cold war protagonist, there has been a major debate within the PRC over its NFU posture. This has largely been triggered by an overwhelming nuclear and conventional threat from the US given its adherence to a 'First Use' posture. Concerns arise mainly from a potential massive US first strike on Chinese nuclear facilities as well as population and economic centres, severely damaging its capital assets and nuclear deterrence.

This has pushed China to embark upon upgrading its nuclear capabilities from silo-based systems and antiquated nuclear command and control to a more modern and dispersed system, that includes upgradation to digital command and control and the development of tunnels and underground firing positions across the country, to enhance the survivability of its nuclear forces, backed by Early Warning systems based on space-based ISR.

In addition, China is creating force structures, through a proposed increase in the number and mix of weapons based on the perceived totality of threats that apart from US include regional players, most prominently India. China is also expanding sea-based deterrence by inducting more nuclear submarines and increasing the range of its SLBMs, including sea launched cruise missiles with possible hypersonic capability.² With its increasing number of SSBNs, China will be able to deploy separate patrols in both the Pacific and Indian Oceans.



A file photo of China's nuclear-powered Type 094A Jin-class ballistic missile submarine.

Source: [The Eurasian Times](#)

² <https://www.defensenews.com/naval/2022/05/16/satellite-photos-show-possible-new-chinese-nuclear-submarine-able-to-launch-cruise-missiles/>

Going by current assessments, China is not focusing on developing more accurate systems for counter force use. Its nuclear forces remain on 'positive retaliation', i.e., assured overwhelming counter value punishment to dislocate the enemy physically and psychologically, thereby deterring escalation. There is little in Chinese literature that points towards a conception of nuclear escalation or war fighting. The entire notion of deterrence is to prevent nuclear use, and if it is not possible to limit nuclear exchanges, highlighting their destructive effect. This is akin to the Indian policy of massive retaliation.

Importantly, force modernisation connotes reorientation in doctrinal thinking, from mere retaliation to assured second strike which perforce includes both qualitative and quantitative increase in nuclear arsenal, dispersal and upgradation of command and control. It is this qualitative and quantitative upgradation which is behind revised estimates of the Chinese arsenal from the existing 280-300 to possibly 750 by 2027, and touching 1000 by the turn of the decade. This can be termed as a doctrinal shift from "minimum" to **"effective deterrence"**. The focus is to ensure that the "nuclear deterrent" is "safe, reliable, and credible" under "any" circumstance, allowing China to mount an effective counterattack.

China's strategic response capability is enhanced by integrating a large conventional missile force capable of precision attacks. An aspect which is often not fully appreciated is the interface between nuclear and conventional missile forces. The science of second artillery explicitly states that during future joint combat operations, PLA Rocket Forces will not merely act as the main force in providing nuclear deterrence and nuclear counter-strike power, but also act as the backbone force in conventional firepower assaults.

This implies that as part of its non-contact campaign, China could use overwhelming missile forces to degrade and disrupt communication and net centric infrastructure that includes critical sensors, as also forward and intermediate zone airfields. These could also be utilised against counter value targets given the proximity of heavily populated areas of Central and Eastern India that lie within the range of Chinese MRBMs. China can also be expected to use EMP and other types of E weapons as warheads for such a missile campaign.

India-China Nuclear Equations and the Impact on Indian Deterrence

There are several areas of commonality in the declared doctrines of China and India:

- The declared policy of No First Use (NFU).
- The long-held adherence to credible minimal deterrence, although perceptions of the same differ.
- The firm demarcation between controller and custodian of nuclear weapons and the rigid centralisation of command authority.

However, these doctrinal similarities need to be seen from the perspective of the close linkage between the Sino-Pak nuclear equations that provide China with a duality to their combined nuclear posture. Therefore, no examination of Chinese nuclear capability from the Indian perspective is complete without coming to grips with the symbiotic relationship between the nuclear doctrines of China and Pakistan. China's dualistic approach permits it to espouse a Janus-headed policy - one for the world at large, of a NFU, minimalistic, rigid, and controlled nuclear power, while on the other hand retaining the First Use alternative through its proxy Pakistan.

Secondly, taking the NFU declaratory doctrines of both India and China at their face value essentially means that nuclear weapons as tools of deterrence are outside the equation of any conventional conflict scenario. In the event of major capability shifts in Indian deterrence, this can enable China, with its superior counter force targeting, to undertake counter force conventional strikes as also the counter value targeting of Indian strategic assets. The relativity of deterrence capabilities will influence the India-China strategic balance in the medium term.



A file photo of China's DF-31A ballistic missile on display at a military parade.

[Source: Wikipedia](#)

The next question is the functional effectiveness of Indian deterrence vis-a-vis China. If counter value targeting strategies are at the heart of nuclear response, India is clearly at a disadvantage. The Indian heartland of Central and Eastern India, comprising some of the nation's most populous states and strategic assets, is within the range of Chinese MRBMs and even SRBMs. China's strategic coastal belt, on the other hand, is well outside the ranges of India's current arsenal. This differential in effect undermines the Indian doctrine of punitive and massive retaliation. India will have to build credible MRBM and ICBM capability based on Agni 5 and Agni 6, and the sea leg based on ICBM systems such as K5 and K6, apart from upgrading space based ELINT, tracking and navigation systems, to deal with the deterrence deficit.

India also cannot overlook China's overwhelming conventional missile capability and credible space based C4ISR systems. China could employ its Theatre-Range Ballistic Missiles (TBMs), equipped with manoeuvrable re-entry vehicles (MaRVs), and Anti-Ship Ballistic and Cruise Missiles, backed by cyber and information attacks, to degrade both Indian command and control systems and launch vectors, without technically crossing the nuclear threshold, putting the onus on India on survivability and credible response. Clearly, this requires a rethink of a possible doctrinal profile beyond looking at these weapons merely as a tool of political deterrence. India must, therefore, take a hard look at the medium term profile of both its strategic and conventional deterrence strategies, including weapons design and capacities from high KT to MT ranges, along with their delivery systems.

Pakistan's Capability Development and Doctrinal Thinking

Pakistan's doctrinal thinking and capability development are attuned to undermining India's favourable conventional asymmetry across all spectrums—strategic, operational and tactical—through rapid nuclear weapons development and posturing of shallow thresholds. Pakistan claims that this is a response to India's attempts at exploiting conventional superiority through pre-emptive, massive, and punitive retaliation by creating space for a "Limited War under Nuclear Overhang". Such thinking is also posited in the backdrop of massive retaliation, should Pakistan's attempt at nuclear brinkmanship and coercion fail.

India's proactive doctrine and military modernisation is seen by Pakistan as attempts at leveraging growing conventional asymmetry (although the Pakistani military believes that this is not as pronounced as it is made out to be), thereby reinforcing the stability/instability paradox. For Pakistan, India's conventional doctrine poses the following strategic challenges:

- India can launch a pre-emptive offensive at short notice with a credible element of surprise. Growing Indian ISR and non-contact capabilities will only enhance this Indian advantage in the future.
- The Indian Air Force, with its growing superiority in numbers and types of aircraft, and improvements in weapons and sensors, can create a favourable air situation through effective counter air campaign, including strategic and operational interdiction.
- Technological developments such as BMD, MIRV and ASAT, over a period of time, are seen as negating Pakistan's ballistic and cruise missile capability and first strike options.
- Possibility of an Indian offensive over a wide front significantly increases the challenge for Pakistan's limited intelligence and reconnaissance assets, enhancing the scope for operational surprise.

These assumptions have forced Pakistan to relook at the functional effectiveness of its doctrine of First Use, as its military planners perceive conventional and nuclear limitations. In the absence of the option of a **flexible, measured, and proportionate** response, Pakistan faces the option of either resorting to massive and suicidal counter value attacks as a response to India's aggression, or face strategic losses with grave political consequences. These limitations have necessitated a review of its nuclear doctrine and the development of a new generation of weapons, including a low yield tactical weapons programme.

Increasingly concerned about the credibility of the "doctrine of use (first use) as a last resort", Pakistan faces the dilemma whether it should launch a credible first strike, or doctrinally develop a graded and proportional punitive retaliation option. There is also a perception that while nuclear deterrence can prevent major escalation, it does leave adequate space for a limited conflict. From its perspective, space for limited conflict exists precisely because of the confidence that operations can be contained if escalation is feared, assigning a conflict termination role to nuclear assets.



Pakistan conducts training launch of surface-to-surface ballistic missile 'NASR', January 24, 2019. Source: [Twitter/OfficialDGISPR](https://twitter.com/OfficialDGISPR)

Thus, one of the options for stabilising an increasingly asymmetric conventional deterrence is the introduction of low-yield nuclear weapons at the conventional level. The idea behind this thinking is the multiplicity of options at low threshold levels, rather than going straight for counter value use. Pakistan's decision to develop TNWs is largely predicated on the following factors:

- Low-yield battlefield nuclear weapons help solidify its defensive wall and assist in tackling eventualities arising from increasing conventional asymmetries between India and Pakistan.
- With the threat of employment of a new weapon previously untried in battle, complete uncertainty is created as to the tactical result of the battle, and thus to the entire course of a campaign.
- The employment of low yield nuclear weapons creates the fear of the possibility, or near certainty, of escalation to the strategic nuclear level. The stability achieved at the operational nuclear level thus gets extended to the conventional level.

Pakistan's military strategists accept that the development of these weapons requires specific technical knowhow and their integration into existing nuclear command and control through sophisticated and fool proof arrangements. Nonetheless, Pakistan is willing to pay the price of developing nuclear deterrence at the conventional level by taking what they claim are tactical risks by its military controlled NCA.

We need to recognise that this is only the first tier of response. The second tier continues to be based on inflicting unacceptable damage incommensurate with the stakes of the conflict. The concept is based on a guaranteed second strike response after absorbing the opponent's riposte. Pakistan's nuclear weapons and delivery vector development, now in its third ten-year development cycle, continues to be based on this two-tier doctrinal thinking. It is also driving twin weapons production routes of HEU and Plutonium, and fast paced weapons development. Nor has Pakistan overlooked the development of a nuclear Triad. Creation of a Naval Strategic Forces Command, and plans to mount nuclear tipped Hatf 7 missiles in the torpedo chutes of Agosta 90B submarines, underscore this fact.

Essentially, the above scenario implies that Pakistan is preparing to play the nuclear brinkmanship game at the lowest possible thresholds with the singular idea of not allowing India space to exploit its growing conventional force advantage, and exploiting the low end of the conflict spectrum through cross-border state-sponsored terror. Pakistani participants in Track II dialogues are quite forthright in acknowledging the clear cut linkage of strategic weapons and conventional asymmetry. They look upon these weapons as a means to maintain strategic balance by limiting India's conventional options, backed by their counter value strike capability.

Based on the foregoing analysis, Pakistan's nuclear posture is dictated by following four considerations:

- Pakistan perceives nuclear capability as the ultimate compensation for its conventional inferiority, which is likely to only increase with time.
- Geographical disadvantage has compelled Pakistan to overcome this vulnerability by building a much larger nuclear force. This belief is also driven by the fact that the incremental gap in India's economic growth and military capability will put Pakistan at greater risk. A large nuclear arsenal capable of inflicting extensive damage is a necessary assurance.

- A large nuclear force backed by reasonable conventional capability provides the opportunity of conducting sub-conventional operations, imposing both costs and restraint on India.
- Given the siege mentality of Pakistan's military leadership, it will continue to expand and improve its nuclear arsenal as a hedge against uncertainty. This is translating into the development of nuclear capabilities for every conceivable contingency.

India's Doctrinal Perspective

This brings us to the question of taking a closer look at India's strategic response calculus. India's declaratory nuclear doctrine is based on the concept of NFU backed by a policy of assured massive retaliation. In this policy of "retaliation only," the survivability of the nuclear arsenal is extremely critical. Indian policy planners perceive this to be a dynamic concept related to the strategic environment, technological imperatives, and the needs of national security, which determine the actual size, components, deployment, and employment of Indian nuclear forces.

The overall aim is to convince any potential aggressor that:

- Threat of use of nuclear weapons against India shall involve measures to counter the threat; and
- Any nuclear attack on India and its forces anywhere shall result in massive retaliation, inflicting unacceptable damage to the aggressor.

The question is, are the structures of nuclear command and control attuned to convey and respond in the way our doctrinal thinking presumes?

Nuclear Command Structure

India's nuclear force structure is based on being effective, enduring, diverse, flexible, and responsive under various contingencies. Survivability of nuclear forces is enhanced by a combination of multiple redundant systems, mobility, dispersion, and deception. Nuclear weapons are tightly controlled and released for use only at the highest political level. An effective and survivable command and control system with requisite flexibility and responsiveness has been put in place. Integrated operational plans, or a series of sequential plans, predicated on strategic objectives and a targeting policy, form part of the system.

For effective employment, the unity of command and control of nuclear forces and credible delivery systems has been ensured. The survivability of the nuclear

arsenal and effective C412 systems are the mainstay of India's National Command Authority (NCA). Another element of India's nuclear force capability is the ability to execute operations in an NBC environment with minimal degradation. Space based and other assets are being created or under development to provide early warning, communications, and damage/detonation assessment.

Credible Minimum Deterrence (CMD)

India's nuclear doctrine calls for building CMD to inflict massive punishment upon the adversary in any scenario through a relatively small, albeit adequate nuclear weapons arsenal. "Adequate" in a nuclear war-fighting scenario is a relative term, determined by the size of the adversary's arsenal, his doctrinal thinking, and the capacity within the NFU framework to withstand a first strike, absorbing the damage inflicted and retaining adequate capability to retaliate with sufficient residual force. Whereas the possession of nuclear weapons, irrespective of the size of the arsenal, is intrinsically deemed as deterrence, credible minimum deterrence is a function of assured and credible response.



A file photo of India's 'Agni-V' nuclear-capable intercontinental ballistic missile.

[Source: Wikipedia](#)

Such a capability appears to be in place in any Pakistan-centric scenario, but against China it is clearly not adequate. The dilemma is deciding upon both the numbers and yields of warheads and vectors for building a robust and credible deterrence against China. Only a significant size of the arsenal, backed by suitable delivery means that can target China's coastal heartland, can convey such credibility. India's dilemma is compounded by the fact that our weapon yields are relatively low. High yield and thermonuclear weapons that have been developed are at best cold tested, and their yields and functionality is questioned by the international strategic community.

In its calculus, India also needs to factor in the consequences of a premeditated disarming counter force strike, primarily from China, as has been highlighted earlier. India will further need to factor the ongoing massive upgradation of China's nuclear forces, as also its strategic conventional missile force assets deployed against India. Thus, three issues arise: the size of India's arsenal, the weapons mix (with the need to develop high-yield megaton range weapons), and the delivery vectors (MRBM, ICBM and MIRV configurations) that deliver the capability of targeting both counter value and counter force threats from both Pakistan and China.

NFU Strategy and Second Strike Credibility

The Indian doctrine presupposes creating conditions that will ensure survival of the country's nuclear arsenal against an adversary's first strike whether it is counter value, counter force, or both. One of the key areas of concern for Indian planners is that while it is reasonably assumed that a major part of its nuclear weapons would survive, the same cannot be guaranteed for the delivery or command and control systems. Ballistic missile systems are increasingly becoming vulnerable to new satellite-based intelligence gathering capabilities available to nations either directly or through allies who are in possession of such assets. The challenge is to find the ways and means to ensure that road and rail mobile missile systems can neither be detected nor attacked. Insofar as aircraft are concerned, flight refueling capability and flexibility in weapon storage provide early dispersal capability to survive a first strike.

Nuclear attack submarines (SSBNs) are beyond question the most survivable assets, equipped with SLBMs. It is for this reason that India has invested so much to develop a credible Triad. Silos for storage of ballistic missile systems undoubtedly enhance survivability but are expensive to build. India has adopted for land and rail mobile systems. These can be initially located in depth areas and appropriately redeployed as situation demands, thereby preserving the arsenal from a decapitating counter force strike. Adequate concealment

during movements and dispersal, and effective control in an increasingly transparent environment, poses a greater challenge.



Prime Minister Narendra Modi congratulates the crew of INS Arihant on the successful completion of the nuclear submarines' first deterrence patrol, November 5, 2018.

[Source: Twitter/@narendramodi](https://twitter.com/narendramodi)

It is said that deterrence does not imply matching weapons for weapons to achieve an adequate degree of deterrence. Even fewer weapons, backed by a robust and resolute command authority, could signal a high deterrence value.

However, India needs to adequately factor in Pakistan's TNW and its rapidly developing nuclear arsenal, as well as growing conventional asymmetry vis-a-vis China. For example, a response calculus to use of TNW's based on massive retaliation looks good doctrinally, but is it politically feasible? And what is the perceived efficacy of graduated response? Can this lead to war termination, or an step in the escalating nuclear response ladder?

Similarly, how do we ensure strategic deterrence vis-a-vis China? Is there a case for India going the TNW route to deter China? How do we deal with China's growing precision missile strike capabilities, particularly in an operational theatre? More importantly, is there a case for "Prahara", an indigenously developed Non-Line of Sight Short Range Ballistic Missile System, or the Brahmos Cruise missile (NG) or longer range systems being

converted into low yield battlefield systems? Similarly, India needs to enhance its ISR capacities to provide adequate "strategic warning" and precision strike capacities.

Employment Options and Communication of Intent

Signaling and posturing are important elements of credible deterrence. India largely projects an image of being a minimalist nuclear weapons state. There is growing thinking among the strategic community that it needs to be more forthcoming about its nuclear force-in-being, credibility of its command authority and above all political resolve. Lack of this positioning has the potential for miscalculation, particularly in the India-Pakistan dyad. India decires Pakistan as an irrational player. In fact, such a mindset suits Pakistan's strategy, given conventional asymmetry and its lack of strategic depth, and keeps Indian planners guessing and assessing their flexible response options. India's public reticence at times is misconstrued as a sign of weakness, leaving it exposed to more brinkmanship and coercion.

India, wants to convince the world at large of being a rational actor and a responsible nuclear weapons state. While this may win accolades, in the game of nuclear brinkmanship such an approach is more likely to convince adversaries of a limitation of options and weak political resolve.

This is most relevant in the case of China, which must have a clear understanding of Indian redlines. Even though, China's nuclear forces largely remain US centric, but their deployment pattern indicates an arc that includes coverage of most of India both by their MRBMs and ICBMs. China possesses adequate strategic mobility to shift a large component of its conventional strategic missile force from the Taiwan theatre to Tibet. The ability of this sizeable force hitting India's population centers in Central and Eastern India, and other strategic and operational targets, needs to be countered. India must clearly define an interface between its conventional deterrent and its nuclear posture as a structured policy to convey a likely Indian response. This particularly relates to a credible deterrence capability against China's missile deployments in the Lanzhou and Chengdu Military Regions (DF3/4 and DF 21/21A).

Similarly, India must respond to the challenge posed by growing Chinese SLBM capability based on the JL2/JL3 systems by speedily upgrading its own SLBM capability, from the 3,500 Km range K4 to the 5000/6000 Km range K5 and K6 missile systems. It is only after these are inducted that India will have a pan Indo-Pacific missile capability, thereby convincingly enhancing its overall deterrence posture.

Support from Strategic Partners

A case is being made in some recent writings of US scholars that Indian warhead designs require major upgradation.³ It is being suggested that the US should help India develop a capable nuclear deterrent, an assistance that will “manifest most clearly when India decides to carry out hot testing”, either in an extreme emergency or if one of its adversaries carries out such testing. India's return to nuclear testing, however, would provoke the termination of the 2008 bilateral Civil Nuclear Cooperation Agreement.⁴ Such assistance is being suggested in the American interest to balance China more fundamentally.

Another suggestion of import is to help India develop an effective, stealthy, and mobile nuclear submarine force, that can survive any future counter force strikes and hold at risk major Chinese nuclear, economic and population centers. Since India does not fall into the category of US allies, it cannot be included in the nuclear attack submarine technology programme for Australia under AUKUS.

It is therefore being suggested that the answer to both these objectives, providing India with the design of advanced thermonuclear weapons and nuclear reactor technology for its SSNs, lies in invoking the help of France in a collaboration underwritten by the US as part of a India-US-France trilaterale arrangement. Regarding possible French assistance, it needs to be noted that in December 2021, during the French Defence Minister's visit to Delhi, France had proposed to sell its **Barracuda nuclear attack submarine** under the Indian Navy's Project 75 Alpha. The Barracuda is not an SSBN but an SSN, and if inducted could provide a formidable sea denial capability to India. Converting this into a SSBN by incorporating SLBMs will remain an important issue, which too can perhaps be facilitated by the proposed cooperation.

In so far as thermonuclear weapons design is concerned, it is an interesting idea which requires much deeper consideration and understanding of the strategic payoffs that may be involved.

In the interim, India is in the process of acquiring at least six T-160 White Swan strategic bombers from Russia with an effective operational range of 12,500 Km, and provisioning to carry both nuclear weapons and cruise missiles.⁵

³ Ibid

⁴ Ibid pp 254

⁵ <https://eurasianimes.com/white-swan-for-india-air-force-russian-tu-160-bombers-chinas/>

These should be seen as an interim measure to enhance India's strategic reach to take on targets on the East Coast of China.

These suggestions are important and need to be discussed further in Track 1.5 interactions to ascertain seriousness of the proposals as also feasibility under existing American laws. Even more importantly, India also needs to be clear about the strategic and political costs envisaged in any such collaboration.

Conclusion

This paper has identified the contours of the India-China and India-Pakistan nuclear dyads, as also an overview of the doctrinal thinking and posture of these three nuclear powers. Based on the above, the following broad conclusions can be made:

- India's nuclear capability is directly related to the China-Pakistan dyad and the challenge it poses. It has less compelling need of nuclear weapons for its conventional security. The core relevance of India's nuclear weapons is to prevent escalation and miscalculation.
- For Pakistan, nuclear weapons are an indispensable guarantee for its security. Pakistan's logic and rationale of first use lies in a "use it or lose it" syndrome. India must take cognisance of the fact that nuclear war fighting is an inherent construct of Pakistan's doctrinal philosophy.
- In this context, Pakistan can be expected to preemptively deploy TNW into a battle area. It is therefore incumbent on India to evolve an adequate doctrinal and physical response.
- China's focus remains the Eastern Pacific theatre. It tends to underplay the Indian threat as part of a nuanced strategic calculus. India remains a strategic adversary, but one whose importance cannot be elevated as this will undermine China's efforts to position itself as the pre-eminent power in Asia.
- China has always had India in its nuclear cross hairs. Nuclear targeting of India is a reality which will only get intensified with China's induction of more accurate and sophisticated weapons systems.
- While nuclear balance with India is not central to China's threat calculations, in fact India's deterrence helps in restraining thresholds of conflict. However, given technological advances and improvements in

its terrestrial defence systems, the propensity for counter force targeting will increase if India is seen as ill prepared and vulnerable.

- In view of growing conventional asymmetry with China, India needs to integrate nuclear deterrence in its overall strategic posture for greater clarity of nuclear signaling.
- India does not need a 'huge' nuclear arsenal, but a "convincing" deterrent force is essential. This must include credible long range missile capabilities, bringing China's coastal heartland under the shadow of Indian retaliation. India must never allow a situation which allows China to coerce India both in conventional and nuclear domains by clearly wresting escalation control.



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