

National Security Resilience (NSR) — Framing the First Steps in the Indian Context

Col Ravinder Pal Singh (Retd) and Lt Gen Harinder Singh (Retd)

With the end of the Second World War, the global strategic balance shifted to bipolarity.¹ In the 1990s, the collapse of the Warsaw Pact marked a brief transition to a unipolar world.² At present, the rise of China and resurgence of Russia, coupled with the inability of the US to motivate its partners to contest the growing Chinese power, marks a transition to a new world order.³ Of late, its inability to fulfil its security guarantees to Ukraine, let alone recover its occupied territories, indicates its waning global salience. The US intervention in Iran alongside Israel is yet another indicator of the turbulent world order. If the world is truly transitioning towards a new world order, then we need to assess its impact on India's national capacities to serve its policy of strategic autonomy; and determine what India would need to develop a strategic potential in an uncertain world.

India has the world's largest population; a rapidly growing economy and workforce; a large market size; and a capable military force.⁴ The real test is how all of these factors can bear on India's strength — in terms of the country being counted as a major power — in the world order. A country is a major power if it is resilient enough to generate sufficient intrinsic capacities to meet the demands of its “*national security resilience*” (NSR) for indefinite periods of time. The NSR, in turn, has to produce sufficient military potential in terms of men, machines and material (3Ms) to organise, equip, train, maintain, sustain and restore its capacity against a mix of security threats — external and internal — that test the integrity of the Indian State.⁵

The question, then is, do India's military capacity, its socio-economic conditions, and the state of its techno-industrial productivity, enable it to have the staying power and resilience to sustain its wars in pursuit of its national interests independently, and for indefinite periods of time? Even though India has a high GDP, its low *per capita* income and weak socio-economic indicators, as also other concomitant limitations in its technological and industrial capacities, impair and challenge its ability to build

¹ C. Kupchan, (2021). “Bipolarity is Back: Why It Matters”, *The Washington Quarterly*, 44(4), 2021, pp.123-139.
<https://doi.org/10.1080/0163660X.2021.2020457>

² Ivan Weinel, (2023). “Dissolution of the Warsaw Pact”. <https://www.ebsco.com/research-starters/diplomacy-and-international-relations/dissolution-warsaw-pact>

³ Silvana Malle, “Russia and China in the 21st century, Moving towards Cooperative Behaviour”, *Journal of Eurasian Studies*, 8 (2), July 2017, pp. 136-150.

⁴ “India: World's Fastest-Growing Major Economy: World Bank forecasts 6.7% Growth for India, Surpassing Global Growth of 2.7%”, Press Release, PIB, Ministry of Information and Broadcasting, 18 January 2025.

⁵ Harinder Singh, “Managing the 3Ms of Military Readiness”, IDSA, 28 January May 2011 at https://idsa.in/about-mp-idsa/system/files/IB_3MsOfMilitaryReadiness.pdf

its national security capacity and required military resilience.⁶ This essay attempts to explore India's perspectives on national security resilience (NSR) and examine how it could frame a context to cast its pillars of national resilience (NR) in order to address the gaps in its national security capacity.

A Tri-polar World

The emerging global order leads us to concede that no country, other than the US, China and Russia, has requisite intrinsic or integral capacities and capabilities required to prosecute war independently to protect its security interests.⁷ By corollary, if it is only these three powers that can progress war independently and fight autonomously in pursuit of their respective national security interests, these are the only ones that qualify as “pole powers” in the contemporary turbulent world order. There are other countries with significant capabilities, which have security alignments (either treaty or dependency relations) with one or another of these three powers. Japan, South Korea, Taiwan, Australia and the NATO countries fall in this category. Even Pakistan could progress a conflict for a limited period, only if there is adequate support from any two of these three powers.

Then, there are countries with significant military size and capability, which have not aligned their security dependency with any of these three poles. To what extent, can such countries sustain a high tempo of combat for prolonged periods of conflict? Can India, which has significant military potential in its region, wage wars independently for its national interests for indefinite periods, especially if one of the belligerents arrayed against India is one of the three pole powers? This leads us to an inference that India's national security, as well as that of other countries outside the tri-polar global security architecture, does not possess the degree of strategic autonomy that such countries would like.

Questions derived from these two contrasting propositions on the evolving international order require India's national security planners and its military practitioners to ponder over the reality of the country's national security resilience and the resulting strategic autonomy.

In this context, a few aspects are especially pertinent. First, is the world multipolar, or tri-polar? This is a question that India's leaders and decision-makers need to answer with reasonable certitude. With India only having a few enabling agreements with the US on the maintenance of a “free and open Indo-Pacific”, any military support is constrained by a multiplicity of constraining factors: **(1)** that of not openly provoking China; **(2)** that the American interest in India is transactional; **(3)** that the US is not certain of India's strategic objectives in the Asia-Pacific and whether, given its trade and technology dependencies on China, New Delhi would be willing to distract China from its Taiwan adventure; and **(4)** whether India's security dilemma is no more than its desire to maintain strategic autonomy. Evidently, India avoids risks of excessive reliance on US military support, as it could pull it into US orbit.⁸ At the same time, it needs US military support to counter China and its Pakistani convergence; more so when India's traditional avenues

⁶ Chris Smith, *India's Ad Hoc Arsenal Direction or Drift in Defence Policy?* SIPRI, Oxford University Press, 1994.
<https://www.sipri.org/sites/default/files/files/books/SIPRI94Smith.pdf>

⁷ Krishnappa Venkatshamy and Princy George (Eds.), *Grand Strategy for India: 2020 and Beyond*, Pentagon Security International, New Delhi, 2012.

⁸ “India Wary of Falling Into Trap of US Reliance: Analysts”, Defence News, Sputnik India, 23 September 2023.
<https://sputniknews.in/20230923/india-wary-of-falling-into-trap-of-relying-on-us-analysts-4394863.html>

of military and technological support from Russia carry the risks of latency and long dependency on its legacy inventory, thereby constraining India's strategic autonomy.⁹

Second, without a comprehensive military security alignment with any of the three poles, how do the aforementioned constraints and other techno-industrial constraints impact India's strategic autonomy? In what ways, would India's military technological competitiveness, indicated by the low levels of its weapons- and technology exports, constrain military effectiveness in the short to medium term? Given these considerations, there is a need to examine the two questions of: can India build its National Security Resilience (NSR) without developing and deepening its National Resilience (NR)? And can India really practice a policy of strategic autonomy on its own merit or is it only a statement that glosses over its strategic limitations? Both these questions require serious examination.

Third, if any response to the foregoing questions is in the negative, then the three pathways that need to be examined by the military are quite self-explanatory. One, what elements of NR need to be developed in order to sustain NSR, and why? Two, what capacities, policies, structures and processes are required to sustain a force design to provide for India's combat resilience (CR) which, if threatened by a *de-facto* China-Pakistan convergence, can be optimally taken care of, independently? And three, what national-level legislation, national security agencies, and national security planning frameworks are required to validate and verify the constructs of NR, NSR and CR and their implementation processes across the national spectrum and executive departments, including the military?

The threat-reality of a China-Pakistan strategic convergence is, indeed, real.¹⁰ It is based on common interests of both those countries to contain India so that India does not pose a strategic challenge to Chinese hegemony in Asia or an existential threat to Pakistan. Early evidence of this convergence was noted in 1976, when Pakistani scientists trained at the Shanghai Institute for Nuclear Studies (SINS).¹¹ Later, in 1989, Pakistan's first nuclear device was tested at the Chinese nuclear test range at Lop Nor. Another evidence of their strategic convergence was the spurt in Pakistan-sponsored terror in Kashmir in the 1990s.¹² If a nuclear India was difficult to defang, then the best option for China was to give nuclear

⁹ Daniel Twining, "India's Heavy Hedge Against China, and its New Look to the United States to Help", *Joint US-Korea Academic Studies, Korea Economic Institute of America*. <https://keia.org/wp-content/uploads/2020/05/indias-heavy-hedge-against-china.pdf>.

See Also: "United as Sentinels of Sovereignty and Guardians of Liberty: A Compendium of U.S.-India Defense Partnership", CUTS International, June 2024. <https://cuts-global.org/pdf/a-compendium-of-us-india-defense-partnership.pdf>.

See Also: Ashley J Tellis, *Opportunities Unbound: Sustaining the Transformation in U.S.-Indian Relations*, Report, South Asia Program, Carnegie Endowment for International Peace, 07 January 2013. <https://carnegieendowment.org/research/2013/01/opportunities-unbound-sustaining-the-transformation-in-us-indian-relations>

¹⁰ Harsh V Pant and Vinay Kaura, "India-Pakistan Conflict Exposed the Real Danger — China", *The Print*, 30 May 2025. <https://www.orfonline.org/research/india-pakistan-conflict-exposed-the-real-danger-china>

¹¹ "The Nuclear Testing Tally", Arms Control Association, October 2025. <https://www.armscontrol.org/factsheets/nuclear-testing-tally>;

Also See: Gary Milhollin and Gerard White, "...In 1989 there were reports that China had supplied special magnets for stabilizing the centrifuges Pakistan was using to make weapon-grade uranium at Kahuta, and that China was preparing a test site to explode a Pakistani bomb at China's Lop Nor proving ground." "Bombs from Beijing: A Report on China's Nuclear and Missile Exports", Report, Wisconsin Project on Nuclear Arms Control, Washington DC, 01 May 1991. <https://www.wisconsinproject.org/bombs-from-beijing-a-report-on-chinas-nuclear-and-missile-exports/>

¹² Harsh V Pant and Rahul Rawat, "How China and Pakistan Work Against India", *National Interest*, 06 June 2025. <https://www.orfonline.org/research/how-china-and-pakistan-work-against-india>;

know-how and conventional arms to its regional rival, namely, Pakistan, and to keep terrorism pot in Kashmir boiling.^{13 14}

Considering the scale of China-Pakistan convergence, the principal security challenge for any political leadership in India is to prevent societal tensions and unrest spreading to other parts of India. Social diversity is inherent in all countries that span large sub-continental territories. India's vote bank polarisation, resulting in social fissures, presage communal cleavages that only serve the China-Pakistan strategic convergence. No wonder the well-known Chinese analyst, Xue Tong Yan, formerly from CICIR, notes weaknesses in India's societal mobilisation.¹⁵ In his paper entitled, *"China and Comparative Power of States"*, he argues that: *"Political turbulence can diminish a state's comprehensive power severely and rapidly, and reduce its status at a faster rate than can economic degradation."* India is no exception. India's challenge is to prevent social turmoil, while securing its territorial integrity, by keeping the diversity together through a shared sense of belonging to the nation.

The question then, which India's security decision-makers need to examine, is whether India is resilient enough to sustain a border conflict of prohibitive attrition for undetermined periods, if any of the two other major powers, i.e., the United States and Russia, do not actively provide diplomatic, military and financial support to New Delhi. India needs to be wary on two related counts — the territorial integrity of its contested borders both with China and Pakistan and the increasingly fragile internal tensions along its border regions and the hinterland — which could constrain its use of force against external and internal threats.

Building a NSR Planning Perspective

NR and NSR are generated through capacities and capabilities that have to be systematically developed through a policy framework and cultivated planning processes. These are unlike "human resilience", which is an endurance capacity beyond normal human endeavour, found in combat crises or extreme adversity. NR includes elements such as financial, economic, industrial, agricultural, technological, trade, in addition to human factors. These, in turn, are dependent upon social cohesion, educational standards, skilled manpower resources, the degree of participation of women in the workforce and democratic institutions, among a host of others. Meanwhile, NSR draws upon resources and assets from NR to build, operate, and sustain military, industrial, and technological assets, for operational and logistical capabilities.

Also See: Matthew P Taylor, "Pakistan's Kashmir Policy and Strategy Since 1947", Thesis, Naval Postgraduate School, Monterey, California, March 2004. <https://apps.dtic.mil/sti/tr/pdf/ADA422346.pdf>;

Also See: Priyanka Singh, *China-Pakistan Ties and Kashmir: History and Geopolitics*, MP-IDSA Monograph Series No. 77, August 2022. <https://www.idsa.in/system/files/monograph/monograph77.pdf>

¹³ Ryan Clarke, "Sino-Indian Strategic Relations: Assessing the Risk of Great Power Rivalry in Asia", EAI Working Paper No. 157, National University of Singapore, 04 August 2011. <https://research.nus.edu.sg/eai/wp-content/uploads/2017/11/EWP157.pdf>

¹⁴ Harinder Singh, "Shaping the New Deterrent: The Strategic Shift in India-Pakistan Conflict", *Business Standard*, 26 May 2025. https://www.business-standard.com/economy/analysis/shaping-the-new-deterrent-the-strategic-shift-in-india-pakistan-conflict-125052600385_1.html

¹⁵ Andrew Scobell (Ed.), *The Costs of Conflict: The Impact on China of a Future War*, Strategic Studies Institute, US Army War College, October 2001. <https://www.govinfo.gov/content/pkg/GOVPUB-D101-PURL-LPS19471/pdf/GOVPUB-D101-PURL-LPS19471.pdf>

Should a State fail to strengthen its material capacity for NR, because it is distracted by priorities of politics and populist measures, then it is likely that NR is weakened or insufficient to generate the required State surpluses needed to strengthen State security. The factors that impair NR in the Indian context include its socio-economic and technological-industrial constraints. With 58 per cent of the population being beneficiaries of food security legislation, and only 6 per cent being taxpayers; India's GDP is limited by the size of its retail market and is one-sixth of that of China; its comparative *per-capita* energy consumption and nuclear energy generation is one-eighth and one-seventh of China's.¹⁶ Consequently, India's ability to generate requisite levels of resilience are of concern.

Evidenced by the limitations of its manufacturing sector, India's manufacturing abilities are burdened by high costs, labour issues, power shortages and poor rural sector infrastructure.¹⁷ As a result, its technology and industrial productivity is rendered uncompetitive.¹⁸ In turn, this severely constrains India's arms procurement and technology-development demands which, in any case, are already handicapped by slow procurement procedures.¹⁹ These also provide evidence of India's inability to sustain a prolonged conflict. Therefore, what should India's decision-makers proactively do to build the country's NR capacities and its NSR ones? For India to simply pin its strategic hopes on some security expectation either from the US, or Russia, simply reveals the country's shortcomings in its NR and NSR planning and preparations.

For the US, international security arrangements are mere transactional choices, with no moral obligations towards the partner State. For instance, it cosies-up to Pakistan, despite over 80 per cent of Pakistan's military dependency being on China.²⁰ Whenever politically convenient, the US quietly lifts any arms embargoes it might have imposed upon Pakistan. The case of the F16s purchased by Pakistan offers telling evidence of this.²¹ India's inability to bring out this policy inconsistency persuasively is because its NR has been neglected and underdeveloped since 1947. Had India's NR or NSR capacities been significant, New Delhi could have faced the US sanctions on India's purchase of Russian oil or equipment

¹⁶ *Economic Survey 2025-26*, Ministry of Finance, Department of Economic Affairs, Economic Division, Government of India, January 2026. <https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

¹⁷ Kanika S Tomar, Mahua Bhattacharjee, and Anjali T Tandon, "Analysis of Performance and Challenges of India's Manufacturing Sector In The Global Market", Munich Personal RePEc Archive, Institute for Studies in Industrial Development, Amity School of Economics, Amity University, 2024. https://mpira.ub.uni-muenchen.de/123091/1/MPRA_paper_123091.pdf

¹⁸ *Industrial Development for the 21st Century: Sustainable Development Perspectives*, Department of Economic and Social Affairs, United Nations, New York, 2007. https://www.un.org/esa/sustdev/publications/industrial_development/full_report.pdf

¹⁹ *Technology Perspective Capability Roadmap 2025*, Ministry of Defence, Government of India. https://www.mod.gov.in/dod/sites/default/files/FINAL-TPCR-2025_0.pdf

²⁰ Krishnappa Venkatshamy and Princy George, no. 7; "Why India Struggles to Isolate Pakistan — Shivshankar Menon Exclusive", *India Today*. <https://www.facebook.com/watch/?v=1035393415374177>;

See Also: "US Report says China-Pakistan Military Alliance not Inevitable", *JK News Today*, 28 March 2023. <https://jknewstoday.com/us-report-says-china-pakistan-military-alliance-not-inevitable/>;

See Also: Brahma Chellaney, "The Illusion of a Rules-Based Global Order", *International Security*, 23 December 2019. <https://chellaney.net/2019/12/23/the-illusion-of-a-rules-based-global-order/>; <https://chellaney.net/category/international-security/page/27/>

²¹ Chidanand Rajghatta, "US Faces the F-16s it Supplied Pakistan", *The Times of India*, 14 September 2008. <https://timesofindia.indiatimes.com/world/us/us-faces-the-f-16s-it-supplied-pakistan/articleshow/3482718.cms>;

See Also: "US Seeks Information on Pakistan's Potential Misuse of F-16s", *The Economic Times*, 02 March 2019. <https://economictimes.indiatimes.com/news/defence/us-seeks-information-on-potential-misuse-of-f-16-by-pakistan/articleshow/68229586.cms?from=mdr>

with considerable equanimity and agility. It is a pity that India's NSR, and its policy relevance and importance, as a concept, a doctrine, a strategy, and as an implementation agency, has never been publicly debated.

This, in turn, raises a quite a few questions related to India's NSR and CNP: First, can India develop its NR potential and strategy to sustain the tempo of its operational engagements over extended periods and capabilities to deliver prohibitive attrition over a prolonged period? This is a challenge for India, because its vulnerable areas and major population centres are within a few hundred kilometres of the LAC with China. By way of contrast, most of China's vulnerable areas, population centres and communication nodes, are located well over 1000 kilometres from the LAC. Besides, these borders, punctuated by contentious tri-junctions with Pakistan, Nepal, Bhutan and Myanmar, which adds to the complexity of India's security dilemma along its northern borders.²²

Second, does India have the requisite military-industrial capacity, resourcing, and productivity, to build combat platforms and munitions and surge capacity for delivering retaliatory attacks over extended periods, at various vulnerable points across the length and breadth of the Sino-Indian border that could render them ineffective as launching pads for any offensive against India? How does India visualise the achievement of these material capacities in the absence of a striking lack of clear understanding and policy articulation on the factors influencing its NR, NSR and CR?

Third, has India rightly assessed the sufficiency of its military-industrial capability to counter the China-Pakistan strategic convergence, and is New Delhi willing to develop a sustainable competitive and effective response? Among the several aims and objectives of NSR, the development of India's war-fighting capabilities to deter convergence of Pakistani and Chinese military capabilities, is crucial, as demonstrated during Operation SINDOOR.²³ Under similar operational circumstances in the future, India would be compelled to react even more convincingly than was the case with Operation SINDOOR.²⁴

Four, does the current state of India's military industrial potential vis-a-vis the China-Pakistan strategic convergence identify a heightened need for an NR Policy, its implementation, monitoring, as also the identification of a verification agency? Suffice it to say that a National Security Resilience Agency (NSRA) is required to develop planning processes that are required to coordinate India's national assets, maintain and enhance surges in military production capacities for increasing its warfighting capabilities (including the replacement rate and equipment restorability) to a point where they are higher than the estimated attrition rates envisaged in a future conflict.

Factors Impacting NR, NSR and CR

²²Harinder Singh, "The China Challenge", *Business Standard*, 25 July 2024. https://www.business-standard.com/economy/news/the-china-challenge-124072501569_1.htm

²³ Ravi Shankar, "India Asserts Military Superiority by Beating Pakistan's Chinese Arms", *Bharat Shakti*, 15 May 2025. <https://bharatshakti.in/india-asserts-military-superiority-by-beating-pakistans-chinese-arms/>;

See Also: Thomas F Lynch III (Ed.), *Strategic Assessment 2025: Evolving Great Power Competition at Mid-Decade*, Institute for National Strategic Studies, National Defense University, Washington DC, 2025.

https://ndupress.ndu.edu/Portals/68/Documents/Books/SA2025/Strategic_Assessment_2025.pdf

²⁴ Harinder Singh, "Four Days of Fire and Fury: The Takeaways", *Deccan Herald*, 17 May 2025. <https://www.deccanherald.com/india/four-days-of-fire-and-fury-the-takeaways-3544875>

Security studies and experts have argued that nation-states lose conflicts and wars, because of shortfalls in their military's resilience strategies and a lack of NR and NSR preparedness.²⁵ States even break up because of a lack of NR and institutional capacities and processes to prepare for NSR. There are, of course, many reasons for countries failing to do so but a very significant one is attributable to military establishments tending to provide politically palatable estimates, the adverse impacts upon the CR of the military force notwithstanding.

From a national security policy planning perspective, a few factors that weaken NR include weak manufacturing, an adverse trade balance; limited finance and financial reserves, damaged social trust and cohesion in society, a lack of energy reserves, inadequate research on materials and energy alternatives, inadequate R&D in key technologies, and weak innovation indicators.²⁶ While these NR deficits may well be attributed to a number of compounding reasons, including poor compliance and a narrow decision-making set-up, it is nevertheless true that as these factors begin to dominate more and more of the national decision-making criteria, they can lead to catastrophic developmental consequences for the country.

With specific regard to NSR and CR, a mix of deficits and factors stand out. The more obvious of these are listed below, amongst many more that could be identified during the course of a detailed project study:

- First, the underestimation of national security threats and the overestimation of one's industrial and financial capabilities by the country's military planners.²⁷ This can lead to a lack of coherence in long-term planning, programming, budgeting, recruitment, training, research and development, production and hardware acquisitions.
- Second, the persistent absence of institutionalised coordination and mechanisms between the civilian, technological, industrial, financial, and political decision-makers and military planners of the country. This includes a lack of coordination amongst the various branches of the armed services and defence forces, and the lack of technological know-how at varying levels within the echelons of the three defence forces.²⁸
- Third, the lack of process for predictable financial allocations for competitive R&D on emerging technologies and processes, projects and technology absorption. Unpredictable financial planning and allocations can result in uneven force development, or weapons and support development.

²⁵ T Jančárková, D Giovannelli, K Podiňš, I Winther (Eds.), *15th International Conference on Cyber Conflict: Meeting Reality*, CCDCOE Publications, 2023. https://www.ccdcoe.org/uploads/doc/CyCon_2023_book_print.pdf

²⁶ Janna Anderson, Lee Rainie and Emily A. Vogels, *Worries About Life in 2025*, Report, Pew Research Center, 18 February 2021. <https://www.pewresearch.org/internet/2021/02/18/worries-about-life-in-2025/>

²⁷ Harinder Singh, "National Security Strategy: Framing the First steps in the Indian Context", *Business Standard*, 31 August 2025. https://www.business-standard.com/blueprint-defence-magazine/opinion/national-security-strategy-framing-the-first-steps-in-the-indian-context-125083000646_1.html

²⁸ Harinder Singh, "The key to India's multi-domain deterrence, capabilities", *The Hindu*, 27 March 2026.

<https://www.thehindu.com/opinion/lead/the-key-to-indias-multi-domain-deterrence-capabilities/article70789040.ece>

- Fourth, the lack of high-technology industrial manufacturing- and repair capacities and capabilities for dispersed maintenance and restorability.²⁹ This requires building conversion adaptability, for redundancy and production lines of high-precision weapons. This can be compounded by inadequate capacities of industrial skills in the country.
- Fifth, the low availability of technology-proficient leadership and manpower. Shortages affect the military's operational, logistics and industrial production. Besides, technically trained and militarily skilled manpower could be insufficient to meet expanded military demands. When conflict is thrust upon any military, it takes several years for the needed skills and experienced manpower to become available, to meet the increased demands.
- Sixth, insufficient equipment stocks due to an inadequate understanding of the concept of restorability. This could result in low availability of equipment and can lead the military to undertake “make-do” operations. Further, there is the impact of external sanctions on NR and NSR, especially the impact of sanctions on the DRDO, dual-use items, military-related equipment, spare parts, and critical technologies, all of which need to be kept in mind.
- Seventh, the streamlining of agile logistics to support the principle of flexibility in operations. Oil and gas supply chain vulnerabilities, alternatives, and the inability to identify energy potential alternatives at the national level. Replenishment and production-scalability of major systems and related technologies is a pressing requirement.
- And eighth, inadequate border infrastructure to meet the requirements of dispersed deployment and logistics needed to create capabilities needed for- and in dispersed depots for fuel and ammunition supplies.³⁰

Framing the First Steps

Conceptual underpinnings: The idea of NSR will have to be developed at a few levels:

- First, it would require India's leaders, decision-makers and the strategic community to identify the necessity, challenges and barriers, the potential value, and best practices for building resilience in the Indian security sector, for advancing the country's strategic autonomy. It would need to include participation of State institutions, industry, economy, financial, and technology sectors.
- Second, it would require policymakers to coordinate an approach that includes the whole of society and the entire public sector. To add the depth needed to make NSR capacity-building a sustainable

²⁹ Harinder Singh, “Defence Tech: A Case for Collaboration with India's Tech Industry Base”, *Business Standard*, 31 March 2025. https://www.business-standard.com/opinion/columns/defence-tech-a-case-for-collaboration-with-india-s-industry-base-125033101058_1.html

³⁰ Harinder Singh, “Rails to the Edge: Border Infrastructure Key to Strategic Deterrence”, *Deccan Herald*, 25 July 2024. <https://www.deccanherald.com/india/rails-to-the-edge-border-infrastructure-key-to-strategic-deterrence-2-3736689>

resource, there would be a need to identify national legislation, as also public and private institutions, which would support growth of India's strategic autonomy and security sector resilience.

- Third, it would require a process framework to define the concept and structures of NSR: planning processes, the development of a framework for a National Action Plan to implement NSR plans, related training initiatives, and the performance evaluation process. The need for NSR capacity-building plans will emerge when existing assumptions on the nature and duration of future conflict are cross-examined.

Pathways to Build NSR: Two aspects are important to trigger any meaningful discussion on the subject matter: *one*, there is a need to examine the question: can any country or India build its NSR without developing and deepening its NR or CNP? And *two*, can India really practice a policy of strategic autonomy or is this merely a political statement that's eels to cover up the limitations of its CNP?

If the State response to any of the above questions is in negative, then the following four principal pathways need to be examined:

- First, what elements of NR need to be developed in order to sustain NSR and why?
- Second, what elements of NR flow directly into NSR? (E.g. a border state's infrastructure, power generation, civil-military technology and industrial integration, technically qualified military-age manpower and leadership resources); and indirectly, the State's financial resources and revenue that are convertible into military expenditure, technology and arms acquisitions.
- Third, what are the capacities, policies, structures and processes required for a force design to provide for India's CR, which is threatened by the *de-facto* China-Pakistan operational convergence? What is India's military restorability policy and what are the capabilities required to sustain long-term conflicts?
- Fourth, what is national level legislation, agencies, and framework required to validate and verify the NR, NSR and CR, which together combine to define CNP implementation processes across the national assets and executive departments, including the military?

Suggested Pillars of NSR: A seven-pillar framework that could help India's decision-makers and policy maker's build their own conception of NSR is listed below:

- **Pillar 1:** Rethinking linkages between Strategic Autonomy and NSR.
- **Pillar 2:** NSR implementation limitations and opportunities at six levels, to illustrate the concept:
 - Limitations in integrated financial planning. Correlation of military capabilities with the defence budget as a ratio of the GDP and *per capita* income;

- Advanced technology competitiveness, limitations, and opportunities for exports. Limitations of an exclusively public-sector advanced-technology R&D model;
 - Poverty eradication for security sector resilience-building;
 - Female labour force participation rate for building resilience in the security sector;
 - Educational competitiveness for human factor productivity, with a concomitant need to revisit the 2035 Education policies, plans and standards; and
 - Power generation SMR and solar, with the attendant need to revisit India's long term energy plans.
- **Pillar 3:** Economic capacities for national security resilience: Conversion of economy, industrial, technology sectors; impact of conflict shocks on primary, manufacturing and service sectors for provision of essential goods and services.
 - **Pillar 4:** Financial Sector Resilience: Trade diversification; financial system resilience stability to absorb shocks of long duration conflict; and ability to reconfigure and recover to restore financial services.
 - **Pillar 5:** Operational resilience and conflict sustainability national stocking policy; replenishment and operational sustainability for long duration conflicts; limitations of manpower in handling sophisticated equipment; and repair and restorability.
 - **Pillar 6:** Impact of communal or social polarization on national cohesion and NSR. There is a natural vulnerability of balancing identities in heterogeneous societies of ethnic, communal, caste and cultural diversity. Internal, political and social threats to perceived loss of opportunities to community. The pursuit of exclusion in welfare-ism for electoral success could undermine trust in the society.
 - **Pillar 7:** Technology, both as the driving force for socio-economic change as well as an enabler of NSR planning. Technology - in its widest sense, not just IT or military hardware tech - will have to be factored into overall NSR thinking.

Conclusion

National Security Resilience is about building a robust and adaptable framework to safeguard India's interests and citizens from evolving threats. By conceptualising and prioritising the pillars of resilience across several dimensions of national security, India can mitigate risks and ensure strategic autonomy for its core interests. There is a need to articulate at the highest level, and then flesh out in detail, a new paradigm for India's national security framework, which transcends beyond existing narratives and assumptions. The existing paradigm is fraught with pre-dispositions and cognitive biases, reinforced by self-confirmation by a narrow set of professional views. The new paradigm would have to be based on a much wider set of consultations with experts and institutions, beyond the traditional notions of national

security, to include diverse disciplines of economics, trade and investment, public finance, political sociology and technology. We call this paradigm, National Security Resilience (NSR). The focus of any NSR initiative has to be to determine policy options through scientific deduction and elimination. Only once this paradigm is fully understood can the next steps be articulated to set up the processes and institutional framework for all round NSR Capacity Building.

About the Authors

Colonel Ravinder Pal Singh. *A former Senior Fellow at the Institute for Defence Studies & Analyses, New Delhi; Ford Fellow at the School of Public Affairs, University of Maryland; and a Founder Member and Senior Fellow at the Geneva Centre for Democratic Control of the Armed Forces (DCAF), Colonel Ravinder Pal Singh (Retd) headed the Arms Procurement Decision-Making project at the Stockholm International Peace Research Institute (SIPRI). Later, he worked on the NATO Parliamentary Assembly's project on security sector reforms in former Warsaw Pact countries and the UN Conference on Arms Trade Treaty (ATT). He has researched, written and worked extensively across 30 countries on security sector reforms, arms transfer transparency and defence budgets alternatives. is a Founding Member, of the Geneva Centre for Security Sector Governance. He may be contacted at ravi.singh.link@gmail.com*

Lt General Harinder Singh. *Lt General Harinder Singh (Retd) is a former Director-General, Military Intelligence (DGMI); a former Commander of the Indian Army's 14 Corps (which he commanded during the eastern Ladakh Crisis of 2020); and a former Commandant of the Indian Military Academy (IMA), Dehradun. He is a prolific and deeply respected writer on matters of defence- and security strategy. He may be contacted at harinder41@gmail.com*