

Strategic Stability in South Asia: The Evolving Challenges and Potential Opportunities for India and Pakistan

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Abstract

The strategic stability debate in South Asia is largely influenced by the complex and volatile relationship between nuclear rivals India and Pakistan. Growing competition between the United States (U.S.) and China and border dispute between China and India are influencing the security dynamics of the region, but it is the aggravating hostility between New Delhi and Islamabad over ongoing issues such as Kashmir and terrorism charges against one another that have increased risk of war in the region. The fragile balance of terror is influenced by various challenges such as evolving nuclear postures, regional power competition, conventional and nuclear arms race, and emerging technologies. In that regard, it is imperative that both states engage to resolve outstanding issues, develop confidence and evolve a strategic restraint regime to strengthen strategic stability in the region.

Keywords: *Strategic Stability, India, Pakistan, Nuclear, CBMs, South Asia.*

Introduction

South Asian security dynamics offer one of the most complex and volatile situations in the world with three nuclear armed states — China, India and Pakistan — sharing a complicated relationship. Within this equation, India and Pakistan have been in a confrontational relationship since their independence from the British rule.¹ The incessant Indo-Pakistani rivalry is fuelled by ongoing territorial issues arising from the contested partitioning of the two countries; resource competition and

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¹ Asad Hashim, “Timeline: India-Pakistan Relations,” *Aljazeera*, March 1, 2019, <https://www.aljazeera.com/news/2019/3/1/timeline-india-pakistan-relations>

competing regional interests.

In discussing strategic stability in South Asia, it is imperative to assess the issue in its regional order, identify the primary parties to the conflict and address fundamental questions, such as: are we viewing India, Pakistan and China as a part of one problem? Is it essentially a triangular competition between Pakistan, India and China or rather a dyadic rivalry between Pakistan and India on the one hand and between India and China on the other, where the U.S.-China competition has also begun to influence the region? What is the level of hostility in the two dyads and how do they impact each other?

India and Pakistan share a long history of rivalry and have experienced several military crises and wars.² The same is not true for the relationship between India and China, who have not resorted to a major war since 1962. India-China competition has recently been exacerbated due to the greater United States (U.S.) involvement in the Asia-Pacific region where India was being projected as the net security provider and received massive military assistance for that purported role.³ However, the U.S. reliance on India for standing up against China has already been called out as a “bad bet.”⁴ The China-India relationship have become strained as a result of border issues since 2020. Nonetheless, these border issues remained limited to small skirmishes and scuffles and by no means indicated a crisis potentially leading to a nuclear war. Therefore, in terms of risk of direct confrontation, the India-China dyad cannot be paralleled with the nuclear flash point of the India-Pakistan dyad.

This is not to understate the significance of the India-China dyad, which has certainly become more volatile after recent border issues. However, by comparison, it is more of a competition than the confrontation. China does not view India as a primary security threat and have historically maintained a no-war bottom-line intention threshold

² Sumit Ganguly, *Conflict Unending: India-Pakistan Tensions Since 1947* (Columbia University Press, 2002).

³ India has Emerged as a regional power and net security provider in the Indo-Pacific: Defence Minister, *Hindu*, November 29, 2022, <https://www.thehindu.com/news/national/india-has-emerged-as-a-regional-power-and-net-security-provider-in-the-indo-pacific-defence-minister/article66201456.ece>

⁴ Ashley J. Tellis, “America’s Bad Bet on India,” *Foreign Policy*, May 1, 2023, <https://www.foreignaffairs.com/india/americas-bad-bet-india-modi>

vis-à-vis India.⁵ Between India and China, it is not only nuclear deterrence but economic deterrence that has significantly reduced the risk of war and has contained bilateral issues to diplomatic scuffles and border skirmishes. India-China bilateral trade has witnessed a phenomenal increase in the past two decades. Since 2015, India-China bilateral trade has grown exponentially; with over 90 per cent growth, the current trade between Beijing and New Delhi stands at U.S.\$136.26 billion.⁶ Therefore, India-China relationship can be explained more in terms of complex interdependence, where one-time rivalry has moved towards economic interdependence, thereby reducing the chance of a major direct conflict even more in the future. Therefore, when it comes to the primary conflict in South Asia, it is India and Pakistan's volatile relationship that runs the risk of triggering a nuclear war, whether intentionally or inadvertently. Unlike the India-China dyad, the India-Pakistan rivalry has failed to create interdependency and the bilateral trade remained as low as U.S.\$1.3 billion during the year 2022.⁷

With this backdrop, this study aims to analyse the traditional concept of strategic stability and its evolving nature in the context of India and Pakistan. The paper will provide a detailed assessment of contemporary challenges to strategic stability in South Asia and how these challenges are evolving with the potential to destabilise the fragile balance. The paper will also explore potentially useful albeit limited opportunities for stabilising bilateral relationship in the coming years.

Understanding Strategic Stability in the Context of India-Pakistan

Strategic stability emerged as a concept after the advent of nuclear weapons and it continued to develop and evolve during the Cold War. India and Pakistan have borrowed the Cold War nuclear lexicon for their analysis and their nuclear learning process is also heavily influenced by the U.S.-USSR examples. Therefore, the theoretical understanding of

⁵ Xiaoping Yang, "China's Perception of India as a Nuclear Weapon State, *Regional Insight*, Carnegie Endowment for International Peace, June 30, 2016.

⁶ Trade and Economic Relations, Embassy of India in Beijing, China, https://www.eoibeijing.gov.in/eoibeijing_pages/MjQ,

⁷ "India-Pakistan Trade Stood At US\$1.35 Billion During April-December 2022," *Outlook India*, February 8, 2023, <https://www.outlookindia.com/business/india-pakistan-trade-stood-at-1-35-billion-during-april-december-2022-news-260565>

strategic stability in South Asia is shaped by western scholars and literature. Going back to the Cold War literature, one finds that there is no formal definition of the term strategic stability, nonetheless, many cold war theorists have analysed the concept and shared their explanations. Thomas Schelling, for example, explained strategic stability in the following manner: “If both sides have weapons that need not go first to avoid their own destruction, so that neither side can gain great advantage in jumping the gun and each is aware that the other cannot, it will be a good deal harder to get a war started. Both sides can afford the rule: When in doubt, wait.”⁸

In simple terms, strategic stability refers to a country’s ability to effectively strike back after absorbing the first nuclear strike by the adversary. Thus, the basic premise of strategic stability is that the sense of mutual vulnerability will dissuade a country to engage in a disarming first strike against the rival state.

One of the core elements of strategic stability is first strike stability. Glenn Kent and David Thaler are credited to have explained the contours of first strike stability as follows: “After considering the vulnerability of strategic forces on both sides, neither leader perceives the other as pressured by the posture of forces to strike first in a crisis either leader sees an advantage in striking first to avoid the potentially worse outcome of incurring a first strike if he waits.”⁹ In other words, first strike stability refers to a balance of terror where neither side finds value or advantage in attacking the adversary. The Cold War adversaries, in order to achieve the first strike stability focused on the survivability of their assets.

The other two associated concepts are crisis stability and arms race stability. Crisis stability is closer to the first strike stability concept as it refers to the “absence of incentives to use nuclear weapons first.” Arms

⁸ Thomas C Schelling, *Arms and Influence* (Yale University Press, 2020), 246.

⁹ G. A. Kent, and D. E. Thaler, “First-Strike Stability: A Methodology for Evaluating Strategic Forces,” Interim report. no. AD-A-215606/5/XAB; RAND/R-3765-AF. Rand Corp., Santa Monica, CA (USA), 1989, <https://www.jstor.org/stable/pdf/resrep12086.5.pdf>

race stability, on the other hand refers to “the absence of incentives to build up a nuclear force.”¹⁰

Strategic stability can also be assessed in both narrow and wider scope. The narrow scope essentially focuses on achieving crisis stability and arms race stability. This narrow objective can be slightly expanded to include avoidance of an armed conflict between nuclear armed states. In a broader scope, strategic stability refers to a stable global environment and absence of conflict; a situation where countries are enjoying peaceful relationship.¹¹ The focus of this study shall remain on analysing challenges to strategic stability between India and Pakistan in its narrower scope.

Challenges to Strategic Stability in South Asia

Nuclear learning in South Asia has been slow and challenging. Strategic stability in South Asia has evolved at its own pace with some features that are sharply distinct from the Cold War model. Like other nuclear-armed states, India and Pakistan entered the nuclear club without having any prior experience or conceptual maturity in dealing with the role of nuclear weapons in their respective security strategies.¹²

Over the years, the trial-and-error learning process has enabled both states to strengthen their nuclear institutions and exercise certain restraint in their policies.¹³ However, this learning process was not identical in the two countries and transpired at different levels and with varying degrees. Nuclear learning in South Asia has not reached a point where the states can display a stable relationship. While India and Pakistan have not resorted to a full-fledged war since overt nuclearisation, there have been serious crises, such as the Kargil war (1999), military standoff (2001-2), Mumbai attack (2008) Uri and Pathankot attack (2016) and

¹⁰ James M Acton, “Reclaiming Strategic Stability: Contending Interpretations,” Strategic Studies Institute (2013): 117-146, <https://carnegieendowment.org/2013/02/05/reclaiming-strategic-stability-pub-51032>

¹¹ Acton, “Reclaiming Strategic Stability.”

¹² Feroz Hasan Khan and Ryan Jacobs, “The Challenges of Nuclear Learning in South Asia,” in Feroz Hasan Khan, Ryan Jacobs and Emily Burke eds., “*Nuclear Learning in South Asia: The Next Decade* (Naval Post Graduate School, June, 2014), 5.

¹³ Imran Hassa, “Strategic Stability & Restraint in South Asia,” *South Asian Voices*, July 22, 2021.

Pulwama/Balakot crisis (2019) which have threatened the security of the region. The challenges to strategic stability in South Asia, currently one of the most war-prone regions in the world, are very much visible at the conceptual and operational levels. Some of these specific challenges are described below:

Transitory Nature of Strategic Stability

One major challenge in South Asia is the evolving/transitory nature of strategic stability itself. In the third nuclear age, the classical idea of Cold War bipolar strategic stability is shifting to multipolar strategic stability. This major shift has transformed the Cold War security dilemma into what Gregory Koblentz calls a new “security trilemma” where more than two parties are involved in a strategic competition.¹⁴ The actions of one state to increase its security against an adversary creates an impact on the third state, which in turn, takes extra security measures against a threat which is not primarily aimed against it. This process undermines overall security and makes it difficult to identify the nature of threat which remains multidirectional. In addition, the theatre of war in South Asia is no longer confined to state actors. It also involves the non-state actors, who do not conform to the basic rules of strategic stability and have the potential to initiate an inadvertent crisis.

While it is recognised that there is a need to reformulate the concept of strategic stability, there is dearth of scholarly work and a lack of policy priority in that regard.¹⁵ In the absence of a clear understanding of this evolving situation, insisting on an outdated model of strategic stability to deal with the fast changing dynamics of South Asia creates the risk of increasing instability.

Doctrinal Challenges

One important element of stable deterrence is a well-defined nuclear doctrine. Soon after their nuclear tests, India and Pakistan focused on their nuclear policies and postures. While both states have exercised relative restraint and responsibility following the nuclear tests, their

¹⁴ Gregory D. Koblentz, *Strategic Stability in the Second Nuclear Age*, Council Special Report no. 71 (Washington: Counsel on Foreign Relations, November 2014).

¹⁵ Kane and Nielsen, “Rethinking Strategic Stability,” 2.

nuclear postures are not free from ambiguities which are discussed below in detail.

India's Doctrinal Incongruity

On August 17, 1999, India's National Security Advisory Board announced a draft nuclear doctrine that included a No First Use (NFU) policy.¹⁶ India's 2003 official statement, however, included a caveat to its erstwhile absolute NFU pledge stating, "in the event of a major attack against India, or Indian forces anywhere, by biological or chemical weapons, India will retain the option of retaliating with nuclear weapons."¹⁷

The incumbent government under Bharatiya Janata Party (BJP) in India alluded to the revision of India's nuclear doctrine during the election campaign in 2014, and announced in the election manifesto its intention "to revise and update [the nuclear doctrine], to make it relevant to challenges of current time."¹⁸ The announcement came in view of the aforementioned contradictions in the existing nuclear doctrine that not only left space for ambiguity but also called its credibility into question. The BJP announcement rekindled the debate about forswearing India's NFU policy and changing the massive retaliation posture. A similar approach was visible in the 2016 statement by India's Defence Minister, Manohar Parrikar in which he questioned India's NFU policy.¹⁹ Notwithstanding later clarification that this was his personal view, it reignited the enduring debate in India on NFU policy. The debate got further accentuated as a potential change in India's nuclear strategy from counter-value to counter-force was noted, suggesting that India might

¹⁶ "Draft Report of National Security Advisory Board on Indian Nuclear Doctrine," Ministry of External Affairs, August 17, 1999, <http://mea.gov.in/in-focus-article.htm?18916/Draft+Report+of+National+Security+Advisory+Board+on+India+n+Nuclear+Doctrine>

¹⁷ "Cabinet Committee On Security Reviews Progress In Operationalising India's Nuclear Doctrine," Office of the Prime Minister, New Delhi, January 4, 2003, <http://pib.nic.in/archieve/lreleng/1yr2003/rjan2003/04012003/r040120033.html>

¹⁸ Bharatiya Janata Party, "Ek Bharat Shrestha Bharat: SabkaSaath, Sabka Vikas (One India, Great India: With All, Development for All); Election Manifesto 2014," March 26, 2014, 39,

http://www.bjp.org/images/pdf_2014/full_manifesto_english_07.04.2014.pdf

¹⁹ Sushant Singh, "Manohar Parrikar Questions India's no-first-use Nuclear Policy, adds 'My Thinking,'" *Indian Express*, November 11, 2016.

initiate a decapitating first strike against threat of an imminent use of nuclear weapons by Pakistan.²⁰ India's 2017 Joint Armed Forces Doctrine once again emphasised on the sanctity of the NFU policy but that assurance was short-lived as Indian Defence Minister, Rajnath Singh once again nullified India's NFU in 2019.²¹ Regardless of this back and forth, India's NFU policy is viewed with great scepticism and concern inside Pakistani strategic circles.

In the 2003 official statement, India also departed from previously held idea of "sufficient damage" and moved to a posture of "massive retaliation." thus leaving fewer options for response. This change was criticised by some analysts as being unrealistic since it called into question the credibility of India's threat to carry out a massive retaliation in response to the use of tactical nuclear weapons by Pakistan.²² It also left no space for escalation control due to some "missing rungs on escalation ladder."²³ As has also been observed that even the U.S. had had to shift from the 1950s policy of massive retaliation to a flexible response option.²⁴

²⁰ Remarks by Professor Vipin Narang, Department of Political Science, Massachusetts Institute of Technology Carnegie International Nuclear Policy Conference Washington, DC, March 20, 2017. For further debate on Professor Narang's comment see: Christopher Clary and Vipin Narang, "India's Counterforce Temptations: Strategic Dilemmas, Doctrine and Capabilities," *International Security*, vol. 43, no. 3 (Winter 2018/19):7-52, https://doi.org/10.1162/ISEC_a_00340. Max Fisher; "India, Long at Odds With Pakistan, May Be Rethinking Nuclear First Strikes," *New York Times*, March 31, 2017; Shashank Joshi, "India's Nuclear Doctrine Should no longer be Taken for Granted," *The Interpreter*, Lowy Institute for International Policy, March 22, 2017; Ankit Panda, "Nuclear South Asia and Coming to Terms with 'No First-Use' With Indian Characteristics," *The Diplomat*, March 28, 2017, Sameer Lalwani and Hannah Haegeland, "The Debate Over Indian Nuclear Strategy is Heating Up," *War on the Rocks*, April 5, 2017.

²¹ Toby Dalton, "Much Ado about India's No-First-Use Nuke Policy," Carnegie Endowment for International Peace, September 26, 2019.

²² Gurmeet Kanwal, "India's Nuclear Doctrine: Reviewing NFU and Massive Retaliation," *IPCS*, January, 2015.

²³ Toby Dalton and George Perkovich, "India's Unresolvable Nuclear Debate," *Dawn*, June 2, 2016, <http://herald.dawn.com/news/1153416/indias-unresolvable-nuclear-debate>

²⁴ Scott D. Sagan, *Moving Targets: Nuclear Strategy and National Security* (Princeton University Press, 1989), 11-57.

A similar debate has continued over India's "credible minimum deterrence." Over the years, India has referred to a variety of threats, which it perceives from both Pakistan and China, as justification of a policy of "credible minimum deterrence." This policy had enabled India to keep its options open in defending what is meant by "minimum." As Vipin Narang noted, "anything credible against China will not be 'minimum' against Pakistan; and what constitutes 'minimum' against Pakistan cannot be 'credible' against China."²⁵ India's 2017 Joint Armed Forces Doctrine also omitted the phrase "minimum" from the "credible minimum deterrence" posture.²⁶ India was already adding more nuclear weapons and nuclear material into its arsenal and perfecting new capabilities, this categorical announcement of doing away with "minimum" along with plausible signs of India moving towards counterforce strategy is bound to increase arms race and affect strategic balance in the India-Pakistan dyad particularly.

Pakistan's Doctrinal Paradox

Unlike India, Pakistan has not declared its nuclear doctrine. There are only a few official statements that outline some features of the nuclear policy of Pakistan. The official statements, while carefully calibrated so as not to reveal any details of Pakistan's nuclear posture, do not indicate an NFU posture. Pakistan has announced a policy of credible minimum deterrence and identifies deterrence against India's conventional military superiority as the driving factor of its nuclear policy. Pakistan has also postulated a "full spectrum deterrence" (FSD) posture after testing the short-range tactical nuclear missile, the Nasr, for the purpose of plugging the perceived gaps in Pakistan's deterrence posture in response to India's Cold Start doctrine — a limited-war strategy reportedly conceived in 2004 by the Indian army, that aimed to seize Pakistani territories in

²⁵ Vipin Narang, "Five Myths about India's Nuclear Programme," *The Washington Quarterly*, vol. 36, issue no. 3 (2013),

<http://dx.doi.org/10.1080/0163660X.2013.825555>

²⁶ Joint Armed Forces Doctrine, Ministry of Defence, April 2017,

http://bharatshakti.in/wp-content/uploads/2015/09/Joint_Doctrine_Indian_Armed_Forces.pdf> also see:

Ankit Panda, "India's 2017 Joint Armed Forces Doctrine: First Takeaways," April 28, 2017, <http://thediplomat.com/2017/04/indias-2017-joint-armed-forces-doctrine-first-takeaways/>

blitzkrieg attacks, without risking a nuclear response.²⁷

Notwithstanding, Pakistan maintains a first use option, it has not clearly defined the so-called “redlines” that might initiate a nuclear response.²⁸ This opacity is aimed at deterring an attack from India at any level, but it also increases the risk of a miscalculated escalation in case of a conflict because unspecified redlines are more likely to fail when they are not fully acknowledged and consequences of their violation are not clear to the adversary.²⁹

In the aftermath of the Indian claims of a surgical strike in Azad Jammu and Kashmir in 2016 and attack on mainland Pakistan in 2019, there is a growing perception in India that it is possible to fight a limited war under nuclear overhang without affecting Pakistan’s nuclear redlines.³⁰ Such assertions are dangerous and hold a greater risk of escalation in future crises.

Lack of Escalation Control Mechanism

At the dawn of nuclear era, Bernard Brodie famously asserted that, “thus far the chief purpose of our military establishments has been to win wars, now onwards their chief purpose should be to avert them.”³¹ This realisation was based on perceived mutual vulnerability as a result of massive nuclear development on each side of the Cold War rivals. It led the Cold War strategic thinkers to establish ways and means to control crises from escalating into full-fledged wars.

²⁷ Naveed Ahmad, “India’s Elusive ‘Cold Start’ doctrine and Pakistan’s Military Preparedness,” *Express Tribune*, January 20, 2017, <https://tribune.com.pk/story/1300686/indias-elusive-cold-start-doctrine-pakistans-military-preparedness/>

²⁸ Sadia Tasleem, “Pakistan’s Nuclear Use Doctrine,” Carnegie Endowment for International Peace, June 30, 2016; Sitakanta Mishra, “Pakistan’s Nuclear Threshold: Not as Low as Perceived.” *IndraStra Global* 6 (2017): 4. https://www.ssoar.info/ssoar/bitstream/handle/document/52086/ssoar-indrastraglobal-2017-6-mishra-Pakistans_Nuclear_Threshold_Not_as.pdf?sequence=1

²⁹ Bruno Tertrais, Drawing Red Lines Right, *The Washington Quarterly*, (Fall 2014), 7-24, <https://twq.elliott.gwu.edu/sites/twq.elliott.gwu.edu/files/downloads/Tertrais_Fall2014.pdf>

³⁰ Shekhar Gupta, “How Indian Armed Forces can Defeat Pakistan in Less than a Week,” *The Print*, February 1, 2020.

³¹ Bernard Brodie, ed., *The Absolute Weapon: The Atomic Power and World Order* (New Haven, Connecticut: Yale Institute of International Studies, 1946).

Nuclear weapons have not eliminated the risk of war, instead they have given way to a constantly looming risk of a crisis escalating to a nuclear exchange. Adversaries deliberately escalating a conflict to achieve certain objectives (e.g. controlling the behaviour of the other state through escalation dominance) would create the risk of an inadvertent escalation, which could spiral out of control if escalation control mechanisms are not in place.

In South Asia, India and Pakistan are competing to strengthen nuclear deterrence, but lack escalation control mechanisms, thus exposing themselves to the uncontrolled dynamics of a crisis situation. Unlike the Cold War deterrence equation, which according to Bhumitra Chakma, was “an autonomous strategic phenomenon,” South Asian deterrence is more complex and “subject to the penetration of systemic forces,” involving external powers.³² In the absence of bilateral escalation control mechanisms, India and Pakistan have largely relied on these extra regional systemic forces such as the U.S. intervention for escalation control during crisis situations.

The idea of outsourcing crisis management to a third party is inherently destabilising as it is based on potentially misplaced trust that the third party will intervene before the crisis becomes out of control. This can lead the competing states to feel more incentivised to engage in a policy of brinkmanship.³³ In addition, a third party’s motivation to intervene during a crisis may be different at any given point, hence increasing the chance of miscalculation by the competing states that in turn would challenge the strategic stability in the region. Likewise, to be effective, the third party must have an impartial character and should have leverage on parties involved in a conflict. This situation seems to be changing in South Asia, particularly after the U.S. tilt towards India in the wake of rebalancing in the Indo Pacific region.³⁴ During Pulwama/Balakot crisis in 2019, the U.S.

³² Bhumitra Chakma, *South Asia’s Nuclear Security* (New York: Routledge, 2015), 8.

³³ Rabia Akhtar, “Outsourcing Escalation Control,” *South Asian Voices*, September 23, 2013, <http://southasianvoices.org/outsourcing-escalation-control/>

³⁴ Jayita Sarkar, “Three Concrete Steps Toward South Asian Nuclear Stability,” *The Bulletin of Atomic Scientists*, September 13, 2016, <http://thebulletin.org/how-reduce-south-asias-nuclear-dangers>

role as a neutral third party was debated as it was perceived to be missing at the beginning and tilting more in favour of India.³⁵

Growing Conventional Asymmetry

Conventional force balance plays an essential role in maintaining regional peace. There is, however, an increasing gap between Pakistan and India's conventional force structures. Pakistan is wary of India's acquisition of sophisticated weapon systems and views them as a source of conventional imbalance. Unable to match India's conventional superiority due to its weak economy, Pakistan has increased its reliance on nuclear weapons vis-à-vis India, thereby lowering the nuclear threshold.

India is emerging as the higher spender on its conventional military with the proposed allocation of U.S.\$72.6 billion for defence in the fiscal year 2023-24 which is a 13 per cent increase from previous year.³⁶ In comparison, Pakistan's 2022-23 defence budget stands at U.S.\$10.3 billion.³⁷ India has also been the world's top arms importer since 2010. Its major imports includes high-tech systems such as warplanes, and missile defence system from Russia, combat aircraft and submarines from France, Israeli missiles and American transport aircraft etc.³⁸

This conventional asymmetry is bound to increase in future as India is expected to further increase its defence spending. This, in turn, will increase Pakistan's reliance on nuclear weapons since, as Robert Crockett notes, "without nuclear weapons, Pakistan loses military

³⁵ Sameer Lalwani, "America Can't Ignore the Next Indo-Pakistan Crisis," *War on the Rocks*, February 26, 2021, <https://warontherocks.com/2021/02/America-Cant-Ignore-The-Next-Indo-Pakistani-Crisis/>

³⁶ Manoj Kumar, "India Raises Defence Budget to \$72.6 bln Amid Tensions with China," February 1, 2023, [https://www.reuters.com/world/india/india-raises-defence-budget-726-bln-amid-tensions-with-china-2023-02-01/#:~:text=NEW%20DELHI%2C%20Feb%201%20\(Reuters,its%20tense%20border%20with%20China](https://www.reuters.com/world/india/india-raises-defence-budget-726-bln-amid-tensions-with-china-2023-02-01/#:~:text=NEW%20DELHI%2C%20Feb%201%20(Reuters,its%20tense%20border%20with%20China)

³⁷ Military Expenditure Database, SIPRI yearbook 2022, *SIPRI*, <https://www.sipri.org/databases/milex>

³⁸ Surge in Arms Imports to Europe, while US Dominance of the Global Arms Trade Increases, *SIPRI*, March 13, 2023, <https://www.sipri.org/media/press-release/2023/surge-arms-imports-europe-while-us-dominance-global-arms-trade-increases#:~:text=India%20remains%20the%20world's%20top,replace%20imports%20with%20local%20designs>

parity.”³⁹ Furthermore, nuclear deterrence is deemed to be more cost effective for Pakistan as the cost of its conventional forces is at least six times higher than that of the nuclear force. ⁴⁰

Strategic Defence Upgrades

South Asia is witnessing an upsurge in the acquisition of advanced weapon systems, capabilities and new technologies. There is rapid modernisation of conventional and non-conventional weapon systems. While all military upgrades lead to a securitised environment, the following developments are specifically challenging the regional stability between India and Pakistan.

Missile Developments

Since 1998, India and Pakistan have come a long way in developing and improving their missile delivery systems. The past decade has witnessed rapid missile proliferation and both India and Pakistan now possess a variety of missiles with different ranges and pay loads.

India possesses a mature and wide ranging missile programme, consisting of both ballistic and cruise missiles. It includes short, medium and long range systems. India’s operational land-based missiles include Prithvi-I, Agni-I and Agni-II. The Prithvi series has three road-mobile, surface-to-surface systems (Prithvi-I, II, III), and one sea-to-surface (Dhanush). In the Agni series, there are four operational missile systems: Agni-I, II, and III and the recently tested inter-continental ballistic missile (ICBM) Agni-V. Successful testing of the Agni-V, with a range of 5000-8000 km, is significant as it puts India in the exclusive club of

³⁹ Robert Crockett, “National Security Implications of Eliminating Nuclear Weapons,” in Project on Nuclear Issues: A Collection of Papers from the 2013 Conference Series, ed., Sarah Minot (Washington, DC: Centre for Strategic and International Studies, 2014).

⁴⁰ Asim Bashir Khan, *The Price of Nonconventional Security*, Regional Insight, (Washington DC: Carnegie Endowment for International Peace. June 30, 2016), <http://carnegieendowment.org/2016/06/29/price-of-nonconventional-security-pub-63914>

states possessing ICBMs.⁴¹ India's K series of missiles, including the K-15 (Sagarika) and the K-4, are submarine launched missiles. Successful testing of the K-4 along with commissioning of the INS Arihant submarine provided India a seaborne nuclear deterrent.⁴² India's K-5 is rumoured to have a range of 5000 to 6000 kilometres (km). India's cruise missiles include a 300-500 km BrahMos supersonic missile (a joint Indian-Russian project), the Astra (indigenously produced air-to-air missile) and the Nirbhay (indigenously developed long-range cruise missile).⁴³

Pakistan has three operational nuclear-capable ballistic missiles: the short-range Ghaznavi (Hatf-III) and Shaheen-1 (Hatf-IV), and the medium-range Ghauri (Hatf-VI). It has four other nuclear-capable ballistic missiles: the medium-range Shaheen-2 (Hatf-6); the short-range Abdali (Hatf-2); the Nasr (Hatf-9); and the Shaheen III with a range of 2750 km.⁴⁴ Pakistan has also developed two cruise missiles, Babur (Hatf-7) and Ra'ad (Hatf-8).⁴⁵ Pakistan also tested Babur III, a submarine launched cruise missile (SLCM) with a range of 450 km. With the induction of the Babur III into its arsenal, Pakistan has acquired a sea-based second strike capability.⁴⁶ Pakistan has also conducted the first flight test of a new medium range ballistic missile, Ababeel, with a range of 2200 km. The Ababeel is capable of launching multiple warheads using multiple independent re-entry vehicle (MIRV) technology.⁴⁷ Notwithstanding doubts about the accuracy and efficiency of MIRV technology on a medium or short range missile, Pakistan has become the fifth country after the U.S., China, France and Russia to acquire this

⁴¹ O'Donnell, Frank and Harsh V. Pant, "Evolution of India's Agni-V Missile: Bureaucratic Politics and Nuclear Ambiguity," *Asian Survey* 54, no. 3 (2014): 584-610.

⁴² Hans M. Kristensen and Matt Korda, "Indian Nuclear Weapons, 2022," *Bulletin of the Atomic Scientists* 78, no. 4 (2022): 224-236.

⁴³ The success and accuracy of Nirbhay is questionable as three out of four flight tests of the missile has been a failure.

⁴⁴ Zafar Khan, "Conceptualising Pakistan's Evolving Nuclear Policy after Two Decades of Nuclearisation," *Asian Journal of Comparative Politics* 8, no. 1 (2023): 228-243.

⁴⁵ ISPR, ISPR Press Release no. PR104/2011-ISPR, April 29, 2011, http://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1732

⁴⁶ Iftikhar Ali and Jatswan S. Sidhu, "Strategic Dynamics of the Arms Race in South Asia," *Journal of Asian and African Studies* (2023).

⁴⁷ ISPR Press release no PR-34/2017-ISPR, Dated: January 24, 2017, <https://www.ispr.gov.pk/press-release-detail.php?id=3705>

capability.⁴⁸

Although the pattern of missile testing suggests that India and Pakistan are not in a mutual competition, it certainly adds to the strategic stability challenges. The induction of short-range ballistic missiles (SRBMs) such as Pakistan's Nasr, a surface-to-surface, multi-tube ballistic missile with 60 km range, and India's Prahar,^{49a} a solid-fuelled, road-mobile with a range of 150 km, invite even greater challenges to regional stability.

Both India and Pakistan claim that they maintain assertive control on all missiles, including the SRBMs, thereby reducing the risk of unauthorised detonation or accidental use. The shorter range missiles, however, may cause a nuclear ambiguity problem.⁵⁰ India's Prahar is not a declared nuclear capable system, but it is largely viewed as one in Pakistan's security circles.⁵¹ India's decision to replace the older Prithvi-I system, which is designed primarily for a nuclear attack, with the Prahar reinforces this view in Pakistan and increases the risk of ambiguity.⁵²

Pakistan has introduced into its arsenal the long range Shaheen III (2750 km), which can cover India's whole landmass. According to Pakistani officials, it will "strengthen Pakistan's deterrence capability vis-à-vis India" by targeting Indian bases in the Andaman and Nicobar

⁴⁸ Sitakanta Mishra, "The Myth of Pakistani MIRVs," *South Asian Voices*, *The Stimson Centre*, January 27, 2017, <https://southasianvoices.org/hot-takes-pakistans-mirv-capable-ababeel-missile/>

⁴⁹ The Prahar is not declared by India as a nuclear missile, but it is capable of carrying both conventional and tactical nuclear weapons and largely viewed as a nuclear weapon by Pakistan. See; Vishal Thapar, "India Test Fires a Shoot-and-Scoot Nuclear Missile, Prahar," *SP's MAI*, August 01-15, 2011; Toby Dalton, George Perkovich, "India's Unresolvable Nuclear Debate," *Herald*, October 01, 2016, <http://herald.dawn.com/news/1153416>

⁵⁰ Dinshaw Mistry, "Missile Proliferation and Deterrence Stability in South Asia," in Michael Krepon and Julia Thompson eds., *Deterrence Stability and Escalation Control in South Asia*, (Washington DC: The Stimson Centr, 2008).

⁵¹ Z. Kazmi, (n.d.). SRBMs, Deterrence and Regional Stability in South Asia: A Case Study of Nasr and Prahhaar," www.irs.org.pk/strategic/sps012.doc

⁵² Design Characteristics of India's Ballistic and Cruise Missiles, *Nuclear Threat Initiative*, <http://www.nti.org/learn/countries/india/delivery-systems/>

islands in the Bay of Bengal.⁵³ India views the introduction of the Shaheen III as a destabilising move because it can destroy India's second-strike capability, one of the requirements of strategic stability.⁵⁴

India has also announced its intention to equip its medium and long-range nuclear-capable ballistic missiles with MIRV technology. While Pakistan's test of its MIRV missile Ababeel is proclaimed to render Indian radars ineffective, India's Defence Research & Development Organisation (DRDO) is pitching its MIRVs a counter-measure to China's ballistic missile defence (BMD) system. Development of MIRV missiles would challenge both India's and Pakistan's claims of nuclear minimalism and particularly call into question India's commitment to NFU.⁵⁵

Acquisition of Ballistic Missile Defence (BMD) System

India is heavily investing in its BMD system against threats emanating from Pakistan's strategic missile system. India began its efforts to acquire a BMD system soon after its overt nuclearisation, and accelerated its efforts after acquiring key technologies such as tracking, fire control and interceptor guidance from countries like Israel, France and Russia.⁵⁶ In 2012, India's DRDO announced the successful development of a missile defence shield that could be deployed to cover two major Indian cities in

⁵³ Khalid Ahmad Kidwai, Advisor, National Command Authority and former DG Strategic Plans Division, Pakistan, Interview with the author, Karachi, August 31, 2016.

⁵⁴ Arka Biswas, "Pakistan's New Missile Disrupts Nuclear Stability in South Asia," *The National Interest*, March 27, 2015, <http://nationalinterest.org/blog/the-buzz/pakistan%E2%80%99s-new-missile-disrupts-nuclear-stability-south-asia-12495>

⁵⁵ Joshua T. White and Kyle Deming, "Dependent Trajectories: India's MIRV Program and Deterrence Stability in South Asia" in Michael Krepon eds., *Deterrence Stability and Escalation Control in South Asia*, (Washington DC: The Stimson Centre 2015), 178.

https://www.files.ethz.ch/isn/190631/Deterrence_Instability_WEB.pdf

⁵⁶ Manoj Joshi, "Government Baffled Over DRDO Chief's Claim on Missile Shield," *India Today*, July 18, 2012, <http://indiatoday.intoday.in/story/government-baffled-over-drdo-chief-claim-on-missile-shield/1/208850.html>

its first phase.⁵⁷ India's BMD is a double-tiered system comprised of two interceptor missiles that provide high-low cover against incoming missiles. The Prithvi Air Defence (PAD) missile tested in November 2006 is capable of interception at exo-atmospheric altitudes of 50km to 80km. The Advanced Air Defence (AAD) Missile tested in December 2007 is designed for interception at the endo-atmospheric altitudes up to 30km.⁵⁸

In 2017, India tested another indigenously built ballistic missile system. The new exo-atmospheric interceptor missile named the Prithvi Defence Vehicle (PDV) is slated to replace the old PAD system. With its Imaging Infrared (IIR) seeker capability, it will be able to distinguish between incoming warheads and decoys. ⁵⁹

India has also completed two flight tests of its very short-range air-defence system (VSHORADS) missiles which is a man-portable air defence system (MANPADS).⁶⁰ Possessing miniaturised reaction control system (RCS) and integrated avionics, VSHORADS has a range of 6 km and it is capable of carrying a pre-fragmentation warhead of upto 2 kg.

In 2018, India also signed a deal with Russia for five regiments of Russian-made S-400 Triumf advanced Air Defense Systems.⁶¹ Despite U.S. opposition, India has received third squadron in February 2023 and

⁵⁷ "India's Missile Defence Shield Ready, Says DRDO Chief," *India Today*, May 6, 2012, <http://indiatoday.intoday.in/story/india-missile-defence-shield-ready-drdo-chief/1/187601.html>

⁵⁸ Design Characteristics of India's Ballistic and Cruise Missiles, Nuclear Threat Initiative, <http://www.nti.org/learn/countries/india/delivery-systems/>, also see Pooja Tyagi, "A Look at the Indian Ballistic Missile Defence Programme," *India TV*, March 23, 2013 and "India Successfully Tests Interceptor Missile," *Dawn*, May 16, 2016.

⁵⁹ Franz-Stefan Gady, "India Successfully Tests Prithvi Defense Vehicle, A New Missile Killer System," *The Diplomat*, February 15, 2017, <https://thediplomat.com/2017/02/india-successfully-tests-prithvi-defense-vehicle-a-new-missile-killer-system/>

⁶⁰ "Agnipath — Major Transformative Reform," India's Ministry of Defence 2022 Year End Review (Some Extracts), chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/<https://www.vayuaerospace.in/Issue/202302121749556419.pdf>

⁶¹ Richa Tokas "Procuring S-400: Changing Dynamics of Foreign Relations," *Strategic Analysis* 46, no. 2 (2022): 220-226.

have installed the system on its western border alongside Pakistan in Punjab sector.⁶²

India rationalises BMD development on the grounds that it has displayed restraint in adopting an NFU policy, opposed to Pakistan's first use posture, and that a BMD system is a necessary defensive measure to ensure survivability and to counter any threat emanating from Pakistan.⁶³ At the same time, there is a debate within and outside India about the usefulness of a BMD system in South Asia. There are also questions about the effectiveness of the BMD system other than under controlled circumstances.⁶⁴

Apart from its uncertain effectiveness, BMD systems are considered a destabilising development that could initiate an arms race in the region. In the view of critics, it upsets mutual vulnerability, an essential prerequisite for strategic stability, and would create a false sense of security in the minds of Indian decision makers which may lead to an unwarranted escalation of crises in the region. BMD deployment also complements India's offensive military doctrines such as the proactive military strategy and the counter force strategy which is deemed risky.⁶⁵

It is assessed that Pakistan, in response to India's BMD, would potentially take certain measures to restore mutual vulnerability in its favour. Pakistan's test of the MIRV missile Ababeel is a step in that direction. Pakistan may further opt for larger arsenals, penetration devices and other countermeasures against BMD system.⁶⁶ These developments on both sides would disturb the existing precarious balance.

⁶² Akash Sharma, "India Receives 3rd Squadron of S-400 Missile System from Russia, Likely to be Deployed Along Pak Border," *News 18*, February 28, 2023, <https://www.news18.com/news/india/india-receives-3rd-squadron-of-s-400-air-defence-missile-system-from-russia-likely-to-be-deployed-along-pakistan-border-7187119.html>

⁶³ Balraj Nagal, *India and Ballistic Missile Defence: Furthering a Defensive Deterrence*, (Washington DC: Carnegie Endowment for International Peace, June, 2016).

⁶⁴ Joshi, "Government Baffled over DRDO Chief's Claim on Missile Shield."

⁶⁵ Zafar Nawaz Jaspal, "The Introduction of Ballistic Missile Defense in South Asia: Implications on Strategic Stability," in Feroz Hasan Khan, Ryan Jacobs, and Emily Burkeeds., *Nuclear Learning in South Asia: The Next Decade*, (Monterrey, CA: Naval Postgraduate School Center on Contemporary Conflict, June 2014).

⁶⁶ Nagal. *India and Ballistic Missile Defence: Furthering a Defensive Deterrence*, 2016.

Adoption of Disruptive Technologies

There is a worldwide technological revolution in emerging disruptive technologies and South Asia is not immune to it. Disruptive technologies refer to “new technologies that unexpectedly displace the position of established technologies,” such as cyber weapons, 3D printing, unmanned aerial vehicles (UAVs) remote sensing technologies and lethal autonomous weapons systems (LAWS).⁶⁷ In the defence sector, these new technologies are replacing the old ones, making warfare more dangerous and unpredictable. The introduction of disruptive technologies by states changes the rules of the game without prior notice and might destabilise the existing balance. In South Asia, cyber space has emerged as a new and as yet unspecified battleground. Although India and Pakistan have not officially embraced the idea of the offensive use of cyber space against one another, India is reported to have developed some cyber-intelligence and offensive cyber capabilities against Pakistan.⁶⁸ The growing reliance on cyber links and technologies in warfare has increased mutual vulnerabilities, adding an additional front to an already problematic situation. Cyber space may also be exploited by non-state actors to create a false alarm during a crisis situation, similar to a hoax call to the Pakistani President from someone claiming to be the Indian Minister of External Affairs following the Mumbai attack in 2008.⁶⁹

⁶⁷ J. Bower and C. Christensen, “Disruptive Technologies: Catching the Wave,” in Robinson, N. and Valeri, L., 2008, in IFIP International Federation for Information Processing, vol. 253, Critical Infrastructure Protection, eds., E. Goetz and S. Shenoi; (Boston: Springer), 3-14.

⁶⁸ Cyber Capabilities and National Power: A Net Assessment, *International Institute for Strategic Studies*, June 28, 2021, https://www.iiss.org/globalassets/media-library/content/migration/files/research-papers/cyber-power-report/cyber-capabilities-and-national-power--a-net-assessment____.pdf

⁶⁹ According to Wiki Leaks cables, few days following terrorist attack on the Indian city Mumbai in 2008, a man pretending to be India’s then External Affairs Minister, Pranab Mukherjee created an alarm in Islamabad, when he called Asif Zardari, Pakistan’s President and warned about India’s military response. See for details: Dean Nelson, “Wiki Leaks: hoax phone call brought India and Pakistan to brink of war,” *Telegraph*, March 23 2011, <https://www.telegraph.co.uk/news/worldnews/wikileaks/8401391/WikiLeaks-hoax-phone-call-brought-India-and-Pakistan-to-brink-of-war.html>.

Another dimension of disruptive technologies is unfolding in the form of unmanned aerial vehicles (UAVs). In September 2015, Pakistan became the fourth country in the world — following the U.S., the United Kingdom and Israel — to use an armed drone, in this instance for a targeted assault on terrorists in the tribal areas of Pakistan.⁷⁰ Initially, India largely relied on Israeli and the U.S. drones, but in a latest move India is trying to acquire MQ-9B Predator armed drones from the U.S. However, New Delhi is heavily investing in its indigenous capability as well e.g. development of its own stealth combat drones such as medium-altitude long-endurance unmanned aerial vehicles (MALE UAVs).⁷¹ The excessive reliance on UAVs is bound to change the nature of warfare in South Asia. With the prospect of less or no human loss, it is not unreasonable to assume that states in conflict are more likely to engage in more aggressive military postures.

Potential employment of lethal autonomous weapons (LAWS) or the so-called killer robots is likely to create additional risk of instability. Technological advancements have challenged the traditional foundations of stable deterrence and have exposed it to new vulnerabilities. The survivability of nuclear assets is facing new challenges in view of enhanced accuracy and availability of remote sensing that can even target submarines and mobile missiles.⁷²

Impact of Regional Rebalancing

The external rebalancing in the Indo-Pacific region has direct impact on the security situation in the South Asian region. The U.S. pivot to Asia paved the way for new strategic and economic cooperation in the region, including Japan, South Korea, the Philippines, Indonesia, Australia and India. While the policy was primarily aimed at containing China's

⁷⁰ Michael Boyle, "Why Pakistan's First Drone Strike Should Worry Obama," *Express Tribune*, October 1, 2015, <http://tribune.com.pk/story/965600/why-pakistans-first-drone-strike-should-worry-obama/>

⁷¹ Manish Kumar Jha, "India's Quest for High-Calibre Military UAVs is Still in its Infancy," *Financial Express*, December 30, 2022, <https://www.financialexpress.com/business/defence-indias-quest-for-high-calibre-military-uavs-is-still-in-its-infancy-2931909/>

⁷² Keir A. Lieber, "Nuclear Weapons in the New Era of Counterforce" in Policy Roundtable 1-4 on U.S. Nuclear Policy, *ISSF*, December 22 2016, <https://issforum.org/roundtables/policy/1-4-nuclear>

growing influence, it destabilised the existing power structure in the region. As a counter-weight to this policy, China began to assert its control in the region through economic cooperation, trade and military relationships and diplomatic initiatives.⁷³ The growing U.S.-China competition is fast changing into an adversarial relationship and posing great challenges to regional security.

As a result of this external rebalancing, the security dynamics in South Asia have changed dramatically. India's status was elevated in this new arrangement due to its perceived position as a counter weight to China. While Indian position elevated, Pakistan's importance, as a frontline ally in the war on terror lessened after the U.S. final withdrawal from Afghanistan in 2021.⁷⁴ Since the introduction of "Af-Pak" policy of the U.S.,⁷⁵ Pakistan was viewed more as a part of the Afghanistan problem. As a result, India managed to become de-hyphenated from the decades old India-Pakistan equation and entered into a strategic partnership with the U.S. which opened up new ways for nuclear and defence cooperation for India.

In the last 15 years alone, India has acquired equipment worth around U.S.\$ 20 billion from the U.S.⁷⁶ Additionally, India has signed a number of defence cooperation agreements with the U.S. including the Basic Exchange and Cooperation Agreement (BECA) for geospatial cooperation in 2020. This is the third foundational agreement that has been signed between India and the U.S. after the Logistics Exchange Memorandum of Agreement and the Communications Compatibility

⁷³ International conference on "Emerging Security Order in Asia Pacific and its Impact on South Asia," organized by the Islamabad Policy Research Institute (IPRI) November 17-18, 2015, <http://www.ipripak.org/emerging-security-order-in-asia-pacific-and-its-impact-on-south-asia/>

⁷⁴ Madiha Afzal, "An Uneasy Limbo for US-Pakistan Relations Amidst the Withdrawal from Afghanistan," The Brookings Institute, August 6, 2021.

⁷⁵ The Obama Administration announced its new "Af-Pak" strategy to deal with situation in Afghanistan and Pakistan on March 27, 2009. Under this policy, as explained by National Security Advisor General James Jones, the United States "will treat Afghanistan and Pakistan as two countries, but as – with one challenge in one region." The US administration discontinued the use of term in 2010, in view of growing criticism.

⁷⁶ Manjeet Negi, "India, US to Sign BECA Deal this Month-end for Closer Defence Ties," *India Today*, October 19, 2020, <https://www.indiatoday.in/india/story/india-us-beca-china-defence-ties-1733082-2020-10-19>

and Security Agreement in 2016 and 2018 respectively.⁷⁷

In response to the U.S. rebalancing, China initiated a charm offensive in the region. China's engagement with Pakistan, its massive U.S.\$46 billion investment in the China-Pakistan Economic Corridor (CPEC) and the development of Gwadar port as part of the CPEC raised serious concerns regarding China's ambitions. India has made no attempt to hide its anxiety over the CPEC, especially given the prospect of a Chinese presence in the Arabian Sea through the Gwadar port.⁷⁸

The external rebalancing of major powers has had a direct influence on South Asian strategic stability following the newly defined roles of the two nuclear rivals. India, after its elevated regional status, has become more assertive and as a result, is less inclined towards negotiations on core issues on equal terms. Recent events, especially the India-Pakistan face off following the Pulwama/Balakot crisis have demonstrated a more risk acceptance approach.

Challenging the Nuclear Non-Proliferation Norms

The emerging trends and positions on nuclear non-proliferation in South Asia not only have the tendency to make the nuclear norms more vulnerable, but also undermine the security of the region as a whole. The emerging trends include preferential treatment of India in civil nuclear agreements and its potential membership in the NSG, growing nuclear material stockpiles and the consistent opposition by both Pakistan and India to a Fissile Material Cut-off Treaty (FMCT) and to the Comprehensive Test Ban Treaty (CTBT).

Following the announcement of the Indo-U.S. nuclear agreement in 2005, India was granted a waiver by the NSG, which exempted it from the requirement of full-scope IAEA safeguards as a condition for nuclear trade. India, with its booming economy, attracted numerous civil nuclear

⁷⁷ US Security Cooperation with India, Factsheet, Bureau of Political-Military Affairs, US department of State, January 20, 2021.

⁷⁸ Anurag Kotoky and A. Ananthlakshmi, "India "Concerned" by China Role in Pakistan's Gwadar Port," *Reuters*, February 2, 2013, <http://in.reuters.com/article/india-airshow-china-pakistan-antony-idINDEE91506I20130206>

deals with a number of countries, including France, Russia, Kazakhstan, Namibia, Canada, Australia and Japan among others. The uranium supply from these countries is being used for the civilian nuclear energy programme, freeing up India's indigenous uranium reserves for nuclear weapons development.

In addition, a number of concerns have been expressed with respect to India's separation plan. India has not made a clear distinction between its civilian and military nuclear facilities, and has not placed its all civilian nuclear facilities under the IAEA safeguards.⁷⁹ As a result, India's separation plan did not create two categories of civilian and military facilities as envisaged. It has rather resulted in three categories: civilian safeguarded, civilian unsafeguarded, and military facilities.⁸⁰ The distinction between its civilian and military programme is quite blurred, making it a unique case where three streams of a nuclear programme run in parallel. Interestingly India's nuclear deal with the U.S., which suffered a deadlock for six years since its signing in 2008, was finalised only after the U.S. agreed to give up two primary demands: one, related to tracking as the U.S. origin all nuclear material supplied by the U.S. and the other concerning U.S. suppliers' liability in case of an accident.⁸¹

Besides that, both India and Pakistan are expanding their fissile material stocks exponentially. According to the 2022 report of International Panel on Fissile Materials (IPFM), India is estimated to possess 4.9 ± 2 tons of highly enriched uranium (HEU) and 8.1 ± 4.3 tonnes of reactor-grade plutonium separated from unsafeguarded heavy-water power reactors as of the beginning of 2021. Pakistan's fissile material stocks are estimated to include 4 ± 1.2 tons of HEU and 0.5 tonnes of plutonium of plutonium.⁸² In 2015, it was reported that India

⁷⁹ Kalman A. Robertson and John Carlson, "The Three Overlapping Streams of India's Nuclear Program," Project on Managing the Atom, Belfer Center for Science and International Affairs, Harvard Kennedy School, April 2016, <http://belfercenter.ksg.harvard.edu/files/thethreesoverlappingstreamsofindiasnuclearpowerprograms.pdf>

⁸⁰ Robertson and Carlson, The Three Overlapping Streams of India's Nuclear Program.

⁸¹ "US-India Reach 'Breakthrough Understanding' on Stalled Civil Nuke Deal," RT, January 25, 2015, <https://www.rt.com/news/226099-us-india-nuclear-agreement/>

⁸² Global Fissile Material Report 2022, The International Panel on Fissile Materials, https://fissilematerials.org/publications/2022/07/global_fissile_material_r.html

was building a large secret uranium enrichment centrifuge complex, the Special Material Enrichment Facility (SMEF), in Karnataka, which would further increase the fissile material stocks.⁸³ In view of the existing disparity in fissile material reserves vis-à-vis India, Pakistan has stalled negotiations on an FMCT, intended to prohibit only future production. Pakistan is pressing, as a condition for initiating FMCT negotiations, the taking into account of existing stockpiles.

India and Pakistan are two of the three Annex 2 states according to the CTBT that have neither ratified nor signed the treaty. Pakistan has conditioned its ratification on India's ratification and has also proposed signing a bilateral test ban treaty with India as a confidence building measure.⁸⁴ India, however, has vehemently opposed signing the CTBT on the grounds of nuclear sovereignty and has not indicated any interest in formalising its unilateral moratorium on nuclear testing. This resistance was even more visible during discussions between India and Japan regarding the civil nuclear agreement, where Japan insisted on understanding regarding cancellation of the agreement if India conducted a nuclear test.⁸⁵

According to experts, India's massive uranium enrichment developments are an indication of its efforts to develop thermonuclear weapons.⁸⁶ India's ambition to develop ICBMs up to the range of 10,000

⁸³Adrian Levy, "India Is Building a Top-Secret Nuclear City to Produce Thermonuclear Weapons, Experts Say," *Foreign Policy*, December 16, 2015. Also see: David Albright and Serena Kelleher-Vergantini, "India's New Uranium Enrichment Plant in Karnataka," *ISIS*, July 1, 2014, <http://isis-online.org/isis-reports/detail/indias-new-uranium-enrichment-plant-in-karnataka1/>

⁸⁴ "Pakistan Offers India Bilateral Arrangement on Non-Testing of Nuclear Weapons" *Express Tribune*, August 16, 2016, <http://tribune.com.pk/story/1163773/pakistan-offers-india-bilateral-arrangement-non-testing-nuclear-weapons/>

⁸⁵ Suhasini Haidar, "Deal or no Deal? India, Japan Wrangle over N-Pact Note," *Hindu*, November 14, 2016, <http://m.thehindu.com/news/national/deal-or-no-deal-india-japan-wrangle-over-npact-note/article9341159.ece>

⁸⁶ Levy, "India Is Building a Top-Secret Nuclear City to Produce Thermonuclear Weapons, Experts Say." Also see: David Albright and Serena Kelleher-Vergantini, "India's New Uranium Enrichment Plant in Karnataka," *ISIS*, July 1, 2014, <http://isis-online.org/isis-reports/detail/indias-new-uranium-enrichment-plant-in-karnataka1/>

km would also require progression in the thermonuclear capability.⁸⁷ Considering India's reportedly failed thermonuclear test in 1998, it is likely that India may conduct another series of test before closing the door on nuclear tests.⁸⁸ Any such development would be a serious blow to the global non-proliferation norms and highly destabilising for regional security as it would prompt Pakistan to reconfigure its future nuclear options as well.

Role of Strategic Culture

Understanding strategic culture is an important tool for analysing and predicting a state's policy choices. As Iain Johnston contends, "different states have different predominant strategic preferences that are rooted in the early or formative experiences of the state, and are influenced to some degree, by the philosophical, political, cultural and cognitive characteristics of the state and its elites."⁸⁹ In South Asia as well, India and Pakistan have had distinct strategic preferences stemming from their past experiences and ideational outlook which have played a significant role in the development of their respective nuclear programmes and policies. Factors such as prestige and domestic politics played an important role in India's policy outlook and acquisition of nuclear weapons.⁹⁰ India's nuclear programme, as we see it today, is a product of "multicausality"⁹¹ in which the idea of Indian exceptionalism has dominated its nuclear development and continues

⁸⁷ Ankit Panda, "India Is Capable of Developing a 10,000-Kilometer Range ICBM," *The Diplomat*, April 06, 2015, <http://thediplomat.com/2015/04/india-is-developing-a-10000-kilometer-range-icbm/>

⁸⁸ Sachin Parashar, "Pokhran II not fully successful: Scientist," *Times of India*, August 27, 2009, <http://timesofindia.indiatimes.com/india/Pokhran-II-not-fully-successful-Scientist/articleshow/4938610.cms>

⁸⁹ Alastair Iain Johnston, "Thinking about Strategic Culture," *International Security*, 19:4, 33-64, <http://www.fb03.uni-frankfurt.de/45431264/Johnston-1995-Thinking-about-Strategic-Culture.pdf>

⁹⁰ George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (California: University of California Press, 1999).

⁹¹ Michael Brown, et al., eds., "Going Nuclear: Nuclear Proliferation and International Security in the 21st Century" as quoted by Adil Sultan, "Pakistan's Emerging Nuclear Posture: Impact of Drivers and Technology on Nuclear Doctrine," *Strategic Studies*, 2011, 149, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://iss.org.pk/wp-content/uploads/2014/06/1340000409_86108059.pdf

to effect its posture.⁹² Despite India's strong advocacy of global nuclear disarmament, India's premier scientist Dr. Homi Bhabha announced India's ability to develop a nuclear bomb in 1958.⁹³ Security as a driving factor for nuclear weapons development arose only after India's war with China in 1962. Over the years, India's scientific community has assumed a stronger role in nuclear policymaking through their assertive role in determining the types of weapons and capabilities.⁹⁴

Pakistan, on the other hand, has perceived an existential threat from India right from its independence in 1947 that triggered a security anxiety in the Pakistani leadership.

Tensions over Kashmir have created a perpetual state of volatile relations that have culminated in a nuclear competition. In Pakistan, the nuclear programme started under civilian leadership after dismemberment of Pakistan in 1971. Over the years, especially after the enactment of the Pressler Amendment by the U.S. Congress, which constrained the sale of conventional weapons, Pakistan increased its reliance on nuclear weapons.⁹⁵ With growing reliance on the nuclear weapons as part of its national security policy, the military assumed primary responsibility in various aspects of nuclear policy as well. The civilian government was largely left with a ceremonial role in the nuclear policy making.

The current nuclear postures of both India and Pakistan are a result of their respective strategic cultures which have evolved out of their

⁹² Malik, *India's Nuclear Debate: Exceptionalism and the Bomb*.

⁹³ Salik, *The Genesis of South Asian Deterrence: Pakistan's Perspective*, 15.

⁹⁴ Joshua T. White and Kyle Deming, "Dependent Trajectories: India's MIRV Program and Deterrence Stability in South Asia" in Michael Krepon, Joshua T. White, Julia Thompson, Shane Mason eds. *Deterrence Instability and Nuclear Weapons in South Asia* (Washington DC: Stimson Centre 2015), 177.

⁹⁵ The 1985 Pressler amendment to the US law was introduced in view of Pakistan's covert nuclear activities during 1980s. It required that a presidential determination be given to the US Congress annually that Pakistan did not possess a nuclear device, failing which, military and economic assistance to Pakistan would stop. In 1990, President Bush withheld this determination and halted the sale of F-16 planes and other military equipment to Pakistan. This increased the conventional disparity in South Asia and contributed to greater reliance on nuclear weapons by Pakistan. See for example; Khan, "Eating Grass: The Making of the Pakistani Bomb," 326.

historical experiences and distinct national aspirations.⁹⁶ On the political front, the conflicting objectives of India and Pakistan have increased countervailing tendencies in the masses, making it difficult for the leaders to change or take flexible positions on sticky issues.⁹⁷ In India, for instance, the current BJP leadership has adopted a tough policy on Pakistan and have used anti Pakistan narrative even during the election campaigns. As a result, the Modi government in 2019 risked the stability of the region by launching an air strikes inside Pakistan for election gains. Likewise in Pakistan, right wing groups, despite having less political strength, make it difficult for the government to show any flexibility on the traditional Kashmir policy.⁹⁸ This behaviour was visible during Pakistani Foreign Minister's visit to India to attend the Shanghai Cooperation Organization (SCO) meeting in New Delhi recently, where no breakthrough could be possible as both sides remained stuck to their traditional positions. ⁹⁹

Opportunities for Positive Engagement

While there are multiple views on how to ensure that deterrence does not fail and lead to war, there is relatively less attention being paid to the fact that deterrence is not an end in itself.¹⁰⁰ The very purpose of maintaining deterrence is to buy time for formulating strategies to deal with issues which are challenging regional security. In South Asia as well, it is necessary to realise that, while deterrence is working, efforts should be made to find ways and means to resolve issues, create interdependence and move towards peace and stability.

⁹⁶ Eric Arnet, ed., *Military Capacity and Risk of War: China, India, Pakistan and Iran*, SIPRI (New York: Oxford University Press, 1997).

⁹⁷ Sitara Noor, Nuclear Confidence-Building Measures and Peace-Making in South Asia, *Strategic Studies*, Fall (2012): 142.

⁹⁸ Pak Trashes Musharraf's 4-Point Kashmir Formula," *Times of India*, June 30, 2010, <http://timesofindia.indiatimes.com/world/pakistan/Pak-trashes-Musharraf-s-4-point-Kashmir-formula/articleshow/6109996.cms>

⁹⁹ Hafsa Adil, "At SCO Summit, India, Pakistan Squabble over Kashmir, Terrorism," *Aljazeera*, May 8, 2023, <https://www.aljazeera.com/news/2023/5/8/at-sco-summit-india-pakistan-squabble-over-kashmir-terrorism>

¹⁰⁰ Van Jackson, "Stop Confusing Deterrence with Strategy," *The Diplomat*, July 06, 2015, <http://thediplomat.com/2015/07/stop-confusing-deterrence-with-strategy/>

India and Pakistan have witnessed short-lived moments of peace. These moments have not yielded any lasting results and have fallen victim to chronic trust deficit between the two states. As a result of the Lahore Memorandum of Understanding in 1999¹⁰¹ and the Composite Dialogue process of 2004, both India and Pakistan became engaged in a series of confidence building measures (CBM).¹⁰² While some CBMs, such as people to people contact and bilateral trade, succumbed to the rising tensions, many other, such as the agreement on non-attack on nuclear facilities, have withstood the pressure of crises. For over a decade now, however, even the CBM process has been stalled and India has declined to engage in any new CBMs with Pakistan. In response to India's reactions, Pakistan also displayed "CBM fatigue." The situation worsened after India's abrogation of article 370 and 35-A that revoked special status of Indian held Kashmir and bifurcated the region into two union territories in 5 August 2019. Despite this new low in bilateral relations, a silver lining, however, was Pakistan's opening of Kartarpur Corridor in 2019 as per schedule and bilateral reaffirmation of a 2003 ceasefire agreement on the line of control in 2021.

These agreements amidst heightened tension between the two countries suggest that despite gloomy situation arising from the hardened positions on both sides, there are some areas of potential engagement. A starting point could be giving space to legal diplomacy to address imminent issue of terrorism. It is worth recalling that Pakistan and India were not only engaging on the 2008 Mumbai case and the Pathankot base attack but they were also jointly investigating the Samjhota carnage involving the killing of 42 passengers, mostly Pakistani citizens, by Hindu extremist groups inside India as well as former Indian navy officer Kulbhushan Yadav's case, who was arrested inside Pakistani territory and admitted facilitating numerous terrorist activities in Balochistan and Karachi on the direction of India's Research & Analysis Wing (RAW). While commenting on these pending cases, analysts have highlighted that "the common legal feature is that all of them are transnational crimes, in which the crime of terrorism has been conspired in one jurisdiction and executed in the other... all the cases are pending

¹⁰¹ Lahore Declaration February, 1999, February 02, 1999, Ministry of External Affairs, Government of India.

¹⁰² Noor, "Nuclear Confidence Building Measures and Peace Making in South Asia," 137-143.

investigation before the courts and courts demand admissible evidence to convict the accused which has never been provided by either country in their respective cases.”¹⁰³ To date, these cases and trials have been used for political point scoring against the adversaries, leaving aside the legal trail, which has resulted in a continuous blame game and allegations of not doing enough to the satisfaction of the other state.¹⁰⁴

It is, therefore, important that both India and Pakistan share actionable evidence, if available as claimed by both sides, for a proper legal investigation. This step will mutually benefit both states, each of which blames the other for terror activities inside their jurisdiction, while they also face home-grown terrorists. In view of the risk of emergence of IS affiliates in India and Pakistan, it is even more important to distinguish the existing terror networks from that of the Islamic State, which could manipulate the simmering tensions between the two states. India and Pakistan may also consider expanding the existing CBMs which are successfully being implemented. For instance, since the signing of the 1988 India-Pakistan Non-Attack Agreement on Nuclear Installations, at the beginning of each year, the two countries exchange lists of their nuclear installations. This is lauded as the most successful CBM between the two nuclear rivals, and one that has withstood the pressures of various crises. Article 1 of Non-Attack Agreement prohibits an attack or damage to the other’s nuclear facilities. However, it does not specifically address cyber attacks. It is therefore suggested that a cyber-security aspect may be incorporated in the existing agreement for greater clarity and broader application. It may also be expanded to secure other critical infrastructures, such as aviation and the nuclear command and control systems.

Another mutually beneficial area of cooperation is nuclear safety and security. While it is naive to think of close cooperation and information sharing under the current circumstance, it is certainly beneficial for both states to establish close communication links and share best practices.

¹⁰³ Mariana Baabar, “Timely Message from Pakistan Sobers Modi India,” *News*, September 21, 2016, <https://www.thenews.com.pk/print/151450-Timely-message-from-Pakistan-sobers-Modi-govt>

¹⁰⁴ Sitara Noor, “Uri Attack: Managing Conflict through Legal Diplomacy,” *South Asian Voices*, The Stimson Centre, September 30, 2016, <https://southasianvoices.org/hot-takes-uri-in-context/>

India and Pakistan have signed an agreement on “Reducing the Risk from Accidents Relating to Nuclear Weapons” under which both states agreed to notify each other immediately in the event of any accident relating to nuclear weapons. The agreement was signed in 2007, initially for five years, and has been extended twice since then.¹⁰⁵ India and Pakistan should consider expanding this agreement to include all nuclear related emergencies, as already proposed by Pakistan, to establish a bilateral mechanism for early notification of nuclear emergencies. Given geographical proximity, this is important to providing quick information and work together in any such eventuality.

An associated area of cooperation could be in combating illicit trafficking of nuclear and radioactive materials, minimizing the risk of nuclear or radioactive material being used for an improvised nuclear device or a radiological dispersal device. In a worst case scenario, if nuclear or radioactive material stolen in one country is used in the other as a dirty bomb, it may create a serious crisis, particularly if that source is identified as originating from the rival state. In a worst case scenario, it may be viewed as a nuclear first use.¹⁰⁶

Lastly, with growing realisation about the necessity of regional stability for a better future, Pakistan’s long standing proposal to establish a strategic restraint regime (SRR) needs to be revisited and repackaged in more nuanced manner. The proposed SRR to control a prospective arms race in the region envisions three interlocking features: (1) a mutually agreed framework for nuclear and missile restraint; (2) conventional restraint; (3) establishing an agreed mechanism to resolve all outstanding issues especially the Kashmir dispute for stable relations.¹⁰⁷ The SRR broadly covers political, military and nuclear dynamics that have destabilised the region.¹⁰⁸ Hence, it offers a risk reduction mechanism as well.

¹⁰⁵ Agreement on Reducing the Risk from Accidents Relating To Nuclear Weapons, The Stimson Center, February 21, 2007.

¹⁰⁶ Noor, “Nuclear Confidence Building Measures and Peace Making in South Asia,” 146-147.

¹⁰⁷ Khan, *Eating Grass: the Making of Pakistani Bomb*, 296.

¹⁰⁸ Shahzad Chaudhry, “Strategic Restraint,” *News International*, March 11, 2016, <https://www.thenews.com.pk/print/104353-Strategicrestraint>

Conclusion

Strategic stability in South Asia has been sustained through various crises over the past two decades. However, recent developments have created destabilising factors that pose new challenges. Incidents involving non-state actors, whose interests lie in perpetual India-Pakistan conflict, call into question the role of nuclear deterrence and its applicability in the 21st century.

The existing tense situation is further exacerbated with the development and implementation of inflammatory military strategies, actions and statements. Arms control stability is also on shaky grounds due to the growing arms build-up in the region. These developments put a severe burden on crisis stability and have increased the probability of a crisis originating from some unintended incident that might lead to a nuclear alert. It is therefore important that both states develop more confidence and evolve a strategic restraint regime that would work at crosscutting levels to strengthen strategic stability. A stable relationship based on a genuine desire to resolve decade old issues would be the only guarantee of a stable future of South Asia.