



# ISSUE BRIEF

No. 218

March 2020

## Mapping Pakistan's Nuclear Force Trajectory in the Last Decade (2009-2019)



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Out of the several nuclear hotspots globally, Pakistan has been the central focus of analysts worldwide in the last decade. Wide range of debates varying from changing posture, numerical advancements of warheads and frequent evolving technical capabilities have taken place for all the right reasons. The fact that Pakistan, at present, is the fastest growing nuclear country is not new. This has been substantiated over and over again by various yearly reports and papers. Some reports even estimate that by 2025, Pakistan will even surpass countries like France, China and the United Kingdom in the number of warheads.<sup>1</sup> As per the yearly reports published by the *Bulletin of the Atomic Scientists*, from 2009 to 2019, on an average Pakistan's Nuclear Forces have gone up by 10 warheads per year.<sup>2</sup> This includes the development of Tactical Nuclear Weapons (TNW), development of Sea-based deterrence, broadening of fissile material infrastructure, adoption of a Full Spectrum Deterrence (FSD) in 2013 and evolution of its counter-force capabilities.

When closely examined, the developments in the last decade have impacted Pakistan's

### *Key Points*

1. With an average increase in 10 warheads per year, major developments includes the development of Tactical Nuclear Weapons (TNW), Sea-based deterrence, broadening of fissile material infrastructure, adoption of a Full Spectrum Deterrence (FSD) and evolution of its counter-force capabilities.
2. Tactical Nuclear Weapons has an impact on regional stability because of Pakistan's basic understanding of Nuclear Warfighting which comes with an approach of a limited nuclear war.
3. Absence of a strong conventional force has led to the intermixing of conventional and non-conventional ways to tackle any form of external conflict.
4. The disparity in conventional military power between India and Pakistan has resulted in a nuclear thinking which is tailored specifically keeping India in consideration.
5. The development undertaken in the last decade should not only concern India but the whole of South Asia and its extended neighbourhood including Israel.

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## Mapping Pakistan's Nuclear Force ...

nuclear thinking. The pace of development indicates shifts in its Nuclear Policy which was evident by adoption of FSD in 2013. To bolster support to its FSD, fissile material infrastructure has expanded over the decade.<sup>3</sup> This has not only strengthened its counter-value strategy but also strengthened its counter-force desires. Consequently, this has led to shifts in threat perceptions which have altered Pakistan's behaviour to any regional conflicts in a proactive manner. In consequence, these dynamics have also impacted the regional power balance between India, Pakistan and China. At present, China sees no immediate or direct threat from Pakistan, implying that these developments must concern India and India must assess for its own security. The paper intends to analyse the trajectory of rapidly changing Nuclear Force Capability of Pakistan between 2009 and 2019 and its implications for regional security dynamics.

### Nuclear Policy Shifts

Pakistan's nuclear weapons evolved with the policy of 'Credible Minimum Deterrence' (CMD). This policy guided the initial years of Pakistan's nuclear thinking. However, shifts from CMD began to happen due to the broadening of existing gaps in terms of conventional forces between India and Pakistan. The Kargil War (1999) was one such setback for Pakistan in which the conventional inferiority of its forces became quite evident. Consequently, this vulnerability brought distinct shifts in Pakistan's Nuclear thinking, its threat perceptions and even in its basic understanding of Nuclear Warfighting. Coupled with fear of conventional inferiority came the finalisation of India-US Civil Nuclear Deal, popularly known as 123 Deal.<sup>4</sup> In 2008, the US Congress gave its final approval to the Civil Nuclear Deal which came along with an exceptional waiver from the Nuclear Suppliers Group (NSG) to India. What made Pakistan concerned about this deal was the exceptional waiver given to India. According to Pakistan, this could help India in expanding its nuclear arsenal. In reaction to this, an official statement from Pakistan affirmed that its credible minimum deterrence will be met.<sup>5</sup> Needless to say, the intent of Pakistan was actually to increase the size of its arsenal.

For long, Pakistan believed that it was impossible for India to launch any conventional strike against Pakistan under the shadow of its nuclear weapons. A major shift came into Pakistan's Nuclear Policy with the coming up of India's "Cold Start Doctrine" (CSD).<sup>6</sup> Espoused in 2004, it envisaged swift deployment of troops on India's western borders. CSD was repeatedly featured in Pakistan rather than in India as the sole rationale behind adoption of a Full Spectrum Deterrence. Lt Gen Khalid Kidwai (Retd) in 2015 stated that CSD has compelled Pakistan to discard CMD and adopt a Full Spectrum Deterrence (FSD).<sup>7</sup> He further went on to say that Pakistan's nuclear weapons will cover strategic, operational and tactical levels of conflicts. However, adoption of FSD at all three levels has actually blurred the distinction between the levels of conflict. What is more confusing is a statement from Pakistan's National Command Authority (NCA) which actually mixes both CMD and FSD. Pakistan's former Foreign Secretary Aizaz Chaudhry further elaborated on this and said, "Our conduct continues to be guided strictly by the principle of credible minimum deterrence. Full spectrum deterrence is by no means a quantitative change in our credible minimum deterrence; it is rather a qualitative response to the emerging challenges posed in South Asia."<sup>8</sup> What is problematic in these statements is the use of "minimum" when several estimates indicate a rising number of nuclear weapons intended to be used at every level of conflict. According to some analysts, FSD closely aligns with Pakistan's posture of asymmetric escalation to ensure escalation dominance at each level of conflict.<sup>9</sup> Adoption of FSD has also resulted in the development of Tactical Nuclear Weapons (TNW) like Nasr with a range of approximately 60 km. Implications of TNWs on regional stability have been raised several times but what is more concerning is Pakistan's basic understanding of Nuclear Warfighting which comes with an approach of a limited nuclear war. No nuclear war can be limited and single use of TNWs gives the right of massive retaliation to India as per its stated position.<sup>10</sup> Apart from the change in the threat perception, what has led to the adoption of the concept of limited nuclear war is a constant fear

of a conventional defeat. Inadequate budgetary and resource allocation has made Pakistan choose between modernisation of conventional and non-conventional forces. To meet the conventional gap, what looks viable for Pakistan is to develop means of asymmetric responses which can be a weapon of last resort. According to a Pakistani analyst, “Nuclear weapons have become an affordable and cost-effective option to offset the Indian threat.”<sup>11</sup> This line of thinking has disastrous consequences as the lesser are the means of fighting a conventional war, the more are the chances of unconventional means of warfighting.

### Shifts in Threat Perception

What has been constant in India-Pakistan relationship all these years is a tumultuous path which was comprised of low intensity conflicts, cross-border infiltration attempts by Pakistan-sponsored terrorists, ceasefire violations, etc. Ideally speaking, conventional security threats and challenges do not directly impact nuclear threat perception and states in general deploy conventional means to tackle them. India has tackled its conventional security threats in the northern borders via conventional means even in the worst cases and opted to remain nuclear low-key in such circumstances. What has happened in the case of Pakistan in the last decade is blurring of distinctions in tackling conventional and non-conventional security threats. Absence of a strong conventional force has led to the intermixing of conventional and non-conventional ways to tackle any form of external conflict. The most recent example of this is the rationale behind use of its Tactical Nuclear Weapons in case of a conventional domination by Indian Armed Forces. This is reinstated by Pakistan’s former National Security Adviser Maj Gen Mahmud Ali Durrani (Retd) in his assessment of Pakistan’s Nuclear Policy as “Deterrence of all forms of external aggression....”<sup>12</sup> Recent developments suggest more faith and reliance on its nuclear capabilities targeted specifically against India. Time and again, Pakistani leadership has resorted to nuclear rhetoric including its former and current Prime Ministers Shahid Khaqan Abbasi and Imran Khan respectively.

Another major threat in Pakistan’s perception is India’s Cold Start Doctrine (CSD) of 2004. Pakistan’s

understanding of CSD is of a pre-emptive strategy in which Integrated Battle Groups (IBG) comprising the three services of the Armed forces can mobilise and strike inside Pakistani territory in a short span of time. In recent years, retaliation to repeated terror strikes by Pakistan-based terror organisations have gone under the present Indian Government. These quick mobilisations further substantiate capabilities, strong will and intentions which have consequently induced a sense of insecurity amongst the Pakistani leadership and its armed forces.

Another similar threat perception for Pakistan arises out of India’s enhanced Ballistic Missile Development (BMD). The development of India’s BMD capabilities is seen as an offensive and a destabilising factor by many in Pakistan.<sup>13</sup> Analysts argue that this gives Pakistan an excuse to be more reliant on its nuclear force thus destabilising South Asia even more. Lastly, and most recently, what constitutes Pakistan’s nuclear threat perception includes India’s acquisition of a Nuclear triad. Pakistan sees this development as “nuclearisation of Indian Ocean Region.”<sup>14</sup> Pakistan aims to develop its own sea-based capabilities with assistance from China. It recently tested indigenously developed Submarine Launched Cruise Missile Babur, which has a range of 450 km.

### Development in Force Capabilities

Development of its Nuclear force capabilities vis-à-vis land, air and sea has been quite rapidly evolving with more advanced accuracy and payload systems. As per the DG ISPR official website press release, 26 successful tests have been conducted between 2009 and 2019. Tests include induction of new variants and regular combat readiness exercises. These include non-strategic weapons (Tactical Nuclear Weapons) with very short range, short-range ballistic missile (SRBM), medium-range ballistic missile (MRBM) and Cruise Missile. Collectively, the estimated number of warheads in 2009 was 70-90.<sup>15</sup> However, in 2019, it is estimated to be around 140-150 warheads which shows a steady rise.<sup>16</sup> This puts Pakistan top on the list of countries expanding its nuclear arsenal.

In 2013, a successful test of Nasr (TNW) was conducted which has a short range of about 60-70 km. Nasr intends to counter any conventional superiority in the tactical battlefield with India. In the same year another test of Hatf-2 was conducted with a range of 200 km. This aims to provide SRBM capability. Another development during this period came in 2014 with Shaheen-II—a medium-range ballistic missile which has a range of 1,500-2,000 km, was inducted and became operational in 2014. Another MRBM, Ababeel was successfully tested in 2017. With a range of 2,200 km, Ababeel is capable of delivering multiple warheads using Multiple Independent Re-Entry Vehicles (MIRV) as per the DG ISPR press release (January 2017). Out of all, Pakistan's longest range missile, Shaheen-3 (MRBM) was also successfully tested twice in 2015. It has a range of 2,750 km, having potential to reach all major Indian cities. The final induction is yet to happen.

Expanding its naval-nuclear capabilities, headquarters of Naval Strategic Forces command was established in 2012. Described as “the custodian of the nation's second strike capability,” this naval command is mandated to look after the operational deployment of nuclear weapons in Pakistan's naval front.<sup>17</sup> In the Naval front, Babur-1, a cruise missile with a range of 350-700 km, has been in service since 2010. Another similar upgraded variant is Babur-IB with a range of 700 km, with advanced accuracy tested. Babur-3, another submarine-launched cruise missile was first tested in 2017. Another test was carried out in April 2018 meeting all parameters as per the DG ISPR. As per the press release Babur-3 is capable of “delivering various types of payloads” and uses “underwater controlled propulsion.”<sup>18</sup>

### Regional Security Dynamics

The development post 2009 by Pakistan has changed the security dynamics of the Indian subcontinent in significant ways. Most of it has been the result of differences in conventional military power. In conventional military terms, the disparity exists not only between India and Pakistan but also between India and China. However, this has led to two completely different outcomes which is evident the

more so in the last decade. Both India and Pakistan seek to match the existing disparity, the former with China and the latter with India. However, India seeks a conventional and symmetric balance of power with China. In contrast, Pakistan has put its faith on non-conventional and asymmetric strategy to deter India, which is destabilising for many reasons. In the case of Pakistan, the only adversary in consideration while formulating its operational doctrine is India, however, for India both China and Pakistan needs to be analysed while formulating or amending any change in the doctrine. There is a big difference between the two neighbouring states of India in terms of their nuclear capabilities but both have unpleasant histories and contemporary geopolitical aspirations common to them. Consequently, China-Pak bonhomie has also led to Chinese assistance to Pakistan to acquire technological sophistication on nuclear capable ballistic missiles and dual-use platforms. China seems not so bothered with the developments in Pakistan. In fact, Pakistan has the unequivocal support of China both at the regional and global forums which has excluded India from the nuclear triangle in South Asia.

The disparity in conventional military power between India and Pakistan has resulted in a Nuclear thinking which is tailored specifically keeping India in consideration. Central to it is ‘First Use Policy’ and trailing ambiguities of nuclear threshold. As per some Pakistani analysts, this ambiguity serves as a deterrence. However, the ambiguity of the nuclear threshold is long gone for Pakistan as recent tests suggest that Pakistan has chosen to have flexible choices in responding to India. From Nasr (TNW) to Shaheen-III, Pakistan has all choices of responding with various payloads and ranges. Shifts in its doctrine are also evident with shifting focus from counter-value to counter-force targets. Both Nasr and Shaheen-III can be counter-force target weapons as the former is meant to target troop movement or military installations closer to the border and the latter has already been explicitly mentioned to be used to target strategic bases in Andaman and Nicobar Islands.

## Conclusion

Contrary to its belief, 'Nuclear Romanticism' of Pakistan has not strengthened deterrence against India.<sup>19</sup> The new development reflects a complex understanding of nuclear warfighting with too much reliance on asymmetric means of escalation domination but no escalation control. TNWs have lowered the threshold of nuclear warfighting making the security situation precarious in the region. Any misadventure with TNWs on India gives India the right to retaliate as per the stated doctrine causing an 'all-out war'. The possibility of such misadventures should not be underestimated given the track record of nuclear brinkmanship by its Politico-Military leadership.

Many recent developments also stand contested on the basis of their impact on regional security. It is argued

that Pakistan's urge for a sea-based deterrence is asymmetrical and its modus operandi destabilises the region as they do comply with the standard practices by other nuclear armed forces.<sup>20</sup> The development of MIRVs adds more complexity to the understanding of deterrence of Pakistan. Investments in broadening of fissile material infrastructure signifies more dependence on nuclear warfighting and does have a prolonged impact on arms build-up in the region in the years to come. The development undertaken in the last decade should not only concern India but the whole of South Asia and its extended neighborhood including Israel as well. The present nuclear capabilities of Pakistan make many countries susceptible, including its allies of today, as the changing geopolitical situation can turn them into enemies of tomorrow. After all, a nuclear-tipped missile is unidirectional by its trajectory but not by intentions.

## Notes

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