NUCLEAR 'FAIL-SAFE' REVIEWS AND RISK REDUCTION APPROACHES IN SOUTH ASIA

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On March 9, 2022, a supersonic missile landed inside the Pakistani territory that India claimed later was one of its Brahmos cruise missiles, mistakenly fired due to a technical malfunction. Several senior Pakistani officials, however, disagree with this explanation, believing instead that the launch was intended to test Pakistan's defence systems. This mutual distrust, stemming from long-standing disputes and a history of military crises, is further exacerbated by growing military asymmetries between India and Pakistan, as well as the perceived ambiguities in their nuclear postures. There is a growing possibility that the integration of new and emerging technologies in their military platforms and nuclear command and control (C2) systems would further increase the chances of miscalculation, and the decisions that may not have been officially sanctioned by the political leadership.

In the absence of any nuclear risk reduction dialogue between India and Pakistan, a relatively minor incident could rapidly escalate to a serious military crisis with a real possibility of nuclear use. This danger was highlighted in the two recent episodes that had the potential to escalate into major military confrontations, underscoring the urgent need for the resumption of bilateral dialogue on nuclear confidence-building measures (CBMs) that have been on hold since 2012, due to India's reluctance to engage with Pakistan.

The Need for Nuclear Risk Reduction Approaches in South Asia

On February 26, 2019, after a suicide attack on an Indian military convoy, Indian leadership launched a 'punitive' aerial surgical strike across the Line of Control (LoC) and declared it to be a new norm against Pakistan. This aerial incursion into mainland Pakistani territory was the first of its kind since 1971, when the two countries fought their

last major war. To deter India from treading this dangerous trajectory, Pakistan responded with its own counter-aerial surgical strike that resulted in the downing of two of the Indian aircraft and the capture of one Indian pilot.

This incident significantly affected Prime Minister Modi's political standing and raised serious questions about the Indian military's credibility as a regional power capable of confronting China. To restore his image at home and abroad, PM Modi opted to escalate the crisis by mobilising India's nuclear-capable missiles and issuing threats of nuclear use. Pakistan responded by declaring that any missile strike from India would be met with a matching response. Amid this serious military crisis, the Indian Navy deployed one of its submarines closer to Pakistani territorial waters. While the vessel was intercepted by the Pakistan Navy, it chose not to escalate the crisis in how it engaged the submarine. Had a Pakistani local military commander not exercised restraint, a South Asian version of the 'Cuban Missile Crisis' could have led to uncontrolled escalation with serious consequences for the region.

The Balakot crisis was not the 'final failure' in South Asian security dynamics. The subsequent Brahmos missile incident in 2022 has raised serious concerns about India's missile C2 structure and its internal 'fail-safe' mechanisms, including the degree to which these issues may also be present in India's nuclear force systems. Following the missile incident, there have been demands amongst the Pakistani strategic circles for the adoption of enhanced measures, including the expanded deployment of air defence systems and placing missiles on a higher alert status. Such changes carry their own inherent risks of miscalculation, potentially leading to the accidental, unauthorised, or mistaken use of nuclear weapons.

Nuclear 'Fail-Safe' Review – Relevance for South Asia

The concept of nuclear fail-safe is not new; it was first introduced by the United States in the 1950s. The US Commission appointed in 1990 to carry out a comprehensive review of nuclear fail-safe recommended more than 50 specific steps to prevent the accidental, mistaken, or unauthorised use of a nuclear weapon. In 2021, the US Congress ordered an independent review of the safety, security, and reliability of US nuclear systems. The broader aim of this review is to reduce the likelihood of nuclear weapons use due to accidents, miscalculations, or false warnings.

The US model of 'fail-safe' reviews may not be applicable to all nuclear-armed states, especially for countries like India and Pakistan. Any such mechanism that the two regional nuclear powers choose to institutionalise, unilaterally or bilaterally, would need to be tailored to their respective national threat assessments and requirements. Given the sensitivities surrounding nuclear weapons safety and security procedures, encouraging transparency in the internal processes of India and Pakistan would remain a challenge in an environment of mutual distrust. Nevertheless, it is the responsibility of every nuclear-armed state to ensure that its internal safety and security protocols are periodically reviewed, in order to prevent accidental or unauthorised launch of its weapon systems and avoid undesired escalation trajectories.

There is also a growing possibility that some emerging and disruptive technologies (EDTs) may be integrated into the military platforms and nuclear C2 systems in the near future. This would bring additional challenges, especially in South Asia, due to the growing disparity between the two countries in the emerging field of new technologies.

India has already demonstrated its anti-satellite (ASAT) capability, which can be used to deny its adversaries access to space-based assets. This capability could adversely impact Pakistan's military operations across all domains of warfare - *land, air, sea, or nuclear*. India has also tested hypersonic weapons, which could potentially be used to target Pakistan's strategic assets by launching a pre-emptive 'non-nuclear' strike in a counterforce role.

These relatively new developments add additional pressure on Pakistan to maintain the credibility of its deterrence posture by developing options that reassure decisionmakers that their nuclear weapons would 'always' be available for use when needed, even if it involves a compromise on the 'never' side of the 'always/ never' dilemma.

India, with US assistance, is also making significant progress in the field of cyber, AI, and quantum technologies. These technologies, once integrated into military systems, could revolutionise traditional warfare concepts and how nuclear C2 systems would be managed in the future. Any nuclear fail-safe measures proposed unilaterally, bilaterally, or at the multilateral levels, must therefore, cater for these new developments as part of a future nuclear risk reduction framework amongst all nuclear-armed states.

To conclude, all nuclear-armed states, including India and Pakistan, must develop nuclear 'fail-safe' measures, as these are necessary for building confidence in their own nuclear postures and for minimising misunderstandings arising from the adversary's actions. The recent two crises, which had the potential to escalate into a serious military confrontation, do highlight the need for conducting periodic 'fail-safe' reviews. While the findings of these reviews may not be shared publicly, undergoing the processes could help reduce the possibility of miscalculation, false warning, or accidental launch of nuclear weapons or missiles. This would also be crucial for avoiding the risk of uncontrollable escalation between the two nuclear-armed adversaries.

The opinions articulated above represent the views of the author(s) and do not necessarily reflect the position of the Asia-Pacific Leadership Network or any of its members.

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