

Asia-Pacific Leadership Network–India Nuclear Fail-Safe Dialogue

**February 4, 2025
New Delhi, India**

MEETING SYNOPSIS

Overview

- » On February 4, 2025, the Centre for Air Power Studies (CAPS) and the Asia-Pacific Leadership Network (APLN) co-hosted a workshop in New Delhi, bringing together a delegation of former U.S. officials and experts and current and former Indian officials and experts. The workshop, titled “Managing Risks of Nuclear Use – Fail-Safe Reviews in the Contemporary Nuclear Landscape,” focused on examining and mitigating nuclear risks, including through the process of nuclear fail-safe reviews, which emphasize safeguards that prevent the unauthorized, accidental, or mistaken use of a nuclear weapon. The workshop was part of a broader regional project on fail-safe measures conducted by APLN and supported by the Nuclear Threat Initiative.
- » The objective was to discuss the contemporary nuclear risks, especially of inadvertent escalation, from India’s perspective. A major part of the discussion revolved around internal unilateral nuclear fail-safe reviews and processes and their potential as a unilateral or multilateral nuclear risk reduction measure. Participants discussed the purpose and merits of “independent” nuclear fail-safe reviews similar in concept to the 1990–1992 review commissioned by the U.S. Department of Defense and the more recent review authorized by the U.S. Congress in 2021.
- » Participants candidly engaged on the security benefits of such reviews; why and how all nuclear-armed states could periodically conduct such reviews; that such reviews required no negotiation, treaty, or verification; and that any sharing of results or actions was not required and would be entirely at the discretion of each state.

Participants agreed:

- » Rapid technological advances can heighten the risks of unauthorized or accidental nuclear use and interference or prevention of execution of a lawful political order regarding nuclear weapons. These risks merit special attention from a nuclear command and control standpoint. Artificial intelligence, cyber, and quantum computing threats were emphasized, with the latter assessed to be a serious threat to secure communications systems given its potential ability to penetrate certification and authorization codes. Nuclear fail-safe reviews could, therefore, be an important concept for all nuclear-armed states to consider.
- » Every nuclear-armed state has a unique nuclear force posture, policies, and procedures; hence each nuclear fail-safe review would also have a unique scope and focus. Understanding the nature and intent of a fail-safe review, as distinguished from the normal security review processes and broader doctrinal and posture reviews of a given state is essential to advancing risk mitigation.
- » U.S. participants clarified that the U.S. fail-safe review:
 - Evaluates the technical resilience of all elements of the nuclear enterprise against current and future vulnerabilities which, if unaddressed, could enable unauthorized interference or, at worst, nuclear use.
 - Is independent of any past, current, or future nuclear doctrine or posture. The review examines, for example, the security of the expansive supply chain for nuclear force components, which will be a continuing security focus independent of any U.S. doctrine or posture. So, too, is the integrity of secure nuclear communications systems.
 - Is different from:
 - The Nuclear Posture Review, which evaluates and decides U.S. nuclear strategy, including doctrine and posture, and incorporates factors such as national and adversary conventional capabilities into its assessments.
 - Regular nuclear force security reviews, as a “fail-safe review” is an independent review conducted by experts and former officials not involved in day-to-day nuclear operations. Reviewers have fresh eyes to evaluate the full scope of national nuclear enterprise resilience measures and vulnerabilities (including personnel security, military practices, national laboratory processes, command-and-control processes and systems, and force modernization and technical architecture developments). U.S. nuclear operators value the inputs of the fail-safe review, recognizing that their focus on day-to-day issues means they may not see potential vulnerabilities that those with fresh eyes can discern.
- » Indian participants generally acknowledged the overall value of independent fail-safe reviews to audit nuclear practices and technical architecture. Indian interlocutors also:
 - Offered their perspectives on nuclear risks and how the Indian nuclear doctrine and posture—as distinct from that of the United States—creates fewer risks in day-to-day operations. For example, the doctrinal attribute of no first use allows India to keep its forces on a low alert status, weapons de-mated, and command and control structure more relaxed. These measures reduce risks of unauthorized nuclear use compared to alternate postures of nuclear high alert.
 - Noted that there is a difference in the proliferation and maturity of disruptive technologies impacting South Asia and in the extent of conventional-nuclear systems overlap, as compared to those impacting the United States, which should also determine the nature and frequency of fail-safe reviews.

- » The declassified 1992 U.S. fail-safe review report, including the committee’s charter and topics of inquiry, serves as a useful starting point for better understanding how a state can potentially conduct a fail-safe review.¹ While the 2022 review’s scope and findings remain classified, it is still notable that the authorizing legislation for the review instructed that it “is conducted in a manner similar to the [1992 review]” and provided initial guidance on its scope.²
- » Nuclear-armed states must move toward a concept of recognizing shared nuclear risks, rather than attempting to manipulate and exacerbate these risks for national strategic advantage. Independent, internal, unilateral nuclear fail-safe reviews by all nuclear-armed states could create, over the long term, an environment conducive to building confidence.

Bottom line

- » The dialogue was highly constructive and generated several avenues for further discussion. Both sides explored and explained their perspective on the value of fail-safe reviews. The dialogue also provided a valuable opportunity for both sides to better understand each other’s evolving nuclear risk perceptions and supported the need for more engagement on these issues.

¹ U.S. Department of Defense, Final Report of the Federal Advisory Committee on Nuclear Failsafe and Risk Reduction (FARR), 1992, available at <https://archive.org/details/FinalReportoftheFederalAdvisoryCommitteeonNuclearFailsafeandRiskReductionFARR/page/n1/mode/2up>.

² U.S. Congress, “Sec. 1644. Review of Safety, Security, and Reliability of Nuclear Weapons and Related Systems,” in National Defense Authorization Act for Fiscal Year 2022 (Public Law 117–81), December 27, 2021, <https://www.govtrack.us/congress/bills/117/s1605/text/enr#HA7A0D1C226D847E48C07695B27C51CA3>.