



The Artificial Intelligence (AI) Arms Race in South Asia

By

Vaibhav Chhimpia

When India's AI-powered missile defense system intercepted a simulated hypersonic threat in 2023, American analysts were surprised by the ethical framework guiding its development. In South Asia, rapid AI adoption intensifies deterrence challenges as India and Pakistan field autonomous strike capabilities. Existing arms control regimes fail to account for the region's rivalries, asymmetric force balances, and non-aligned traditions.

That gap undermines American extended deterrence because Washington cannot reassure allies or deter aggressors without accounting for South Asia's threat calculus. AI arms developments in this region stem from colonial legacies and mistrust of great power intentions, creating a volatile strategic environment.

India's Governance Innovation in Defense AI

India's governance model integrates [civilian oversight](#) with defense research and ensures ethical deployment of AI. The Responsible AI Certification Pilot evaluated algorithms for explainability before clearance. Its [National Strategy for AI](#) mandates ethical review boards for dual-use systems. Developers must document bias-mitigation measures and escalation pathways. Embedding accountability at design phase stabilizes deterrence signals by reducing inadvertent algorithmic behaviors.

The [Evaluating Trustworthy AI](#) (ETAI) Framework advances defense AI governance. It enforces five principles: reliability, security, transparency, fairness, privacy, and sets rigorous criteria for system assessment. Chief of Defense, Staff General Anil Chauhan, stressed resilience against adversarial attacks, highlighting the challenge of balancing effectiveness and safety. By mandating continuous validation against evolving threat scenarios, ETAI prevents mission creep and maintains operational integrity under stress.

India's dual use by design philosophy embeds safeguards within prototypes from inception. This contrasts with reactive models that regulate AI after deployment. Civilian launch-authorization channels separate political intent from technical execution, ensuring decisions remain under human control and reinforcing credibility in crisis moments. Regular [red-team exercises](#) involving independent experts further validate system robustness and reduce risks of false positives in autonomous targeting.

Strengthening Extended Deterrence through Cooperation

US-India collaboration on [AI verification](#) can reinforce extended deterrence by aligning technical standards and testing protocols. The [iCET fact sheet](#) outlines secure information sharing and joint safety trials. Launched in January 2023, iCET has already enabled co-production of jet engines and transfer of advanced drone technologies. Building on this foundation, specialized working groups could develop common benchmarks for adversarial-resistance testing and automated anomaly detection.

A Center for Strategic and International Studies report recommends a trilateral verification cell blending American evaluation tools with India's ethical reviews. Joint trials of

autonomous air-defense algorithms would demonstrate interoperability and resolve. A shared “AI Red Flag” system would alert capitals to anomalous behaviors and reduce strategic surprise. Embedding cryptographically secure logging of decision path data ensures an immutable audit trail for post-event analysis and confidence building.

The INDUS-X initiative, launched during Prime Minister Narendra Modi’s 2023 US visit, integrates responsible AI principles into defense innovation. By aligning standards, both countries ensure AI systems enhance strategic stability rather than undermine it. Expanding INDUS-X to include scenario-based wargaming with allied partners can stress-test ethical frameworks and calibrate thresholds for human intervention under duress. This model can extend under the [Quad framework](#), pressuring authoritarian regimes to adopt transparency measures.

Institutionalizing Global AI Arms Control

A formal arms control dialogue should adopt India’s baseline standards for ethical AI governance. The [UNIDIR report](#) calls for universal bias audits and incident-reporting obligations to prevent unintended escalation. Carnegie scholars propose a tiered certification process under a new protocol for autonomous systems within the Convention on Certain Conventional Weapons, requiring peer review of algorithms before deployment. Embedding such certification in national export-control regimes would create global incentives for adherence.

The UN General Assembly has established an [Independent AI Scientific Panel](#) and a Global Dialogue on AI Governance to issue annual assessments on risks and norms. This mechanism can evaluate military AI applications and recommend confidence-building measures. Procedural transparency would coexist with confidentiality requirements, balancing security with mutual reassurance. Regular joint workshops on risk-assessment methodologies can diffuse best practices and diffuse mistrust among major powers.

Regional Applications and Future Prospects

India’s responsible AI framework must inspire regional adoption and confidence-building measures. Pakistan and China should engage transparency initiatives to prevent dangerous asymmetries in AI capabilities. Proposed measures include [joint research on AI safety](#), shared performance databases, and collaborative development of detection algorithms.

Successful tests of India’s hypersonic ET-LDHCM system, capable of [Mach 8](#) and a 1,500-kilometer range, underscore the urgency of governance frameworks before fully autonomous weapons deploy. The Quad’s model of Indo-Pacific cooperation provides a template for multilateral norms on responsible AI in defense. Extending these norms to confidence-building measures such as pre-deployment notifications and automated backchannels can reduce the risk of inadvertent escalation.

Looking ahead to the United Nations General Assembly meeting on AI governance in September 2024, American policymakers can leverage India’s experience. Joint verification exercises and an ethical audit regime will establish global norms for military AI. Integrating lessons from ETAI and iCET into the assembly’s resolutions can produce enforceable standards that bind both democratic and authoritarian states. This approach will reaffirm American extended deterrence and help prevent destabilizing AI-driven arms races worldwide.

By demonstrating that ethical AI development strengthens rather than weakens deterrence credibility, India’s model provides both technical solutions and normative frameworks for managing the military applications of artificial intelligence. Sustained international cooperation

on these principles is pivotal for securing strategic stability in a rapidly evolving technological landscape.

Vaibhav Chhimpa is a researcher who previously worked with the Department of Science & Technology (DST), India. Views expressed are the Authors own.