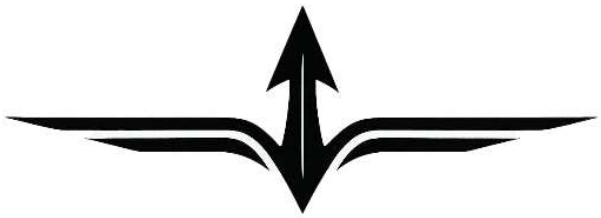
Chapter 6



Stability at the Nuclear Edge

Bill Wieninger and Andrea Malji

"Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose."[2]

— Bernard Brodie
The Absolute Weapon: Atomic Power and World Order (1946)

Introduction

The global strategic environment is shifting from the post-Cold War era of loose unipolarity to an era of competitive multipolarity. Nowhere is this transformation more consequential than in the Indo-Pacific, where multiple nuclear-armed states converge amid rising tensions, rapid military modernization, and the erosion of arms-control norms.

For the United States, this evolution challenges assumptions forged in a largely bilateral Cold War context. China's ascent, North Korea's unpredictability, the volatility of the China–India–Pakistan triangle, and Russia's growing entanglements across the region complicate both the credibility and successful implementation of deterrence and extended deterrence.

In this environment, signaling resolve, preserving second-strike survivability, and managing escalation have become more demanding. Diffused power heightens the risk of miscalculation, weakens the clarity of bilateral signaling, and raises the likelihood that localized crises may overlap or cascade. The central strategic task is therefore to assure allies and deter adversaries while avoiding arms races and inadvertent escalation.

The core claim of this chapter is straightforward: the United States can sustain credible strategic deterrence in a nuclearized, multipolar Indo-Pacific not by matching rivals weapon for weapon, but by reinforcing stability through the three Cs: capability, grounded in survivable second-strike forces; communication, anchored in disciplined and coherent signaling; and commitment, demonstrated through practical guardrails and alliance integration that reassure partners while constraining escalation.

Finally, while South Asia lies outside the U.S. extended deterrence umbrella, preventing a nuclear exchange among China, India, and Pakistan remains strategically vital. Such conflict would generate profound uncertainty across the Indo-Pacific and could undermine deterrence stability well beyond the subregion. Accordingly, this chapter also examines U.S. options for enhancing

strategic stability in South Asia as a necessary complement to deterrence elsewhere in the Indo-Pacific.

The Logic and Legacy of Deterrence

Classical nuclear deterrence emerged from the U.S.–Soviet rivalry and the logic of mutual vulnerability.[3] At its core were three interlocking requirements: the ability to absorb a first strike and still impose unacceptable costs in retaliation (capability), the clear articulation of red lines (communication), and the credible political will to enforce them (commitment).[4] These principles remain foundational, but their application is far more complex in today's era of competitive multipolarity, where additional actors, accelerated decision cycles, and contested signaling environments magnify uncertainty.[5]

The early nuclear decades were marked by perilous ambiguity. Divergent postures and doctrines culminated in the 1962 Cuban Missile Crisis—what Secretary of Defense Robert McNamara later described as a war avoided only by "luck."[6] The episode demonstrated that stability required more than arsenals alone. Survivable second-strike forces had to be paired with restraint and crisis-management mechanisms, prompting the establishment of the Washington–Moscow hotline in 1963.[7] Although subsequent crises occurred, including the 1973 Yom Kippur War, during which U.S. nuclear alert levels were raised,[8] none approached the systemic danger of 1962. Over time, arms-control initiatives such as the Strategic Arms Limitation Talks (SALT I), the Anti-Ballistic Missile (ABM) Treaty (1972),[9] and the Intermediate-Range Nuclear

Forces (INF) Treaty (1988) reinforced predictability and reduced incentives for unconstrained competition.[10]

From this experience, scholars and practitioners converged on a practical consensus: deterrence is most stable when capability, communication, and commitment are balanced. Two enduring caveats, however, temper this conclusion. First, the relative stability of the Cold War cannot be attributed solely to deterrence;[11] diplomacy, institutional learning, and sheer contingency played decisive roles.[12] Second, the Indo-Pacific today presents a far more demanding test. Multiple nuclear dyads and triads,[13] unresolved territorial disputes, and emerging technologies, from missile defense and hypersonics to counter-space operations and AI-enabled command systems, complicate warning, compress decision time, and erode shared perceptions of mutual vulnerability.[14]

The legacy of Cold War deterrence, therefore, offers guidance rather than a blueprint. While the essential logic endures, sustaining credibility across multiple rivalries in an era of technological churn and weakened arms-control norms will be more fragile, less predictable, and less forgiving of error.

The New Nuclear Multipolarity

The emergence of a multipolar nuclear system complicates crisis management, blurs strategic signals, and widens the margin for miscalculation. Deterrence still rests on capability, communication, and commitment, but maintaining credibility now requires navigating overlapping rivalries and faster decision cycles without triggering destabilizing arms races.

China's Rise and Strategic Shifts

China's nuclear expansion represents the Indo-Pacific's most consequential long-term challenge to U.S. deterrence posture. While the United States and Russia remain the largest nuclear powers, Beijing is rapidly building a diversified triad of silo-based intercontinental ballistic missiles (ICBM), mobile launchers, submarine-launched ballistic missiles (SLBM), and an expanding strategic bomber fleet.[15] Open-source assessments suggest China could field more than 1,000 warheads by 2030, a tenfold increase in two decades, challenging long-standing assumptions that it would sustain a "minimal deterrent."[16]

Officially, Beijing maintains a No First Use pledge, but its evolving force posture—early-warning systems, theater nuclear options, and dual-capable platforms—suggests greater doctrinal flexibility.[17] This ambiguity provides strategic leverage but undermines transparency, raising the risk of miscalculation in crises. Compounding the concern, China has declined to enter arms-control talks that require verification or to join trilateral negotiations, leaving the Indo-Pacific exposed to unregulated competition.[18]

These developments unfold alongside broader geopolitical ambitions. China's assertiveness in the South China Sea, pressure on Taiwan,[19] and military standoffs with India[20] illustrate a willingness to pair conventional risk-taking with a nuclear backdrop.[21] Such moves increase the danger that a conventional clash could escalate into a nuclear standoff, particularly if U.S. treaty allies such as Japan or the Philippines are involved. For U.S. deterrence, the challenge is not whether the three Cs still apply, but how Washington can adapt them: by preserving credible second-

strike capability, communicating unambiguous resolve, and demonstrating enduring commitment to allies, without catalyzing a destabilizing arms race.

Missile Defense and Arms-Racing Risks

Missile defense has long promised protection, but history shows its limits against sophisticated adversaries. During the Cold War, U.S. efforts to build nationwide defenses quickly ran into unfavorable cost-exchange dynamics: it was cheaper to add offensive missiles and penetration aids than to build reliable interceptors.[22] This logic underpinned the 1972 ABM Treaty, after which the U.S. Safeguard system operated only briefly before being shut down.

By the late 1990s, fear of "rogue state" threats revived interest in missile defense,[23] and after 9/11, the U.S. withdrew from the ABM treaty to pursue broader programs.[24] Between 2002 and 2024, Washington spent nearly $200 billion on a mix of systems,[25] producing some capability against short- and medium-range missiles but only limited, test-dependent success against even simple ICBM profiles.[26] Against massed or sophisticated peer attacks, the odds of success fall dramatically once decoys and countermeasures are introduced.

Relying on BMD as a hedge against China's buildup risks weakening deterrence, stability, and security in two ways. First, it deepens mistrust and incentivizes adversaries to expand and diversify arsenals, accelerating an offense–defense spiral. Second, it compounds the "numbers problem": As stockpiles and delivery systems grow, the cumulative probability of accidents and errors rises even in highly reliable organizations. History's mishaps in

nuclear-adjacent domains—from Three Mile Island, Chernobyl, and Fukushima to the losses of USS *Thresher* and K-141 *Kursk*—underscore that complex systems can fail despite rigorous safeguards. Limited defenses retain value against limited threats,[27] but strategic stability rests on survivable second-strike, resilient Nuclear Command, Control, and Communications (NC3), consistent signaling, and demonstrated alliance commitment.[28]

Regional Flashpoints

Territorial disputes and military buildups across the Indo-Pacific—from Taiwan and the South China Sea to the Korean Peninsula and the China–India–Pakistan frontier—are increasingly entangled with great-power competition. Each flashpoint carries the potential for nuclear signaling or escalation, and each tests U.S. deterrence credibility across three interlocking dimensions of capability, communication, and commitment.

The China–India–Pakistan Triangle

The China–India–Pakistan nuclear triangle is among the world's most volatile deterrence environments. Unlike the Cold War's largely bilateral structure, this triad lacks shared doctrinal understanding, institutionalized crisis-management mechanisms, or aligned strategic objectives. All three states are modernizing their arsenals, engaging in strategic signaling, and confronting one another across contested borders. In such an environment, a failure of deterrence in one dyad risks cascading escalation across the broader regional system.

India occupies a particularly precarious position, facing simultaneous competition with two nuclear-armed neighbors. Its border clashes with China, most notably the 2020 Galwan Valley incident, spurred long-term infrastructure development and force-posture adjustments along the Line of Actual Control (LAC), even as persistent instability along the Line of Control with Pakistan continues to drain resources and attention.[29] Pakistan's nuclear posture further destabilizes the triangle. Its reliance on tactical nuclear weapons, including the Nasr missile,[30] lowers thresholds for nuclear use and injects ambiguity into crisis scenarios. The absence of a No First Use pledge, combined with the military's dominant role in nuclear decision-making, compounds the risk of rapid escalation.[31]

A brief skirmish between India and Pakistan in 2025 demonstrated how quickly conventional incidents can ignite nuclear posturing. A terrorist attack triggered limited strikes, retaliatory fire, and visible nuclear signaling by Pakistan, including publicly observable missile readiness activities.[32] Although both sides ultimately de-escalated, the episode underscored how fast crisis dynamics can outpace diplomacy. China, though not a direct participant, conducted concurrent military activities near the India–China border[33] and continued deepening ties with Pakistan, reinforcing Indian perceptions of strategic encirclement.[34]

What distinguishes this triangle from other nuclear rivalries is the near-absence of institutionalized guardrails: there are no trilateral hotlines, no nuclear risk-reduction agreements, and limited transparency in doctrine or posture.[35] Deterrence here is therefore brittle, highly personalized, and vulnerable to misinterpretation. For the United States, the challenge is not one of direct deterrence, but

of exercising strategic influence to prevent escalation in a region where a nuclear exchange would have consequences far beyond South Asia.

U.S. Role: Stability Broker, Not Guarantor

Unlike its treaty-based commitments in Northeast Asia, the United States does not extend security guarantees to any party in the China–India–Pakistan nuclear triangle. Its role is therefore not that of a deterrent guarantor, but of a stability broker, seeking to prevent escalation in one of the world's most dangerous nuclear environments. A conflict among these three states may not remain regionally contained, and it would inject severe uncertainty into global deterrence dynamics

Washington's leverage in South Asia lies in shaping crisis conditions rather than dictating outcomes. This includes encouraging survivable command-and-control arrangements that reduce incentives for early nuclear use; persistently advocating bilateral crisis-management mechanisms such as missile-test notifications, military hotlines, and incident-prevention protocols; and sustaining high-level diplomatic engagement during periods of heightened tension.[36] The objective is not dispute resolution, but crisis stabilization, lengthening decision time, and preserving off-ramps when conventional incidents threaten to escalate.

This calibrated "stability broker" role reflects strategic prudence. Automatic defense commitments would risk the U.S. becoming entangled in conflicts where its interests are indirect, while disengagement would invite rapid escalation among nuclear-armed rivals. A balanced approach—supporting enhanced security

capabilities across South Asia, maintaining substantive dialogue with all regional stakeholders, and signaling to China that escalation in South Asia would reverberate across the Indo-Pacific—allows the United States to contribute to regional stability appropriately within the regional context.

South Asia thus illustrates a central lesson of deterrence in a multipolar nuclear order: success does not always require promises of defense, but it does require sustained engagement, disciplined signaling, and persistent crisis management. In this environment, U.S. success should be measured not by dominance or alignment, but by whether local crises remain bounded and nuclear thresholds remain untested.

If South Asia highlights the limits of U.S. deterrence in non-allied nuclear rivalries, the Korean Peninsula illustrates the opposite challenge: sustaining extended deterrence credibility under constant pressure from a nuclear-armed adversary.

North Korea's Deterrence Challenge

North Korea continues to leverage nuclear weapons for coercive diplomacy, coupling unpredictable missile testing with sharper political rhetoric. In 2024, Pyongyang declared South Korea its "principal enemy," abandoning the language of peaceful unification.[37] By late that year, it had also sent thousands of troops to Russia, signaling unprecedented levels of alignment with Moscow and raising the prospect of coordinated pressure on the United States and its allies.[38] These moves deepen an already volatile landscape.

Yet Korean Peninsula dynamics are not new. Since the 1990s nuclear crisis and North Korea's withdrawal from the Nuclear Non-Proliferation Treaty (NPT), periods of dangerous instability have repeatedly been followed by restraint. Even during moments of acute tensions—the sinking of the ROKS *Cheonan* in 2010 or the 2017 nuclear test—deterrence ultimately held. At the core, the confrontation rests on a clash of absolutes: Washington's goal of denuclearization and Pyongyang's determination to retain its arsenal. Sanctions and pressure have not reversed this trajectory but instead have pushed North Korea closer to China and Russia.

Recognizing North Korea as a nuclear state would be unwise, but so too is assuming that denuclearization is achievable in the near term.[39] Stability today depends less on forcing disarmament than on maintaining credible deterrence. That means preserving capability through robust combined forces and survivable U.S. nuclear guarantees; ensuring communication by signaling clear thresholds and reducing the risk of miscalculation; and demonstrating commitment with visible alliance presence and integrated planning with Seoul and Tokyo. Recent debates in South Korea about indigenous nuclear options reflect persistent anxiety about U.S. resolve,[40] underscoring the importance of credible extended deterrence. A nuclear-armed South Korea would likely be less, not more, stable.

What this means for U.S. deterrence today: Across both South Asia and the Korean Peninsula, the test is not whether deterrence applies; it does, but whether U.S. credibility can be sustained under pressure. That credibility rests on maintaining survivable forces and resilient NC3 (capability), disciplined and predictable signaling (communication), and steady, visible alliance engagement

(commitment). The challenge for Washington is to reduce miscalculations and buy time for crisis management so that local incidents remain bound and do not spiral into nuclear confrontation.

Extended Deterrence and U.S. Commitments

In the face of multipolar competition and rapid modernization, the question is not whether the United States should reaffirm extended deterrence in the Indo-Pacific, but how to keep it credible. Visible commitments—forward presence, rotational deployments, combined exercises, and integrated planning—help, but reassurance built on symbolism alone will not suffice. Credibility must be anchored in the three Cs—capability, communication, and commitment—and translated into visible, operational practice.

Extended deterrence has long served dual purposes: deterring aggression against allies and constraining nuclear proliferation. During the early Cold War, U.S. guarantees helped dissuade West Germany and South Korea from pursuing nuclear arsenals; the same principle has held across Europe and Asia.[41] More nuclear powers mean more uncertainty and greater room for error, which is why the NPT and allied security guarantees have been central to U.S. strategy since the 1960s. Since NATO's founding in 1949—and through Indo-Pacific alliances with the Philippines (1951), Australia (1952), South Korea (1953), Thailand (1954), and Japan (1960)—no U.S. ally under the nuclear umbrella has been invaded by a nuclear-armed adversary. Provocations have occurred—the sinking of the *Cheonan* in 2010 and repeated crises on the Korean Peninsula—but deterrence has held where U.S. guarantees apply.

Skeptics argue that today's environment of more actors, larger arsenals, and disruptive technologies alters the equation. Yet the fundamentals remain intact. Capability rests on maintaining assured retaliatory forces and reliable command and control, not on perfect defenses. Communication depends on clear thresholds and consistent signaling that reduces the risk of miscalculation. Commitment is demonstrated through visible presence, integrated planning, and political will that adversaries cannot easily dismiss.

New technologies have not overturned this logic. Hypersonics complicate defenses, but extended deterrence has never relied on impenetrable shields. The United States has invested heavily in missile defense,[42] gaining limited utility against short- and medium-range threats while leaving strategic defense against peers inherently fragile. Deterrence credibility endures not because defenses are foolproof but because retaliation remains assured. AI may accelerate warning and analysis, but speed is a double-edged sword if it compresses decision time in launch-on-warning scenarios.[43] Restraint and redundancy, not automation alone, are essential to maintaining stability.

Concerns about U.S. resolve surface periodically in allied debates, sometimes fueling calls for independent nuclear options. Yet history suggests such steps would make the region less stable by multiplying decision centers and shortening crisis timelines. U.S. credibility has always rested on more than declaratory policy: forward-deployed forces, the presence of U.S. citizens and assets, and institutionalized consultation create a "tripwire" that transforms political commitments to operational realities. Any attack on an ally would inevitably involve the United States, not just by choice but by design.

What this means for the Indo-Pacific today: Washington must tailor assurance to the distinct anxieties of each theater while preserving the universal logic of the three Cs. That means maintaining capability through credible retaliatory forces and reliable command systems; reinforcing communication with steady public messaging and private crisis channels; and demonstrating commitment through visible allied integration, without sparking arms races or allied proliferation. Done right, extended deterrence remains the most effective and least destabilizing means of preserving peace in a nuclearized Indo-Pacific.

Tailored Extended Deterrence for U.S. Allies

These principles cannot be applied in the abstract. In the Indo-Pacific, extended deterrence is not monolithic but mosaic-like. Each U.S. ally faces distinct threats, interprets risk through its own political and strategic culture, and holds different expectations of U.S. guarantees. Credibility is therefore measured not only in aggregate U.S. capability, but in how capability, communication, and commitment are tailored to each ally's security environment.

South Korea

Nowhere is reassurance more urgent than on the Korean Peninsula, where each North Korean provocation revives domestic debates over indigenous nuclear weapons.[44] Washington has responded through the U.S.–ROK Nuclear Consultative Group,[45] extended deterrence dialogues, and visible force employment, ranging from bomber task force rotations to combined live-fire exercises.[46] These measures integrate military capability with political commitment

while sharpening communication about thresholds and escalation pathways. The objective is to sustain allied confidence in the U.S. nuclear umbrella so that Seoul remains anchored in alliance planning rather than pursuing nuclear self-help, which would likely reduce rather than enhance regional stability.

Japan

As Tokyo adapts its defense posture,[47] developing counterstrike capabilities to hold targets at greater distance and refining layered, integrated air and missile defenses,[48] its reliance on U.S. extended deterrence has become more explicit. For Japan, disciplined communication is paramount. The 2024 *Guidelines for Extended Deterrence* represent a historic shift, formalizing bilateral consultation and strategic messaging to maximize the credibility of the U.S. nuclear umbrella.[49]

Clear and consistent signaling that aggression against Japanese territory or forces would trigger a U.S. response under treaty obligations remains central to deterrence credibility. Closer operational planning, integrated missile defense architectures, and routine joint exercises translate declaratory commitments into practice, reinforcing deterrence in the eyes of both North Korea and China while reducing ambiguity during crisis scenarios.[50]

Australia and the Philippines

For allies farther south, deterrence credibility is expressed less through nuclear signaling than through sustained presence and conventional integration. In Australia, rotational deployments, AUKUS cooperation, and expanded access to northern facilities

demonstrate an enduring U.S. commitment while strengthening the conventional foundations of strategic stability.[51] In the Philippines, the Enhanced Deterrence Cooperation Agreement provides U.S. access to key bases near the South China Sea, creating a tangible "tripwire of presence."[52] By embedding U.S. forces in routine operations and deepening interoperability, these arrangements indirectly bolster nuclear deterrence by rendering alliance commitment unmistakable.[53]

Taken together, these cases demonstrate that extended deterrence in the Indo-Pacific is not a single promise but a tailored practice. From the explicit nuclear assurances required on the Korean Peninsula, to the disciplined signaling demanded by Japan, to the presence-based commitments central to Australia and the Philippines, the application of capability, communication, and commitment must remain context-specific. In each case, the objective is the same: to avert war by making U.S. involvement credible by design rather than declaratory intent.

Strategic Recommendations: A U.S. Posture Roadmap

Deterrence in a nuclearized, multipolar Indo-Pacific should be judged by one standard: does it reduce miscalculation, lengthen decision time, and keep crises bounded without fueling arms races? Meeting that test requires the United States to operationalize the three interlocking Cs of strategic deterrence—capability, communication, and commitment—through posture choices, modernization programs, and alliance management. The following roadmap translates these principles into practice.

U.S. deterrence credibility in a multipolar environment turns first on forces that cannot be disarmed. The modernization of all three legs of the nuclear triad reflects this logic. The Columbia-class ballistic missile submarine (SSBN) program will preserve the stealth and endurance of the undersea deterrent, the hardest leg for adversaries to locate or neutralize. With 12 hulls planned from the late 2020s, the program is intended to ensure the sea-based mission remains credible well into the second half of the century.[54] The B-21 Raider bomber adds a flexible, penetrating option capable of operating from dispersed bases and employing both standoff and direct-attack weapons, complicating adversary calculations. Complementing this, the LGM-35A Sentinel ICBM recapitalizes the land leg—the most continuously responsive element of the triad—with improved reliability and secure command links. Replacing the 50-year-old Minuteman III infrastructure, the Sentinel is designed to maintain the 24/7/365 alert posture through 2075 while avoiding signals that could destabilize crises.[55]

Survivability, however, is not a matter of platforms alone. It derives from mobility, dispersal, deception, and reconstitution: shifting aircraft across austere airfields, hardening logistics nodes, duplicating fuel and munitions flows, and rehearsing rapid runway repair and sortie generation. NC3 must be hardened, redundant, and resilient to cyber, counterspace, and electronic warfare threats. Integration with Joint All-Domain Command and Control (JADC2) should allow nuclear and conventional forces to coordinate operationally without blurring thresholds or creating hair-trigger couplings.

The ultimate test of capability is simple: after any plausible first strike or conventional campaign, the United States must retain the assured ability to impose unacceptable costs. Survivability and resilience, not parity or illusory defense, are the foundation of deterrence credibility.

Communication – Predictability and Guardrails

In a crowded Indo-Pacific battlespace, disciplined signaling, not volume, prevents misread intent. Washington should expand mini-lateral risk-reduction formats (U.S.–Japan–ROK; U.S.–India–Japan) that yield tangible outcomes: missile-test notifications, air and sea encounter protocols, and agreed radio scripts for on-scene commanders.

With Beijing, even absent a Cold War-style hotline, function-specific channels—maritime and air safety lines, space deconfliction protocols, missile pre-notification boxes—can reduce the odds that routine operations cascade into crisis. Theater-specific signaling should privilege predictability: pre-announced exercise windows, routine (not ad hoc) deployments, and clear separation of nuclear versus conventional messaging. These measures lengthen decision time and lower miscalculation risk.

The United States retains decisive advantages and should act deliberately, reassuring allies without overreacting or provoking adversaries. While Beijing has resisted proposals for a hotline, Washington should continue seeking practical mechanisms to avoid a repeat of the Cuban Missile Crisis, which spurred the first hotline in 1963.

Commitment – The Alliance Edge

Deterrence fails when adversaries doubt American resolve or allies question U.S. staying power. The most effective remedy is visible, routine integration of forces and interests. Forward-deployed and rotational units, combined patrols, and regular high-end exercises create a "tripwire of presence" that makes involvement credible by design. Institutionalized consultations—extended-deterrence dialogues, nuclear consultative groups, and crisis-management mechanisms—turn guarantees into operational practice.

The common principle across allies is daily, observable cooperation: interoperable maritime operations, integrated air and missile defense, shared ISR, and logistics frameworks for rapid reinforcement. In practice, commitment is more than a treaty; it is a habit of actions that adversaries cannot ignore, and allies cannot doubt.

Conclusion

A nuclearized, multipolar Indo-Pacific is more complex, less predictable, and easier to misread than the bipolar Cold War. Classical deterrence logic still offers guidance, but it is no longer a blueprint: more actors, divergent doctrines, cross-theater linkages, and faster decision cycles compress warning time and heighten the risks of miscalculation.

For the United States, credibility, not sheer numbers, must anchor extended deterrence. Stability in this environment rests on the three Cs: capability that is survivable and resilient rather than numerically maximal; communication that is disciplined,

predictable, and regionally tailored; and commitment that is demonstrated through visible, routinized integration with allies rather than symbolic statements alone. Practical guardrails: mini-lateral risk-reduction, targeted crisis-management channels, and clear boundaries between conventional and nuclear signaling do not solve the regional disputes, but they can buy what is scarce in crises: the time to think.

Endnotes

1 The authors are solely responsible for the views expressed in this publication, which do not necessarily represent the official policy or position of the Daniel K. Inouye Asia-Pacific Center for Security Studies, the U.S. Department of War, or the U.S. government.

2 Bernard Brodie, *The Absolute Weapon: Atomic Power and World Order* (New York: Ayer Co. Pub, 1946), 76.

3 Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966), 232–35.

4 Herman Kahn, *On Thermonuclear War* (Princeton, NJ: Princeton University Press, 1960), Table 48.

5 Vipin Narang, Nuclear Strategy in the Modern Era: Regional Powers and International Conflict (Princeton, NJ: Princeton University Press, 2014).

6 *The Fog of War: Eleven Lessons from the Life of Robert S. McNamara*, directed by Errol Morris (Culver City, CA: Sony Pictures Classics, 2003), DVD.

7 U.S. Department of State (DOS), Memorandum of Understanding Between the United States of America and the Union of Soviet Socialist Republics Regarding the Establishment of a Direct Communications Link, June 20, 1963, https://2009-2017.state.gov/t/isn/4787.htm.

8 Henry Kissinger, *Crisis: The Anatomy of Two Major Foreign Policy Crises* (New York: Simon & Schuster, 2003), 350.

9 U.S. DOS, Interim Agreement Between the USA and the USSR on Certain Measures with Respect to the Limitation of Strategic Offensive Arms (SALT I), May 26, 1972, https://2009-2017.state.gov/t/isn/4795.htm.

[10] U.S. DOS, Treaty Between the USA and the USSR on the Elimination of Their Intermediate-Range and Shorter-Range Missiles, signed Dec 8, 1987 (effective 1988), https://2009-2017.state.gov/t/avc/trty/102360.htm.

[11] Patrick Morgan, *Deterrence Now* (Cambridge: Cambridge University Press, 2003), 133.

[12] Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton, NJ: Princeton University Press, 1993).

[13] Narang, Nuclear Strategy in the Modern Era.

[14] Michael T. Klare, *Assessing the Dangers: Emerging Military Technologies and Nuclear (In)Stability* (Washington, DC: Arms Control Association, 2024), 9–14, https://www.armscontrol.org/sites/default/files/files/Reports/ACA_Report_EmergingTech_digital.pdf.

[15] Hans M. Kristensen et al., "Chinese Nuclear Weapons, 2025," *Bulletin of the Atomic Scientists* 81, no. 2 (2025): 135–60, https://doi.org/10.1080/00963402.2025.2467011.

[16] U.S. Department of Defense, *2024 Report on Military and Security Developments Involving the People's Republic of China* (Washington, DC: DOD, December 18, 2024), ix, https://www.war.gov/Spotlights/2024-China-Military-Power-Report/; Tytti Erästö, "Revisiting 'Minimal Nuclear Deterrence': Laying the Ground for Multilateral Nuclear Disarmament," *SIPRI Insights on Peace and Security* no. 2022/6 (June 2022), 4–5, https://www.sipri.org/sites/default/files/2022-06/sipriinsight2206_minimal_nuclear_deterrence_0.pdf .

[17] Ministry of Foreign Affairs People's Republic of China, "No-First Use of Nuclear Weapons Initiative," updated July 23, 2024, https://www.mfa.gov.cn/eng/xw/wjbxw/202407/t20240723_11458632.html.

[18] U.S. DOD, 2024 Military and Security Developments Involving the People's Republic of China.

[19] Michael Froman, "How China Intensified Its Tactics Against Taiwan," *Council on Foreign Relations,* July 25, 2025, https://www.cfr.org/article/how-china-intensified-its-tactics-against-taiwan.

[20] Saheb Singh Chadha, "Negotiating the India-China Standoff: 2020–2024," Carnegie Endowment for International Peace, December 11, 2024, https://carnegieendowment.org/research/2024/12/negotiating-the-india-china-standoff-2020-2024.

[21] Eric Cooper, "Persistent Gray Zone Aggression in the South China Sea Calls for Increased Coordination in Rule of Law," (Santa Monica, CA: RAND, April 16, 2024), https://www.rand.org/pubs/commentary/2024/04/persistent-gray-zone-aggression-in-the-south-china.html.

[22] McGeorge Bundy, Danger and Survival: Choices About the Strategic Nuclear Arms Race (New York: Random House, 1988).

[23] Congress, House Committee on National Security, *Findings and Conclusions of the Commission to Assess the Ballistic Missile Threats to the United States* 105th Cong., 2nd sess., July 16, 1998), https://commdocs.house.gov/committees/security/has197000.000(1)/has197000_1.HTM.

[24] The White House, "ABM Treaty Fact Sheet," December 13, 2001, https://georgewbush-whitehouse.archives.gov/news/releases/2001/12/20011213-2.html.

[25] Ronald O'Rourke, *U.S. Strategic Nuclear Forces: Background, Developments, and Issues*, Congressional Research Service Report RL33640 (Washington, DC: Department of War, updated October 15, 2025), 42–45, https://www.congress.gov/crs_external_products/RL/PDF/RL33640/RL33640.67.pdf.

[26] "Fact Sheet: U.S. Ballistic Missile Defense," The Center for Arms Control and Non-Proliferation, updated May 21, 2025, https://armscontrolcenter.org/fact-sheet-u-s-ballistic-missile-defense/.

[27] U.S. DOD *2022 National Defense Strategy of the United States of America* (Washington, DC: DOD, October 2022), 6, https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF.

[28] Anya L. Fink, Defense Primer: Nuclear Command, Control, and Communications (NC3), Congressional Research Services, CRS In Focus 11697, updated January 8, 2026, https://www.congress.gov/crs_external_products/IF/PDF/IF11697/IF11697.9.pdf.

[29] Saheb Singh Chadha, "Negotiating the India-China Standoff: 2020–2024," Carnegie India, December 11, 2024, 38, https://carnegieindia.org/research/2024/12/negotiating-the-india-china-standoff-2020-2024.

[30] Missile Defense Project, "Nasr (Hatf 9)," *Missile Threat*, Center for Strategic and International Studies, September 16, 2016, last modified April 23, 2024, https://missilethreat.csis.org/missile/hatf-9/.

[31] "India and Pakistan," Center for Arms Control and Non-Proliferation, https://armscontrolcenter.org/countries/india-and-pakistan/.

[32] Gibran Naiyyar Peshimam and Charlotte Greenfield, "Pakistan Tests Missile, India Orders Drills Amid Kashmir Standoff," *Reuters,* May 5, 2025, https://www.reuters.com/world/asia-pacific/pakistan-tests-missile-amid-india-standoff-moodys-warns-economic-cost-2025-05-05/.

[33] Alyssa Chen, "China's Call for Restraint Comes Hours Before India, Pakistan Agree to 'Full Ceasefire'," *South China Morning Post,* May 10, 2025, https://www.scmp.com/news/china/diplomacy/article/3309869/china-calls-restraint-india-pakistan-military-conflict-escalates.

[34] Sannan Pervaiz, "China's Role in the May 2025 India-Pakistan Conflict: Strategic and Global Implications," Belfer Center for Science and International Affairs*,* August 1, 2025, https://www.belfercenter.org/research-analysis/chinas-role-may-2025-india-pakistan-conflict-strategic-and-global-implications.

[35] Tanvi Kulkarni, "Policy Brief No.134: Managing the China, India and Pakistan Nuclear Trilemma," Toda Peace Institute, July 28, 2022, https://toda.org/policy-briefs-and-resources/policy-briefs/managing-the-china-india-and-pakistan-nuclear-trilemma.html.

[36] Moeed Yusuf, Brokering Peace in Nuclear Environments: U.S. Crisis Management in South Asia (Stanford: Stanford University Press, 2018).

[37] Kim Jong Un, "Respected Comrade Kim Jong Un Makes Policy Speech at 10th Session of 14th SPA," *KCNA Watch*, January 16, 2024, https://kcnawatch.org/newstream/1705369092-194545332/respected-comrade-kim-jong-un-makes-policy-speech-at-10th-session-of-14th-spa/.

[38] Choi Yonghwan, "The Meaning and Significance of North Korean Troops' Deployment to Russia," *Royal United Services Institute (RUSI)*, 4 December 2024, https://www.rusi.org/explore-our-research/publications/commentary/meaning-and-significance-north-korean-troops-deployment-russia.

[39] James M. Minnich, "Today Trump is Talking to a Different North Korea," *Diplomat,* November 7, 2025, https://thediplomat.com/2025/11/today-trump-is-talking-to-a-different-north-korea/.

[40] Dalton, Toby, Karl Friedhoff, and Lami Kim, "Thinking Nuclear: South Korean Attitudes on Nuclear Weapons," Chicago Council on Global Affairs, February 21, 2022, https://globalaffairs.org/research/public-opinion-survey/thinking-nuclear-south-korean-attitudes-nuclear-weapons.

[41] Alexander Lanoszka, *Atomic Assurance: The Alliance Politics of Nuclear Proliferation* (Ithaca, NY: Cornell University Press, 2018).

[42] Francis G. Mahon and Punch Moulton, "Hypersonic Missiles: We Need 'Em…and We Need a Strategy," *Real Clear Defense,* January 14, 2025, https://www.realcleardefense.com/articles/2025/01/14/hypersonic_missiles_we_need_emand_we_need_a_strategy_1084451.html.

[43] Annie Jacobsen, *Nuclear War: A Scenario* (New York: Dutton 2024), 84.

[44] Toby, Friedhoff, and Kim, "Thinking Nuclear."

[45] White House, "Washington Declaration," April 26, 2023, https://www.mofa.go.kr/viewer/skin/doc.html?fn=20230428042901619.pdf&rs=/viewer/result/202601.

[46] U.S. Department of War, "Joint Press Statement on the Fifth Nuclear Consultative Group," December 11, 2025, https://www.war.gov/News/Releases/Release/Article/4358035/joint-press-statement-on-the-fifth-nuclear-consultative-group-meeting/.

[47] Japan Ministry of Foreign Affairs, *National Security Strategy of Japan* (Tokyo: Government of Japan, December 2022), 18–22, https://www.cas.go.jp/jp/siryou/221216anzenhoshou/nss-e.pdf.

[48] Japan Ministry of Defense, *Defense of Japan 2025* (Tokyo: Ministry of Defense, July 2025), 1–4, https://www.mod.go.jp/j/press/wp/wp2025/pdf/DOJ2025_Digest_EN.pdf.

[49] U.S. DOD, *Government of the United States of America – Government of Japan Guidelines for Extended Deterrence*, December 26, 2024, https://www.war.gov/News/Releases/Release/Article/4016928/government-of-the-united-states-of-america-government-of-japan-guidelines-for-e/.

[50] U.S. DOD, *Joint Statement of the Security Consultative Committee ("2+2")* (Washington, DC: DOD, July 28, 2024), https://www.war.gov/News/Releases/Release/Article/3852169/joint-statement-of-the-security-consultative-committee-22/.

[51] Australian Government Department of Defence, *National Defence Strategy 2024,* (Canberra, Department of Defense, April 2024), 33–37, https://www.defence.gov.au/about/strategic-planning/2024-national-defence-strategy-2024-integrated-investment-program.

[52] U.S. DOD, "Fact Sheet: U.S.–Philippines 2+2 Ministerial Dialogue, April 11, 2023, https://media.defense.gov/2023/Apr/12/2003198602/-1/-1/0/20230411-PHIL2+2-FACT-SHEET-FINAL.PDF.

[53] U.S. DOD, 2022 National Defense Strategy of the United States of America, 8–11.

[54] U.S. DOD, *Program Acquisition Cost by Weapon System: FY 2026 Budget Request* (Washington, DC: Under Secretary of Defense (Comptroller), June 2025), 6-3, https://comptroller.war.gov/Portals/45/Documents/defbudget/FY2026/FY2026_Weapons.pdf.

[55] Air Force Global Strike Command, "LGM-35A Sentinel," updated November 2025, https://www.afgsc.af.mil/About/Fact-Sheets/Display/Article/3872112/lgm-35a-sentinel/.