

Exploring Potential Models and Trajectories for Future Arms Control Architecture in a Multipolar World

Sufian Ullah*

Abstract

With the demise of the New Strategic Arms Reduction Treaty (New START), the international security environment has entered a new stage in which nuclear powers are engaged in unrestrained strategic competition without the discipline of legally binding arms control agreements—an unprecedented situation since the beginning of the nuclear age. This development occurs in the backdrop of the gradual transformation of the global strategic environment towards a predominantly complex multipolar structure that entails multiple strategic competitors with intensifying geopolitical rivalries, along with rapid advancements in disruptive technologies intersecting with nuclear deterrence. This paper offers an analytical assessment of the impact of these changes on future arms control architecture. It examines the transition of the international security environment towards a multipolar order and shows how it differs from the past. It analyses the relevance of arms control as a policy option in a complex multipolar structure and identifies the underlying rationale behind arms control remaining the same. However, the new objectives must incorporate contemporary challenges arising from multi-actor deterrence dynamics, rapid technological advancements, and interconnectedness between nuclear and non-nuclear capabilities. The article further explores potential models for future arms control architecture by examining the prospects and limitations of trilateral, bilateral, and unilateral approaches. The paper particularly focuses on the United States' (US) view of China as a potential nuclear peer whose advancing capabilities shape the former's threat perception as well as arms control

* Sufian Ullah (PhD) is the Director of the Maritime Centre of Excellence at Pakistan Navy War College, Lahore.

choices, especially in the context of Beijing and Moscow. The paper argues that despite the challenges confronting the prospects of legally binding arms control measures between great powers, the prevailing instabilities in the contemporary security environment necessitate exploring flexible, specific, and modular arms control measures which could enhance transparency and predictability.

Keywords: Arms Control, Multipolar World, New START, Nuclear Deterrence, Strategic Stability.

Introduction

Contrary to the past, when the arms control treaties were considered the main pillar of strategic stability and balance of power among the antagonistic states,¹ it no longer seems a priority for competing powers in the present evolving multipolar world. Arms control depends on shared understanding among adversaries regarding the sources of strategic stability and instability. With intensifying major power competition, states respond to respective threat perceptions and adopt divergent strategic doctrines. This, in turn, undermines the prospects of arms control by weakening the consensus on what constitutes a stable strategic balance, what needs to be regulated, and how to ensure compliance. This is evident from the termination of the Intermediate-Range Nuclear Forces (INF) Treaty in 2019 and the end of the New START, the last bilateral arrangement that constrained the nuclear weapons of Russia and the US, on 5 February 2026, amidst the continuous modernization of weapons in the US, Russian, and Chinese arsenals.² The contemporary era is the first time in decades when there are no limits for the nuclear-weapon states to deploy nuclear weapons on their delivery systems.³

¹ Adam Daniel Rotfeld, "The Future of Arms Control and International Security," in *A Future of Arms Control Agenda: Proceedings of Nobel Symposium 118, 1999*, ed. Ian Anthony and Adam Daniel Rotfeld (Oxford: Oxford University Press, 2001), 4

² Jennifer Knox, "Nuclear Weapons without Limits: Avoiding a New Arms Race after New START," *Union of Concerned Scientists*, January 2026, <https://www.ucs.org/sites/default/files/2026-01/Nuclear-Weapons-Without-Limits.pdf>, 28 May 2026

³ Geoff Brumfiel and Charles Maynes, "For the first time in decades, the US and Russia have no limits on nuclear weapons," *National Public Radio*, 5 February 2026, <https://www.npr.org/2026/02/04/nx-s1-5697382/new-start-nuclear-treaty-expired-us->

While Beijing's increasing number of nuclear warheads has come under significant focus⁴, the US intends to deploy Golden Dome, a multilayered missile defense system that also includes space-based interceptors.⁵ This could lead to a heightened space-based arms race with increasing risks of nuclear war as well as conflict in space.⁶ These developments are happening in the worrisome backdrop of rescinding arms control commitments, lack of serious dialogue among major powers to discuss arms control and strategic stability, growing propensity towards use of force in regional conflicts, increasing skepticism among non-nuclear weapons states regarding the US extended deterrence commitments as well as nuclear weapons states' inaction to pursue disarmament as required under Article VI of the Nuclear Non-proliferation Treaty (NPT). Experts note that with the slowing pace of dismantlement of retired warheads, there is a 'clear trend of growing nuclear arsenals'.⁷ More so, advancements in disruptive technologies further lead to complexities by undermining the effectiveness of existing norms and regulations.⁸ By facilitating communication and predictability, arms control helps establish trust among competing powers. Conversely, lack of predictability not only contributes to unconstrained arms competition but also complicates the escalation pathways during potential military crises involving nuclear-weapon states.

This article carries three parts. In the first part, it provides a reasoning for the relevance of arms control in the Multipolar World. In the second part, it assesses the potential of future arms control mechanisms, correlating it to

russia#:~:text=At%20midnight%20on%20Thursday%2C%20a,on%20missiles%2C%20bombers%20and%20submarines,28 May 2026

⁴ Hans M. Kristensen, Matt Korda, Eliana Johns, and Mackenzie Knight, "Chinese Nuclear Weapons, 2025," *Bulletin of the Atomic Scientists*, Vol 81, No. 2 (2025), 135-160

⁵ Robert Peters, "Missile Defense for the 21st Century," *The Heritage Foundation*, https://www.heritage.org/sites/default/files/2026-03/2026_IndexOfUSMilitaryStrength_ASSESSMENT_POWER_MD.pdf

⁶ Ankit Panda, "For homeland missile defense, think Golden Zones, not a Golden Dome," *Atlantic Council*, 21 March 2026, <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/homeland-missile-defense-golden-zones-not-golden-dome/>

⁷ Hans M. Kristensen quoted in "Nuclear risks grow as new arms race looms—new SIPRI Yearbook out now," *Stockholm International Peace Research Institute*, 16 June 2025, <https://www.sipri.org/media/press-release/2025/nuclear-risks-grow-new-arms-race-looms-new-sipri-yearbook-out-now>

⁸ Manoj Harjani and Mei Ching Liu, "Navigating Uncertainty: Arms Control in an Age of Disruptive Technologies," *S. Rajaratnam School of International Studies*, January 2025, https://rsis.edu.sg/wp-content/uploads/2025/01/ER250123_MTP-Conference-2024.pdf

the present dynamics, while in the third section, it explores the implications and prospects and offers relevant recommendations.

Why Arms Control is relevant in the Multipolar World?

The nuclear arms control, as traditionally seen, was the product of a bipolar security environment signifying rivalry between the US and the former Soviet Union (now Russia) that differed from the current multipolar system in terms of arms control structure and practices. The bilateral arms control measures focused on strategic parity between the rival states that together possessed more than 90 percent of the total nuclear weapons in the world.⁹ The bilateral arms control agreements, such as the INF Treaty and START, aimed to regulate the quantitative and qualitative aspects of nuclear competition to stabilize deterrence. This bilateral context largely shaped the conceptual understanding of deterrence, strategic stability, escalation, and crisis management.¹⁰ It implied that due to mutual vulnerability between the two nuclear adversaries, neither of them could benefit from initiating and escalating a crisis, thus creating incentives for restraint and arms control.¹¹ Based on this policy relevance and theoretical foundations, a common understanding of escalation dynamics and crisis management emerged to establish the rationale behind pursuing arms control to avoid nuclear war.

Contrary to this bilateral context, one of the defining features of a multipolar order is the diffusion of power as well as military and technological capabilities, whereby power is no longer concentrated in a single or two superpowers, but rather among several powers, including China and other regional actors, who continue to influence the security environment. The nine states currently possess around 12,241 nuclear warheads, out of which 9,614 are estimated to be operational.¹² Unlike institutionalized and predictable deterrence architecture in the bipolar environment, multipolarity signifies asymmetrical force structures, a lack of consensus on the

⁹ Nevine Schepers, "Russia's War and the Global Nuclear Order," *Policy Perspectives*, Vol 10, No 6 (2022): 1

¹⁰ Steven E. Miller, "A Nuclear World Transformed: The Rise of Multilateral Disorder," *Dædalus, the Journal of the American Academy of Arts & Sciences*, Vol. 149, No. 2 (2020): 18

¹¹ Andrew Futter, *The Politics of Nuclear Weapons* (Cham: Palgrave Macmillan, 2021)

¹² Claire Mills, "Nuclear Weapons at a Glance," *House of Commons Library*, 14 January 2026, <https://commonslibrary.parliament.uk/research-briefings/cbp-9069/>

foundational dimensions of strategic stability, and varying perceptions of vulnerability vis-à-vis perceived adversaries.¹³

Contending Factors

The above-discussed factors make arms control more relevant in a multipolar setting where the absence of regulatory regimes not only exacerbates the risks of an unabated arms race but has adverse implications for escalation dynamics by paving the way towards crisis instability and inadvertent escalation. While the regulatory mechanisms to ensure transparency and verification have already been weakened through the gradual erosion of formal treaties and agreements, the advancements in new technologies, including autonomous systems, cyber and space capabilities, hypersonic delivery systems, and so on, further complicate stability by blurring the distinctions between nuclear and conventional domains and reducing the decision-making time in the event of a crisis.¹⁴

Globally, the multipolar world order has transitioned to become more complex than the Cold War. The three key elements that define this evolutionary structural change include: a) the return of great power competition involving more than two major actors; b) the technological competition as being central to power politics; c) the rise of private companies as major actors in the development of dual-use technologies. The nuclear weapons states assess this changing environment as not conducive to reducing the reliance on nuclear weapons; the salience of deterrent capability has increased multifold in states' doctrines and postures.¹⁵

Regionally, different regional conflicts in recent years also signify the centrality of nuclear weapons in states' security calculus, as nuclear

¹³ Lawrence Rubin and Adam N. Stulberg, *"The End of Strategic Stability? Nuclear Weapons and the Challenges of Regional Rivalries"* (Washington DC: Georgetown University Press, 2018)

¹⁴ Sarah Grand-Clement, "Artificial Intelligence Beyond Weapons: Application and Impact of AI in the Military Domain," *United Nations Institute for Disarmament Research (UNIDIR)*, Geneva, 2023, https://unidir.org/wp-content/uploads/2023/10/UNIDIR_AI_Beyond_Weapons_Application_Impact_AI_in_the_Military_Domain.pdf

¹⁵ Lukasz Kulesa, "Reducing Global Reliance on Nuclear Deterrence," *Royal United Services Institute (RUSI)*, 23 December 2025, <https://www.rusi.org/explore-our-research/publications/insights-papers/reducing-global-reliance-nuclear-deterrence>

deterrent capability is increasingly seen as a guarantor of national security.¹⁶ The survival of North Korea, which has been able to sustain international pressure and deter aggression through nuclear capability, as compared to Iraq and Libya, is generally seen as an example signifying the effectiveness of nuclear weapons to deter external intervention. The Russia-Ukraine war has also spurred the debate in favor of nuclear deterrence as being the most credible security assurance against aggression, raising questions about Ukraine's renunciation of nuclear deterrent capability as a viable strategy.¹⁷ Additionally, US President Donald J. Trump's statement regarding the possible resumption of nuclear testing by the US and likely responses from Moscow and Beijing also hint at the perceived need for modernization and growing salience of nuclear weapons.¹⁸

Simultaneously, there has been a growing tendency to use advanced military capabilities as tools of strategic competition, compellence, and coercive diplomacy.¹⁹ During the war with Ukraine, Russia resorted to using nuclear signaling to deter external involvement and shape the adversarial behavior.²⁰ In South Asia, the May 2025 crisis between Pakistan and India witnessed how the acquisition of advanced weapons emboldened New Delhi to initiate a crisis.²¹ Additionally, the growing questions about the credibility of US extended nuclear deterrence for the transatlantic alliance and other allies in Asia have generated discussions about a greater role of French nuclear capabilities in Europe, as well as indigenous deterrent

¹⁶ Steven E. Miller, "A Nuclear World Transformed: The Rise of Multilateral Disorder," *Daedalus* 2020; 149 (2): 17–36. doi: https://doi.org/10.1162/daed_a_01787

¹⁷ Sufian Ullah, "War in Iran and the Nuclear Non-Proliferation Regime: A Perspective from Pakistan," *International Institute for Strategic Studies*, March 25, 2026, <https://www.iiss.org/online-analysis/online-analysis/2026/03/war-in-iran-and-the-nuclear-nonproliferation-regime-a-perspective-from-pakistan/>

¹⁸ Łukasz Kulesa, "Reducing Global Reliance on Nuclear Deterrence," *Royal United Services Institute (RUSI)*, December 23, 2025, <https://www.rusi.org/explore-our-research/publications/insights-papers/reducing-global-reliance-nuclear-deterrence>

¹⁹ Terry Tracy, "Coercive Deterrence: Adapting Deterrence for Strategic Competition with China," *Parameters* 55, no. 3 (2025), doi:10.55540/0031-1723.3355

²⁰ Kulesa, "Reducing Global Reliance on Nuclear Deterrence"

²¹ Rabia Akhtar, "Conclusion: India's Doctrinal Drift and the End of Equilibrium," in *Strategic Reckoning: Perspectives on Deterrence and Escalation Post-Pahalgam – May 2025*, ed. Rabia Akhtar (Islamabad: The Center for Security, Strategy and Policy Research, University of Lahore, and the Institute of Regional Studies, 2025), 325–327

capabilities for Japan and South Korea.²² These trends coincide with ongoing modernization drives and expansion of military capabilities among major powers and signify that the salience of nuclear deterrence has increased in the contemporary era, leading to a more competitive nuclear landscape in the multipolar world. Such perceptions further strengthen the belief in the acquisition as well as modernization of nuclear weapons, necessitating the need to promote restraint. The absence of arms control arrangements, in addition to the divergent interests of states²³ in such a multipolar nuclear order, accelerates the arms race, which in turn leads to complex military postures that fuel uncertainty and the dangers of conflict escalation.

Implications

The complex interplay of these factors increases the ambiguities with respect to the intentions and actual capabilities of different states, thus leading to new challenges for strategic stability. While technological advancements continue at an unprecedented pace, the international efforts to regulate the development and use of advanced technologies like autonomous weapons systems have been underplayed for more than a decade, albeit with disagreements regarding the adoption of legally binding or informal initiatives to promote the responsible use of these technologies.²⁴

The traditional functions of any arms control efforts, as identified by Jozef Goldblat, include regulation, limitation, risk reduction, and building confidence between antagonistic powers.²⁵ As argued by Thomas Schelling and Hedley Bull, arms control does not aim to replace deterrence with

²² Maximilian Hoell et al., “Extended Deterrence in a Multipolar World (Workshop Summary),” *Center for Global Security Research, Lawrence Livermore National Laboratory*, March 25–26, 2025, <https://cgsr.llnl.gov/sites/cgsr/files/2025-05/Extended%20Deterrence%20in%20a%20Multipolar-Nuclear-World-Workshop-Summary.pdf>

²³ Dalton, T. (2022). Plus, Ça Change? Prospects of a Nuclear Deterrence Multipolarity in Southern Asia. *Journal for Peace and Nuclear Disarmament*, 5(2), 243–261. <https://doi.org/10.1080/25751654.2022.2158702>

²⁴ Kühn, U., & Williams, H. (2025). Governing the impact of emerging technologies: Actors, technologies, and regulation. *Journal of Strategic Studies*, 48(3), 559–570. <https://doi.org/10.1080/01402390.2025.2472213>

²⁵ Mathews RJ, McCormack TLH. The influence of humanitarian principles in the negotiation of arms control treaties. *Revue Internationale de la Croix-Rouge/International Review of the Red Cross*. 1999;81(834):331–352. doi:10.1017/S1560775500097431

alternative strategies; it aims to stabilize the strategies of deterrence.²⁶ While retaining the traditional underlying logic, any arms control efforts in the future may focus specifically on pursuing a set of objectives in light of unfolding multipolar dynamics and strategic complexities. Based on the synthesis of existing literature, policy debates, and proposals put forth by different states at different international fora, the following objectives of arms control are identified to address the complex challenges of multipolarity:

- Managing the destabilizing impact of advanced military capabilities that compress the decision-making cycle, often explained through the observation-orientation-decision-action (OODA loop) metaphor, leaving less time for decision-making and increasing the chances of inadvertent escalation.²⁷
- Ensuring transparency and limiting the unconstrained quantitative and qualitative arms buildup.²⁸ This may include limiting a certain type of weapons, delivery systems, and even the development as well as the integration of emerging and disruptive technologies like artificial intelligence to reduce the possible destabilizing impact on strategic stability.²⁹
- Regulating the operational posture as well as deployment of military forces to enhance crisis stability by decreasing escalation pressures and risks generated by new technologies.³⁰
- Establishing institutional frameworks and mutually respected norms to govern military use of advanced capabilities in new domains of conflict, including cyber and outer space.³¹

²⁶ Robert Ayson, *Hedley Bull and the Accommodation of Power* (Houndmills: Palgrave Macmillan, 2012)

²⁷ Johnson, J. (2023). "Automating the OODA loop in the age of intelligent machines: reaffirming the role of humans in command-and-control decision-making in the digital age". *Defence Studies*, 23(1), 43–67. <https://doi.org/10.1080/14702436.2022.2102486>

²⁸ Andrew Facini, "The Past and Future of Deterrence Is Arms Control," *Bulletin of the Atomic Scientists*, May 13, 2026, <https://thebulletin.org/premium/2026-05/the-past-and-future-of-deterrence-is-arms-control/>

²⁹ Rebecca Lissner, "The Future of Strategic Arms Control," Discussion Paper Series on Managing Global Disorder, no. 4 (New York: Council on Foreign Relations, 2021), 5. The Future of Strategic Arms Control

³⁰ Ibid

³¹ Jessica West and Lauren Vyse, "Arms control in outer space: Status, timeline, and analysis," *Ploughshares*, 14 March 2022, <https://ploughshares.ca/arms-control-in-outer-space-status-timeline->

Exploring Potential Models and Trajectories

- Facilitating information exchanges through prior notification of relevant activities, verification mechanisms, and arrangements for crisis management to address misperceptions through transparency and communication.³²
- Promoting shared understanding of strategic stability by managing mutual perceptions and escalation thresholds.

The above list of objectives suggests that arms control is a flexible policy approach that offers practical means for adversaries to adopt and pursue limited and specific objectives. Arms control contributes to stabilizing the security environment in more ways than just providing mechanisms for numerical reductions in armaments. Rather, it plays a crucial role in preserving strategic stability by encouraging restraint through communication and predictability. Instead of serving as an end, arms control fulfills a broader purpose by dealing with inter-state cooperation on issues related to limitation and reduction of weapons, as well as their political and military use during peace and war by influencing states' doctrines and military postures.

Assessing Potential Models for Future Arms Control Architecture

The rapid transition to a predominantly multipolar world order raises crucial questions regarding the institutional model of future arms control measures. As the Cold War's bilateral model of arms control does not suit the requirements of the evolving environment, any attempt to restore the old bilateral arms control arrangements may remain futile. In a structurally multipolar order characterized by political and technological diffusion,³³ any pursuit of arms control requires adaptation and flexibility in its institutional form while retaining the central objective, which is to manage strategic competition between antagonistic powers and minimize the risks as well as consequences of escalation. While this core objective remains the same, the means for achieving these objectives require adaptation. Instead

and-analysis/, and Alexey Arbatov, 'Arms control in outer space: The Russian angle, and a possible way forward,' *Bulletin of the Atomic Scientists*, Vol 75, No. 4 (2019): 151-161

³² Williams, H. (2019). "Asymmetric arms control and strategic stability: Scenarios for limiting hypersonic glide vehicles". *Journal of Strategic Studies*, 42(6), 789–813. <https://doi.org/10.1080/01402390.2019.1627521>

³³ Talmadge, Caitlin. "Chapter 1 Multipolar Deterrence in the Emerging Nuclear Era" In *The Fragile Balance of Terror: Deterrence in the New Nuclear Age* edited by Vipin Narang and Scott D. Sagan, 13-38. Ithaca, NY: Cornell University Press, 2023. <https://doi.org/10.1515/9781501767036-002>

of relying on legally binding bilateral treaties, there have been differing proposals to explore possible arms control measures through trilateral or plurilateral arrangements, region-specific approaches that may include bilateral agreements or more flexible confidence-building measures (CBMs), and issue-specific regulatory frameworks to cater to a heterogeneous strategic landscape.

Trilateral Arms Control Agreements

China's economic and military rise since the advent of the twenty-first century has been the most defining aspect behind global power shifts. While China's growing military capabilities significantly influence the threat perceptions in Washington, D.C.,³⁴ Russia remains the only peer of the US, at least in numerical terms, in the realm of strategic nuclear weapons.³⁵ In 2020, President Trump announced the intention of 'proposing a bold new trilateral arms control initiative with Russia and China to help avoid an expensive arms race and instead work together to build a better, safer, and more prosperous future for all.'³⁶ While the international security environment adjusts to the end of unchallenged US primacy, it confronts the asymmetric risks of war and costs of competition between the US, China, and Russia due to profound differences between their nuclear strategies and postures. During the Cold War, the nuclear arms race was the central feature of the bipolar rivalry between the Soviet Union and the US. Contrary to this aspect, China does not accord similar significance to nuclear weapons in its overall military posture.³⁷ In the successive Defence White Papers issued by the Chinese government, the role of nuclear weapons has been identified as ensuring self-defense by deterring other states' use of threat to use nuclear weapons against China.³⁸ It also maintains a decades-old unconditional

³⁴ The White House, *National Security Strategy of the United States of America* (Washington, DC: The White House, November 2025), <https://www.whitehouse.gov/wp-content/uploads/2025/12/2025-National-Security-Strategy.pdf>

³⁵ Rebecca Lissner, "The Future of Strategic Arms Control", Discussion Paper Series on Managing Global Disorder, no. 4 (New York: Council on Foreign Relations, April 2021), 2, https://assets.cfr.org/images/lissner-dp_final/lissner-dp_final.pdf

³⁶ Kingston Reif and Shannon Bugos, "Trump Still Wants Multilateral Arms Control," *Arms Control Association*, April 2020, <https://www.armscontrol.org/act/2020-04/news/trump-still-wants-multilateral-arms-control>

³⁷ Niu, Q. (2025). "Nuclear Weapons and China's National Security: Consistency, Evolvment and Risk Management". *Journal for Peace and Nuclear Disarmament*, 8(1), 76–90. <https://doi.org/10.1080/25751654.2025.2488183>

³⁸ Ibid

policy of the ‘no first use’ (NFU) of nuclear weapons, besides strongly opposing ‘nuclear sharing, extended deterrence, and other arrangements that undermine the international nuclear nonproliferation regime’.³⁹

While there have been varying estimates regarding the number of nuclear warheads possessed by China, one study concludes that Beijing currently possesses approximately 600 nuclear warheads.⁴⁰ While China makes steady progress in developing sea-based assured second-strike capability, most of the Chinese nuclear arsenal remains land-based, with an estimated arsenal of approximately 376 warheads,⁴¹ representing approximately five percent of the US and Russia’s respective arsenals. The US estimates for the next five years project that Beijing’s nuclear arsenal will exceed 1,000 warheads by 2030.⁴² While China’s nuclear program remains far from achieving parity with the US, the latter remains skeptical of the former’s nuclear modernization efforts that could alter the nuclear balance between the two states, hence requiring it to retain the quantitative and qualitative overmatch. Besides nuclear warheads and delivery systems, the US remains wary of China’s covert development of asymmetric cyber and counterspace capabilities and equates it with Beijing’s geopolitical ambitions based on hostile intentions.⁴³ Given China’s credible declaratory NFU policy and smaller arsenal, there is less incentive for Beijing to consider attempting a first strike against the US. Similarly, considering the US conventional military capabilities, there remains a lesser likelihood of nuclear exchange between the two states. However, in the wake of growing tensions between them over Taiwan, the risks of deliberate escalation have considerably

³⁹ Ministry of Foreign Affairs of the People’s Republic of China, *China’s Arms Control, Disarmament, and Nonproliferation in the New Era* (Beijing: Ministry of Foreign Affairs of the People’s Republic of China, November 2025), https://www.mfa.gov.cn/mfa_eng/zy/wjzc/202511/t20251127_11761656

⁴⁰ Hans M. Kristensen, Matt Korda, Eliana Johns, and Mackenzie Knight, “Chinese Nuclear Weapons, 2025,” *Bulletin of the Atomic Scientists* 81, no. 2 (2025): 135–160, <https://doi.org/10.1080/00963402.2025.2467011>

⁴¹ Ibid: 136

⁴² US Department of Defense, *Report to Congress on Military and Security Developments Involving the People’s Republic of China 2025* (Washington, DC: US Department of Defense, December 23, 2025), <https://media.defense.gov/2025/Dec/23/2003849070/-1/-1/1/ANNUAL-REPORT-TO-CONGRESS-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2025.PDF>

⁴³ Vince Manzo, “*Nuclear Arms Control Without a Treaty? Risks and Options After New START*” (Arlington, VA: Center for Naval Analyses, March 2019), http://cna.org/CNA_files/PDF/IRM-2019-U-019494.pdf

increased. Simultaneously, Beijing has recently become more skeptical of US nuclear posture and possible nuclear use with respect to the growing tendency to deploy more nuclear weapons in the Asia-Pacific in the wake of nuclear sharing commitments with Asian allies and lowering nuclear thresholds as manifested through doctrinal positions.⁴⁴

The US perceptions of China's nuclear program largely shape Washington's overall policy choices towards arms control. Despite China's declaratory commitments for restraint, the US believes that Beijing's nuclear modernization signals an offensive posture with minimum restraint.⁴⁵ Western analysts also point out that by 2030, China's nuclear arsenal will witness almost a fivefold increase, providing a force structure and posture like what the US and Russia possess.⁴⁶ From this perspective, continued adherence to arms control commitments undertaken through bilateral agreements between the US and Russia would expose both states to dangers posed by Beijing's unconstrained efforts of military modernization.⁴⁷ This perspective emphasizes that, in addition to other AI-enabled weapons and long-range precision strike capabilities, China's expanding nuclear arsenal makes prior arms control agreements irrelevant.⁴⁸ While Russia could be less wary of these changes in the trilateral strategic balance, the US is more skeptical of China's advancing nuclear capabilities as the two states compete for strategic and political influence at both regional and global levels. With respect to Russia, Washington believes that Moscow violated the INF Treaty by deploying intermediate-range missiles, retains a sizeable arsenal of nonstrategic nuclear weapons along with development of

⁴⁴ Qiyang Niu, "Nuclear Weapons and China's National Security: Consistency, Evolvement and Risk Management," *Journal for Peace and Nuclear Disarmament* 8, no. 1 (2025): 76–90, <https://doi.org/10.1080/25751654.2025.2488183>

⁴⁵ Henrik Stålhane Hiim, M. Taylor Fravel, and Magnus Langset Trøan, "The Dynamics of an Entangled Security Dilemma: China's Changing Nuclear Posture," *International Security* 47, no. 4 (Spring 2023): 147–187, https://doi.org/10.1162/isec_a_00457

⁴⁶ Austin Long, "Myths or Moving Targets? Continuity and Change in China's Nuclear Forces," *War on the Rocks*, December 4, 2020, <https://warontherocks.com/2020/12/myths-or-movingtargets-continuity-and-change-in-chinas-nuclear-forces/>

⁴⁷ Dmitri Trenin, "Stability amid Strategic Deregulation: Managing the End of Nuclear Arms Control," *The Washington Quarterly* 43, no. 3 (2020): 161–75, <https://doi.org/10.1080/0163660X.2020.1813401>

⁴⁸ Christine M. Leah and Frank A. Rose, "The Rocky Future of Arms Control," *Comparative Strategy* 45, no. 3 (2026): 387–98, <https://doi.org/10.1080/01495933.2025.2590459>

hypersonic glide vehicles and cruise missiles, and uses ‘escalate to deescalate’ strategy to influence its and NATO’s strategic behavior.⁴⁹

While the US perspective emphasizes including China in possible future arms control arrangements, the two states do not have a substantive dialogue process to discuss these issues, which serves as the main factor behind the nuclear risks between the two sides. From China’s vantage point, two key challenges undermine its motivation and seriousness to engage in risk-reduction and arms control dialogues. First, there is a dispute over finalizing the framework of discussions on risk-reduction, whereby Beijing prefers discussions on risk prevention while Washington, D.C. prefers discussions on risk management.⁵⁰ Secondly, the huge numerical disparity between China’s nuclear arsenal and the number of warheads held by the US and Russia discourages Beijing from entering into any trilateral arms control framework. Chinese officials maintain that the huge disparity in arsenals does not provide for a ‘fair and equitable basis’ to join arms control negotiations.⁵¹ Fu Cong, Director General of the Chinese Foreign Ministry’s Department of Arms Control, argued in an interview that ‘If the US commits itself to reducing its nuclear arsenal to a level comparable to the Chinese nuclear arsenal, we’ll be happy to join. But frankly speaking, that is something that we do not foresee happening in the near future, maybe not in my lifetime.’⁵²

This perspective emphasizes that the strong power in an adversarial nuclear relationship needs to ensure that the vulnerability of the weaker state shall not be exploited to the advantage of the strong power.⁵³ While it remains to

⁴⁹ Rebecca Lissner, *The Future of Strategic Arms Control*, Discussion Paper Series on Managing Global Disorder, no. 4 (New York: Council on Foreign Relations, April 2021), 2, https://assets.cfr.org/images/lissner-dp_final/lissner-dp_final.pdf

⁵⁰ Qiyang Niu, “Nuclear Weapons and China’s National Security: Consistency, Evolvement and Risk Management,” *Journal for Peace and Nuclear Disarmament* 8, no. 1 (2025): 76–90, <https://doi.org/10.1080/25751654.2025.2488183>

⁵¹ Fu Cong, “Director-General Fu Cong’s Interview with *Kommersant*,” *Ministry of Foreign Affairs of the People’s Republic of China*, October 16, 2020, https://www.mfa.gov.cn/eng/wjb/zzjg_663340/jks_665232/jkxw_665234/202406/t20240606_11405097.html

⁵² Ibid

⁵³ Michael Albertson, ed., *Aligning Arms Control with the New Security Environment* (Livermore, CA: Center for Global Security Research, Lawrence Livermore National Laboratory, 2024), <https://cgsr.llnl.gov/sites/cgsr/files/2024-08/2024-0528-cgsr-cccasional-paper-aligning-arms-control.pdf>

be seen whether China will be willing to discuss any trilateral arms control proposals, the triangular asymmetries and differing threat perceptions indicate that it is almost impossible to achieve a legally binding symmetrical arms control agreement between the US, Russia, and China. This is particularly difficult in the absence of a mutually recognized foundation that could act as an equivalent to the principle of mutually assured destruction.

Bilateral Arms Control Measures

As pursuing trilateral arms control arrangements becomes increasingly difficult due to the rise in the number of essentially required parties to arms control in the multipolar world, states could opt for trade-offs and explore verifiable, technically specified, and reciprocal bilateral arms control agreements. While no arms control agreement is in sight to take the place of New START and no two nuclear-armed adversaries are in a serious negotiation process to pursue arms control, the international security environment is undergoing an unprecedented time in decades, with no formal restrictions on nuclear weapons. This fact alone should provide a strong incentive to nuclear-weapon states, particularly the major powers, to enter separate bilateral negotiations and explore meaningful bilateral pathways of restraint. Despite increasing complexities of the multipolar system, a bilateral approach to pursue arms control remains the most practical pathway. This approach offers a plausible way forward to deal with the complexities of a multipolar order, while recognizing each other's sensitivities.

For the US and Russia, the two sides have a long history of cooperation and implementation of arms control agreements. In the absence of a formal agreement, the two sides should prioritize risk reduction and cooperation over an unbridled arms race. The absence of transparency about each other's strategic postures and possible deployment of hundreds of nuclear weapons could lead to risky arms buildup with serious ramifications for a stable relationship. This requires minimizing the prevalent uncertainty between Washington and Moscow and preserving the channels of communication. However, this approach also confronts certain challenges. First, unlike the Cold War environment, Russia's conception of strategic stability has evolved from seeing it as a condition in which neither side feels incentivized to launch a first strike to a broader concept that goes beyond just preserving nuclear balance to deter coercion and ensure survival across different

domains.⁵⁴ This view has a direct bearing on Russia's contemporary approach towards arms control, where it sees less value in compartmentalizing the nuclear issue and prefers combining arms control with other geopolitical issues like NATO's expansion.⁵⁵ Second, Russia's recent changes in the updated nuclear doctrine that increase reliance on nuclear weapons, as it counts on maintaining a large arsenal of warheads and missiles to deter NATO's conventional superiority,⁵⁶ make it less likely to accept limitations on the nuclear program. Third, the US force modernization efforts, like the Trump administration's announcement to shield the continent by developing the US 'Golden Dome' missile defense system, directly exacerbate Moscow's threat perception regarding the credibility of its deterrent capability.

The more practical bilateral approach for arms control between the US and Russia could focus beyond the traditional scope of deployment of strategic weapons to discuss new categories of weapons. After the expiration of New START, the two sides need to engage in follow-on discussions to explore the prospects of bilateral risk-reduction measures, instead of restricting to principles of parity and reciprocity.⁵⁷ Considering that there are currently no legal constraints against the deployment of strategic forces, the agenda for future US and Russia negotiations may focus on discussing the adverse impacts of the integration of emerging technologies, advanced delivery systems, and the deployment of non-strategic nuclear weapons. Like mutually assured destruction served as the foundational basis to institutionalize bilateral arms control arrangements during the Cold War, mutual risk management could serve as an alternative framework in light of new challenges posed by the complex multipolar order and integration of disruptive technologies in military systems. Moscow and Washington, D.C., should recognize that in an integrated battle space, neither side can control

⁵⁴ Nicolò Fasola and Derek Averre, "Current Russian Perspectives on Strategic Stability and Deterrence through the Prism of Strategic Culture," *Journal of Strategic Studies* (2026): 1–37, <https://doi.org/10.1080/01402390.2025.2602557>

⁵⁵ Linda van der Horst and Qiyang Niu, "Navigating Multipolarity: Reimagining Process Design for Future Strategic Stability Frameworks," *St Antony's International Review* 20, no. 2 (2025): 61

⁵⁶ Malaika Afridi, "Understanding Russia's Nuclear Doctrinal Shifts," *Issue Brief* (Islamabad: Institute of Strategic Studies Islamabad, November 28, 2024), 1, https://issi.org.pk/wp-content/uploads/2024/11/IB_Malaika_Nov_28_2024.pdf

⁵⁷ Stacy Achoki et al., *The Next Generation's Arms Control Agenda for 2050* (London: British American Security Information Council (BASIC), September 2021), 30, <https://basicint.org/wp-content/uploads/2021/09/Arms-Control-Final.pdf>

escalation. By appreciating the mutual threats, the underlying incentive for both states is to lower the risks of miscalculation, reduce uncertainty, and address misperceptions. This requires concrete efforts to challenge previous notions of strategic stability and develop a shared understanding, considering the blurring distinction between conventional and nuclear realms.⁵⁸ However, little may be expected from the negotiations in which one side enjoys a considerable advantage over the other.⁵⁹

In the case of China and the US, while it seems impractical to have a trilateral arms control arrangement that could bind China, the US, and Russia under a single framework to limit their respective strategic capabilities, Beijing and Washington may bolster bilateral efforts to pursue arms control. This requires prioritizing high-level strategic stability dialogues between the two sides to cover a wide range of strategic issues, including nuclear doctrines, force postures to include nuclear weapons, as well as integration of emerging technologies, and risk-reduction measures. Since the two states are likely to remain entangled in great power competition for a considerable time in the foreseeable future, and they have never engaged in institutionalized arms control efforts, there is a need to ensure transparency with respect to motives and intentions by exchanging information and sharing perceptions about stability and escalation pathways. Although the adversarial nuclear relationship between the two states is not defined by parity or numerical symmetry, growing perceptions of the US regarding China as an emerging nuclear peer to the US by 2030 or 2035,⁶⁰ and concerns about its nuclear modernization efforts, should incentivize acknowledging mutual vulnerabilities.

Considering the complex nature of challenges posed by multipolarity, asymmetric forces possessed by competing great powers, and rapid integration of emerging technologies in military systems, any attempts to explore arms control measures that focus exclusively on nuclear issues

⁵⁸ Ibid

⁵⁹ John D. Maurer, "Arms Control among Rivals," in *Space and Missile Wars: What Awaits*, ed. Henry D. Sokolski (Arlington, VA: Nonproliferation Policy Education Center, 2021), 241

⁶⁰ Qiyang Niu, "Nuclear Weapons and China's National Security: Consistency, Evolvment and Risk Management," *Journal for Peace and Nuclear Disarmament* 8, no. 1 (2025): 76–90, <https://doi.org/10.1080/25751654.2025.2488183>

Exploring Potential Models and Trajectories

could prove less productive.⁶¹ As technology continues to evolve at an unprecedented pace, future arms control efforts need to entail a broader agenda to discuss wider issues and may prioritize risk reduction over arsenal reduction. As discussed previously, China and the US retain differing stances on defining the framework for any possible risk reduction measures. Their respective insistence on crisis prevention and crisis management may be dovetailed in a manner to identify broader issues of mutual interest. Qiyang Niu suggests that the possible agenda for their bilateral negotiations could focus on the following measures, as also discussed during Track 2 interactions held in Beijing:⁶²

- Elaborating policies and doctrines to address misperceptions.
- Restrictions on certain weapons and geographical deployments, like the deployment of INF-range ground-based delivery systems of both sides in the Asia-Pacific.
- Pre-launch notification measures to promote transparency and avoid misperceptions. It is worth mentioning that China shared advanced information with the US prior to the test launch of an intercontinental ballistic missile in September 2024 to avoid miscalculations.⁶³
- Pre-notification of US Freedom of Navigation Operations (FONOP) as a measure to strengthen maritime crisis management between China and the US.
- Reciprocal establishment of National Nuclear Risk Reduction Centres (NNRRC) in the US and China to prevent crisis and facilitate communication, on the lines of centers established between the US and Russia.

The precedence of having non-binding agreements between the two states offers an optimistic outlook to explore more meaningful bilateral arms control measures to address strategic risks. Until the two states could pursue legally binding agreements, they could agree on exploring the modular arrangements, as enumerated above, that could serve as building blocks for

⁶¹ Rebecca Lissner, *The Future of Strategic Arms Control*, Discussion Paper Series on Managing Global Disorder, no. 4 (New York: Council on Foreign Relations, April 2021), 2, https://assets.cfr.org/images/lissner-dp_final/lissner-dp_final.pdf

⁶² Ibid

⁶³ Nectar Gan, "China Fires ICBM into Pacific Ocean in First Such Public Test in Decades as Regional Tensions Flare," *CNN*, September 26, 2024, <https://edition.cnn.com/2024/09/25/asia/china-icbm-test-pacific-ocean-intl-hnk>

more comprehensive frameworks. In 2014, under the United Nations Convention on the Law of the Sea (UNCLOS) system, both states adopted the Code for Unplanned Encounters at Sea (CUEA).⁶⁴ Later at the US-China Summit held in Beijing during the same year, the two sides signed a Memorandum of Understanding (MoU) on pre-notification of major military activities.

Unilateral Commitments

The expiry of New START does not mean the end of significance and urgency to pursue arms control for a stable international security environment in the multipolar world. One of the most significant aspects of arms control is the flexibility in its approaches, whereby states do not need to rely solely on bilateral or multilateral bindings; they could opt for unilateral actions to promote broader arms control objectives.⁶⁵ The prospects of reciprocity remain the lowest in unilateral approaches, yet the exemption from the need to have verification measures incentivises states to adopt voluntary measures to offer greater transparency regarding their intentions. The unilateral arms control measures may be organized into four distinct categories: political declarations, domain-specific moratoriums, voluntary transparency measures, and doctrinal self-restraint. Each of these approaches contributes towards uniquely preserving strategic stability, reflecting the state's intent to exercise restraint even in the absence of reciprocal commitments from the adversary.

Since political declarations are meant to signal the willingness to reduce the dangers of escalation, these signify the most basic form of unilateral arms control measures. The famous 'Reagan-Gorbachev Principle,' which emphasized that since nuclear war cannot be won, it must not be fought, remains the most famous example of a non-binding political declaration. Its continued relevance was reflected through the joint reiteration of this principle by all NPT signatory nuclear-weapon states in January 2022.⁶⁶ The second category of unilateral arms control measures relates to domain-

⁶⁴ Youngmin Seo, *The South China Dispute as International Law and Politics: Discovering the Role of Law in Times of Power Shift* (Leiden: Martinus Nijhoff, 2024), 201

⁶⁵ Robin Brown, *Arms Control: Has the West Lost Its Way?* (London: Alliance Publishers Ltd. for the Institute for European Defence & Strategic Studies, 1987), 34

⁶⁶ Tobias Fella, Noah Mayhew, and Daria Selezneva, *Future Formats of Nuclear Arms Control*, Deep Cuts Commission Issue Brief 19 (Hamburg: Deep Cuts Commission, December 16, 2025), <https://doi.org/10.5281/zenodo.17828341>

specific moratoriums that aim to promote restraint in those areas of evolving strategic competition where formal legal frameworks have not yet been negotiated or agreed upon. In April 2022, the US declared a unilateral commitment not to conduct direct-ascent anti-satellite (ASAT) missile tests is an example of this approach that was seen as a positive step to enhance space sustainability to reduce the threats posed by such tests to military and civilian space assets by generating orbital debris.⁶⁷ This example indicates how domain-specific unilateral measures can help building norms in areas where technological developments outpace the adoption of formal and mutually agreed measures of restraint.

Adopting voluntary transparency measures to reduce risks of inadvertent escalation, strategic uncertainties, and dangers of miscalculation constitutes the third category of unilateral arms control measures. Beijing's pre-launch notification of an intercontinental ballistic missile test in September 2024 exemplifies an important confidence-building measure. Such actions do not require compromising the state's legitimate security requirements by expecting formal, legally binding commitments or intrusive verification procedures. Conversely, these are meant to minimize the risks of misinterpreting routine military activities as acts of aggression. In a multipolar strategic environment with heightened dangers of inadvertent escalation due to dual-capable delivery systems and advanced conventional capabilities, these measures can help develop mutual trust among adversaries about each other's strategic intentions by minimizing uncertainties. This not only paves the way for more formal arms control arrangements but also helps preserve crisis stability.

The fourth category in unilateral arms control measures includes deliberate declarations of policies to demonstrate doctrinal self-restraint as an attempt to constrain escalation pathways. As discussed in previous sections, China's decades-old adherence to the doctrinal stance of NFU and Negative Security Assurances (NSA) signifies this form of unilateral commitment.⁶⁸ By limiting the circumstances that warrant the use of nuclear weapons and pledging not to threaten the nuclear-armed states, thus encouraging them not to consider the option of acquiring nuclear weapons, a state declares the

⁶⁷ Bruce McClintock, "US Decision on ASAT Testing a Positive Step Towards Space Sustainability," *RAND*, April 21, 2022, <https://www.rand.org/pubs/commentary/2022/04/united-states-decision-on-asat-testing-a-positive-step.html>

⁶⁸ Ministry of Foreign Affairs of the People's Republic of China, "Security Assurances," July 23, 2024, https://www.fmprc.gov.cn/mfa_eng/xw/wjbxw/202407/t20240723_11458631.html

strategic intent not to exercise restraint. Although such commitments are subject to questions of credibility during times of crises, they directly contribute to predictability and transparency regarding nuclear posture.

In an era of strategic uncertainties and reduced prospects for formal arms control arrangements, the unilateral actions provide the basis for more concrete agreements and frameworks. Besides reflecting a restrained posture, these measures also carry the normative significance for the particular state adopting these steps to project itself as a responsible military power among competing states. While Russia and the US are currently not constrained by any treaty like a legally binding arrangement, they could engage in meaningful strategic dialogue and make parallel political commitments to uphold the numerical limits set out in the New START.⁶⁹ In the absence of legal force, such commitments could reduce the tendency for nuclear expansion and offer more predictability with respect to each other's nuclear postures. Historically, the two states have engaged in such political declarations as Presidential Nuclear Initiatives (1991-1992), whereby Russia committed to removing non-strategic nuclear weapons from submarines and surface ships, whereas the US withdrew overseas ground-launched short-range weapons. The two states have agreed on the necessity to address threats posed by advanced and sophisticated weapons that carry the risks of accidental war by shortening the response times.⁷⁰ Another area of action relates to addressing the problem of strategic entanglement that accentuates the dilemma of perception as well as response. By recognizing how non-nuclear strategic weapons threaten the survivability of each other's nuclear deterrent capabilities, the two sides may consider offering more transparency with respect to dual-capable missile systems.⁷¹ In an era marred by threats of rapid escalation, any misreading of incoming adversarial weapon systems could lead to nuclear exchange with catastrophic consequences.

⁶⁹ Stephen Cimbala, "Beyond New START: Prospects for US-Russian Nuclear Arms Control," *Global Security Review*, April 14, 2026, <https://globalsecurityreview.com/beyond-new-start-prospects-for-u-s-russian-nuclear-arms-control/>

⁷⁰ Tobias Fella, Noah Mayhew, and Daria Selezneva, *Future Formats of Nuclear Arms Control*, Deep Cuts Commission Issue Brief 19 (Berlin: Deep Cuts Commission, December 16, 2025), 6, <https://doi.org/10.5281/zenodo.17828341>

⁷¹ Paul van Hooft, Lotje Boswinkel, and Tim Sweijts, *Shifting Sands of Strategic Stability: Towards a New Arms Control Agenda* (The Hague: The Hague Centre for Strategic Studies, 2022), 90, <https://hcss.nl/wp-content/uploads/2022/02/Arms-Control-Shifting-sands-of-strategic-stability-2022-HCSS.pdf>

Similarly, in the case of China, President Xi Jinping's government could offer greater transparency regarding its strategic thinking, perceptions, and military posture without compromising security. China's principle-driven doctrinal commitments, including the NFU policy, commitment not to share nuclear capability in terms of extended nuclear deterrence, and NSA by committing not to attack non-nuclear weapons states with nuclear weapons, are widely acknowledged.⁷² The continued adherence to these political commitments is required more than ever before, considering the prevailing arms control environment and growing strategic complexities in the multipolar world. While there are challenges to win reciprocity, unilateral measures of arms control remain the easiest way to pursue restraint, as the state adopting unilateral measures could exercise maximum authority to adhere to such commitments. Although this approach carries inherent shortcomings of a lack of reciprocity, a legally binding nature, and an absence of verification mechanisms, the unilateral actions provide a basis for more concrete agreements and a framework.

Conclusion

The international security environment in the contemporary multipolar world confronts the challenge of eroding arms control architecture. The expiration of New START raises serious concerns regarding the unconstrained arms buildup and intensifying strategic competition in the absence of any guardrails to ensure transparency, as well as risk reduction measures. As compared to past years, the multipolar world is characterised by a rise in the number of competing actors, asymmetries in respective nuclear capabilities, integration of rapidly advancing disruptive technologies in military systems, and blurring distinctions between nuclear and conventional military capabilities. This paper concludes that while the underlying logic of arms control remains the same, which is to regulate and limit the development as well as use of force, introducing risk reduction measures to address the destructive consequences of war, and building confidence between antagonistic powers, the new trends require redefining the objectives of arms control to address unprecedented challenges and threat perceptions of competing powers.

⁷² Xia Liping, "Impacts of China's Nuclear Doctrine on International Nuclear Disarmament," *Nuclear Threat Initiative*, September 2021, https://www.nti.org/wp-content/uploads/2021/09/Xia_Liping.pdf

While the core logic of arms control remains the same, the paper has discussed at length how the potential mechanisms to pursue restraint and risk reduction measures may follow different structures. The most significant distinction between the bipolar and multipolar nuclear order is the rise of China's military power and the US perception of it as a potential nuclear peer. However, China's considerably leaner nuclear arsenal, asymmetrical capabilities, and advancements in disruptive technologies constrain the possibilities of incorporating Beijing in bilateral nuclear arrangements between Russia and the US. The paper identifies the differing perceptions of great powers towards each other's respective nuclear postures and the absence of a common understanding of strategic stability as primary reasons behind enduring strategic competition and arms race. In keeping with the distinct requirements of a multipolar strategic environment, the paper examines the prospects of trilateral, bilateral, and unilateral models of arms control arrangements. By analyzing the strengths and shortcomings of each of these approaches, the paper concludes that in wake of reduced prospects for formal arms control arrangements, the unilateral actions provide the basis for more concrete agreements and framework that could shape the future arms control architecture. It further emphasizes that while the comprehensive legally binding measures, involving all competing great powers under a single framework, seem impractical in the foreseeable future, states must pursue bilateral as well as unilateral arrangements, including the non-binding political declarations, to enhance transparency and reduce the risks of inadvertent escalation. The future of arms control architecture is less likely to be shaped by a single institutional model; it hinges upon layered and modular arrangements.