Anum Riaz and Mobeen Jafar Mir<sup>1</sup>

#### **Abstract**

The impending expiration of New START Treaty next year on 5 February 2026, the last remaining bilateral arms control treaty, marks a watershed moment in the evolving landscape of global non-proliferation regime. The gradual collapse of global arms control treaties over the years, a process expedited by Emerging and Disruptive Technologies (EDTs), shifting global geopolitical landscape and rise of multipolarity, has brought home nuclear policymakers and experts the urgent need to revive and strengthen the faltering global arms control regime. Therefore, in the prevailing scenario of future arms control ambiguity, the steps required to forge a multilateral cooperation post New-START expiration is the main research question of the paper. Considering the ongoing geopolitical atmosphere where states are more involved in power maximization in an anarchic world than abiding by the rules of nonproliferation, the theoretical framework of offensive realism is being used to explain the phenomenon. The paper takes a brief stock of historical developments of arms control, analyzes the constraints and limitations in the New START Treaty, and its impact on strategic stability in the multilateral world. The paper proposes a future blueprint for a comprehensive new arms control framework while considering the likely future scenarios and concludes with practical policy pathways, like the need for verification regimes, incorporation and regulation of provisions for the ethical use of AI and strengthening of already established international institutions among others.

**Keywords:** New START, Global Non-Proliferation Regime, Disruptive Emerging Technologies, Arms Control Frameworks, Geopolitics, Strategic Stability, Multipolarity, Offensive Realism

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#### Introduction

The Cold War emerged as the broader geopolitical and ideological conflict between the United States and the Soviet Union, within which nuclear arm race became the defining and escalation feature. To curb the escalating nuclear arms race, several initiatives were undertaken. The United Nations Atomic Energy Commission (UNAEC) was established but failed to reach a consensus. During the 1950s, there was growing international interest in regulating nuclear energy. US President Dwight D. Eisenhower's 1953 'Atoms for Peace' speech played a significant role in the eventual establishment of the International Atomic Energy Agency (IAEA) in 1957.<sup>2</sup> Its aim was to restrict the rampant proliferation of nuclear weapons and forge international cooperation on civil nuclear research.

The history of arms control goes back to the beginning of the 20<sup>th</sup> century when the Hague conferences not only stipulated the rules for warfare but also prohibited certain weapons during conflict. After World War I and particularly during the interwar period various initiatives like the Washington Naval Treaty for naval disarmament and the Geneva Protocol of 1925 for prohibition of biological and chemical weapons were launched. The League of Nations was also established to maintain collective security and peace through disarmament. After World War II, the Baruch plan of 1946 also aimed at international control of atomic energy. Yet, the intensifying Cold War rivalry between US and USSR slowed down the progress of global arms control and disarmament. The 1950s and 1960s witnessed a tremendous arms buildup between the two global powers, yet various treaties, like Limited Test Ban Treaty (LTBT) in 1963, Nuclear Non-Proliferation Treaty (NPT) in 1968, Strategic Arms Limitation Talks (SALT I & II) in 1972 and 1979 respectively, were introduced. The Anti-Ballistic Missile (ABM) Treaty and Biological Weapons Convention of 1972 followed by Chemical Weapons Convention of 1993 were other notable initiatives at arms control and disarmament. In 1996, Comprehensive Test Ban Treaty (CTBT) prohibiting all types of nuclear testing was also introduced. The US and USSR also signed Strategic Arms Reduction Treaties (START I and II) in 1991 and 1993 respectively, Strategic Offensive Reductions Treaty (SORT) in 2002, and the New START treaty in 2010.

The work focuses on two independent variables, (1) changing geopolitical landscape marked by Ukraine war, great-power rivalry in the Asia Pacific, and weakening of liberal order, and (2) EDTs, which can have impact on the future of arms control, which is our dependent

<sup>&</sup>lt;sup>2</sup> "List of Member States," *International Atomic Energy Agency, https://www.iaea.org/about/governance/list-of-member-states.* 

variable for the study. In April 2010, Obama and his Russian counterpart Dmitry Medvedev signed the New START Treaty.<sup>3</sup> The New START treaty committed the US and Russia to further reduce their strategic arsenals, with a 30% cut in deployed warheads and lower limits on missile launchers and nuclear-capable bombers. The treaty, replacing the first START treaty, was approved by the US Senate<sup>4</sup> and the Russian parliament in 2011 for next ten years.<sup>5</sup>

Since the US withdrawal from the Intermediate Range Nuclear Forces (INF) treaty in 2019<sup>6</sup> and Treaty on Open Skies in 2020<sup>7</sup>, the only working bilateral arms control treaty between Russia and the US is the New START. Just days before the 2021 treaty was set to expire, the US and Russia had agreed to extend New START for an additional five years, maintaining verifiable limits on their long-range nuclear arsenals. This agreement marked one of the former US President Joe Biden's first significant foreign policy actions as US leader. The Trump administration had attempted, but failed, to secure a shorter extension that would also address China's nuclear capabilities.

James Acton in "Reclaiming Strategic Stability" published by Carnegie Endowment for International Peace highlighted how New START contributes to crisis and arms race stability, while critiquing Cold War-era assumptions about deterrence. Alexei Arbatov in "Updating the Concept of Strategic Stability" published by PIR Center, opined New START's role in reducing incentives for nuclear first use and the need to adapt arms control to emerging threats. Heather Williams in "Strategic Stability, Uncertainty, and the Future of Arms Control" published by King's College London evaluated the role of AI, hypersonic weapons, and space-based weapons in complicating the conventional arms control frameworks. In view of the gaps in the

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<sup>&</sup>lt;sup>3</sup> "Obama signing nuclear treaty with Russia in Prague," *The Guardian*, April 8, 2010, https://www.theguardian.com/world/gallery/2010/apr/08/nuclear-weapons-obama-administration.

<sup>&</sup>lt;sup>4</sup> Z. Collina, Tom. "Senate Approves New START," *Arms Control Association*, https://www.armscontrol.org/act/2011-01/senate-approves-new-start.

<sup>&</sup>lt;sup>5</sup> "Russian parliament approves Start nuclear arms treaty," *BBC*, January 26, 2011, https://www.bbc.com/news/world-europe-12284532.

<sup>&</sup>lt;sup>6</sup> Lopez, C. Todd. "U.S. Withdraws From Intermediate-Range Nuclear Forces Treaty," *U.S. Department of Defense*, August 2, 2019, https://www.defense.gov/News/News-Stories/article/article/1924779/us-withdraws-from-intermediate-range-nuclear-forces-treaty/.

<sup>&</sup>lt;sup>7</sup> Bugos, Shannon and Reif, Kingston. "U.S. Completes Open Skies Treaty Withdrawal," *Arms Control Association*, December 2020, https://www.armscontrol.org/act/2020-12/news/us-completes-open-skies-treaty-withdrawal.

<sup>&</sup>lt;sup>8</sup> Bugos, Shannon and Reif, Kingston. "U.S., Russia Extend New START for Five Years," *Arms Control Association*, March 2021, https://www.armscontrol.org/act/2021-03/news/us-russia-extend-new-start-five-years. <sup>9</sup> James M Acton, "Reclaiming Strategic Stability," Think Tank Website, Carnegie Endowment for International Peace, February 5, 2013, https://carnegieendowment.org/posts/2013/02/reclaiming-strategic-stability?lang=en. <sup>10</sup> "Updating the Concept of Strategic Stability," *PIR Center*, n.d., accessed March 25, 2025, https://pircenter.org/en/editions/updating-the-concept-of-strategic-stability/.

already existing literature this paper attempts to fill those gaps and address the issue regarding the weakening of bilateral arms control arrangements.

This research paper analyzes how the proliferation of EDTs and changing geopolitical landscape are speeding up weakening of arms control norms. With the major focus on the impending expiration of the New START in 2026, followed by the expiration of several other bilateral arms control agreements over the years, the paper highlights how this reverse of arms control regime would be stopped in the future to tackle the challenge of arms control in a multipolar world.

The objective of this research is to give policy pathways for the development of likely arrangements in which challenges of nuclear proliferation emanating from multiple states are addressed and bilateral arms control measures are strengthened.

The paper utilizes qualitative methodology and primary data and secondary data in the form of official documents, statements, research papers, news, reports, and other open-source material to address the primary research question and fill the identified research gap. This research study utilizes descriptive, and explanatory tools to analyze the data. This study highlights the limits and challenges for New START, the impact of its failure to revive on strategic stability in the given future scenarios, and will sum up the debate with policy recommendations.

#### **Theoretical Framework**

The study is analysed under the theoretical lens of offensive realism. The international relations theory explains the ongoing conflict in the international system marked by conflict and competition due to self-interest and fear of other states. The security dilemma among states is generated by the absence of a hierarchical system in an anarchic world (as witnessed in the weakening of arms control agreements) leading to power maximization.

Security dilemma, a political science concept considered by some scholars as the most important source of conflict between states, is created when a state takes measures to strengthen its security, which in turn generates arms race as the other state feels threatened by the security measures of the original state. The states would continue to struggle for survival through increasing armament and therefore, a need for a multilateral agreement in post New START-era would be required to stabilize the already fragile international system.

The central elements of power are distributed among multiple states rather than staying under the possession of either one or two countries as the world shifts from unipolarity to multipolarity. EDTs, in this context considered as effective and cheaper tools to counterbalance

traditional conventional military superiorities of adversaries, have become central to states' national military strategies to ensure survival in an anarchial world marked by perpetual security dilemma.

These technologies, like artificial intelligence (AI), cyber capabilities, lethal autonomous weapon systems (LAWS), quantum computing, hypersonic weapons, and space-based assets, no more are merely tools of military modernization, but also effective instrument of strategic deterrence, power projection, and geopolitical signaling in an unpredictable global environment. The more and more states get access to these tools, the more challenging their regulation, use and applications would become in the coming years.

# **New START: Limits and Challenges**

The New START, however, has limitations, like it excludes the tactical nuclear weapons, <sup>11</sup> as it only includes strategic nuclear weapons of Russia and the US. The verification mechanism of New START is less stringent compared to START I, and this has affected the capability of compliance of both states. <sup>12</sup>

Moreover, the Treaty does not impose limitations over conventional or missile defence systems, this has been a major break point between the US and Russia, both states have accused the other of advancing in these areas<sup>13</sup> and have highlighted that this has undermined strategic stability. The issues of compliance<sup>14</sup> amongst the increased geo-political tension led to Russian announcement of withdrawal<sup>15</sup> from the Treaty.

There is also a need to address the gaps in the present form of the New START. The Treaty, for instance, fails to account for new technologies, <sup>16</sup> such as hypersonic missiles and nuclear-powered cruise missiles, dual-capable systems, and missile defense technologies, which could bypass traditional arms control frameworks and undermine strategic stability.

<sup>&</sup>quot;New START Treaty," *U.S. Department of Defense*, https://www.state.gov/new-start-treaty?form=MG0AV3&form=MG0AV3.

<sup>&</sup>lt;sup>12</sup> Amy F., Woolf. "The New START Treaty: Central Limits and Key Provisions," *Congress Research Service*, February 2, 2022, https://www.congress.gov/crs-product/R41219.

Liang, Xiaodon. "New START at a Glance," *Arms Control Association*, December 2024, https://www.armscontrol.org/factsheets/new-start-glance?form=MG0AV3&form=MG0AV3.

<sup>&</sup>lt;sup>14</sup> Riaz, Anum and Jafar Mir, Mobeen. "The Future of Arms Control: What Follows the End of New START?," *Australian Institute of International Affairs*, February 11, 2025, https://www.internationalaffairs.org.au/australianoutlook/the-future-of-arms-control-what-follows-the-end-of-new-start/.

<sup>&</sup>lt;sup>15</sup> "Foreign Ministry statement in connection with the Russian Federation suspending the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)," *The Ministry of Foreign Affairs of the Russian Federation*, February 21, 2023, https://mid.ru/en/foreign\_policy/news/1855184/.

<sup>&</sup>lt;sup>16</sup> Jan, Waqas. "Gap in the New START: New START does not address hypersonic missiles," *Modern Diplomacy*, February 24, 2023, https://moderndiplomacy.eu/2023/02/24/gap-in-the-new-start-new-start-does-not-address-hypersonic-missiles/.

Another important issue with New START is its imbalance and one-sided nature. The treaty limits Russia's nuclear arsenal while the US extensively modernizes its strategic and tactical nuclear forces. <sup>17</sup> Although Washington claims to adhere to arms control agreements, it has repeatedly withdrawn from key treaties, such as the ABM Treaty, the INF Treaty, and the Open Skies Treaty—all of which were crucial to maintaining strategic stability. Russia thinks it cannot trust a country that has a track record of abandoning agreements when it no longer serves its interests. Extending New START would only benefit the US unless Russia can secure legally binding guarantees that its security concerns will be addressed. <sup>18</sup>

Additionally, the Treaty does not take into consideration the new military threats that the US and NATO are posing. New START does not address Washington's development of AI-driven command-and-control systems, missile defense systems, or hypersonic weapons. Although Russia has created the Poseidon nuclear torpedo, the Avangard hypersonic glider, and the Burevestnik nuclear-powered cruise missile, these are defensive measures intended to offset the US and NATO's disruptive operations. <sup>19</sup> The West, however, ignores its own quick advances in military technology and presents these improvements as aggressive. Without comprehensive restrictions on all types of military capabilities, arms control initiatives are pointless because the US aims to achieve strategic superiority rather than preserving equilibrium.

The US accuses Russia of violating the agreement while, Russia, on the other hand, blames the West for failing to acknowledge that it is the US and NATO that have consistently escalated tensions by expanding military alliances and stationing nuclear-capable forces near Russia's borders. Because the US has placed travel limitations on Russian officials, <sup>20</sup> this has prevented Moscow from conducting verification inspections in the US, as a result Russia has likewise halted inspections under New START. The treaty's legitimacy may be compromised if one party to the treaty imposes strict compliance requirements while simultaneously hinders the other side's ability to verify them. Russia perceives growing military alliance of NATO and

<sup>&</sup>lt;sup>17</sup> Wilson, Geoff. "Reconsider Nuclear Modernization Plans," *Stimson Center*, November 26, 2024, https://www.stimson.org/2024/reconsider-nuclear-modernization-plans/.

<sup>&</sup>lt;sup>18</sup> "Russia says it's planning for the US to deploy nuclear weapons to Europe after ban treaty abandoned," *Business Insider*, November 26, 2018, https://www.businessinsider.com/russia-doesnt-trust-us-nuclear-arms-treaty-2018-

<sup>&</sup>lt;sup>19</sup> Bendett, Samuel and Boulègue, Mathieu and Connolly, Richard and Konaev, Margarita and Podvig, Pavel and Zysk, Katarzyna. "Advanced military technology in Russia," *Chatham House*, November 2, 2021, https://www.chathamhouse.org/2021/09/advanced-military-technology-russia/03-putins-super-weapons.

<sup>&</sup>lt;sup>20</sup> "Russia suspends START arms inspections over U.S. travel curbs," *Reuters*, August 8, 2022, https://www.reuters.com/world/russia-tells-us-it-is-suspending-inspections-under-start-weapons-treaty-2022-08-08/.

deployment of nuclear-capable forces close to its borders as a security threat. These developments continue to take place despite US criticism of Russia for violating the deal, something Moscow has been denying.

The ability of New START to confirm the combined nuclear stockpiles of both nations is limited by the exclusion of tactical nuclear weapons and non-deployed warheads, even though it has verification tools. The confidentiality surrounding emerging technologies further complicates verification efforts. Furthermore, the US President Donald Trump, during his first presidency, pushed for the inclusion of China in future arms control negotiations. <sup>21</sup> However, this was not a demand specifically for New START itself but rather for any potential replacement or extension of the treaty. Trump's administration viewed New START as flawed because it only covered the US and Russia, while China, Washington believed, was rapidly expanding its nuclear capabilities without any constraints. <sup>22</sup>

During New START extension talks in 2020, Trump's team insisted that China must be included in any future arms control framework.<sup>23</sup> However, China refused to participate, arguing<sup>24</sup> that its arsenal (then estimated at around 300-400 nuclear warheads) were at the 'lowest levels' and much smaller than the US and Russia's stockpiles (1,550 deployed warheads under New START). Beijing saw no reason to be bound by a treaty designed for the two largest nuclear powers. Trump's insistence on including China complicated negotiations between the US and Russia. Moscow also does not seek engaging China in a trilateral arms control as a priority.<sup>25</sup> Russia suggested that if China were to be included, then France and the UK (also nuclear-armed states) should be part of the talks as well<sup>26</sup>, but this idea did not gain traction. Eventually, because of these disagreements and Trump's overall skepticism toward

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<sup>&</sup>lt;sup>21</sup> Ali Abbas, Syed and Saqib, Amna. "U.S. Unilateralism on Arms Control and Impact on South Asian Stability," *Stimson Center*, March 7, 2025, https://southasianvoices.org/sec-c-r-us-unilateralism-arms-control-south-asian-stability-03-07-2025/.

<sup>&</sup>lt;sup>22</sup> Kuramitsu, Shizuka. "Pentagon Says Chinese Nuclear Arsenal Still Growing," *Arms Control Association*, January/February 2025, https://www.armscontrol.org/act/2025-01/news/pentagon-says-chinese-nuclear-arsenal-still-growing.

<sup>&</sup>lt;sup>23</sup> Gramer, Robble and Detsch, Jack. "Trump Fixates on China as Nuclear Arms Pact Nears Expiration," *Foreign Policy*, April 29, 2020, https://foreignpolicy.com/2020/04/29/trump-china-new-start-nuclear-arms-pact-expiration/.

<sup>&</sup>lt;sup>24</sup> "China says it won't take part in trilateral nuclear arms talks," *Reuters*, May 6, 2019, https://www.reuters.com/article/world/china-says-it-wont-take-part-in-trilateral-nuclear-arms-talks-idUSKCN1SC0MJ/.

<sup>&</sup>lt;sup>25</sup> C. Logan, David. "Trilateral Arms Control: A Realistic Assessment of Chinese Participation," *Stimson Center*, August 9, 2021, https://www.stimson.org/2021/trilateral-arms-control-a-realistic-assessment-of-chinese-participation/.

<sup>&</sup>lt;sup>26</sup> "Russia Wants Britain, France to Join Wider Nuclear Talks With U.S.," *RadioFreeEurope/RadioLiberty*, July 29, 2021, https://www.rferl.org/a/russia-britain-france-nuclear-talks/31383828.html.

arms control, the US did not renew New START during his first presidency. Instead, the treaty was extended for five more years only after Joe Biden took office in 2021.<sup>27</sup>

Trump maintains this stance even during his second term. This is a blatant attempt by Washington to shift the focus away from its own nuclear modernization and divide Russia and China by pressuring Beijing into an unnecessary arms control framework. Russia maintains <sup>28</sup> strong strategic relations with China and recognizes that Beijing has legitimate security concerns<sup>29</sup> regarding US military activities in the Asia-Pacific. The US is simply using arms control as a geopolitical tool to contain both Russia and China while expanding its own military power unchecked.

The New START Treaty only applies to strategic nuclear weapons, which include intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and strategic bombers—weapons designed for long-range deterrence. However, the treaty does not regulate tactical nuclear weapons,<sup>30</sup> which are smaller, short-range nuclear warheads intended for battlefield use.

This omission creates a significant asymmetry in nuclear capabilities, as Russia holds <sup>31</sup> a clear advantage in tactical nuclear weapons, with an estimated 2,000 warheads compared to the US's 200, most of which are stationed in Europe. Russia maintains a more robust tactical nuclear deterrence since these weapons are not restricted by treaties, whereas the US does not have an equivalent stockpile in this category.

Since there is now no arms control framework that oversees tactical nuclear weapons and New START does not address them, their inclusion is an important issue for future negotiations. The US is likely to support limitations on Russia's tactical nuclear arsenal since these weapons increase the likelihood of conflict escalation. Russia is expected to resist any restrictions or look for compromises on other security problems, such as NATO's military

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<sup>&</sup>lt;sup>27</sup> Hudson, John. "Biden administration to seek five-year extension on key nuclear arms treaty in first foray with Russia," *The Washington Post*, 21 January 2021, https://www.washingtonpost.com/national-security/biden-russia-nuclear-treaty-extension/2021/01/21/4667a11e-5b40-11eb-aaad-93988621dd28\_story.html.

<sup>&</sup>lt;sup>28</sup> M. Kim, Patricia and Aydintasbas, Asli and Stent, Angela and Varma, Tara, and Wyne, Ali. "China and Russia's strategic relationship amid a shifting geopolitical landscape," *Brookings*, March 6, 2025, https://www.brookings.edu/articles/china-and-russias-strategic-relationship-amid-a-shifting-geopolitical-landscape/.

<sup>&</sup>lt;sup>29</sup> E. Hamilton, Robert and Primiano, Christopher. "Russia and China in the Indo-Pacific: China's Use of the Instruments of Power," *Foreign Policy Research Institute*, March 6, 2025, https://www.fpri.org/article/2025/03/russia-and-china-in-the-indo-pacific-chinas-use-of-the-instruments-of-power/.

<sup>&</sup>lt;sup>30</sup> Pifer, Steven and Talbott, Strobe. "New START Is No Mistake," *Brookings*, July 7, 2010, https://www.brookings.edu/articles/new-start-is-no-mistake/.

<sup>&</sup>lt;sup>31</sup> Demirjian, Karoun. "Here are the nuclear weapons Russia has in its arsenal," *The Washington Post*, October 6, 2022, https://www.washingtonpost.com/world/2022/10/05/russia-nuclear-weapons-military-arsenal/.

posture in Europe, missile defense systems, or hypersonic weapons. Without a solution, the lack of restrictions on tactical nuclear weapons will continue to jeopardize strategic stability, increasing the likelihood that regional conflicts will worsen and making future arms control negotiations more difficult.

Russia sees this contradiction as evidence that Washington is not a reliable<sup>32</sup> ally in the arms control process. Trump's history of pulling out of arms control accords, like the INF Treaty and Open Skies Treaty, raises doubts about whether he will honor any new agreements, despite his indications that he is willing to engage in negotiations. Trump also unilaterally left the Joint Comprehensive Plan of Action (JCPOA) in 2018. Since the US regularly changes its position due to internal political and strategic considerations, while Moscow has continuously insisted that it keeps its promises, any pact is inherently unstable.

Furthermore, NATO's hostile stance toward Russia has seriously hampered efforts to restrict armaments. As seen by its eastward expansion,<sup>33</sup> military drills close to Russia's borders, and direct engagement in the situation in Ukraine, NATO is getting ready for a protracted fight with Russia. Arms control accords are useless in such a hostile climate if they just restrict Russia's strategic options while enabling NATO to bolster its military capabilities. The US would engage in sincere negotiations instead of imposing terms and increasing military threats if it genuinely desired stability.

The New START is currently facing significant challenges, such as NATO attempts at expansion, growing distrust between the US and Russia over Ukraine, and issues over strategic stability of the region. The US-led punitive economic sanctions on Russia, backed by military presence and diplomatic measures aimed at Russian isolation, further complicate the issue. As New START is set to expire next year, the prospects for a new agreement to replace it stay bleak. The unresolved security concerns of the past leading to different interpretations of past agreements further complicate the matter between the two.

If the war in Ukraine continues, arms control talks may collapse, potentially leading to a new nuclear arms race. The ongoing Ukraine war has raised doubts about the reliability of arms control agreements, especially as Russia has placed its nuclear forces on 'special alert.' 34

<sup>&</sup>lt;sup>32</sup> "Russia raises concerns over U.S. implementation of arms control treaty," *Reuters*, May 24, 2021, https://www.reuters.com/world/russia-accuses-us-exceeding-limits-imposed-by-new-start-arms-control-treaty-2021-05-24/.

<sup>&</sup>lt;sup>33</sup> Sauvage, Gregoire. "Did NATO 'betray' Russia by expanding to the East?," *France 24*, January 30, 2022, https://www.france24.com/en/russia/20220130-did-nato-betray-russia-by-expanding-to-the-east.

<sup>&</sup>lt;sup>34</sup> "Ukraine invasion: Putin puts Russia's nuclear forces on 'special alert'," *BBC*, 28 February 2022, https://www.bbc.com/news/world-europe-60547473.

Both the US and NATO are increasing military spending, and Russia has made threats of nuclear escalation.<sup>35</sup> This reduces the focus on arms control and makes dialogue more challenging.

If New START collapses, the onus will be more on the US than on Russia. The US and NATO are actively pushing the world toward a new arms race by refusing to respect Russia's security concerns. Washington is already modernizing its nuclear triad,<sup>36</sup> developing new ICBMs, submarines, and stealth bombers, and encouraging its allies to expand their military capabilities. If arms control fails, Russia will be forced to further strengthen its nuclear forces to counter these threats. The US must understand that Russia will not be pressured into a one-sided agreement that weakens its strategic position.

# **Nuclear Arms Control beyond New START: Impacts on Strategic Stability**

The already existing literature has prime focus over bilateral treaties and agreements for arms control, the prospects of a new framework for future arms control agreements remain bleak. Moreover, the impact of emerging technologies is yet to be seen over bilateral arms control agreements. There is a need to review the already existing bilateral treaties like New START<sup>37</sup> in the context of the evolving geopolitical landscape.

Historically, treaties and international bilateral or multilateral agreements have been a key factor for improving strategic stability among global powers. These institutions and cooperation might not be sufficient. However, historically, they have played a role in reducing uncertainty, managing arms competition, and mitigating the effects of the security dilemma. The most effective illustration of the effectiveness of bilateral arms control measures that have provided stability between two nuclear-armed adversaries is the New START deal.

The New START treaty's verification procedures have helped to foster mutual confidence between the US and Russia, and its function has effectively fostered cooperative security. There is still potential for the Treaty to be expanded to include additional nuclear-armed states, even though the emergence of multipolarity has limited its applicability. To create a new framework for an arms control deal that duplicates New START, there is a need for deeper international cooperation.

<sup>&</sup>lt;sup>35</sup> "New Russian doctrine increases possible nuclear weapons use scenarios," *ICAN*, November 21, 2024, https://www.icanw.org/new russian doctrine increases possible nuclear weapons use scenarios.

<sup>&</sup>lt;sup>36</sup> F. Krepinevich Jr., Andrew, "Modernizing the Nuclear Triad: Decline or Renewal?," *Hudson Institute*, October 21, 2021, https://www.hudson.org/national-security-defense/modernizing-the-nuclear-triad-decline-or-renewal.

<sup>&</sup>lt;sup>37</sup> Piccolli, Larlecianne. "Policy Brief – New START Treaty Review: Paving the Way to Strategic Stability in the 21<sup>st</sup> Century," *Academia*,

https://www.academia.edu/76136689/Policy\_Brief\_NEW\_START\_TREATY\_REVIEW\_PAVING\_THE\_WAY\_TO\_STRATEGIC\_STABILITY\_IN\_THE\_21ST\_CENTURY.

Beyond the immediate arms control concerns, the role of non-state actors and proxy conflicts further complicates the security environment. The US continues<sup>38</sup> to supply weapons to Ukraine, support anti-Russian forces, and interfere in global conflicts, all of which increase the likelihood of escalation. Washington's policies are creating a volatile global security environment where nuclear risks are higher than ever. Rather than engaging in diplomacy, the US is fueling conflicts around the world while half-heartedly showing interest in arms control.

Moving forward, if the US and NATO genuinely seek strategic stability, they must abandon their confrontational approach and engage in serious dialogue. Russia has always been open to diplomatic solutions, but it will not negotiate from a position of weakness.

Any future arms control agreement must address the full spectrum of military threats, including missile defense systems, hypersonic weapons, tactical nuclear weapons, and the destabilizing actions of NATO. Furthermore, it must include legally binding guarantees that prevent the US from abandoning the treaty as it has done in the past.

The fate of New START is not just about arms control; it is about the broader global security architecture. If the treaty collapses, it will be because the US and its allies refused to engage in genuine negotiations and instead sought to use arms control as a political tool to weaken Russia. Moscow will not compromise its national security to satisfy American demands. The world stands at a crossroads: either the US acknowledges Russia's legitimate concerns and negotiates in good faith, or the world will enter in a new era of strategic competition where nuclear stability is no longer guaranteed.

# **Future Scenarios in Focus: A Multifaceted Strategic Analysis**

#### • China's Emergence as a Global Player

China's arrival as a prominent player in the shifting geopolitics is one of the factors that has been motivating the US to modernize its nuclear arsenal.<sup>39</sup> The other factors include regional conflicts and shifting alliances. The rising geopolitical tensions have influenced US and Russia's decision to engage in future arms control negotiations, at bilateral or multilateral level. The global order has shifted towards multilateralism; this has impacted the global nuclear arms control regime.<sup>40</sup> This provides opportunities and challenges for an effective future nuclear

<sup>&</sup>lt;sup>38</sup> "Poland confirms supplies of US arms to Ukraine have resumed," *Reuters*, March 12, 2025, https://www.reuters.com/world/europe/poland-confirms-that-supplies-us-arms-ukraine-have-resumed-2025-03-12/.

<sup>&</sup>lt;sup>39</sup> Hiim, Henrik Stalhane and Fravel, M. Taylor and Troan, Magnus Langset. "The Dynamics of an Entangled Security Dilemma: China's Changing Nuclear Posture," *International Security*, January 4, 2023, https://direct.mit.edu/isec/article/47/4/147/115920/The-Dynamics-of-an-Entangled-Security-Dilemma.

<sup>&</sup>lt;sup>40</sup> Bronder, Lt Col T. Justin. "Future Directions for Great Power Nuclear Arms Control: Policy Options and National Security Implications," *Institute for National Strategic Studies*, October 20, 2021,

arms control framework. Beyond the expiration of the New START, the US and Russia should open a channel for negotiations, keeping in view the existing bilateral agreements and how this can be expanded to include other nuclear weapon states like China.

#### • Case of Strategic Cooperation or Competition

Arms control is only possible if all the stakeholders are willing to work cooperatively, competition only leads to an arms race. There is a need to view whether states' security imperatives allow them to work towards cooperation or competition. The reduction of already existing nuclear arsenals is possible only when all states are at the same page over nuclear arms control. Reduction of nuclear weapons is a product of a cooperative security environment. Geopolitical environment as charged as current times encourages strategic competition, leaving less room for cooperation. States threat perception, in case of strategic rivals as US and Russia, can be affected by advancements in their nuclear arsenals. Each state's decision to modernize is just not based on its own objectives, it reflects its enemy's moves. This can be applied to the US and Russia, there is mistrust and misunderstanding regarding verification and transparency of the clauses of the New START. In this anarchial world where international institutions are proving more inefficient to bring justice, as shows the inability of the IAEA to hold a non-NPT Israel accountable for attacking an NPT-state Iran, uncertainty about other states' intentions are increasing. This is shaping a state's behavior to go for power maximization and increase their nuclear arsenals and delivery means, even at the cost of weakening the existing arms control regime.

#### ■ Impact of Technological Revolution on the future of Arms Control

The technological revolution in current times has made the future of arms control uncertain, having adverse effects on strategic stability. States are including emerging technologies such as AI driven systems or hypersonic weapons, in their military infrastructure. When a state accumulates military power, in an anarchic international system, other states can not be sure about its intention. This uncertainty leads to security dilemma. The inclusion of technological advancement has changed the conventional norms of strategic competition between adversaries, this calls for a new framework for future arms control, that is not limited to a bilateral level but is more multilateral in nature. Nuclear arms control measures fail when there is uncertainty about the intention of an adversary state. This uncertainty can be managed by modelling scenarios and suggesting strategies to minimize risks. There needs to be a framework

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https://inss.ndu.edu/Media/News/Article/2912759/future-directions-for-great-power-nuclear-arms-control-policy-options-and-natio/.

for regulation of emerging technologies that is widely influencing arms control. The US and Russian leadership first need to devise a strategy that model cooperation rather than competition, and then gradually including other stakeholders like China to join a broader, multilateral treaty beyond the New START. This can decrease the trust deficit and move towards a conflict resolution strategy that enhances strategic stability.

### Updating New START's Verification Mechanisms

The verification mechanism of the New START is less robust as compared to the original New START treaty. <sup>41</sup> There have been loopholes in the physical conduct of the verification, which is reported to be exploited by both parties. Effective verification mechanisms are significant for the dynamic strategic process, where parties know that the cost of not abiding by the terms and conditions will be immense. What lacked has been the commitment on part of the US and Russia to invest in transparency and verification mechanisms for decreasing the trust deficit amid the geopolitical shift and technological evolution in arms control.

# From Bilateral to Multilateral Interactions

The idea to include China in the US-Russia bilateral arms control equation is not new, it was first suggested by Trump during his first tenure as the POTUS in 2019.<sup>42</sup> According to President Trump, inclusion of China, alongside Russia in New START, will provide transparency in limiting and verifying nuclear capabilities amid its rise as a global power. This was labelled as 21st century arms control, which was refused by China. Since then, the US has maintained a stance that any future arms control agreement aimed at maintaining strategic stability must be multilateral in nature.<sup>43</sup>

The question arises that is it worth including China in the already established bilateral nuclear arms control equation of the US and Russia? According to Western media reports, China is modernizing its nuclear arsenal,<sup>44</sup> but it has never been part of any arms control

<sup>&</sup>lt;sup>41</sup> Gottemoeller, Rose. "The New START Verification Regime: How Good Is It?," *Carnegie Endowment of International Peace*, https://carnegieendowment.org/posts/2020/05/the-new-start-verification-regime-how-good-is-it?lang=en.

<sup>&</sup>lt;sup>42</sup> Sonne, Paul and Hudson, John. "Trump orders staff to prepare arms-control push with Russia and China," *The Washington Post*, April 25, 2019, https://www.washingtonpost.com/world/national-security/trump-orders-staff-to-prepare-arms-control-push-with-russia-and-china/2019/04/25/c7f05e04-6076-11e9-9412-daf3d2e67c6d story.html.

<sup>&</sup>lt;sup>43</sup> "Briefing with Ambassador Marshall Billingslea, U.S. Special Presidential Envoy for Arms Control And Lt. Gen. Thomas Bussiere, Deputy Commander of the U.S. Strategic Command," *Global Public Affairs, U.S. Department of State*, https://2017-2021-translations.state.gov/2020/08/18/briefing-with-ambassador-marshall-billingslea-u-s-special-presidential-envoy-for-arms-control-and-lt-gen-thomas-bussiere-deputy-commander-of-the-u-s-strategic-command/.

<sup>&</sup>lt;sup>44</sup> Hiim, Henrik Stålhane. "The last atomic Waltz: China's nuclear expansion and the persisting relevance of the theory of the nuclear revolution," *Taylor and Francis Online*, January 8, 2024, https://www.tandfonline.com/doi/full/10.1080/13523260.2023.2291258.

agreement,<sup>45</sup> this challenges the existing arms control framework. However, data generated by SIPRI 2024 highlights that the China's total nuclear inventory is 500 warheads, while the US has 5,044, and Russia has 5,580 nuclear warheads.<sup>46</sup> This shows that Chinese nuclear arsenal is far less behind the quantitative number of weapons possessed by the US and Russia. No matter if China's rise as an economic power must factor into the US and Russian considerations, mentioning China as a challenge to expanding arms control framework seems unfair. President Trump wanted China to enter an arms control <sup>47</sup>agreement, however, China's position is that it is not at parity with the US regarding the number of nuclear weapons, China will only opt for an arms control agreement with the US if it comes at par with these major powers.

Traditionally, the US and Russia have opted for arms control only when their nuclear forces were at par. This can be assessed form the statement given by the Chinese spokesperson in which he rebuked groundless accusation of the dangers from China's modern and growing nuclear arsenal, saying that the number of nuclear weapons in China's arsenal is not in the same order as the United States and Russia." Having said that for having a comprehensive arms control framework and a stronger non-proliferation regime, the Chinese factor cannot be overlooked. However, it is important to keep in mind that including China would also necessitate including India, Pakistan, Israel, and potentially the UK and France. This would complicate the issue significantly.

New START is a bilateral agreement between the two countries with the largest nuclear arsenals. Expanding the scope at this stage could slow down progress on a future non-proliferation agreement and may leave the world without such a significant binding arms control agreement. For now, the primary objective is to achieve a renewed arms control agreement between the two largest nuclear powers through Confidence Building Measures (CBMs). As the two nations with the largest nuclear inventories in 2024, the United States and Russia must engage in bilateral arms control.

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<sup>&</sup>lt;sup>45</sup> Kristensen, Hans and Korda, Matt and Johns, Eliana and Knight, Mackenzie. "Chinese Nuclear Forces, 2024: A "Significant Expansion"," *Federation of American Scientists*, January 16, 2024, https://fas.org/publication/chinese-nuclear-forces-2024-a-significant-expansion/.

<sup>&</sup>lt;sup>46</sup> "Role of nuclear weapons grows as geopolitical relations deteriorate—new SIPRI Yearbook out now," *Stockholm International Peace Research Institute*, June 17, 2024, https://www.sipri.org/media/press-release/2024/role-nuclear-weapons-grows-geopolitical-relations-deteriorate-new-sipri-yearbook-out-now.

<sup>&</sup>lt;sup>47</sup> Reif, Kingston and Bugos, Shannon. "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.

<sup>&</sup>lt;sup>48</sup> "China welcomes extension of New START nuclear treaty, responds to US accusation," *The State Council Information Office, The People's Republic of China*, February 7, 2021, http://english.scio.gov.cn/pressroom/2021-02/07/content\_77196591.htm?form=MG0AV3.

Even if Chinese leadership agrees to entering a global arms control framework, it can demand the nature of the framework to be multilateral rather than trilateral. China can also demand massive cuts in the nuclear forces of the other parties that have bigger inventory than China such as Russia and US. The chances of China accepting constraints on its nuclear arsenal resembling New START are unlikely.

What can be done is opening a channel for negotiations over building confidence and giving political commitment to maintain restraint when it comes to the nuclear expansion of all nuclear weapon states. Shifting the focus towards an inclusive multilateral or trilateral framework for arms control while keeping in mind all state's security concerns are addressed, as arms control cannot be restricted to bilateral level.

# **Policy Pathways**

Due to the evolving security landscape, compounded by emerging technologies, geopolitical shift, and multipolar dynamics, the traditional arms control framework has been facing significant challenges. However, the policymakers concerned can navigate these challenges by replicating bilateral/trilateral or multilateral agreements via cooperation.

There is a need to develop verification regimes to foster principles of mutual trust and compliance with the future arms control treaties and agreements. These must be adaptable to the changing geopolitical environment and reinforce mutual deterrence.

Modern approaches to nuclear arms control should be devised that address the concerns related to nuclear disarmament and factors in the impact of regional conflicts and emerging technologies.

There is a need to acknowledge that the evolving nature of traditional and non-traditional security threats states are facing in contemporary times. Only then can the international community at large and policy makers effectively sustain the future arms control efforts.

The verification mechanisms can be strengthened by investing in advanced technologies, expanding monitoring tools such as AI-driven algorithms for enhancing trust between states involved in arms control treaties.

Transparency can be improved by adopting open-data principles for sharing non-sensitive information. Beyond New START, these recommendations can change the nature of any future nuclear arms control agreement. However, there are reservations regarding informal intrusion into national programs that verification entails.

By taking into consideration the pertinent role of emerging technologies and incorporating provisions for their ethical use in the negotiations for the future arms control agreements can be valuable. Future arms control framework must integrate dialogues over hypersonic missiles, AI driven weapon systems, and other new and disruptive technologies.

A pressing priority is the regulation of emerging technologies, such as AI, Hypersonic missiles, space-based weapons and cyber warfare, that are going to shape the future trajectory of geopolitical competition and arms control efforts. By establishing international agreements and for technological regulation, the impact of these emerging technologies on strategic stability can be monitored.

There is a need to analyze the interlinkage of border security and political issues in the global arms control framework. For this, integrating CBMs among the nuclear armed states, for reducing the mistrust regarding the compliance of future treaties and agreements, will be fruitful. This is instrumental in enhancing cooperation and will lead to transparency. These CBMs can include confidence building exercises, mutual initiatives for greater transparency and enhanced verification mechanisms. Engagement of nuclear armed states can be done by Track II dialogue that is inclusive of state level officials, experts, and analysts. It is imperative to address the debate about the modernization of Chinese nuclear arsenal through targeted CBMs adapted to suit Chinese strategic goals. A critical necessity is to revive multilateral dialogue with other nuclear armed states such as Israel, North Korea, India and Pakistan, keeping in mind the respective regional security dynamics.

It is of utmost importance to strengthen the already existing international institutions such as the United Nations (UN) that can inculcate norms related to emerging technologies and their usage, cyber policies, and conflict resolution for a stable framework for future arms control. The UN can be used as a platform to advocate or open debates about updating the existing nuclear arms control treaties and agreements such as the New START, the NPT to reflect current realities. Nevertheless, diplomatic engagement is the key for harnessing multilateral dialogues between rival states. A concrete dialogue process can foster a conducive environment for future arms control arrangements.

An urgent requirement is to create public awareness campaigns that provide a simplistic view about arms control agreements and highlight their significant role at the national, regional and global level. Think tanks and academic institutions can also be involved for generating grass root level understanding for arms control measures among students and young professionals.

In the long term, there is a need to implement phased approach that includes short term CBMs, intermediate level technological adaptations and long-term commitment to the norms of global nuclear arms control and disarmament. This can be done via establishing a dedicated task force to explore innovative arms control, models that are designed for the shifting geopolitical environment.

#### Conclusion

The last remaining bilateral arms control agreement between the US and Russia is set to expire next year in February 2026, making the future of nuclear arms control regime uncertain. Absence of any other bilateral or multilateral arms control mechanisms and lack of nuclear non-proliferation discussions among major powers depict an alarming strategic scenario, which is marked by power maximization and weakening of global institutions to enforce nonproliferation laws and regulations. The challenge is intense in the presence of massive proliferation of non-nuclear strategic weapons and EDTs by many states. Therefore, there is an urgent need to reach a multilateral agreement post-New START to strengthen global arms control regime and regulate the EDTs. This imperative becomes even more critical in the context of a shifting global order characterized by emerging multipolarity and accelerated technological competition. As more states invest in and operationalize EDTs, such as hypersonic delivery systems, AI-enabled weapons, and space-based assets, the risk of inadvertent escalation and misperception increases substantially. These technologies often outpace existing legal and normative frameworks, making their unregulated use a significant threat to strategic stability. Furthermore, the erosion of traditional CBMs and verification regimes undermines mutual trust and transparency, making crisis communication and deescalation more difficult during times of tension. Without a renewed commitment to cooperative security and arms control, one that includes not just nuclear weapon states but also technologically advanced middle powers—the world may find itself entering a new and more dangerous era of strategic competition. Hence, the post-New START period must not be treated as a pause but as an opportunity, a moment to recalibrate the global arms control architecture to reflect the realities of 21st century warfare. This includes institutionalizing norms for responsible development and deployment of EDTs, revitalizing diplomatic channels among major powers, and building inclusive frameworks that bridge the gap between emerging technologies and global security imperatives.