

Eroding Multilateral Architecture and Nuclear Non-proliferation Regime

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Abstract

The multilateral nuclear non-proliferation architecture, built over six decades through treaties, verification mechanisms, and diplomatic forums, is witnessing its most severe test. This article examines how the erosion of multilateral institutions and agreements affects the long-term viability of the non-proliferation regime. This paper analyzes the growing stress on nuclear non-proliferation norms, legitimacy, compliance incentives, safeguards credibility, and disarmament obligations. It further argues that the multilateral architecture is fading not because of external challenges but due to internal contradictions, including selective enforcement, unfulfilled bargains, and the substitution of exclusive arrangements for universal norms. The nuclear non-proliferation treaty (NPT) Review Conference (RevCon) and the Conference on Disarmament (CD) are ineffective; arms control agreements have been dismantled without successors; safeguards standards have been applied selectively; and the United Nations Security Council (UNSC) has failed as an enforcement mechanism. These dynamics are reshaping the cost-benefit calculus that sustained nuclear restraint for the majority of states. The article explores three future trajectories, i.e., managed decline, institutional fragmentation, and renewed multilateralism. The article further identifies the conditions under which the architecture might be revived, including non-discriminatory criteria for export control membership,

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universal safeguards application, and recommitment to the foundational principles of undiminished security for all states.

Keywords: Nuclear Non-Proliferation Regime, Multilateral Institutions, NPT, IAEA, Nuclear-Weapon States, Non-Nuclear-Weapon States.

Introduction

The multilateral architecture of nuclear non-proliferation, painstakingly built over six decades through treaties, verification mechanisms, and other instruments, is facing its most severe test. The very foundations upon which this architecture rests are under strain from multiple, mutually reinforcing directions. Its future can be printed in many ways, from its revival to its managed decline, depending on whether the contradictions embedded within it can be resolved before they consume the architecture's remaining legitimacy.

The aspirations for a nuclear weapons-free world are as old as the weapons themselves. The very first resolution adopted by the United Nations General Assembly (UNGA), on 24 January 1946, called for the total elimination of nuclear weapons, including weapons capable of causing mass destruction, from national armaments.¹ In 1959, the General Assembly endorsed the objective of general and complete disarmament.² The Final Document of the first Special Session of the General Assembly devoted to Disarmament (SSOD-I), in 1978, codified this vision, establishing general and complete disarmament under effective international control as the final objective, and recognising the elimination of nuclear weapons as the immediate goal, as well as balanced reduction of conventional armed forces and weapons based on the principle of 'undiminished security.'³ The NPT opened for signature in 1968. This was the golden era, which saw the laying down of foundational principles and agreements. In the succeeding decades, additional instruments such as the Partial Test Ban Treaty (PTBT) and the

¹ United Nations General Assembly, *Establishment of a Commission to Deal with the Problems Raised by the Discovery of Atomic Energy*, Resolution 1 (I), A/RES/1(I), January 24, 1946

² United Nations General Assembly, *General and Complete Disarmament*, Resolution 1378 (XIV), A/RES/1378(XIV), November 20, 1959

³ United Nations General Assembly, *Final Document of the Tenth Special Session of the General Assembly*, SSOD-I, A/S-10/2, June 30, 1978, paras. 8 and 50

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Comprehensive Nuclear-Test-Ban Treaty (CTBT) were negotiated, adding different layers to the multilateral nuclear non-proliferation architecture.

For the past several years, the multilateral nuclear non-proliferation architecture has been under significant stress. The nuclear-weapon states parties to the NPT have failed to implement their obligations under Article VI⁴ of the treaty. On the contrary, they continue to modernise and expand their nuclear capabilities.

Arms control agreements, which led to reductions in nuclear stockpiles from their peak levels, have mostly disintegrated in recent times. Successive bilateral agreements that had once constrained the nuclear arms race have been dismantled, multilateral processes have failed to deliver substantive outcomes, and diplomatic forums set up to negotiate new legal instruments have been mired in deadlock. There is also an ongoing normative decay. Universally binding, treaty-based obligations are being sidestepped by voluntary, minilateral, and coalition-based arrangements. Export controls have been politicised, with memberships and supply decisions governed by geopolitical alignment rather than objective, non-discriminatory criteria.

These developments are taking place together with the weaponisation of new and emerging technologies. This has further complicated the strategic landscape, multiplying existing and creating new entanglement risks.

The article examines how the weakening multilateral nuclear non-proliferation architecture is manifesting. It analyses the different stress factors and also explores the likely future trajectory. The central argument of this article is that the multilateral nuclear non-proliferation architecture is eroding not primarily because of external challengers or the emergence of new threats, but because of internal contradictions, selective enforcement, unfulfilled bargains, and the substitution of exclusive arrangements for universal norms, which are progressively hollowing out the regime's legitimacy. A non-proliferation order that demands restraint from everyone while granting exceptions to the few is a regime undergoing a crisis.

⁴ *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT), opened for signature July 1, 1968, 729 U.N.T.S. 161, entered into force March 5, 1970, art. VI.

Nuclear Non-Proliferation Architecture: Foundational Bargains

The multilateral nuclear non-proliferation architecture is built upon legal instruments, disarmament forums, export control arrangements, and other platforms.⁵

Table 1: Structure of the Global Nuclear Non-Proliferation Architecture

Strand	Type	Instrument / Body	Binding	Purpose
Legal	Treaty	NPT (1968)	Yes	Non-proliferation, disarmament, peaceful uses
Verification	Treaty-based	Comprehensive Safeguard Agreements (CSA); Additional Protocol (AP); International Atomic Energy Agency (IAEA)	Yes	Material accounting, inspections, and assurance against diversion
Negotiation and Deliberation	Intergovernmental	CD; the UN Disarmament Commission (UNDC); NPT RevCons.	Partly	Negotiation and review of disarmament and non-proliferation
Enforcement	UNSC Resolution	United Nations Security Council Resolution (UNSCR) 1540 (2004)	Yes	Criminalisation of Weapons of Mass Destruction (WMD) proliferation acts
Export Controls	Informal grouping	Zangger Committee; Nuclear Suppliers Group (NSG)	No	Regulation of dual-use nuclear exports

⁵ Jan Priest, *The Nuclear Non-Proliferation Regime: What It Is and How It Has Evolved*, paper presented at the Seminar on *IAEA Safeguards for the 21st Century*, Nuclear Training Center/KAERI, Taejeon, Republic of Korea, October 18–20, 1999 (Vienna: International Atomic Energy Agency, 1999), <https://www.files.ethz.ch/isn/92364/gtz08.pdf>

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Supplementary	Treaty	Comprehensive Test Ban Treaty (CTBT-1996); Treaty on the Prohibition of Nuclear Weapons (TPNW - 2017)	No*	Test ban; comprehensive prohibition of nuclear weapons
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**CTBT has not entered into force; TPNW entered into force in 2021 but lacks participation of nuclear-weapon states.*

Source: Created by the authors

The states parties to the NPT regard the treaty as the ‘cornerstone’ of the global non-proliferation architecture with its three pillars: preventing the spread of nuclear weapons, promoting cooperation in peaceful applications of nuclear technology, and achieving nuclear disarmament.⁶ The treaty relies on a ‘grand bargain’ between nuclear-weapon states (NWS) and non-nuclear-weapon states (NNWS). The NNWS committed not to acquire nuclear weapons (Articles I–II) in exchange for the recognition of their ‘inalienable right’ to peaceful nuclear technology (Article IV), while NWS undertook to pursue negotiations in good faith toward nuclear disarmament (Article VI).⁷ The NPT Review Conferences, convened every five years, are the treaty’s principal accountability mechanism.⁸

The International Atomic Energy Agency (IAEA) was entrusted with the verification responsibility. Under Article III of the NPT, NNWS are required to conclude Comprehensive Safeguards Agreements (CSAs) with the Agency (IAEA), authorizing it to verify that nuclear material is not diverted from peaceful uses to weapons development. The Additional Protocol, approved by the IAEA Board of Governors in 1997 following the detection of undeclared nuclear activities in some states, expanded the Agency’s verification tools to provide assurances on the absence of undeclared nuclear material and activities.⁹ The NWS, for their part,

⁶ *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT), opened for signature July 1, 1968, 729 U.N.T.S. 161, entered into force March 5, 1970, arts. I–IV, VI

⁷ Andrew J. Coe and Jane Vaynman, ‘Collusion and the Nuclear Nonproliferation Regime,’ *Journal of Politics* 77, no. 4 (October 2015): 983–97, <https://doi.org/10.1086/682080>

⁸ Gaukhar Mukhatzhanova, *NPT Review Process: An Explainer* (Vienna: Vienna Center for Disarmament and Non-Proliferation (VCDNP), July 2023), https://vcdnp.org/wp-content/uploads/2023/07/web_npt_review_process_07212023.pdf

⁹ International Atomic Energy Agency (IAEA), *IAEA Safeguards: Serving Nuclear Non-Proliferation* (Vienna: International Atomic Energy Agency, 2024), <https://www.iaea.org/publications/15613/iaea-safeguards-serving-nuclear-non-proliferation>

concluded Voluntary Offer Agreements with the IAEA, while states outside the NPT framework entered into item-specific safeguards arrangements.

The broader United Nations (UN) disarmament machinery, established and refined through SSOD-I in 1978, was designed to operationalise the disarmament pillar of the architecture. The CD, comprising 65 member states, was designated as the single multilateral disarmament negotiating forum; the UNDC was constituted as a deliberative body with universal membership.¹⁰ The last major product of the CD was the CTBT, opened for signature in 1996 but still not in force due to non-ratification by key Annex 2 states.¹¹ More recently, the TPNW, adopted in 2017 and in force since 2021, emerged not from the CD but from a separate General Assembly-mandated process reflecting the growing frustration with the established machinery's inability to deliver on disarmament.¹²

To promote compliance and control the transfer of sensitive nuclear material and technologies, voluntary export control mechanisms were established alongside the treaty framework. The Zangger Committee (1971) and the Nuclear Suppliers Group (1974) are informal groupings of nuclear-technology-exporting states that, through Trigger Lists and export guidelines, attempt to regulate the transfer of dual-use items and prevent their diversion to military programmes.¹³ These bodies operate with self-selected membership and no formal treaty basis.

The non-proliferation architecture was further reinforced by UNSC Resolution 1540 (2004), adopted under Chapter VII of the Charter, which imposed binding obligations on all states to enact domestic legislation

¹⁰ United Nations General Assembly, *Final Document of the Tenth Special Session of the General Assembly*, SSOD-I, A/S-10/2, June 30, 1978, para. 120

¹¹ *Comprehensive Nuclear-Test-Ban Treaty* (CTBT), opened for signature September 10, 1996, annexed to United Nations General Assembly Resolution 50/245, A/RES/50/245, September 10, 1996

¹² *Treaty on the Prohibition of Nuclear Weapons* (TPNW), adopted July 7, 2017, A/CONF.229/2017/8, entered into force January 22, 2021

¹³ Claudia M. V. Hampton, *Enforcement Through Voluntary Participation: The Impact of Non-Binding Informal Groups on the International Nuclear Nonproliferation Regime* (master's thesis, City College of New York, City University of New York, 2024), https://academicworks.cuny.edu/cc_etds_theses/1155/

criminalising WMD proliferation and to establish national controls over related materials and technologies.¹⁴

Collectively, this architecture was designed to prevent nuclear proliferation through a combination of legal prohibition, verification, institutional engagement, technology access, and supply-side controls. Security guarantees, whether through extended deterrence, negative security assurances, or collective arrangements, were meant to reduce the incentive for states to seek nuclear weapons. Equitable access to peaceful nuclear technology under Article IV was intended to ensure that non-proliferation did not come at the cost of development. The disarmament obligation under Article VI was the price of the bargain. This was the commitment that sustained the willingness of the majority to forgo what the minority possessed. Each of these mechanisms has since come under severe strain.

The Mechanics of Erosion

The strain described above is observable in several ways across every pillar of the non-proliferation architecture; i.e., paralysed institutions, fractured norms, and degraded verification credibility.

Institutional Paralysis and Accountability Failure

The NPT RevCon, its principal accountability mechanism, has failed to produce consensus outcomes in 2015, 2022, and 2026.¹⁵ The 2026 RevCon was convened against the backdrop of the US-Iran war and faced the same structural obstacles, including the inability to agree on disarmament approaches and benchmarks, as well as deadlock over the Middle East WMD-free zone. Successive failures in recent times have transformed RevCons from instruments of accountability into rituals of managed disappointment, progressively normalising the gap between treaty obligations and state conduct.

The CD, mandated as the sole multilateral disarmament negotiating forum, has not concluded a single negotiation since the CTBT in 1996, nearly three

¹⁴ United Nations Security Council, *Resolution 1540 (2004)*, S/RES/1540, April 28, 2004

¹⁵ Daryl G. Kimball, 'NPT Review Conference Fails to Reach Consensus,' *Arms Control Association*, September 1, 2022, <https://www.armscontrol.org/act/2022-09/news/npt-review-conference-fails-reach-consensus>

decades of procedural activity without a substantive outcome.¹⁶ The CTBT¹⁷ itself remains in limbo: opened for signature thirty years ago, it is still not in force due to non-ratification by key Annex 2 states, while recent developments, including Russia's revocation of its ratification and the US allegations against China of covert nuclear testing, have placed the de facto moratorium under renewed stress.¹⁸

The expiration of the New Strategic Arms Reduction Treaty (New START) in February 2026, without a successor agreement or any prospects of negotiations in the immediate future for continued restraint, represents a watershed.¹⁹ For the first time since 1972, there is no legally binding constraint on the world's two largest nuclear arsenals. Meanwhile, all five NPT nuclear-weapon states are modernising or expanding their arsenals. For example, France announced its first warhead increase since 1992; the United Kingdom (UK) raised its warhead ceiling; Russia is building novel categories of delivery systems; the US is deploying interceptors in outer space as part of its golden dome; and China²⁰ is also expanding its nuclear arsenal.²¹ For NNWS parties to the NPT that accepted permanent non-nuclear status in exchange for the commitment to eventual disarmament, the bargain is now visibly unreciprocated.

Normative Fracturing: From Universal Law to Selective Arrangements

Alongside institutional paralysis, the normative foundation of the regime is fractured. Universally binding, treaty-based obligations are being displaced by voluntary, non-binding, or exclusive arrangements. The rise of

¹⁶ United Nations Office for Disarmament Affairs (UNODA), 'Conference on Disarmament,' accessed June 26, 2026, <https://disarmament.unoda.org/conference-on-disarmament/>

¹⁷ Comprehensive Nuclear-Test-Ban Treaty Organization, 'Russia Revokes Ratification of the Comprehensive Nuclear-Test-Ban Treaty,' November 2, 2023, <https://www.ctbto.org/news-and-events/news/russia-revokes-ratification-comprehensive-nuclear-test-ban-treaty>

¹⁸ US Department of State, 'Remarks by Under Secretary Thomas DiNanno at the Conference on Disarmament,' February 6, 2026; 'US Reveals New Details of Alleged Chinese Nuclear Test,' *Reuters*, February 17, 2026

¹⁹ Vienna Center for Disarmament and Non-Proliferation (VCDNP), *End of New START: Short- and Medium-Term Options* (Vienna: Vienna Center for Disarmament and Non-Proliferation, January 2026), <https://vcdnp.org/end-of-new-start-short-and-medium-term-options/>

²⁰ Hans M. Kristensen, Matt Korda, Eliana Johns, and Mackenzie Knight, 'Chinese Nuclear Weapons, 2025,' *Bulletin of the Atomic Scientists* 81, no. 2 (2025): 96–116, <https://doi.org/10.1080/00963402.2025.2467011>

²¹ Hans M. Kristensen and Matt Korda, 'Status of World Nuclear Forces,' Federation of American Scientists, updated March 26, 2025, <https://fas.org/initiative/status-world-nuclear-forces/>

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‘coalitions of the willing’ in non-proliferation (the Proliferation Security Initiative), exclusive technology-sharing arrangements outside multilateral oversight (a trilateral security partnership between Australia, the UK, and the US - AUKUS), and ad hoc diplomatic groupings (the Stockholm Initiative, the International Partnership for Nuclear Disarmament Verification), all represent a shift towards selective minilateralism.

The most consequential normative fracture has been the granting of country-specific exceptions in the export control arena. In 2008, the NSG granted an exception to India, a non-NPT state, whose diversion of safeguarded material had triggered the creation of the NSG²² in the first place, without requiring full-scope safeguards, CTBT ratification, or cessation of fissile material production.²³ Subsequent bilateral nuclear supply agreements, including a uranium supply arrangement concluded as recently as 2026, have compounded the precedent. The message to the broader non-proliferation constituency is unambiguous, i.e., rules apply selectively, and strategic interests override non-proliferation standards. In the backdrop of this, the Group of Non-Aligned Movement (NAM), which had always played a proactive role in championing compliance with disarmament obligations, has been mired in its own internal divisions.

Safeguards Credibility Under Strain

The IAEA’s safeguards system has also been facing its own tests. The IAEA was initially tasked to provide assurances against any diversion of nuclear material into peaceful uses. However, the discovery of undeclared nuclear activities in select states in 1989, 1991, and 1993 exposed a ‘verification gap’ in the traditional Comprehensive Safeguards Agreement (CSA) framework.²⁴ In order to provide the IAEA with tools to assure the absence of undeclared nuclear activities in a country, the Additional Protocol (AP) was designed in 1997. It granted the IAEA expanded access and complementary inspection rights. While 183 states have concluded CSAs and 144 have agreed to APs, the application of these instruments has been

²² John Carlson, *India’s Nuclear Safeguards: Not Fit for Purpose*, Discussion Paper (Cambridge, MA: Project on Managing the Atom, Belfer Center for Science and International Affairs, Harvard Kennedy School, January 2018), <https://www.belfercenter.org/publication/indias-nuclear-safeguards-not-fit-purpose>

²³ Ministry of Foreign Affairs, Government of Pakistan, *Spokesperson’s Statement on the India-Canada Uranium Supply Agreement*, March 5, 2026

²⁴ Mohamed ElBaradei, *The Age of Deception: Nuclear Diplomacy in Treacherous Times* (New York: Metropolitan Books, 2011)

far from uniform.²⁵ In the case of Iran, even a CSA combined with an AP was not considered adequate, and an extensive verification regime was negotiated under the Joint Comprehensive Plan of Action (JCPOA) that went well beyond the CSA-plus-AP framework.

Another damaging blow to the safeguards' credibility has resulted from the lowering of benchmarks in certain exceptional cases. The umbrella safeguards agreement (INFCIRC/754), concluded by India in 2008, permitted a state outside the NPT to access the global nuclear supplies while keeping a significant portion of its nuclear program, including power reactors, its fast breeder reactors, and fissile material production facilities, outside IAEA safeguards.²⁶ Similarly, its AP was also weaker than those concluded by the NPT nuclear-weapon states, limited to export declarations alone, with no provision for complementary access or environmental sampling.²⁷ When safeguards standards are simultaneously raised for one state and lowered for another, and exceptions are designed to benefit states based on strategic geo-political considerations, the credibility of the entire system takes a hit.

Fading Structure of UNSC as a Non-Proliferation Enforcer

The UNSC has also faced paralysis on non-proliferation issues. The two most notable cases before it, Iran and the Democratic People's Republic of Korea (DPRK), illustrate its limits. The JCPOA was meant to address the proliferation concerns of Iran, with the UNSC entrusted with oversight functions. The unilateral withdrawal of the US from JCPOA in 2018, the subsequent scaling back of Iranian compliance, the contested invocation of the snapback mechanism in the UNSC, and the failure to prevent military

²⁵ International Atomic Energy Agency (IAEA), *IAEA Safeguards: Serving Nuclear Non-Proliferation* (Vienna: International Atomic Energy Agency, 2024), <https://www.iaea.org/publications/15613/iaea-safeguards-serving-nuclear-non-proliferation>

²⁶ International Atomic Energy Agency (IAEA), *Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities*, INFCIRC/754 (Vienna: International Atomic Energy Agency, September 2008), <https://www.iaea.org/publications/documents/infcircs/agreement-government-india-and-international-atomic-energy-agency-application-safeguards-civilian-nuclear-facilities>

²⁷ International Atomic Energy Agency (IAEA), *Protocol Additional to the Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities*, INFCIRC/754/Add.6 (Vienna: International Atomic Energy Agency, March 2009), <https://www.iaea.org/publications/documents/infcircs/protocol-additional-agreement-government-india-and-international-atomic-energy-agency-application-safeguards-civilian-nuclear-facilities>

action and attack of safeguarded nuclear facilities in 2025 and 2026 divided the Council members.²⁸ The lesson that others may draw from this crisis is that even the most comprehensively negotiated diplomatic agreements can be unilaterally discarded by their most powerful signatories, and the costs of compliance often exceed the costs of defection.

On the DPRK, the Security Council imposed one of the most comprehensive sanctions regimes in UN history, yet it could not deter Pyongyang from the development of its program.²⁹ The dissolution of the Panel of Experts under the 1718 Committee, after permanent members failed to reach consensus on the renewal of its mandate, dealt a further blow to the enforcement architecture.³⁰

The Calculus of Restraint: Why States Might Reconsider

Eroding Logic of Nuclear Abstinence

The non-proliferation architecture rests on one simple proposition that states are better served by forgoing nuclear weapons than by acquiring them. This proposition was sustained on three interlocking assurances. First, security guarantees that would offset the vulnerability of non-nuclear status, second, equitable access to peaceful nuclear technology as a developmental dividend, and third, the promise that nuclear-weapon states would themselves disarm.³¹ Each of these assurances has been progressively dishonoured, altering the cost-benefit calculus that underpinned nuclear restraint for the majority of states.

Extended deterrence in the form of the nuclear umbrella that incentivised allied states to forgo independent nuclear capabilities is itself under scrutiny. Public opinion surveys in the Republic of Korea consistently show significant support for an indigenous nuclear program. Japan's latent

²⁸ Anna O'Sullivan, 'The US Abandonment of the JCPOA: How Coercive Diplomacy Backfired,' *Hemispheres* 48 (December 2025), <https://doi.org/10.62327/hemispheres.v48i1.8>

²⁹ Boris Kondoch, 'The Limits of UN Sanctions under International Law: The Case of North Korea,' *Journal of East Asia and International Law* 17, no. 2 (November 2024): 369–386, <https://doi.org/10.14330/jeail.2024.17.2.06>

³⁰ Hojin Jang, 'The End of the UN DPRK Panel of Experts: Legal Continuity, Governance Breakdown, and the Emerging Role of Coalition-Based Monitoring,' *Korea on Point*, December 6, 2025, https://koreaponpoint.org/articles/article_detail.php?idx=507&start=&topic_idx=199

³¹ Nobuyasu Abe, 'The NPT at Fifty: Successes and Failures,' *Journal for Peace and Nuclear Disarmament* 3, no. 2 (July 2020): 224–233, <https://doi.org/10.1080/25751654.2020.1824500>

nuclear capability has re-entered policy discourse. In Europe, France's announcement of a 'forward deterrence' doctrine and the broader debate in other European states on strategic autonomy reflect diminished confidence in the reliability of the US security guarantees.³² International law has also failed to deter nuclear-weapon states from attacking non-nuclear-weapon states, including in cases of the Russian invasion of Ukraine and the US-Israel military strike on Iran. If nuclear-armed states are seen as willing to wage conventional wars with impunity, the deterrent value of nuclear weapons is simultaneously validated, and the restraint expected of non-nuclear-weapon states is further tested.

Furthermore, the nuclear-weapon states have failed to agree on the provision of legally binding assurances to non-nuclear-weapon states against the threat or use of nuclear weapons. There has been no progress on the issue of negative security assurances in the CD for over four decades.

Access to technology, the second pillar of the NPT, has been undermined by the uneven application of the NPT-Article IV guarantee. Despite being parties to the NPT in good standing, several non-nuclear-weapon states have faced persistent hurdles in accessing peaceful nuclear technology. In contrast, others, including one state, i.e., India, outside the treaty framework, have been granted preferential access through bilateral arrangements (Indo-US nuclear deal) driven by strategic considerations in the backdrop of evolving great power competition in the Asia-Pacific region. The 'inalienable right' to peaceful uses, which was a central inducement for nuclear abstention, is in practice mediated by exclusive supplier groups operating outside any treaty framework, with membership and supply decisions determined by geopolitical alignment rather than non-proliferation credentials.³³ The disarmament obligation, the third pillar, is the most visibly broken. The complete absence of any arms control negotiation, bilateral or multilateral, and the current practices of all five NPT nuclear-weapon states amount to a reversal of the trajectory that non-nuclear-weapon states were promised. The two largest nuclear-weapon

³² Chicago Council on Global Affairs, *South Korean Public Opinion on Nuclear Weapons* (Chicago: Chicago Council on Global Affairs, 2024)

³³ Giovanna Maletta, Mark Bromley, and Kolja Brockmann, *Non-Proliferation, Nuclear Technology and Peaceful Uses: Examining the Role and Impact of Export Controls*, EU Non-Proliferation and Disarmament Consortium Paper No. 95 (Stockholm: Stockholm International Peace Research Institute (SIPRI), April 2025), <https://www.sipri.org/publications/2025/eu-non-proliferation-and-disarmament-papers/non-proliferation-nuclear-technology-and-peaceful-uses-examining-role-and-impact-export-controls>

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states, the US and Russia, possessing over 90% of global nuclear arsenals, are no longer taking the expected lead role in undertaking reductions. The step-by-step approach that NWS long championed was premised on a continuing trajectory of bilateral reductions by the US and Russia; that trajectory has now been abandoned.

The Paradox of Responsible States Outside the Treaty Framework

The asymmetry in the regime's application extends beyond the NWS-NNWS divide within the NPT. Some states that never acceded to the treaty have nonetheless adopted practices that meet or exceed the non-proliferation conduct expected of treaty members. For instance, Pakistan has concluded safeguards on all civilian nuclear facilities without exception, observed unilateral moratoriums on nuclear testing, and has offered its archival, India, to enter into a bilateral agreement on non-testing (to which the latter has not responded). It also harmonized its national export controls based on NSG guidelines and initiated proposals for bilateral and regional confidence-building measures (CBMS), including nuclear and missile restraint, conventional balance, and conflict resolution.³⁴ Yet Pakistan remains excluded from the institutional benefits of the non-proliferation architecture.

The Politicisation of Export Controls

The multilateral export control arrangements have also suffered politicization. Export control groups, particularly the NSG, were established to prevent the diversion of nuclear material and technology to weapons programs.³⁵ Their effectiveness depends on the consistent, criteria-based application of supply standards. When membership is instead determined by geopolitical alignment, and when the group's own guidelines are bypassed to accommodate country-specific exceptions, export controls cease to function as non-proliferation instruments and become tools of strategic competition. A non-discriminatory, criteria-based approach to supplier group membership would do more to strengthen the credibility and

³⁴ Shahrukh Khan, 'Technological Challenges in the Way of Nuclear Risks Reduction and Strategic Stability in South Asia,' *Science Diplomacy Perspectives* 1, no. 1 (March 2022): 23, https://www.ciiis.org.cn/english/COMMENTARIES/202203/t20220331_8510.html

³⁵ George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (Berkeley: University of California Press, 1999), 293–305

effectiveness of the non-proliferation architecture than any number of political declarations.

Future Trajectories

The erosion dynamics described in this article are not self-correcting. Left unaddressed, they point toward one of three broad trajectories for the nuclear non-proliferation architecture.

Scenario A: Managed Decline

In this scenario, the NPT persists as a legal instrument but progressively loses its effectiveness. The NPT RevCons would not only fail to produce any substantive outcomes but also struggle to converge on reiterating previously agreed outcomes. The UN Disarmament Machinery, including the CD and Disarmament Commission, would remain deadlocked. No new significant disarmament negotiations would be initiated in the foreseeable future. The export control regimes would continue to face credibility-related challenges as they apply different standards selectively and along geopolitical lines.

Meanwhile, nuclear forces and capabilities would continue to expand. Extended deterrence would be offered to more states, and those who fail to receive such assurances may consider going for their own nuclear capabilities. The multilateral non-proliferation architecture would continue to face gradual but assured erosion both on the institutional and normative front.

Scenario B: Institutional Fragmentation

In this scenario, while institutions do function on a periodic basis, they fail to sustain a universal multilateral non-proliferation architecture. The non-proliferation objectives are mostly advanced through narrow coalition-style forums. Non-proliferation would become a function of alliance politics rather than international law. Technology-sharing arrangements like AUKUS would normalise the transfer of sensitive nuclear capabilities within strategic partnerships, outside multilateral oversight.³⁶ Supplier groups would split into rival blocs, each applying its own rules to its own members. The risk of this trajectory is that states outside any coalition or

³⁶ Harald Müller, 'The Future of Nuclear Arms Control,' *The Nonproliferation Review* 27, nos. 1–3 (2020): 205–219, <https://doi.org/10.1080/10736700.2020.1834964>

excluded from all of them would face both security deficits and technology exclusion, creating precisely the incentive structure most likely to drive proliferation. This could also lead to states withdrawing from the NPT and pursuing nuclear weapon programmes for their security. A ‘rules-based order’ in which the rules are defined by the powerful and applied to the rest is only an arrangement with diminishing consent.

Scenario C: Renewed Multilateralism

The least likely but most important trajectory to articulate is a genuine revival of multilateral non-proliferation governance. This would require several conditions to be met, each demanding political will that is currently absent, but whose articulation establishes the benchmark for responsible reform. These include, demonstrable movement by the largest nuclear-weapon states toward reducing their arsenals; the resumption of arms control negotiations in some form; the restoration of the CD as a functioning negotiating body; the adoption of objective, non-discriminatory criteria for membership in export control groups; the universal and consistent application of safeguards standards without country-specific exceptions; and the recommitment to the foundational principles of the SSOD-I Final Document including the assurance that every state has an equal right to security and that disarmament measures should ensure undiminished security for all at the lowest possible level of armaments.³⁷

These trajectories are not mutually exclusive; elements of each may coexist. What will determine which prevails are developments that remain unpredictable. For instance, a resumed nuclear test by any state that would shatter the de facto moratorium; the outcome of the Iran crisis and the lessons other states draw from it; or the remote but consequential prospect of renewed great-power arms control.

Conclusion

The multilateral nuclear non-proliferation architecture is undergoing a major crisis precipitated by multiple factors, including selective enforcement of norms, unfulfilled bargains, and prioritizing narrow coalition-based interests over global objectives. This crisis is manifesting itself in various ways and most significantly through paralysis in various

³⁷ United Nations General Assembly, *Final Document of the Tenth Special Session of the General Assembly*, SSOD-I, A/S-10/2, June 30, 1978, paras. 13, 29, and 113

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non-proliferation and disarmament institutions. The non-proliferation norms, long cherished, are fraying.

As a result, the states are re-evaluating their calculus of restraint and adjusting their postures accordingly, more in tune with the prevailing security landscape. The future of the multilateral non-proliferation architecture largely rests in the hands of the few who have defined and championed its initial objectives. As long as they fail to address the increasing disillusionment with the non-proliferation architecture, the vulnerability of the entire system will only increase with the passage of time. A multilateral non-proliferation order that is built on contradictions cannot be sustained and would fail to have a continued buy-in from the majority.

Whether that contradiction is resolved through inclusive, equitable reform based on implementing the foundational principles of SSOD-I or through the logic of strategic competition will determine the future of the non-proliferation project. The instruments for reform exist. What remains absent is the political will to use them.