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Ukraine, Nuclear Deterrence, and the New Proliferation Dynamic



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"We will have to be ready for a day when America will withdraw its troops from Europe.

*Then, European countries, and Germany in particular, will find themselves next to this
Russian colossus with all its expansive impulses.*

*We thus have to do everything in our power not to be caught unarmed if a challenge
ever comes."*

Konrad Adenauer

"You were given the choice between war and dishonour.

You chose dishonour – and you will have war."

Winston Churchill

Foreword

Ukraine, Nuclear Deterrence, and the New Proliferation Dynamic emerges at a moment when the very foundations of the post-1945 international order are being tested. Russia's aggression against Ukraine since 2014 and 2022, and the unprecedented use of nuclear threats in support of offensive war, has forced policymakers, scholars, and societies to confront questions that many believed were settled decades ago. The research presented in this publication seeks to examine these challenges with clarity and urgency, recognising that Ukraine's security is not an isolated concern but is intrinsically bound to the stability of Europe, NATO, and the global non-proliferation regime. Reaktion Group is deeply grateful to Konrad-Adenauer-Stiftung Kyiv for supporting this work and for recognising the critical importance of grappling with these issues now, before the strategic environment deteriorates further.

This publication does not advocate for nuclear proliferation. Quite the opposite, its purpose is to illuminate the risks that arise when the norms and guarantees underpinning the global non-proliferation system are violated. Ukraine's experience illustrates how the erosion of trust in treaties, alliances, and international commitments can fuel debates about nuclear latency or armament not only in Kyiv, but globally. By analysing the drivers behind these trends in Ukraine, South Korea, and beyond, this study aims to strengthen the international norms that have helped keep the world safer for decades. A secure, sovereign, and resilient Ukraine is essential not only for European stability, but also for ensuring that the Non-Proliferation Treaty and the broader rules-based order remain credible. Supporting Ukraine's defence and deterrence therefore remains one of the most effective tools available to prevent the dangerous spread of nuclear weapons.

Finally, I would like to express my sincere gratitude to my team at Reaktion Group. Their dedication, expertise, and tireless commitment – often under challenging conditions, especially in wartime Ukraine – made this project possible. Their work reflects the seriousness of the moment and the shared belief that rigorous analysis can help shape a safer and more stable future for Europe, Ukraine, and the wider international community.

Joshua R. Kroeker

CEO & Founder, Reaktion Group Consulting Ltd.

Foreword

It is my pleasure to introduce this important study and to express my sincere gratitude to our partners from Reaktion Group for their excellent work and the constructive, trusting cooperation that has made this publication possible. The depth of analysis and clarity of thought presented here are a direct result of their commitment and expertise.

From the Foundation's perspective, this study is timely and necessary. Russia's war of aggression against Ukraine has brought fundamental insights back to the forefront of European security thinking, insights that many in Europe, especially on parts of the political left, preferred to overlook for far too long.

First, Ukraine's experience has demonstrated with sobering clarity how deeply Europe's security – particularly in the nuclear realm – continues to depend on the American nuclear umbrella. For decades, this uncomfortable fact was often minimised in public debate. The brutal reality of this war reminds us that credible deterrence is not a theoretical construct but the backbone of peace and stability on our continent.

Second, the case of Ukraine illustrates that security assurances written on paper are only as reliable as the hard capabilities and automated, enforceable protection mechanisms that stand behind them. The Budapest Memorandum – once celebrated as a model of cooperative security – proved fatally insufficient when tested. This raises not only the question of how Ukraine's security can be credibly guaranteed in the future, but also how much longer Europe's own nuclear and conventional security can rely almost exclusively on the United States and NATO as we know them.

These are not academic considerations. They strike at the heart of Europe's strategic future. The war in Ukraine forces us to reassess long-held assumptions, to confront uncomfortable truths, and to strengthen those elements of our security architecture that remain indispensable.

I hope that this study will find many readers – above all, decision-makers, experts, and political actors – who will draw from it the necessary conclusions for their future courses of action. The stakes for Ukraine, for Europe, and for the international order could not be higher.

Dr. Jan Philipp Woelbern

Deputy Director, Konrad Adenauer Stiftung Ukraine

Executive Summary

Russia's full-scale invasion of Ukraine has become the most consequential challenge to the contemporary security order and the global non-proliferation regime. At the heart of this crisis lies the failure of the Budapest Memorandum, a political agreement through which Ukraine relinquished the world's third-largest nuclear arsenal in exchange for security assurances that ultimately proved unenforceable. Russia's serial violations of these assurances, first in 2014, then in 2022, have undermined confidence not only in political guarantees but in the very foundations of nuclear restraint. The war demonstrates how a nuclear-armed state can use both conventional force and nuclear intimidation against a non-nuclear neighbour, while the international community remains constrained by escalatory fears and geopolitical divisions.

Ukraine's experience reveals the limits of legal commitments and highlights the centrality of credible deterrence – whether conventional, nuclear, or alliance-based. Russia's systematic nuclear threats have shaped Western decision-making, slowed the provision of advanced weapons, and eroded long-standing norms around nuclear signalling. Meanwhile, Ukraine has shown that robust conventional capabilities, such as long-range strike systems and cost-imposing drone and missile operations, can undermine a nuclear-armed adversary's freedom of action. Yet these capabilities cannot substitute for structural security guarantees, especially as both Ukrainian manpower and Western support face growing strain. In this context, some in Ukraine argue that regaining a nuclear deterrent is the only truly reliable option for the country despite significant technical and political hurdles.

The implications of this extend far beyond Europe. States such as South Korea, observing the collapse of Ukraine's assurances, are also openly debating nuclear options, questioning the credibility of U.S. extended deterrence, and drawing direct parallels between their own security environment and Ukraine's. In Europe, the war has exposed profound deficiencies in defence capacity, strategic coordination, and political will, leaving the continent ill-prepared to deter further Russian aggression or to compensate for shifting U.S. priorities.

This study argues that preventing broader nuclear proliferation and ensuring Ukrainian sovereignty depends on a decisive strategic commitment from Europe and the wider West. Credible security for Ukraine will require sustained transfers of advanced conventional weapons, long-term defence-industrial investment, and political guarantees embedded within NATO or equivalent structures. The alternative is an increasingly unstable world in which states conclude that nuclear weapons, and not treaties, norms, or assurances, are the only reliable hedge against aggression.

The prospect of resisting Russian aggression at times is met with fears that the Russian state might disintegrate into chaos in the event of military defeat in Ukraine, with fragmentation of central power and the loss of unified control over the country's nuclear weapons. It is, however, crucial to consider the limits of Western agency: if the Russian state is so far on the edge that such scenarios are in the cards, the structural factors that shape collapse options will bring them about sooner or later, regardless of the West's policy choices with regard to Ukraine. Western capitals should prepare for these scenarios by building intelligence capacities, developing contingency plans, hardening domestic detection and defence systems, and monitoring key indicators in Russia, such as elite splits, failures to implement explicit Kremlin policy, breakdowns in federal budgetary streams, and active empire-building by local elites.

The choices made now, in Ukraine, will shape the future of nuclear deterrence and international order for decades to come.

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1 – Introduction

The Russian-Ukrainian war has become the most consequential stress test of the existing security order and nuclear non-proliferation regime¹. It is a conflict defined by a stark asymmetry: a nuclear-armed power attacking a non-nuclear neighbour that voluntarily relinquished the world's third-largest nuclear arsenal in exchange for political assurances. This foundational imbalance shapes every dimension of the war — from Ukraine's struggle for survival to Russia's routine use of nuclear coercion, and from the erosion of trust in non-proliferation treaties to a global re-examination of what actually deters aggression. The Budapest Memorandum, once hailed as a model of cooperative security, now stands as a symbol of unenforced commitments and a cautionary tale for any state considering nuclear renunciation. Ukraine's fate has become a prism through which the fragility of the global non-proliferation regime is revealed, prompting renewed debates about whether security guarantees still carry weight in the twenty-first century.

Understanding why Ukraine disarmed, why its guarantees failed, and how the war reshapes deterrence thinking is central to this study. Ukraine's denuclearisation in the 1990s was not only a technical process, but a political and symbolic one. Ukrainian leaders sought to consolidate sovereignty, secure international recognition, and escape Soviet control structures. They accepted assurances from nuclear powers, particularly Russia, the United States, and the United Kingdom, that the sovereignty and borders of the again independent state would be respected. For the West, these commitments served broader non-proliferation goals; for Russia, they produced tangible strategic benefits, including the return of strategic bombers, nuclear-capable missiles, and fissile material, as well as retaining the rights of the sole heir to the Soviet Union. Yet because the Budapest Memorandum lacked enforcement mechanisms and because its signatories had divergent interests, these assurances evaporated at the first moment of geopolitical rupture. Russia's annexation of Crimea in 2014, followed by the full-scale invasion in 2022, demonstrated the memorandum's fundamental weakness and left Ukraine exposed precisely when its security assurances were supposed to matter.

The consequences have been staggering. Ukraine not only surrendered a nuclear deterrent; it surrendered weapons that Russia has subsequently modernised and used – directly or indirectly – in its war against Ukraine. The memorandum's collapse contributed to a chain of events: the illegal seizure of Crimea, the fighting in Donbas, years of failed diplomacy, and finally a full-scale war that has drawn the world back into an era of high-intensity kinetic conflict and nuclear brinkmanship. These events have deeply shaped Ukrainian strategic culture. They explain why Kyiv today rejects vague ceasefires, insists on binding security guarantees, and resists pressure to accept premature "peace deals." Having experienced the consequences of unenforced promises, Ukrainian officials emphasise that security must be anchored either in alliance structures such as NATO or in forms of military capacity such as air defence, deep-strike systems, and drones that offer concrete deterrent value.

Russia's use of nuclear rhetoric throughout the war has only elevated these debates. Repeated threats of escalation, the stationing of tactical nuclear weapons in Belarus, and the framing of Western military aid as potential nuclear triggers have influenced the pace and scale of Western support. Delayed deliveries of missile systems, aircraft, and long-range capabilities reflect a Western instinct to manage escalation, but this caution has simultaneously permitted Russia to maintain battlefield initiative and successfully play on these concerns. Nuclear threats have been leveraged not to defend Russian territory but to constrain external support for Ukraine, illustrating how nuclear weapons can shape a conflict in an offensive capacity even when never used. The erosion of the nuclear taboo is visible not only in rhetoric but in actions such as the occupation of the Zaporizhzhia nuclear plant and drone attacks on Chernobyl, further demonstrating the limits of existing norms and enforcement mechanisms.

Against this backdrop, new questions arise about whether conventional deterrence can compensate for the absence of nuclear weapons. Ukraine's wartime experience provides an unusually rich empirical case. Its rapid development of drone fleets, long-range strike capabilities, and cost-imposition

strategies, such as attacks on oil refineries, military logistics hubs, and strategic aviation, has challenged traditional assumptions about how smaller states can deter larger adversaries. Ukraine's operational successes, especially in 2022-23, including attacks on Russia's Black Sea Fleet, the Kursk operation, and long-range strikes deep into Russian territory, show that advanced non-nuclear capabilities can disorganise, degrade, beat back and coerce even a nuclear-armed opponent. They also demonstrate that Russia's declared nuclear "red lines" are far more flexible than its rhetoric suggests. But whether such capabilities provide long-term strategic security remains an open question, especially as Western support fluctuates and Russia adapts its defences.

The global implications of Ukraine's experience are already visible. In South Korea, public support for developing nuclear weapons has reached record highs, driven both by North Korea's advancing arsenal and by doubts about U.S. extended deterrence — doubts sharpened by the perceived failure of Ukraine's security assurances. Germany, though unlikely to pursue nuclear weapons, has been thrust into a deeper debate about its reliance on U.S. nuclear forces, the future of NATO's nuclear sharing, and Europe's broader strategic autonomy. In each case, Ukraine serves both as a warning and a precedent: a demonstration that legal assurances cannot substitute for enforceable deterrence, and that states dependent on external protection must constantly reassess the credibility of those guarantees.

Europe finds itself at the centre of these dilemmas. The war has shattered long-held assumptions about the stability of the European security order and has exposed the inadequacy of economic entanglement and deterrence strategies that rely primarily on de-escalation, restraint, or slow, incremental support. As former Ukrainian defence officials argue, deterrence now requires shaping Russian decision-making through "functional defeats" — strikes and capabilities that degrade Russia's ability to wage war, without necessarily requiring total victory on the battlefield. For Europe, this means not only sustaining Ukrainian defences but also building a strategic culture that recognises the scale of the threat and the cost of inaction. It also means reassessing defence-industrial capacities, overcoming internal political obstacles to cooperation, and investing in both conventional and political mechanisms that provide Ukraine with long-term security.

The study that follows builds on these themes and proceeds in three broad movements. First, it analyses the Budapest Memorandum not as an unfortunate diplomatic miscalculation, but as a structurally flawed bargain whose asymmetries made its failure almost inevitable. Second, it examines evolving debates within Ukraine regarding deterrence – conventional and nuclear alike – and how these debates are shaped by changing battlefield realities, public opinion, and Western support. Third, it situates Ukraine within the wider global context, exploring how its experience informs proliferation thinking in other non-nuclear states and how Europe can use its political, economic, and military tools to stabilise a rapidly deteriorating security environment.

Far from being a regional conflict, the war in Ukraine is a hinge moment for the future of international order. The choices made by Ukraine, Europe, and the wider West in the coming years will shape whether the non-proliferation regime survives, whether conventional deterrence remains credible, and whether smaller states continue to view denuclearisation as a viable path to security. Ukraine stands at the centre of this transformation: not as a passive victim of broken promises, but as an active agent whose experience forces the international community to confront the consequences of unfulfilled guarantees and to rethink the architecture of deterrence in a fragmenting world.

Spotlight



The International Non-Proliferation Regime

The core of the nuclear non proliferation regime rests on a small set of multilateral treaties that define obligations on non proliferation, disarmament, testing, and (more recently) the prohibition of nuclear weapons.

The NPT as the Central Cornerstone

- › Treaty on the Non Proliferation of Nuclear Weapons (NPT, 1968/1970): Universally described as the cornerstone of the legal regime; it has three pillars—non proliferation, disarmament, and peaceful use of nuclear energy—and 191 parties, more than any other arms limitation treaty. The International Atomic Energy Agency (IAEA) verifies compliance with NPT commitments, the IAEA Additional Protocol enhances verification and the UN Security Council is tasked with enforcing compliance.

Key Test Ban and Arms Control Treaties

- › Partial Test Ban Treaty (PTBT, 1963): Bans nuclear test explosions in the atmosphere, outer space and under water, allowing only underground tests.
- › Comprehensive Nuclear Test Ban Treaty (CTBT, 1996; not yet in force): Prohibits all nuclear explosions anywhere on Earth, for military or peaceful purposes, and is widely regarded as one of the most important disarmament and non proliferation treaties.
- › Treaty on the Prohibition of Nuclear Weapons (TPNW, 2017; entered into force 2021): Prohibits development, testing, production, acquisition, possession, stockpiling, use and threat of use of nuclear weapons, and is framed as a comprehensive ban complementing, but politically challenging, the existing NPT based regime.

Other Key WMD Non Proliferation Pillars

- › Chemical Weapons Convention (CWC, 1993/1997): Bans the development, production, stockpiling and use of chemical weapons, and is described as a major pillar of the global non proliferation regime.
- › Biological Weapons Convention (BWC, 1972/1975): Prohibits the development, production and stockpiling of biological and toxin weapons.

2 – The View from Kyiv



Photo 1: Signing of the Budapest Memorandum. Associated Press.

The ineffectiveness of security guarantees of Ukraine's territorial integrity provided under the Budapest Memorandum in exchange for renouncing its nuclear status has for years now fuelled the narrative that Ukraine should consider reacquiring nuclear capabilities. This topic has resonated not only within the country but across global diplomatic and security circles.

The Budapest Memorandum, signed in 1994, remains a cornerstone of this debate. On one hand, the memorandum was heralded as a significant step toward global non-proliferation by facilitating Ukraine's denuclearisation following the collapse of the Soviet Union. However, the assurances provided by the signatories, including Russia, have not prevented the repeated violation of Ukraine's sovereignty and territorial integrity by Moscow. The lessons of the Budapest Memorandum remain relevant as Ukraine faces the ongoing threat of Russian expansionism, raising the fundamental question: What kind of security guarantees can be trusted, and what alternative deterrence measures might Ukraine pursue in the face of existential threats?

As the conflict persists, the need for a robust and predictable security framework for Ukraine becomes increasingly critical, not only for its sovereignty but also for the stability of the European continent. The evolving role of nuclear weapons in Ukraine's security calculus, and the West's response to this dilemma, will shape the future of European defence policies and the viability of NATO as the premier security alliance in the region. This chapter aims to provide insights into the complex interplay of military, political, and strategic considerations that will ultimately determine Ukraine's path forward.

2.1 The Strategic and Symbolic Significance for Ukraine of the Budapest Memorandum

Ukraine's Nuclear Inheritance and the Choice for Independence

When the Soviet Union collapsed in 1991, Ukraine found itself in possession of the world's third-largest nuclear arsenal — some 1,900 strategic nuclear warheads, as well as hundreds of tactical weapons and delivery vehicles. At first glance, this inheritance could have been a powerful tool of leverage, but in practice, Ukraine never had independent operational control over these weapons. Launch authority and command codes remained in Moscow, and the infrastructure for maintenance, targeting, and use was integrated into the Soviet system. As former negotiators have recalled, Ukraine's arsenal was more a liability than a guarantee of sovereignty.³ In interviews, Yuriy Kostenko, Head of the Parliamentary Working Committee on Nuclear Disarmament of Ukraine (1992-1994), who led Ukraine's delegation in negotiations with Russia in the early 1990s, emphasised that Kyiv lacked true control and could not operate its nuclear forces without Moscow.⁴ As Kostenko recalled, Ukraine wanted to avoid being perpetually tethered to Moscow's nuclear command structures and instead sought recognition as an autonomous, sovereign country. Retaining them, therefore, could have perpetuated dependence rather than ensured independence. Lastly, the societal trauma following the 1986 Chernobyl catastrophe was likely also a factor in Ukraine's anti-nuclear deliberations. The fact that the incident was initially underreported, in the long run, became a catalyst for Ukrainian civil society as people saw the cost of Moscow's negligence.

By and large, Ukraine's leaders concluded that a nuclear-free state was the more strategic and symbolic path. By renouncing nuclear arms and acceding to the Nuclear Non-Proliferation Treaty (NPT) as a non-nuclear-weapon state, Ukraine sought to demonstrate its legitimacy as an equal member of the international community, not a pariah. The choice was intended to distinguish Ukraine from the authoritarian tendencies of Russia and to anchor its sovereignty in a rules-based order where borders and independence would be guaranteed by international norms.

The Bargain of Denuclearisation

Ukraine's denuclearisation was codified through the Declaration of Sovereignty of Ukraine (1990), the Minsk Agreement on Strategic Forces (1991), the Lisbon Protocol (1992), the Trilateral Statement (1994), and finally, the Budapest Memorandum on Security Assurances (December 1994).⁵ Yet the bargain was deeply asymmetrical. Russia received the bulk of Ukraine's nuclear materials, including fissile substances, later used in its own weapons program. It also acquired strategic bombers and missiles that Ukraine dismantled or transferred, many of which Russia continues to use today in its war against Ukraine.

For the United States and its allies, the outcome was clear: the feared uncontrolled expansion of the "nuclear club" was avoided. Washington had been deeply anxious that Ukraine, Belarus, and Kazakhstan might seek to retain nuclear capabilities, undermining the NPT regime and destabilising global security. Preventing proliferation in the post-Soviet space was a top U.S. priority, and Ukraine's disarmament was presented internationally as a success story.

Yet the situation Ukraine was facing in the mid-1990s was not that simple. What Ukraine inherited in 1991 was not a fully functional deterrent but rather "a proliferation starter kit" that could not be operated independently of Moscow.⁶ Launch codes and command authority were in Russian hands, and Ukraine lacked the enrichment and reprocessing facilities needed to produce its own fissile material. Building a sovereign nuclear arsenal would have required enormous financial, technological, and political resources at a moment when Ukraine was facing a deep economic crisis. As of the early 1990s, Ukraine's nuclear arsenal was fully integrated into the overall Soviet control system. Ukraine was unable to make decisions on the use of strategic weapons on its territory-launch authorization codes (they were in Moscow) and permissive action links (PALs) were missing. It also could not ensure the

reliable maintenance of the warheads, such as tritium replenishment and regular maintenance and for this relied on Russian specialists. Ideally, Ukraine could have created its own independent national nuclear weapons control and command system, but this would have required years of testing and research, as well as Russia's willingness to tolerate it, which definitely was not the case.

To emphasise the vulnerability of the Ukrainian economy at that time, it is worth recalling that the disarmament program was financed by the United States, while President Bill Clinton directly warned President Leonid Kravchuk that if Ukraine refused to disarm, Washington would impose sanctions.⁷ Western governments, argues Mariana Budjeryn, made clear that Ukraine would become the "North Korea of Eastern Europe" if it tried to keep nuclear arms.⁸ In short, retaining the arsenal might have provided a deterrent in theory, but in practice, it was a path toward pariah status and domestic instability.

But one determining question remains: what did Ukraine itself receive in return? Instead of binding guarantees of security, Kyiv was offered political assurances. The Budapest Memorandum pledged respect for Ukraine's sovereignty and borders, non-use of force, freedom from economic coercion, and recourse to UN Security Council action in the event of nuclear aggression. These were assurances, not guarantees, phrased in political, rather than legal, terms.⁹ Ukraine thus exchanged tangible capabilities and deterrent potential for promises rooted in existing international law, with no enforcement mechanism beyond "consultations."

Nevertheless, the costs have been staggering. Ukraine relinquished strategic bombers and nuclear-capable missiles that Russia has since modernised and used in bombardments of Ukrainian cities. It gave away fissile material that Russia incorporated into its arsenal, which today threatens Ukraine's survival. Instead of receiving robust guarantees, Ukraine was left with assurances that proved hollow. The country has paid for this decision in territorial losses – Crimea, parts of Donbas – and in the ongoing full-scale war.

It is worth recalling what Ukraine actually received in exchange for abandoning the world's third-largest nuclear arsenal. Under the Nunn-Lugar programme, the United States financed approximately \$175 million for dismantling nuclear infrastructure and a further \$155 million to support economic reforms, while Russia agreed to write off part of Ukraine's accumulated gas debt. In material terms, this amounted to very little. Ukraine did not receive anything close to the scale of compensation that might have reflected the strategic value of its arsenal – certainly not even a billion dollars at a time when such funds were desperately needed. In pursuit of international recognition and integration into the post-Cold War security order, Ukraine effectively disarmed for a fraction of the value of what it relinquished.¹⁰

The sequence of events – the Budapest Memorandum, the annexation of Crimea, the war in Donbas, the Minsk agreements, and finally the 2022 invasion and the horrors faced by Ukrainians since – traces a line of broken promises and missed deterrence. Each breach of Ukraine's sovereignty reinforced the perception that the memorandum failed to achieve its fundamental purpose: securing Ukraine's borders in exchange for nuclear disarmament.

The Breach of Assurances

The Budapest Memorandum's credibility already began to unravel dramatically in 2014, when Russia directly violated the commitments it had made to respect Ukraine's sovereignty and territorial integrity.¹¹ The first blow came in February-March 2014, when Russian forces occupied and then illegally annexed Crimea. Moscow justified its actions by citing the supposed will of the local population expressed in a hastily organised and internationally unrecognised referendum that was neither free nor fair.¹² Russia's seizure of Ukrainian territory represented a clear breach of the Memorandum's guarantee that Russia, alongside the United States and the United Kingdom, would refrain from the "threat or use of force" against Ukraine's existing borders, as well as international law in general.¹³

Russia's aggression did not stop in Crimea, however. By spring 2014, Moscow began fuelling a separatist insurgency in Donbas, providing weapons, financing, political guidance, and covert military support to armed groups in Donetsk and Luhansk. While Russia repeatedly denied direct involvement, ample evidence – including captured soldiers, satellite imagery, and battlefield equipment – demonstrated that Moscow played a central role in escalating and sustaining the conflict.¹⁴ The war in Donbas created a de facto partition of Ukraine's eastern territories and cost over 14,000 lives between 2014 and the ensuing full-scale invasion of Ukraine in 2022. It was in this context that the promises of the Budapest Memorandum came to be seen in Ukraine not as meaningful guarantees, but rather as hollow words. Already then, there were some voices calling for a Ukrainian nuclear weapons programme, yet they remained marginal and on the fringes of public discourse.¹⁵

The international response in 2014 sought to punish Russia and reaffirm support for Ukraine's territorial integrity, but it stopped short of direct military intervention and ultimately proved too weak and ineffective to deter Russian aggression. In March 2014, the United Nations General Assembly passed Resolution 68/262 on the "Territorial Integrity of Ukraine," affirming Ukraine's sovereignty within its internationally recognised borders and declaring "the Crimean referendum" invalid.¹⁶ While the resolution received 100 votes in favour, it was non-binding and lacked enforcement power. Western states, particularly the United States, the European Union, Canada, and other allies, imposed waves of sanctions targeting Russian officials, financial institutions, and key economic sectors such as energy and defence. NATO increased defence spending commitments, reinforced its presence in Eastern Europe, increased military exercises, and deepened defence cooperation with Ukraine, but made it equally clear that it would not intervene militarily to defend Ukrainian territory.

For Kyiv, these measures were a double-edged sword. On one hand, they demonstrated a modicum of political and diplomatic support, and sanctions-imposed costs (albeit limited) on Russia's economy. On the other hand, the Western response underscored the weakness of the Budapest Memorandum, and with it the weakness of international law: the assurances given in 1994 carried no binding enforcement mechanism, and when Russia violated them, Ukraine was left to face aggression largely alone. This gap between expectation and reality planted the seeds of deep mistrust in international guarantees that continues to shape Ukraine's strategic posture today.

The real failure was not Ukraine's choice to disarm but the West's failure to uphold its end of the bargain. While Washington and London did provide military aid to Ukraine after 2014, they never explicitly framed this assistance as fulfilling the Budapest Memorandum obligations, nor did they intervene decisively in the Minsk negotiations. In fact, the absence of the United Kingdom and the United States as formal parties to Minsk, combined with their muted reaction to Russia's annexation of Crimea, signalled to Putin both the weakness of the West and the lack of unity among its allies. This should serve as a clear lesson for today's debates over a new "peace deal." Moreover, later on the anniversary of the occupation of Crimea, Putin admitted that in 2014 he was allegedly ready to use nuclear weapons if Western countries interfered with Russia's occupation of Crimea — an episode that demonstrated just how effectively nuclear rhetoric worked to deter Western action.¹⁷ In this way, the Budapest Memorandum quickly faded from diplomatic discourse, reducing its political weight, eroding Ukrainian confidence in Western guarantees, and leaving Kyiv exposed to Russia's encroachments while simultaneously undermining the credibility of the global nonproliferation regime.

A Strategic Mistake?

The question of whether Ukraine's decision to surrender its nuclear arsenal under the Budapest Memorandum was a strategic mistake continues to shape public debate and policymaking today. On the one hand, Russia's war in Ukraine since 2014 has made the costs of disarmament painfully visible: Ukraine gave up the third-largest nuclear arsenal in the world only to see its sovereignty repeatedly violated by one of the very powers that pledged to respect its territorial integrity. It is tempting to conclude that had Kyiv retained nuclear weapons, Russia would never have dared to invade in 2014 or again in 2022, but the situation is far more complex. It is important to emphasise how Russia has turned the nuclear factor into an active instrument of blackmail throughout the war. Putin's

repeated nuclear rhetoric, coupled with explicit threats of escalation, has been used to deter the United States and the European Union from providing Ukraine with the full range of weapons it needs.¹⁸ This hesitation has, in turn, constrained Kyiv's ability to conduct counter-offensive operations successfully.

Yet a closer analysis complicates this view. In his 1993 *Foreign Affairs* essay, John Mearsheimer argued Ukraine should retain a secure nuclear deterrent because it is the only credible means to prevent Russian aggression and preserve European stability; conventional forces are insufficient and meaningful Western security guarantees are unlikely. Mearsheimer contended that, while nuclear proliferation carries risks (accident, unauthorised use, vulnerable forces), it can in some cases promote peace, and a nuclear Ukraine would deter both conventional attack and nuclear blackmail more effectively than alternatives. Mearsheimer noted that Ukraine could maintain a retaliatory capability and that a Russian preventive war would be deterred by the danger of catastrophic retaliation. He dismissed fears that a Ukrainian deterrent would automatically spur European proliferation or fatally undermine fundamental agreements such as the NPT/START, arguing that great-power peace should take precedence and treaties could be adapted. Though acknowledging the grave costs if deterrence failed, Mearsheimer judged the likelihood and costs of a conventional Russo-Ukrainian war, and its destabilising effects on Europe, greater.¹⁹ In more recent years, however, John Mearsheimer has become a highly controversial figure, frequently criticised for articulating arguments that align with pro-Russian narratives and for echoing elements of Russian state propaganda regarding the causes of Russia's invasion of Ukraine.²⁰

The current war, therefore, raises a profound dilemma: if Ukraine falls to a nuclear-armed aggressor, the lesson for other states will be that disarmament is folly. Nuclear renunciation will be seen not as a responsible contribution to international security but as a dangerous gamble that invites coercion. Conversely, if Ukraine repels Russia with sustained Western support, the narrative could be reversed: nuclear weapons would appear less essential to sovereignty, and the nonproliferation regime could be strengthened.

From this vantage point, Ukraine's decision in the 1990s may still be defended as a sensible choice — born of necessity, international constraints, and domestic political will to separate independence from the Soviet military legacy. However, the failure of enforcement mechanisms in the Budapest Memorandum, combined with the limited willingness of guarantors to act decisively when those assurances were breached, transformed what might have been a cornerstone of cooperative security into a cautionary tale.

In balancing these arguments, the historical verdict is less about Ukraine's nuclear surrender itself and more about the structural imbalance of the bargain. Kyiv disarmed responsibly, but Russia violated its commitments, and the West failed to deter those violations. For Ukraine, this remains a bitter irony: by choosing denuclearisation, it demonstrated its commitment to international law and European integration — yet it was precisely international law that failed to shield it from aggression. The Budapest experience makes clear that the strategic mistake lay not in Ukraine's choice, but in the world's unwillingness to ensure that choice was honoured.

Lessons for Today

For Ukraine, the experience has left a lasting imprint on its strategic culture. It explains why Kyiv today insists on binding, enforceable security guarantees, whether through NATO membership, bilateral defence pacts, or EU accession. The memory of Budapest makes Ukrainians wary of paper assurances and sceptical of peace agreements that do not provide credible deterrence against Russian aggression. And even then, political movements in Western Europe and the United States leave open the question of whether other NATO members would invest substantial resources and share existential risks for small swaths of land in Eastern Europe.²¹

This is also why Ukraine resists pressure from the United States and others to accept premature ceasefires or compromises, which might pause the war, but not end it. As Ukrainian officials often argue, agreements without enforcement are meaningless. Having once traded its ultimate deterrent for unenforceable assurances, Ukraine now demands guarantees that are concrete, verifiable, and backed by military commitments.



Photo 2: Canadian Government Bunker, "Diefenbunker," outside Ottawa, Canada

Spotlight



Iran as a NPT Outlaw – Lessons for Ukraine

Iran is traditionally viewed as a key example of a state seeking to develop nuclear capabilities under conditions of international sanctions, external pressure, and the threat of military intervention, which occurred in the summer of 2025. Its nuclear program, combining civilian objectives with elements that could support a military dimension, became a part of the regime identity and illustrates how states attempt to manoeuvre within the non-proliferation regime and exploit legal and institutional gaps in the Nuclear Non-Proliferation Treaty (NPT).

Although Iran formally is a party to the NPT since 1970, the IAEA has repeatedly recorded violations of its obligations regarding transparency, completeness of declarations, access to its nuclear facilities and the non-diversion of nuclear material for military purposes. These actions are considered violations of Article II of the NPT, which prohibits non-nuclear-weapon states from developing or acquiring nuclear weapons, as well as seeking and receiving any assistance in the manufacture of nuclear weapons. For this reason, the international community, acting through UN Security Council resolutions, has been imposing sanctions on Iran, and its nuclear program has come to be viewed as clearly inconsistent with international law.

Ukraine's Legal Constraints and Possibility of Nuclear Revival

Against the background of the ongoing war with Russia and the collapse of the security guarantees, a central question is raised: Would a Ukrainian nuclear deterrent be illegal?

Under existing international law, the answer is clearly yes. As a state party to the NPT, Ukraine is obligated *not to manufacture or acquire nuclear weapons*. This legal status makes any attempt to develop such weapons a direct violation of the treaty. The Budapest Memorandum does not create distinct legal prohibitions for Ukraine, but it reinforces the international commitments the country undertook within the NPT framework. At the same time, Ukraine retains the right to use nuclear energy for peaceful purposes in accordance with Article IV of the NPT. However, this provision cannot be interpreted as a loophole for developing a covert military program, since all peaceful nuclear materials must remain under comprehensive IAEA safeguards. It's worth noting that, as of 2025, Ukraine has consistently adhered to its international obligations and, even under martial law, has provided assistance to the IAEA. Should Ukraine deviate from this course, the risks of losing international support and becoming a nuclear pariah in the eyes of the EU and the U.S. are quite high.

The NPT Legal Grey Zones

Given the current weakness of the NPT regime, there are several loopholes when it comes to the Treaty's restrictions:

- › The legal right to withdraw is included in Article X. The Party to the Treaty can withdraw from it in case of “extraordinary events” which jeopardise the supreme interests of the country. This ‘trick’ of the Treaty was, in turn, used by the DPRK, for example.
- › The dual-use nature of nuclear technologies. Uranium enrichment and plutonium reprocessing are technically permitted for peaceful uses but can also enable military programs. This argument, in turn, is used by Iran, arguing that its program is of an exclusively peaceful nature and is the country's legal right in accordance with the Treaty.

Moreover, in the early 2000s, when concerns first emerged about Iran hiding elements of a military nuclear program, Tehran and the IAEA signed the Additional Protocol (2003) to increase transparency under the NPT and rebuild confidence. The protocol granted the IAEA broader access for monitoring and verification to confirm the peaceful nature of Iranian nuclear activities. Although Iran signed the protocol, it never ratified it. Still, it voluntarily implemented its provisions from 2003 to 2006 and again from 2016 to 2021 under the JCPOA.

After the JCPOA collapsed, as U.S. sanctions were reimposed and Iran's nuclear facilities were targeted in attacks, Iran halted implementation of the Additional Protocol and severely restricted inspector access, effectively crippling the IAEA's monitoring system.

- › Lack of a credible enforcement mechanism. The Treaty does not provide for clear liability for its violation, just as there is no punishment for unofficial nuclear countries such as Israel, Pakistan, and India, which were never part of the Treaty and possess nuclear arsenals.

For Ukraine, these “grey zones” are largely theoretical. While it has the formal right to withdraw from the NPT, the political, security, and economic consequences of such a move could be extremely severe. At the same time, the comparison with Iran demonstrates that countries pursuing nuclear capability under sanctions face deep international isolation and economic strain, but it provides the country with the basis for national sovereignty and the preservation of the current regime.

2.2 Debates Around Ukrainian Conventional Deterrence

The West currently faces a pivotal juncture in its approach to bolstering Ukraine's deterrence against Russian aggression, presenting two fundamental pathways: either by integrating Kyiv into Western defence frameworks such as NATO or the European Union,²² or by unequivocally signalling that the West will decisively respond to any acts of Russian hostility through the provision of advanced weaponry, thereby enabling Ukraine to mount a robust defence with state-of-the-art military technology. This strategy could not only serve as an immediate countermeasure to Russian provocations but also fosters a collaborative environment in which Ukraine could devise and implement effective "hedgehog" strategies, as in Estonia.²³

Such strategies entail equipping the Ukrainian Armed Forces with the necessary resources to orchestrate a sophisticated, layered, and mobile defence, while simultaneously fortifying key urban centres and critical infrastructure. Central to this initiative is the imperative of delivering substantial air and missile defence systems to Ukraine, thereby establishing a credible shield against Russia's ever-expanding arsenal of missiles and drones.²⁴ Western countries that find themselves under increasing hybrid pressure from disruptive drone activities in autumn 2025 to other forms of sabotage could learn valuable lessons in how to defend against many of these threats.²⁵

In the academic debate, this provision of military support, coupled with a consistent and clear message to Moscow, is expected to demonstrate unwavering resolve and reshape the Kremlin's strategic calculations. From the perspective of Western powers, this approach allows for a nuanced management of the deterrent narrative, facilitating careful calibration of the types and quantities of military assistance while retaining the potential for escalation in diplomatic negotiations or in reaction to unfolding events.²⁶

This deterrence model works not by outright objective denial to an opponent but by the promise of punishment. It functions because it emphasises "[...] the costs the putative challenger would face if it executed the undesired activity, whereas deterrence by denial aims to convince putative challengers that they will fail to achieve their goal."²⁷

Other academics criticise the debate parameters overall, as many presuppose a definite end to hostilities before entering into a new paradigm built around Western-supported conventional deterrence. Yet, given that the Kremlin's incentives remain geared towards confrontation,²⁸ hostilities could, in some form, continue for years. Ukraine's former Minister of Defence, Andrii Zahorodniuk, thus proposes enabling Kyiv to inflict on Russia 'functional defeats' by paralysing key capabilities, such as the Black Sea Fleet, military installations, or air force assets, without completely destroying them. This 'strategic neutralisation' would consistently disrupt Russian offensive capabilities and thus shape the Kremlin's options and make victory unattainable. "This, in turn, forms the basis of a viable theory of victory under conditions where an acceptable armistice may never formally arrive."²⁹

Nevertheless, the attempts by Western allies to equip Ukraine with arms to illustrate the futility of Russian ambitions have largely fallen short. Ukraine frequently finds itself bereft of vital munitions and grappling with chronic shortages in armoured vehicles and tanks, while the messaging from Western leaders often lacks the consistency necessary to convey a clear stance to Moscow.

The roles played by leaders from Hungary, Slovakia, and the United States have compounded these challenges, with German Chancellor Olaf Scholz equally epitomizing a notably cautious and even hesitant strategy.³⁰ As articulated by researchers Yevgeniya Gaber and Graeme P. Herd,

"current escalation management entails delaying the supply of weapons to Ukraine, which enables Russia to maintain the strategic initiative on the battlefield and leads to escalation. Western focus on avoiding nuclear escalation and spillover to neighbouring states de facto normalizes Russian conventional attacks inside of Ukraine in violation of the Geneva and other conventions. It raises the level of permissible atrocities

against Ukrainian civilians, as long as these are the result of conventional weapons—guided bombs, the use of the largest nonnuclear bomb in Kharkiv, a 9,000-ton thermobaric bomb, banned ammunition, and white phosphorus munitions. To date, such attacks have included targeting children's hospitals and destroying 80 percent of Ukraine's energy infrastructure.”³¹

This strategy's desired deterrent effect on Moscow's ambitions in Ukraine appears, at present, to be non-existent. Andrii Zahorodniuk, underscores that the overly cautious nature of arms deliveries signals a lack of resolve, inadvertently inviting further Russian escalation.³²

Deterrence Through Imposing Costs

Throughout the conflict, Russia has demonstrated a willingness to engage in negotiations and limited non-aggression agreements, especially when faced with significant costs imposed by Ukraine, but still only on Russian terms. The most important example concerns commercial shipping in the Black Sea: With Russia continuously attacking Ukrainian grain exports from Odesa to world markets in the early years of the war, thus creating famine risks in a number of countries,³³ Ukraine itself began responding against Russian ships, mainly out of Crimea and Novorossiysk. After a while, both parties formally agreed to free passage for commercial shipments of the other side in March 2025.³⁴

In the air, Ukraine could be laying the groundwork for negotiations aimed at curtailing Russia's relentless assaults on

Ukraine's civilian energy infrastructure by targeting Russian oil refineries, particularly in 2025. Meanwhile, a demonstrated capability to inflict real damage on the Russian energy and defence sectors could also yield a broader deterrent effect against future hostilities.³⁵

Furthermore, drones have emerged as a strategic asset for engaging smaller targets within Western Russia — or even extending to the Far East, while newly developed Ukrainian-made cruise missiles could potentially strike at distances of up to 3,000 kilometres.³⁶ In this framework, the Kremlin faces significant risks of disrupting civilian life and economic stability should it continue to pursue aggression against Ukraine. Given that regime stability likely outweighs imperial ambitions in the Kremlin's calculus, the deterrent potential of these advanced weapons systems could prove consequential.

More broadly, during Operation Spider Web,³⁷ Ukraine has targeted critical components of Russia's nuclear deterrent — specifically, its bomber fleet. While these aircraft serve a dual purpose of conducting strikes against Ukrainian cities, they are also integral to delivering Russian nuclear capabilities. Conventional theory would suggest that such an attack on Moscow's strategic bomber fleet might provoke a potentially nuclear escalation from Moscow, particularly given the perceived jeopardy to its deterrent capacity.



Russian attack on Kyiv's Okhmatdyt Children's Hospital, July 8, 2024. Author's personal library.

That no such escalation has occurred indicates that Russia's established "red lines" are, in fact, more fluid than articulated in its doctrines and rhetoric.³⁸ After all, in 2022, the Kremlin was already making threats about the imminent escalation of Western deliveries of man-portable air defence systems, howitzers, rocket launchers, tanks, fighter jets, missiles, etc.³⁹ Ukraine's ability to dismantle bombers that fulfil both offensive and nuclear roles has opened avenues for Kyiv to threaten these systems in the future. By jeopardizing infrastructure that the Kremlin considers vital to its status as a great power, Ukraine could further alter Moscow's strategic calculus regarding future military engagements, thereby enhancing Kyiv's conventional deterrence capabilities.

2.3 Debates Within Ukraine on Nuclear Deterrence

The Budapest Memorandum is today perceived as a failure in many circles, having traded more or less tangible Ukrainian capabilities for political guarantees that turned out emptier than Ukrainians had counted on, both in 2014 and 2022. Unsurprisingly, there is a debate within and beyond Ukraine about whether the country should again embrace nuclear weapons. After all, these systems have been devised explicitly in order to protect a state from aggressive intentions that go beyond war as a political tool. Nuclear weapons are meant to deter total wars of elimination with genocidal intent.

Today, many argue that Ukraine is finding itself through no fault of its own as the victim of an aggressor which explicitly denies its existence and intends to end the Ukrainian state and erase its people's identities.⁴⁰ Which country, in this logic, would have better arguments to become a nuclear state in order to deter these catastrophic musings of a larger neighbour who has repeatedly proved its aggressive intent? In this context, the debate is by far not backward-oriented. The Russian state has geared its economic, financial, and military planning explicitly towards a continued aggressive posture towards Ukraine and Europe.⁴¹ The debate around nuclear weapons is not theoretical; the stakes are high.

Public opinion on the issue offers a stark picture: a survey conducted by the Kyiv International Institute of Sociology (KIIS) in December 2024 revealed that a striking 73% of Ukrainians, transcending ideological divides, would advocate for the re-establishment of a nuclear force. In a hypothetical scenario where Ukraine could withstand Russian aggression until the acquisition of nuclear capabilities, 58% expressed a willingness to forgo Western support to achieve that end.⁴² Such attitudes are underscored by a pervasive sense of foreboding regarding Russia's intentions: 68% of Ukrainians perceive a likelihood of renewed Russian assaults, even in the wake of a peace agreement.

A Ukrainian Bomb?

The discourse surrounding the viability of an autonomous Ukrainian nuclear deterrent is undeniably complex, characterised by a multitude of political, technical, and strategic dimensions. Advocates for the development of a Ukrainian nuclear arsenal often assert that had such capabilities been in place, the full-scale Russian invasion of 2022 could have been averted, as Moscow might have recalibrated its aggressive calculus in the face of a nuclear-armed neighbour.⁴³ Concurrently, Russia's subsequent actions have starkly illuminated the latitude and leverage that nuclear states wield; they can wield the threat of global destabilisation while adopting outlandish negotiation stances, all the while evading substantial repercussions – as noted by Oleksii Yizhak from the National Institute of Strategic Studies, "these nations are not met with confrontation, but rather with concessions at the negotiating table."⁴⁴ Admiral Rob Bauer, then the chief of NATO's Military Committee, even explicitly made this point in November 2024: "I am absolutely sure if the Russians did not have nuclear weapons, we would have been in Ukraine, kicking them out."⁴⁵

Scholars Valeriy Shvets and Yaroslav Lepich further elaborate on this notion, arguing that in light of unmistakable signs pointing toward renewed Russian hostility, the absence of NATO membership on the horizon, the ineffectiveness of international mechanisms to address such threats, and the

anticipated wave of nuclear proliferation likely to emerge from Japan and South Korea, a thorough armament initiative, including nuclear capabilities, is imperative for Ukraine. Their proposition entails a holistic strategy that encompasses investment in pertinent higher education, strategic research and development, as well as the establishment of domestic facilities for spent nuclear fuel storage and enrichment, with an eye toward securing sufficient enriched Uranium-238 for a viable plutonium device.

Ukraine's existing infrastructure, comprising 15 operational nuclear reactors and substantial uranium reserves – ranking among the top ten globally contingent upon extraction costs – serves as a foundational element for this ambitious endeavour.⁴⁶ They project a timeline of 5 to 7 years, alongside an estimated annual investment of 200 to 300 million USD, to realise the aspiration of a Ukrainian nuclear weapon.⁴⁷ Unlike a number of Ukrainian observers, analyst Pavel Podvyh posits that Ukraine may possess a reservoir of institutional expertise and skilled professionals from the 1990s, which could further expedite the developmental trajectory.⁴⁸

Supporters of Ukraine's nuclear ambitions also highlight the consistent progress in the realm of indigenous weapon systems, which could be adapted as delivery mechanisms for nuclear payloads, encompassing cruise and ballistic missiles, thereby enhancing the credibility of independent deterrence. The nation's historically robust aerospace and missile manufacturing sector, epitomised by the renowned 'Pivdenmash' facility, is poised to play a pivotal role in this context.⁴⁹

Given the ongoing degradation of the global non-proliferation regime and the norms underpinning it, as well as the continued threat to Ukraine's existence,⁵⁰ researchers have pointed out that Ukraine could, in fact, build a small and simple nuclear weapon of about two kilotons in a relatively short time, such as one year or less. For this, plutonium extracted from spent nuclear power fuel rods would suffice to create a simple device or dirty bomb with limited military use.⁵¹ Yet, given the fact that Russia already tried to fabricate this exact scenario in backchannel communications to world powers in late October 2022 in order to apparently have a pretext for nuclear first use,⁵² Ukraine will be very cautious to consider this path. It is furthermore highly likely that Western support for Ukraine would then be in question or become extremely conditional.⁵³ Just as importantly, it is highly unlikely that Russia would be either compelled into or deterred from any behaviour by a small Ukrainian nuclear capability. Full deterrence would only be achieved by a diversified, flexible, and sizable cross-spectrum nuclear force, which remains even further outside of Ukraine's reach.⁵⁴

Types of nuclear weapons and their respective explosive power

Type of nuclear weapon	Typical yield (kt TNT)	Relative power (Hiroshima = 1)	Purpose / characteristics / results of use
Hiroshima-type atomic bomb (baseline) ("Little Boy")	15 kt	1x	First-generation fission weapon using highly enriched uranium. "Little Boy" had an explosion radius of approximately 1.3 km and caused casualties of 90,000 – 166,000 people in the city of Hiroshima.
Nagasaki-type plutonium bomb ("Fat Man")	21 kt	1.3–1.7x	Plutonium-based implosion design; "Fat Man" caused casualties of approximately 60,000 – 80,000 people in the city of Nagasaki.
Modern low-yield tactical nuclear warhead	~5–10 kt	0.3–0.7x	Designed for battlefield use: less power – more accuracy. As of 1991 Ukraine possessed from 2,800 to 4,200 tactical nuclear warheads.
Strategic nuclear warhead	~100–1,000+ kt	7–70+x	Strategic weapons are integrated into intercontinental or long-range platforms, which enable deep strikes into an adversary's territory. As of 1991 Ukraine possessed from 1,514 to 2,156 nuclear warheads for strategic weapons.
Thermonuclear warhead	~100–500 kt	6–33x	Can be used for strategic nuclear missions, not for battlefield or limited tactical purposes.

Tech, Expertise, and Political Complicating Factors

Others have substantial doubts as to the technical and political feasibility of a Ukrainian nuclear project. Analysts Mariana Budjeryn and Matthew Bunn point out that all of the highly enriched uranium that is required for a bomb, including at the Kharkiv Institute of Physics and Technology (which was shelled several times during the war), was removed to Russia during the Obama era in 2010.⁵⁵ True, Ukraine has substantial uranium deposits, but no conversion facility to turn it into uranium hexafluoride gas that is then used in enrichment plants. Kyiv also has no facilities to separate the uranium-235 used in weapons from the over 99 percent uranium-238 in natural uranium.⁵⁶

When it comes to the alternative path to a bomb – plutonium –, Ukraine would have to first build a plant to chemically separate the plutonium from its spent rods in nuclear power plants at great expense, which would take years. Even if that were to work, given a number of unsuitable isotopes in reactor plutonium, this approach would be suboptimal.⁵⁷ New technologies, like lasers that work on an atomic level as part of the enrichment process, would require Ukraine to build a whole new nuclear power plant or disconnect an entire oblast from the grid.⁵⁸

Furthermore, unlike other Ukrainian analysts, Budjeryn and Bunn have doubts that Ukraine actually still has the relevant expertise to turn the material into actual nuclear warheads, given the fundamental reorientation of its civilian-military nuclear complex over the past 30 years. Neither are the necessary facilities available, and they would have to be built from scratch.⁵⁹

If Ukraine were to pursue nuclear weapons, accepting all the mentioned constraints, experts such as Olena Parenjuk, Senior Scientific Associate of the Institute for Nuclear Safety, estimate that it would take Ukraine at least a decade to make serious progress⁶⁰ – a timetable that extends far beyond the current and urgent defence needs of the country against Russia’s onslaught.

At the same time, there are substantial other factors to consider. A nuclear program would be extremely difficult to hide, inviting strong disapproval from Western allies and kinetic attacks from Russia on facilities, scientists, as well as cyber disruptions, analysts like Pavel Podvyh underline.⁶¹ Furthermore, given that Ukraine would be lacking a second-strike capability for quite some time after obtaining nuclear weapons, a Russian first strike on facilities and weapon storage locations would be even more likely.⁶² Already in the debates about Ukraine giving up its nuclear weapons in the 1990s, observers warned that a Ukrainian nuclear deterrent would invite instability as Russia’s much larger and diversified arsenal would set the stage for successful first strikes on the Ukrainian deterrent. Kyiv would have to adopt hair-trigger alerts and quickly face “use them or lose them” dilemmas.⁶³



Photo 3: Nuclear Command Center, Museum Perwomaisk, Ukraine

Sharing the Bomb?

Given these formidable challenges to establishing an autonomous Ukrainian weapon, political scientists Polina Sinovets and Adérito Vicente propose the notion of a joint Polish-Ukrainian nuclear deterrent. While this collaboration would encounter substantial political, legal, and technical obstacles, it could leverage an effective division of labour and gain legitimacy through integration with NATO's nuclear-sharing framework. Such a partnership would allow for the positioning of U.S. warheads in Poland and involve Ukraine in operational strategies.⁶⁴ Joint delivery systems could capitalise on Ukrainian advancements in rocket technology, complemented by Polish integration into advanced platforms like the F-35.

However, a prerequisite for any shared Ukrainian-Polish capability would entail extensive political groundwork, both bilaterally and within the broader Western alliance — a daunting task fraught with complications.⁶⁵ Yet, in light of the growing pressures on the global nuclear non-proliferation regime, exemplified by nations like Iran, Saudi Arabia, South Korea, and Japan being cited as potential breakout states, the urgency of such discussions may gain momentum. Russia's offensive and at times successful use of nuclear threats is a precedent that is hard to ignore.⁶⁶

Moreover, should Ukraine appear to be on the verge of losing the war, international apprehensions regarding a Ukrainian nuclear deterrent could face considerable re-evaluation. Would Russia not contemplate positioning its own nuclear assets in the occupied territories of Ukraine to exert pressure on the West, mirroring its actions in Belarus?⁶⁷ The idea of a shared weapon embedded in a broader European or Western alliance structure could thus quickly gain traction.

Spotlight



Nuclear Threats by Russian Officials

In his 2022 speech announcing the “partial mobilization,” Putin warned that Russia would use “all the means at our disposal” to defend what it considers its territory and added that this was “not a bluff,” widely understood as an explicit nuclear threat against the West if it continued supporting Ukraine militarily.

In a March 2024 television interview, Putin reiterated that Russia is ready to use nuclear weapons if the existence of the Russian state is threatened, while adding that he does not currently see such a necessity, framing nuclear use as contingent but very much on the table.

In September 2024, at a Security Council meeting on nuclear doctrine, Putin said Russia could consider nuclear use in response to a large-scale conventional attack involving missiles, aircraft, or drones, and that a nuclear-armed state supporting such an attack would be treated as a joint aggressor — effectively lowering the threshold and directing a warning at NATO states backing Ukraine.

Foreign Minister Sergey Lavrov has repeatedly warned that the risk of nuclear conflict is “real” and has accused NATO countries of moving toward direct confrontation, with the clear implication that escalation could become nuclear if Russia feels cornered; these remarks have been made in interviews and press conferences since 2022.

In his 2024 annual address, Lavrov told Western governments that deeper NATO involvement and allowing strikes on Russian territory “pose the risk of a conflict involving nuclear weapons,” saying Russia also has systems capable of reaching targets in NATO countries, and implying civilization-scale consequences.

Former President and current Security Council deputy chair Dmitry Medvedev has made some of the bluntest nuclear threats, including public comments that Russia could use nuclear weapons if Ukrainian offensive operations endangered what Moscow calls its “territorial integrity,” and posts suggesting that Western support for Ukraine risks a nuclear apocalypse.

Other Kremlin-linked commentators and members of the political elite (for example, some state-TV hosts and policy advisers) have openly discussed limited nuclear strikes on Ukraine or on NATO members supplying arms, usually framed as “demonstrative” or “preventive” use to coerce the West, though these are often characterized as personal opinions that nonetheless echo and amplify the Kremlin’s coercive nuclear messaging.

Dmitry Medvedev 



European leaders are experiencing a seasonal mental breakdown after Trump's victory. Their goal is to push the conflict with Russia into an irreversible stage. One moment, the Frenchman is squawking about supporting Kiev in case America steps back; the next, NATO bosses are showing off their 'wisdom' by discussing how to escalate the fight with us even further.

Now, Germany's chancellor candidate Merz is joining in with ultimatums. His message? Either you end your Special Military Operation, or I'll hand Taurus missiles over to the Ukies the very next day. Obviously, such 'ultimatums' are nothing but election posturing. Clearly, these missiles won't fundamentally alter the conflict's trajectory. Sending them would simply prolong the suffering of the Banderite regime. What's concerning, however, is that deploying such missiles would significantly increase the risk of this conflict reaching its most dangerous phase, as our President has warned.

It's remarkable, really, how eager today's European politicians seem to be to invite war onto their own soil. Notably, doing so pleases the Americans and goes against the wishes of their own people. The vaccine of World War II seems to have worn off completely. Europe's smart, experienced leaders are gone, replaced by pathetic figures with inflated egos. And so, the worst-case scenario remains all too possible.

t.me/medvedev_telegramE/33

72.8K  Nov 12, 2024 at 10:20

Others have followed suit. In their own words:

"I order the Ministry of Defence and the Chief of the General Staff to put deterrence forces on special combat readiness." (Putin's order raised concerns about the possibility of nuclear escalation after the invasion of Ukraine.) - **Vladimir Putin, Ruler of Russia, February 27, 2022**

"Russia is the only country in the world that is realistically capable of turning the United States into radioactive ash." - **Dmitry Kiselyov, Russian State TV Host, March 2022**

"If we are to go to war, we must go all the way. We must destroy the West. If we have to use nuclear weapons, we will use them." - **Alexander Dugin, Russian Philosopher and Ideologue, March 2022**

"We will not hesitate to use nuclear weapons if it comes to it. We are prepared to make the West regret every mistake they have made." - **Vladimir Solovyov, Russian State TV Host, March 2022**

"There is no question that Russia will use nuclear weapons if the West continues to escalate the situation." - **Margarita Simonyan, RT Editor-in-Chief, March 2022**

"If the West intervenes in the conflict and sends forces to Ukraine, Russia will have no choice but to strike at NATO countries." - **Igor Korotchenko, Russian Military Expert, February 2022**

"We must be ready to use all necessary means, including nuclear weapons, to defend Russia's interests." - Yevgeny Prigozhin, Wagner Group Leader, May 2022

"The West must understand: if they push us to the limit, we will use everything. And I mean everything. Including nuclear weapons." - Nikita Mikhalkov, Film Director and Pro-Kremlin Public Figure, March 2022

"If NATO continues its expansion, continues to supply Ukraine with weapons, and sends troops, Russia will be forced to use nuclear weapons. This is an absolute reality, not a threat." - Sergey Markov, Political Scientist and Former Russian Duma Member, March 2022

"Russia will have to hit a bunch of targets in a number of countries in order to bring those who have lost their mind to reason." - Sergey Karaganov – Influential Russian strategist, June 2023

2.4 Conclusion

The discourse surrounding Ukraine's potential reacquisition of nuclear capabilities is alive and well among researchers, political actors, and pundits. Far from an obscure document of the past, the paradoxical lessons of the Budapest Memorandum are foundational for Ukraine's position today. On one hand, it stands as a landmark of non-proliferation success, removing nuclear weapons from Ukraine's soil and helping stabilise the post-Soviet world. On the other hand, it represents a strategic failure for Ukraine itself, which gave up powerful deterrents only to see its sovereignty repeatedly violated by one of the memorandum's signatories with a significant degree of impunity. Having learned that political assurances do not prevent aggression, Kyiv today insists on binding guarantees, integration into NATO and the EU, and the restoration of its territorial integrity.

With no ironclad assurances on the horizon, some Ukrainians insist that the only alternative for Kyiv is to use the legacy of its nuclear infrastructure and know-how to re-acquire nuclear weapons, despite the significant technical hurdles and the prevailing international climate that strongly dissuades any movement toward nuclear breakout.

Ukraine's leadership, however, has unequivocally denied intentions to pursue such a course, even as Ukrainian diplomacy and the President himself had to walk back remarks by Zelenskyy in October 2024 regarding the choice for the country either to join NATO or the development of a nuclear deterrent.⁶⁸ For now, the government is signalling a clear "no" on any nuclear discourse.

Even so, the basic policy question that Europe and the West are facing has already been outlined by the Ukrainian President on the eve of the full-scale invasion, in a speech on Feb. 19, 2022:

"Ukraine has received security guarantees for abandoning the world's third nuclear capability. We don't have that weapon. We also have no security. [What we have is] the right to demand a shift from a policy of appeasement to ensuring security and peace guarantees. [...]"

What else can we do now? Continue to effectively support Ukraine and its defence capabilities. Provide Ukraine with a clear European perspective, the tools of support available to candidate countries, and clear and comprehensive timeframes for joining the Alliance. [...]"

Develop an effective package of preventive sanctions to deter aggression. Guarantee Ukraine's energy security [and] ensure its integration into the EU energy market [...]. All these questions need answers.

So far we have silence instead of them. And as long as there is silence, there will be no silence in the east of our state. That is -- in Europe. That is -- in the whole world. I hope the whole world finally understands this, Europe understands.”⁶⁹

It is thus crucial for European capitals to consider that Ukrainian decision-making is shaped by an existential threat that is held at bay with barely enough support from Europe and the U.S. At the same time, this very support provides substantial influence over Ukrainian political and military strategy. In a scenario where the existential threat persists, Western support dwindles and the international norms governing non-proliferation are undermined by a third country declaring its intent to become a nuclear state, arguments against a Ukrainian nuclear deterrent of some sort will lose salience. If Paris, Berlin, London, and Washington have preferences when it comes to Ukrainian decision-making, the key to seeing them achieved is strong military and financial support for Kyiv.

In this sense, the extent of Western arms deliveries is the actual lever scaling the Ukrainian nuclear debate up and down.

However, the financial commitments necessary for establishing robust conventional deterrence in Ukraine, though significant, remain small when compared with the potential costs associated with unchecked Russian aggression. In this context, adaptable coalitions of the willing can effectively distribute the responsibilities inherent in this undertaking: larger nations might focus on equipping Ukraine with costly systems such as missile defence, while smaller states can contribute specialised capabilities, ranging from signals intelligence to advancements in drone technology.

Beyond that, EU states should invest in and guarantee investments by private entities into Ukrainian defence while incentivizing Western companies to produce directly in Ukraine.⁷⁰ There is, after all, plenty of upscaling potential. Due to underfunding, the country's defence industry operates only at about 30% of its full potential. Many systems could be developed and produced locally much faster and cheaper than in many European countries.⁷¹

A key question regarding the viability of Europe's new strategic culture will be whether this potential is understood and acted upon in European capitals.

Nevertheless, the paramount objective must be the eventual integration of Ukraine into the EU and NATO, as the country's security cannot remain contingent upon the unpredictable currents of increasingly tumultuous political landscapes in the West.

3 – The Return of the Nuclear Question in a Fragmenting World



Photo 4: Control and Launch System, Titan Missile Museum

The war in Ukraine has not only reshaped Europe's security architecture but has also upended what remained of the global nuclear order. For decades after the Cold War, the international community clung to the belief that the combination of deterrence, arms control, and multilateralism would prevent a return to the nuclear anxieties of the twentieth century. Yet today, that belief lies in ruins. The invasion of a non-nuclear state that once surrendered its nuclear arsenal in exchange for security guarantees, the collapse of almost every significant arms-control regime, and the reemergence of nuclear rhetoric as an instrument of coercive diplomacy have all transformed the strategic landscape. The Russo-Ukrainian war is not just a regional conflict; it has become a global turning point in the psychology of nuclear deterrence.

The Impact of the Ukrainian Example on Global Security Thinking

Yet the lesson drawn from Ukraine is far more nuanced than a simple "nuclear equals safe" logic. States such as Germany, Japan, and South Korea have watched the war closely, but none have rushed to pursue nuclear weapons yet. The difference lies in the credibility of their alliances. So long as Berlin and Seoul remain under the protection of reliable nuclear umbrellas, NATO's collective deterrent and the U.S.-ROK security treaty, there is little incentive to cross the nuclear threshold. The Ukrainian tragedy does not push these nations toward proliferation; it reinforces their dependence on stable, trustworthy alliances. What Ukraine lacked was not nuclear capability but enforceable guarantees.

Nevertheless, the broader consequences of Russia's war extend far beyond Ukraine's borders. The conflict has accelerated the erosion of the global non-proliferation regime, a system already weakened by decades of neglect. Moscow's suspension of its participation in the New START Treaty in 2023 ended the last remaining pillar of U.S.-Russian arms control, removing mutual limits on deployed strategic warheads and launchers. Soon after, the Kremlin revoked its ratification of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) — a symbolic but significant blow to the taboo against nuclear testing. Combined with the militarisation of the Zaporizhzhia Nuclear Power Plant, deployment of tactical nuclear weapons in Belarus, which is basically a direct violation of the NPT, and Russia's public threats to use tactical nuclear weapons, these developments represent not isolated breaches but a systemic unravelling.

Adding to the instability, Russia's recent declaration that it no longer adheres to restrictions on short- and intermediate-range missiles dismantles another critical layer of post-Cold War arms control inherited from the INF Treaty. The result is an environment where no credible legal or political mechanism restrains nuclear behaviour. The nuclear taboo, once sustained by global consensus and fear of mutual destruction, is now eroding in real time. The world is sliding toward an era not simply of proliferation but of deregulation — where nuclear weapons are discussed, tested, and potentially used outside any binding international framework.

This collapse of norms coincides with an unprecedented transformation in global power relations. The deterrence logic that once depended on two rational superpowers – Washington and Moscow – no longer applies. A multipolar system has emerged, but without a shared set of rules or institutions to manage it. States that once viewed nuclear weapons as the preserve of a few are now reconsidering their strategic options amid uncertainty about great-power commitments. The Russian full-scale invasion of Ukraine may not yet produce a wave of new nuclear states, but it has reopened the question of who can be trusted to defend whom.

The Transactional Turn: America's retreat and the potential rise of nuclear self-help

Exacerbating this uncertainty is the profound crisis of confidence within the Western alliance system. The reemergence of Donald Trump and his transactional worldview threatens to finish what Russia began — the dismantling of collective security as a credible concept. Trump's consistent disdain for NATO, his public questioning of Article 5 guarantees, and his insistence that allies "pay their share or defend themselves" have already shaken European and Asian capitals. For decades, America's nuclear umbrella functioned not only as a deterrent but as a political promise: that Washington's interests and those of its allies were inseparable. Under Trump's prospective return, that promise appears conditional, negotiable, even expendable.

In this emerging environment, traditional allies are beginning to entertain once-unthinkable questions. If the United States withdraws from its leadership role or treats alliances as business transactions, would independent nuclear capabilities offer a more durable guarantee of survival? The Trumpian worldview – where alliances are reduced to profit-and-loss calculations – undermines the very trust that sustained the non-proliferation order. South Korea's domestic debate about a national deterrent, Germany's quiet anxiety over NATO's reliability, and Japan's discussions of "nuclear sharing" all reflect this shift from collective security toward strategic autonomy.

Simultaneously, enhancing nuclear powers such as China, India, and Iran interpret America's retreat as both an opportunity and a justification to expand further their own nuclear ambitions. The deterrence architecture that once anchored the global order, an implicit U.S. guarantee of stability, is fragmenting. What emerges instead is a transactional world order, where security is purchased, not assured, and where the possession or threat of nuclear weapons increasingly determines diplomatic leverage. Canadian Prime Minister Mark Carney explicitly warned that such a system is already reality during a speech in the 2026 summit in Davos. He called for deep cooperation among middle powers, "because if we're not at the table, we're on the menu. [...] Nostalgia is not a strategy."⁷²

Toward a New Nuclear Disorder

The fusion of these two dynamics – the collapse of arms control and the disintegration of collective security – marks the beginning of a new nuclear era. It is not the bipolar arms race of the Cold War, nor the restrained non-proliferation system of the 1990s, but something far more volatile: a global environment where nuclear ambitions intersect with insecurity, populism, and technological disruption. In such a world, deterrence is no longer guaranteed by stable blocs but by individual calculations of survival.

This chapter explores that transformation through four interrelated case studies, each illustrating a distinct facet of the emerging nuclear landscape:

- › **3.1 South Korea: Between Nuclear Latency and Proliferation: Security Deterioration, Treaty Erosion, and the “America First” Shock:** Examines Seoul’s ongoing debate about indigenous nuclear capability amid growing uncertainty about U.S. commitments and North Korea’s advancing arsenal.
- › **3.2 Germany: Avoiding Nuclearization through Alliance Deepening:** Explores Berlin’s deliberate strategy to reinforce NATO integration, expand conventional military strength, and rely on extended deterrence rather than pursuing an independent nuclear path.
- › **3.3 Conclusion**

Together, these subchapters chart the disintegration of the post-Cold War nuclear order and the rise of a fragmented deterrence system defined by mistrust, autonomy, and opportunism. They demonstrate that the threat of proliferation in the 2020s is not primarily technological but political: the product of collapsing trust, eroded norms, and vanishing enforcement mechanisms.

As the Ukraine war continues to reshape the strategic imagination of states large and small, the central question is no longer whether nuclear weapons will spread, but whether any meaningful framework remains to restrain their use. Chapter 3 thus serves as both an analytical bridge and a warning: that the disintegration of collective security and the erosion of the nuclear taboo may yet converge into the defining security crisis of the twenty-first century.

3.1 South Korea – Between Nuclear Latency and Proliferation: Security Deterioration, Treaty Erosion, and the “America First” Shock

South Korea’s nuclear debate has moved from the political fringe to the centre of strategic discourse under the pressure of three converging trends: (1) a deteriorating global and regional security environment marked by North Korea’s expanding arsenal and increasingly permissive doctrine for nuclear first use; (2) the fracturing credibility of arms control and the nonproliferation order; and (3) renewed uncertainty about U.S. extended deterrence under the resurgence of a Trumpian transactional “America First” approach. Together these drivers have begun to normalise discussion in Seoul of two pathways that were long considered taboo: outright nuclearisation or, alternatively, nuclear latency — maintaining the technical and industrial capability to produce nuclear weapons on short notice while remaining, for the time being, within the Nuclear Non-Proliferation Treaty (NPT). As one concise definition often used in Korean policy circles suggests, latency would mean being only weeks away from a bomb without breaking the NPT. The debate has also sharpened attention to a third path: conventional proliferation – major quantitative and qualitative expansion in missiles; air and naval power; intelligence, surveillance, and reconnaissance (ISR); and integrated air and missile defence – designed to restore local deterrence credibility and thereby reduce the political demand for nuclear weapons.

This subchapter advances three claims. First, the incentives pushing Seoul toward either nuclear weapons or latency are not primarily ideological; they are structural, rooted in the erosion of the nuclear order and in North Korea's doctrine and capabilities. Second, the credibility gap in U.S. extended deterrence – exacerbated by Donald Trump's return and explicit transactional rhetoric – has accelerated public and elite interest in nuclear options, as reflected in multiple polls and elite statements. Third, conventional proliferation and deeper alliance integration can, if sustained and credibly re-sourced, delay or even prevent a nuclear breakout by providing near-term deterrence gains and political reassurance that are otherwise being sought through nuclear means.

Spotlight



Nuclear Capabilities vs. Nuclear Latency

Nuclear Capabilities refer to a state's actual, operational ability to design, produce, deploy, and employ nuclear weapons. This includes possession of fissile material, warhead design and manufacturing capacity, delivery systems (missiles, aircraft, or submarines), and command-and-control structures necessary for a functioning nuclear arsenal.

Nuclear Latency describes a state's potential to acquire nuclear weapons relatively quickly without currently possessing them. A latent nuclear state has advanced civilian nuclear infrastructure, technical expertise, and industrial capacity that could be redirected toward weapons development if a political decision were made, but it remains formally non-nuclear and typically within international nonproliferation regimes.

Key Distinction

Nuclear capabilities denote *possession and operational readiness*, whereas nuclear latency denotes *technical readiness and breakout potential without deployment*.

Structural Drivers: North Korea's Arsenal, Doctrine, and Regional Contingencies

North Korea's capabilities – number, survivability, and diversity of delivery systems – have expanded steadily since 2011, with four of the six nuclear tests Pyongyang has conducted under Kim Jong Un and multiple intercontinental ballistic missile (ICBM) tests that could hit the U.S. mainland, alongside many short- and medium-range systems that could hit the territory of South Korea.⁷³ Capability improvements are matched by doctrinal change. In September 2022, Pyongyang promulgated a law permitting pre-emptive nuclear use in the early stages of a crisis, with Kim declaring that nuclear status is irreversible and that nuclear weapons are not a “bargaining chip.”⁷⁴ As one escalation analysis highlights, “the law's language effectively lowers the threshold for nuclear use, implying early tactical

employment to shock Seoul and Washington into concessions, including a low-yield detonation against South Korean or American forward-deployed forces.⁷⁵

These dynamics intersect with realistic dual-contingency risks. The *Guardian Tiger II* simulation explored simultaneous crises in the Taiwan Strait and on the peninsula, underscoring how “a stretched American posture could reduce missile interception capacity on the peninsula and temporarily remove some nuclear-capable platforms from immediate Korean defence,” potentially encouraging North Korean opportunism.⁷⁶ The resulting pressure on U.S. force posture – e.g., diversion of the USS *Ronald Reagan* CSG, redeployment of B-52H bombers, and repositioning of THAAD/Patriot – feeds a perception in Seoul that the United States might avoid nuclear escalation in Korea while balancing a larger confrontation with China.⁷⁷ In this scenario space, calls have emerged “for indigenous nuclear weapons, expanded production of the Hyunmoo 4 ballistic missile, and pressure on Tokyo to more seriously pursue nuclear sharing arrangements.”⁷⁸

South Korea’s strategy has not stood still. The “three-axis” concept defence⁷⁹ aims to offset North Korea’s advantages and close escalation pathways.⁸⁰ The force components are real: an “extremely heavy” ballistic inventory for deeply buried targets, submarine-launched systems, and layered defences. Yet, as Maitre emphasises, Seoul judges that conventional deterrence “alone is insufficient against a nuclear-armed adversary,” reinforcing its demands for U.S. nuclear assurances.⁸¹

The Erosion of Arms Control and the Nonproliferation Regime

The broader nuclear order, as highlighted above, has degraded. The breakdown of U.S.-Russia arms control agreements, the weakening of taboos, and the growing acceptance of explicit nuclear coercion in regional conflicts have damaged the NPT’s perceived utility as a guarantor of restraint. In the Korean discourse, this matters in two ways. First, it lowers the reputational costs of hedging or latency because the “rules” appear inconsistently enforced elsewhere. Second, North Korea’s serial violations and the limited penalties exacted reinforce a belief that compliance by Seoul is asymmetrically constraining. As *Arms Control Today* recounted, South Korea “had a nuclear weapons development program, but gave it up, and in 1975 joined the [NPT],” building a major civil nuclear sector thereafter; however, earlier undeclared experiments (1979-2000) and today’s advanced civilian base underscore that Seoul would need to withdraw from the NPT to weaponise — an act with “significant security and economic repercussions.”⁸² Publics, meanwhile, are unconvinced that the treaty order alone will protect them: polling has found 70 to 75 percent of the population favours developing such weapons.⁸³

The normalisation of nuclear brinkmanship in Ukraine has also reshaped expectations in Seoul. As Kelly and Kim argue, Russian nuclear threats “successfully limited U.S. support for Kyiv”; if such signaling constrained a traditionally alliance-friendly administration, “then Pyongyang’s will very likely restrain the nationalist, transactional Trump.”⁸⁴ This is not a legal point; it is a credibility point, one that interacts with treaty fatigue to make latency or nuclearisation appear more rational than previously.

Extended Deterrence Under Pressure: The Trump Shock

Extended deterrence credibility lives or dies on perceptions about American willingness to trade New York for Paris, or in the Korean case, San Francisco for Seoul. Kelly and Kim revisit this classic dilemma to argue that North Korea’s ICBMs raise “doubts about whether the United States would honour its alliance commitment,” because Pyongyang can “now strike American cities with a nuclear weapon.”⁸⁵ Public beliefs reflect that anxiety. A 2024 Asan poll found that only “47 percent of South Koreans believe Washington would risk nuclear strikes on the U.S. homeland on South Korea’s behalf.”⁸⁶

The 2023 Washington Declaration aimed to restore confidence, pledging that any North Korean nuclear attack on South Korea would be met with a swift and decisive response. It also created a Nuclear Consultative Group (NCG) to strengthen extended deterrence, coordinate strategic planning,

and address proliferation risks. South Korean officials called the agreement an unprecedented step in integrated deterrence and suggested it would reassure the public, even hinting at a de facto nuclear-sharing arrangement with the United States.⁸⁷ Still, the declaration failed to settle the issue. As Lami Kim observes, calls for nuclear armament have not subsided, with public support remaining above 70 percent, despite continued elite opposition to actual weaponisation.⁸⁸

Trump's return has sharpened these concerns. Kelly and Kim recount that Trump "said privately in 2021 that he would 'blow up' the alliance if reelected," and he has repeatedly framed alliances as "pay-for-service protection schemes."⁸⁹ Also, as the *Wall Street Journal* summarised: "Just as the world wakes up from the decades-long daydream of North Korean denuclearisation, the U.S.—South Korea's longtime defence partner—has grown unreliable." Further, the *Wall Street Journal* cites a poll by the *Korean Herald* in 2024 that found 60% of South Koreans do not trust the U.S. to use its nuclear weapons to protect Seoul from a North Korean attack.⁹⁰ In this climate, even elite restraint has limits, particularly if Washington is seen to accept North Korea as a "nuclear power" or to trade allied exercises for summits.⁹¹

From Taboo to Mainstream: Publics, Elites, and the Normalisation of the Nuclear Option

A decade ago, nuclear armament was a fringe position in South Korea. Today, elite views are slightly more nuanced.⁹² According to Lami Kim, "the majority of South Korean elites do not favour outright nuclear armament," with an April 2024 poll by Victor Cha finding only 34% in favour and 66% against; however, many experts favour nuclear latency — acquiring the capability to rapidly develop weapons without actually crossing the NPT line.⁹³ Conservative politicians have organised to press the case: the Mugunghwa Forum, launched by Yoo Yong-won, seeks "to promote nuclear latency and develop strategies to secure it," with over 20 politicians pledging "full support."⁹⁴ At the same time, progressive governments have hedged via dual-use pathways, most notably, nuclear-powered submarines, which require enrichment for naval fuel; these efforts, dating to Roh Moo-hyun and revived under Moon Jae-in, were read by some as latency by another name.⁹⁵

The political economy of public support is also revealing. Maitre finds that support "does not significantly wane when respondents are informed of the likely costs" (sanctions, isolation), suggesting a willingness to absorb material penalties to close what many perceive as an existential vulnerability.⁹⁶ That willingness intersects with a sharpened threat perception: North Korea is constructing facilities to increase its production of nuclear weapons, has tightened ties with Russia and China, and declared reunification "dead," designating the South a "primary foe and invariable principal enemy."⁹⁷

Nuclear Latency as Insurance and as a Policy Dilemma

Nuclear latency appeals because it promises security gains at lower political cost than overt proliferation. "Acquiring nuclear latency by obtaining the ability to produce nuclear fissile materials would significantly reduce the costs associated with nuclear armament, potentially shrinking from a few years to a few months the time to a bomb once enrichment or reprocessing is in place."⁹⁸ This is, in essence, insurance logic: "The shorter the process of developing nuclear weapons, the less challenging it will be for South Korea to withstand both the security vacuum and international opposition."⁹⁹ Prominent figures have echoed this, such as Han Dong-hoon, former leader of the Korean Conservative People's Party, arguing that:

"The international situation is unpredictable, and relying solely on alliances has its limits. Therefore, like Japan, we need to develop the potential capability for nuclear armament when necessary, such as by securing enrichment and reprocessing technology... If we pursue direct nuclear armament immediately, the risk of international sanctions is high. I believe nuclear latency is a realistic and effective measure that doesn't depend solely on alliances."¹⁰⁰

Latency, however, creates a diplomatic trap vis-à-vis Washington. The U.S.-ROK 123 Agreement restricts enrichment and reprocessing “without U.S. consent”; although revised in 2015 to allow possible civilian pathways, such activities require U.S. approvals, and U.S. policy consistently opposes South Korea’s pursuit of such capabilities because of proliferation risk.¹⁰¹ As Lami Kim notes, advocates try to justify enrichment or pyroprocessing for fuel security (e.g., diversifying away from Russian enrichment, which supplies 30% of Korean nuclear fuel) and for spent fuel management. However, their underlying motive is achieving nuclear latency, argues Kim.¹⁰² That creates a dilemma: “the more South Koreans raise their voice about their intention for nuclear armament, the less likely Washington will give its consent,” and even if the executive were supportive, Congress could resist.¹⁰³

Precedents are a double-edged sword, however. Japan’s permission for enrichment and reprocessing is buttressed by a national, deeply entrenched anti-nuclear sentiment, while AUKUS submarine technology transfer was judged low risk. In contrast, South Korea has “both means and motives to build nuclear weapons,” making U.S. consent harder to secure.¹⁰⁴ Attempts to hide these ambitions, such as amending domestic law to emphasise peaceful use while advocating latency to domestic audiences, “appear to be a strategic manoeuvre designed to gain U.S. consent — an effort that is unlikely to fool Washington.”¹⁰⁵



Photo 5: Baker Day Atomic Bomb Test, Bikini Atoll, July 25, 1946, U.S. National Archives

The Case, and Costs, For Nuclearisation

The pro-nuclear case, as articulated by Kelly and Kim, proceeds from scepticism toward extended deterrence and from regional threat inflation. Because North Korea can now hold U.S. cities at risk, the United States “would hesitate before getting involved.”¹⁰⁶ A domestic deterrent would likely fill the gap, requiring roughly a few dozen warheads for parity, and while South Korea already possesses delivery platforms and it could “place its warheads undersea to improve their survivability.”¹⁰⁷ Crucially, Kelly and Kim contend, allowing Seoul to nuclearise “would not trigger the breakdown of the international nonproliferation regime,” citing prior cases (e.g., U.K., France, Israel) where Washington adapted. In their framing, this is also about liberal values: respect a democracy’s security choices, even if they diverge from U.S. preferences.¹⁰⁸

Yet the costs for South Korea would still be substantial. *Arms Control Today* warns of “diplomatic isolation, sanctions, and a rupture in the [South Korean-U.S.] alliance.”¹⁰⁹ Maitre underscores legal triggers, such as the Nuclear Non-Proliferation Act (1978) and Nuclear Proliferation Prevention Act (1994), and broader economic consequences given South Korea’s deep integration and its civil nuclear export model.¹¹⁰ Even within the pro-nuclear argument, authors concede risks: possible Chinese and Russian countermeasures, and the small but non-zero danger of North Korean strikes on nuclear facilities during a breakout.¹¹¹ The *Wall Street Journal* retells elite fears that Trump could “cancel the annual joint military exercises” for a summit, and reports expert estimates that Kim aims to grow from 60 to 150 weapons within a decade, with a goal of 300, adding pressure on Seoul’s calculus.¹¹²

Conventional Proliferation as a Stabiliser and Non-Nuclear Off-Ramp

A core policy question is whether conventional proliferation, i.e., accelerated investment in strike, defence, resilience, and allied integration, can reduce the political demand for nuclear weapons in Seoul. The evidence suggests it can, if implemented credibly and in tandem with alliance measures.

First, conventional strike capacity can restore deterrence by punishment without crossing the nuclear threshold. South Korea already fields a sophisticated missile complex (Hyunmoo families, including “extremely heavy systems designed to destroy deeply buried targets”), submarine-launched assets, and robust ISR.¹¹³ Expanded production of Hyunmoo-4 and rapid deployment of next-generation precision munitions can raise Pyongyang’s expected costs for limited aggression, narrowing the perceived “gap” that nuclear weapons are asked to fill.¹¹⁴

Second, layered denial, such as air and missile defence, counter-UAS/UCAV, hardening, and dispersal, complicates North Korean coercion strategies. The *Global Security Review* dual-contingency scenario recommends “pre-positioned munitions, dispersed basing arrangements for nuclear-capable aircraft, and rotational deployments of dual-capable ships and submarines” to sustain a credible presence even under force diversion.¹¹⁵ For Seoul, that translates into more KAMD investment, deeper sensor fusion with U.S. and Japanese networks, and hardened, redundant Command and Control.

Third, tripartite integration with Japan and the United States (and its NATO partners) – data-sharing, co-development, and coordinated strike-defence planning – creates a regional deterrence fabric thicker than bilateral arrangements. Even if Washington’s declaratory policy wobbles, the actual capacity to fight and win a limited conflict at acceptable risk rises. That, in turn, makes nuclear latency less urgent and outright nuclearisation less compelling.

Finally, a visible U.S. presence and planning matter. The Washington Declaration’s NCG was a start; to influence Seoul’s domestic debate, it must produce operational outputs — e.g., recurring table-tops, shared playbooks for nuclear-conventional integration, and recognizable patterns of bomber/submarine deployments. Seoul must also demonstrate to Washington that faltering on its promises could potentially lead to nuclear proliferation, an outcome Washington does not want. As *Global Security Review* cautions, “Strengthening deterrence credibility in Northeast Asia will require more than

declaratory statements.”¹¹⁶ If conventional posture and alliance planning tangibly reduce risk, the political market for nuclear weapons shrinks.

Managing Latency Within the Alliance: The 123 Agreement and Credible Hedging

If Seoul chooses latency rather than immediate weaponisation, alliance management will hinge on the 123 Agreement constraints. Kim canvasses arguments that latency advocates deploy to win U.S. consent: fuel security, spent-fuel management via pyroprocessing, and naval propulsion.¹¹⁷ Yet Washington’s baseline is sceptical: enrichment and reprocessing are high-proliferation-risk, and Congress is sensitive to signals that latency is a thin cover for weapons ambitions.¹¹⁸

The political economy of South Korea’s success also weighs against a dash. As Maitre notes, “many countries would impose sanctions,” with disproportionate pain for an export-driven, high-tech economy deeply embedded in Western value chains. Even those who believe Washington could tacitly accept a *fait accompli* concede that congressional statutes and allied politics complicate such a stance.¹¹⁹

A realistic pathway, therefore, would require sequencing and transparency. If Seoul pursues latency-relevant technologies, it must (1) emphasise safety, safeguards, and IAEA transparency beyond minimums; (2) decouple naval propulsion from weapons fuel cycles via internationalised fuel arrangements; (3) avoid public rhetoric that frames latency as a stepping stone to “rapid nuclearisation,” which “risks undermining both Washington’s trust ... and democratic principles.”¹²⁰ Otherwise, even an executive branch open to compromise will face congressional headwinds.

Policy Implications: Preventing Nuclearisation by Making It Unnecessary

Given the structural drivers, the most plausible path to keeping South Korea non-nuclear is not to sermonise about the NPT; it is to alter the security and political calculus that currently makes nuclear options attractive. That requires five integrated lines of effort:

1. Make extended deterrence credible in deed, not word. The NCG must produce concrete, visible outputs, such as joint planning cells, rehearsed playbooks, and recurring deployments, that narrow the gap between declaratory policy and Seoul’s lived perception of U.S. resolve.¹²¹
2. Resource conventional proliferation at scale. Expand production of long-range conventional strike (Hyunmoo), hard-target munitions, drones, and standoff air and naval fires; accelerate KAMD layers and counter-UAS; and deepen allied sensor fusion.¹²²
3. Institutionalise tripartite planning with Japan. Move from ad hoc to routine trilateral missile warning/tracking, BMD patrol patterns, and combined air-sea strike packages. A thicker conventional net reduces the marginal deterrence value of nuclear weapons for Seoul.
4. Design a latency-compatible, alliance-acceptable nuclear fuel strategy. If Seoul pursues enrichment/pyroprocessing for civilian reasons, package it with gold-plated safeguards, multi-national oversight, and explicit de-linkage from weapons pathways to address the CSIS-identified dilemma.¹²³
5. Stabilise crisis signalling with Pyongyang. Clear, public and private red lines on nuclear use; integrated nuclear-conventional response options; and explicit planning for dual contingencies (Korea/Taiwan) to remove perceived windows of opportunity.¹²⁴

If these steps succeed, the political rationale for nuclear weapons narrows. As Kelly and Kim argue from a different angle, Washington’s tolerance for allied agency may in some cases be stabilizing.¹²⁵

Yet where the alliance can supply the capabilities Seoul seeks – through conventional means and shared planning – the case for nuclearisation weakens without coercion.

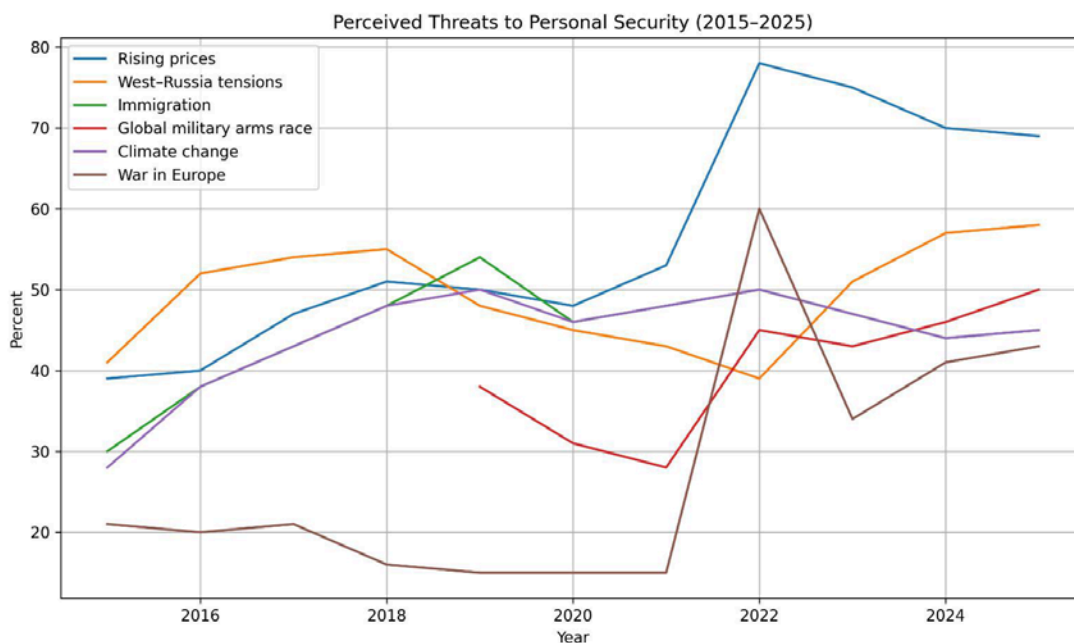
Conclusion

South Korea's nuclear debate is a rational response to structural deterioration: North Korea's more numerous, survivable, and doctrinally usable arsenal; the unravelling of arms control and the frayed authority of the NPT; and the credibility shock of overt transnationalism in U.S. alliance policy. Within this context, nuclear weapons promise a level of autonomy and certainty. Nuclear latency offers a legal-political hedge but it triggers alliance frictions, congressional scrutiny, and global market risks. The pro-nuclear case is coherent and, as opinion polls show, popular; it is also costly.

The non-nuclear path remains viable if it can satisfy Seoul's core strategic needs. Conventional proliferation and genuine trilateral integration can restore local deterrence without detonating the NPT. If the United States wants to keep a close ally non-nuclear, it must make nuclearisation unnecessary by providing credible, practiced deterrence in deed, not rhetoric. Conversely, if Washington defaults to declaratory statements while tolerating gaps in presence and planning, the gravitational pull of nuclear options, either as weapons or as latency, will grow. The outcome is not preordained. It will be decided by whether the alliance can supply, through conventional and institutional means, the assurance that publics in Seoul increasingly seek through the bomb.

3.2 Germany: The More Things Change...

With MAGA-style isolationist Trumpism entrenched and electorally successful in the U.S., the future of nuclear deterrence in Europe is at a crossroads. Germany is again finding itself in the role of the central, and often ambivalent, actor within this shifting security landscape. This chapter explores Germany's evolving role and approach to nuclear deterrence amidst a drastically altered geopolitical environment sparked by Russia's aggression against Ukraine. A discussion of the contradictions of *Zeitenwende*¹²⁶ is followed by an analysis of the domestic discourse regarding deterrence before evaluating Germany's resulting policy approach.



(Data obtained from the German Bundeswehr; Reaktion Group Illustration)¹²⁷

Spotlight



Germany: Armaments, Atom Bombs and Attitudes

Often hailed as a Civil Power¹ that has renounced military force after the atrocities it committed in the Second World War, West (and East) Germany nevertheless upheld substantial armies and military capabilities during the Cold War. For much of the 1970s and 1980s, almost 500.000 active soldiers served in the Bundeswehr, fielding 12 full divisions or 36 brigades. In wartime, reservists would have boosted the ranks to 1.3 million. Seven thousand tanks of all specifications, more than 1,000 fighter aircraft, 18 air defence battalions, and a substantial navy including 24 submarines made the force a capable instrument. West Germany then even contributed 50% of NATO's personnel and material strength in Europe and by far surpassed the British and French armies.¹ Deep integration into NATO command-and-control structures and Germany's limited sovereignty prior to the 2+4 Treaty in 1990 ensured Allied cohesion and intra-alliance reassurance. Only the 1990s then saw the beginning of substantial and steady reductions in force size, reaching a low point of 177,800 in 2016.¹

A key feature of said military integration to this day includes nuclear sharing ("Nukleare Teilhabe"), which forward-deploys U.S. nuclear weapons into Europe, where allies like Germany maintain dual-capable aircraft that would, given the agreement of both countries, deliver U.S. nuclear weapons to their targets.¹ With about 20 U.S. tactical nuclear weapons stored at Büchel airbase with German dual-capable Tornado fighters nearby, this arrangement is traditionally controversial in the country's domestic debate. Strategically, experts keep pointing out that it remains essential for Germany to uphold credible deterrence with Russian hypersonic missiles just a few minutes' flight time away in Kaliningrad. Apart from that, nuclear sharing keeps Berlin in the loop on technical matters as well as strategy formulation, both in peace and wartime.¹

Public opinion in Germany has long run counter to such strategic arguments for nuclear deterrence. For decades, large majorities supported disarmament -- 70% favoured a nuclear-free Europe in 2006, 93% backed an international ban in 2016, and about 80% supported joining the Treaty on the Prohibition of Nuclear Weapons in 2018. Most Germans also preferred neutrality in world affairs: in 2019, only 20% believed war might ever be necessary, 60% supported international neutrality, and over two-thirds wanted Germany to stay neutral even in a hypothetical U.S.-Russia or U.S.-China conflict. Two-thirds opposed relying on nuclear deterrence at all. Even after Russia's 2022 invasion, 68% rejected a German military leadership role, and many viewed NATO membership and U.S. troops as serving primarily American interests. In this light, nuclear sharing is widely seen less as a security asset and more as an alliance obligation.¹ These attitudes were equally mirrored in academic debate where research interest in security and nuclear issues was frowned upon and often publicly opposed while Peace Studies were exclusively understood through the prism of disarmament.¹

A *Zeitenwende* full of Contradictions

Against this background, Germany met Russia's full-scale invasion of Ukraine in 2022 and Moscow's subsequent ever-escalating nuclear threats with shock. Having relied on economic integration with Russia to shape incentives despite Moscow's escalating hostile behaviour since at least 2014, Germany was ill-prepared materially, politically, and conceptually to respond in a decisive, consistent, and effective manner:

A large rearmament program of 100 billion euros was immediately announced, and yet the defence industry was slow-rolled, lacking long-term contracts, overarching bureaucracies and dragged-out debates over procuring European or U.S. systems.¹²⁹

Berlin sent substantial military and economic aid to Ukraine (after dragging its feet right up until February 2022. Famously, Germany responded to pleas for military support from Kyiv by sending 5,000 helmets in January 2022¹³⁰); and yet exhibited a disastrous image of division and confusion with the Chancellor himself stoking fears of Russian nuclear weapons beginning already in April 2022 when the delivery of light armoured vehicles was atop the agenda.¹³¹

Berlin settled on strategically divesting from Russian hydrocarbons and helping Ukraine's defence; and yet failed at overall coherent strategy formulation both within the governing coalition and at an EU and NATO setting.¹³² While it publicly supported Ukraine's European aspirations, it slow-rolled Kyiv's drive to quickly make progress towards EU and NATO accession.¹³³

Berlin announced immediately after the full-scale invasion that its special relationship with Moscow was over and Germany was ready to play a leadership role in security matters; and yet, calls from senior politicians "to find ways to 'freeze the war and end it later,' *without* Kyiv's victory, prompted charges of appeasing and rewarding Russian aggression. The government's opposition to seizing frozen Russian assets and Scholz's adoption of the mantle of "peace chancellor" strengthened the impression that Germany was too weak to deter authoritarian bullying and thus undermined European security."¹³⁴

Daring to Debate Deterrence? A Contested Discourse Shift

In the immediate aftermath of Russia's full-scale invasion of Ukraine, the implicit claim of a dramatic term like *Zeitenwende* appeared to hold some weight when it came to the country's strategic debate around nuclear weapons. Three factors were key to mainstreaming the discussion around deterrence alternatives for Germany.

First, the war began with the U.S. presidential election and campaign already visible on the horizon. Donald Trump, soaring in the polls, remained impeccably opposed to U.S. aid to Ukraine and repeatedly cast doubts about whether he, as president, would defend other NATO countries.¹³⁵ His ultimate victory added urgency to the debate around the future security architecture in Europe, as the new president, among other things, repeatedly talked about drawing back U.S. troops from Europe.¹³⁶ The central cornerstone of Germany's security appeared to have been removed.

Second, Germany's political elites and broader population soon understood that the decades-long underinvestment and general neglect of the armed forces had led to substantial capability gaps in basically all sectors. The Bundeswehr's Inspector General even made clear publicly on the first day of the Russia-Ukraine war that Germany's armed forces were wholly depleted, incapable of confronting Russia or contributing much of value to allied efforts.¹³⁷

Third, Russia soon resorted to directly threatening Germany with direct attacks over Berlin's support for Ukraine. In ever-escalating tirades, officials and pundits underlined that Russian hypersonic missiles in Kaliningrad could reach Berlin within minutes, leaving practically no time for warnings. Indeed, when it came to airborne threats, the German capital lay undefended.¹³⁸

In this drastically changed and urgent environment, the question of nuclear deterrence moved from the academic fringes to the centre of political discourse. A broad spectrum of political circles across all major parties soon held a remarkably unified stance on the nuclear deterrence independent from U.S. guarantees. Figures from the conservative opposition, the governing Social Democrats, the Greens, and even the liberal FDP openly raised the question of whether France and the United Kingdom could extend their nuclear protection to Germany and Europe.¹³⁹

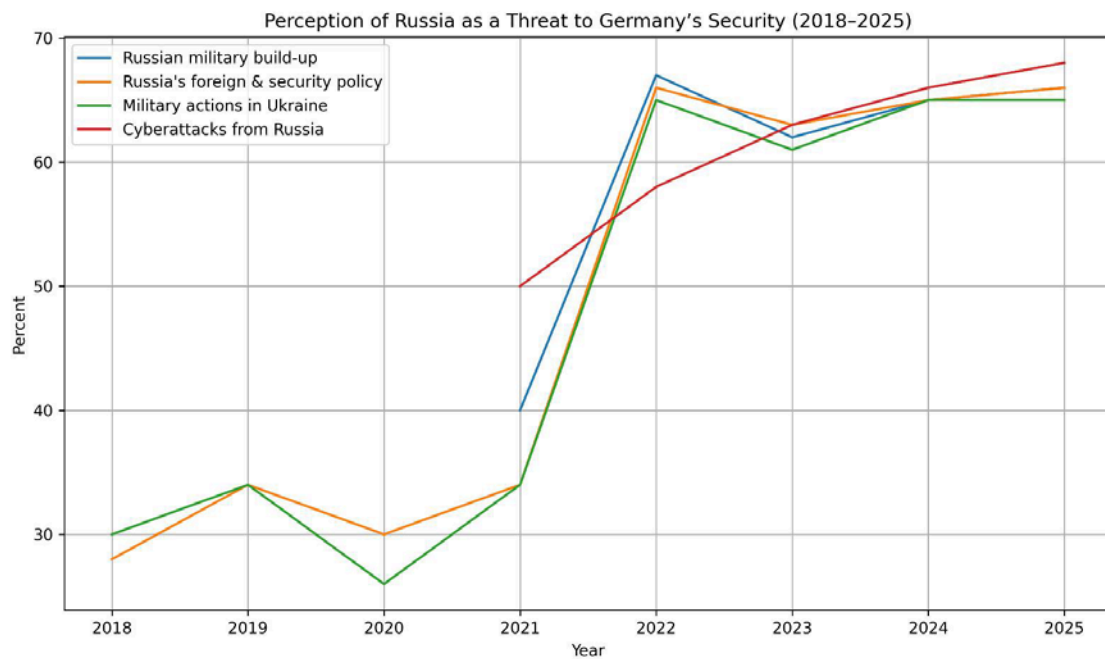
At the same time, the disarmament discourse that had for many years dominated the German security debate dramatically lost steam or was fundamentally reframed. In the words of former Foreign Minister Annalena Baerbock, herself a Green Party politician,

"I would like us to hold an honest debate on how we can create the conditions necessary for steps towards disarmament. This cannot be done by making unilateral demands of our Western partners within the Alliance. Genuine progress towards disarmament can only be achieved when all nuclear weapon states take credible steps. And we also know [...] that Putin is now doing precisely the opposite, is threatening to use nuclear weapons. [...] We must understand disarmament and arms control as being complementary to deterrence and defence."¹⁴⁰

Finally, bolstered by a strong strand of media commentary supporting a robust defence posture in open opposition to Russia and strong military support for Ukraine,¹⁴¹ public opinion shifted noticeably on defence matters. This also included unprecedented strands of opinion on nuclear deterrence: The number of Germans who were convinced of the deterrent effect of nuclear weapons against nuclear attack jumped by 23% while support for the unconditional withdrawal of all U.S. nuclear weapons even halved, to 32%¹⁴².

Yet, there is also evidence to the contrary. Matthias Mader and Harald Schoen, among others,¹⁴³ argue that the shift in public attitudes on defence and nuclear matters is not sustainable and old patterns are re-asserting themselves outside narrow and concrete issues relating to Russia and Ukraine. This concerns structurally increasing defence spending, attitudes towards China, and a sustained confrontational policy towards Moscow. "This pattern of limited, topical change and more general, overarching stability holds regardless of political orientation and interest. Moreover, in the post-2022 invasion period studied, there is nothing to suggest a continuing shift in orientations that might eventually add up to significant change."¹⁴⁴

These findings are consistent with the strengthening of anti-Ukrainian and latently pro-Russian political projects like BSW or AfD that were able to score significant electoral wins in the post-invasion environment.¹⁴⁵ At the same time, pro-Russian voices are again confidently trying to shape the discourse within the larger parties, particularly the Social Democrats (SDP), but also, to a lesser extent, the Christian Democrats (CDU).¹⁴⁶ This is complemented by a flurry of public resolutions by actors, activists, and other well-known personalities that assert, in tune with narratives coming out of Russia, that arms deliveries to Kyiv are senselessly prolonging the war, Russian victory is inevitable, and Western reticence to engage Russia diplomatically stands in the way of peace.¹⁴⁷



(Data obtained from the German Bundeswehr; Reaktion Group Illustration)¹⁴⁸

Making Deterrence -- and Confronting its Limits

Over 2022 and 2023, a number of key guardrails emerged from the discourse in policy circles and broader society that have since then remained the bedrocks of Germany's new-ish foreign and defence policy¹⁴⁹:

Massive conventional rearmament: with strong public backing, all of Germany's non-populist democratic parties, the CDU, SPD, Greens, and Liberals, supported massive budget hikes for defence. This included a 100-billion-euro special fund on top of a significantly increased regular defence budget in 2022. After parliamentary elections in 2025, parliament then exempted defence spending over 1% of GDP from the country's strict debt rules; spending on the armed forces in 2025 reached 86 billion euros (2.4% of GDP) and is set to escalate progressively to 153 billion euros (3.6% of GDP) in 2029, roughly tripling defence spending compared to pre-2022 levels.¹⁵⁰

A strong U.S. Component in German Defence: Despite increasing political volatility in the U.S. and doubts about U.S. alliance commitments under Donald Trump, Berlin is planning substantial investments in U.S.-made arms for its modernisation drive. This includes, most prominently, 35 F-35 fighters for 10 billion euros from 2027 that are able to replace the Tornado as Germany's key platform for nuclear sharing.¹⁵¹ This is complemented by the purchase of 60 CH-47F Chinook heavy transport helicopters for 7.3 billion euros,¹⁵² as well as 4 new Patriot air defence systems and 500 interceptors for 5.1 billion euros.¹⁵³ These spending decisions signal continuity as Berlin continues significant purchases of U.S. technology off the shelf, snubbing calls for more domestic European procurement, which is, however, often plagued by multi-lateral development and delivery delays and remains mostly untested in real conditions.¹⁵⁴

No German nuclear deterrent: Practically all discussion of nuclear deterrence options for Germany in the absence of ironclad U.S. guarantees under Trump excluded the development or acquisition of nuclear weapons under a national framework. This is because Berlin would have to alienate its most important allies and breach the country's foundational 2+4 Treaty¹⁵⁵ in open defiance of the other

signatories — France, the U.K., the U.S., and Russia as the legal successor state of the Soviet Union. Germany would also have to exit the NPT, potentially triggering a chain reaction in proliferation.¹⁵⁶ A 2025 poll found three-quarters of Germans opposed to such a move — and no serious politician or commentator is on record backing this idea.¹⁵⁷

A Dead-End European Option

There are, however, several proposals within the discourse to tackle the challenging security environment collectively on a European level — a core instinct of political thought in Germany. One prominent idea of historian Herfried Münkler calls for establishing an EU nuclear deterrent with the ‘nuclear football’ rotating between the capitals in accordance with the presidency of the Council of the European Union.¹⁵⁸ Prominent economist Hans-Werner Sinn has proposed a wholly new European Confederation going beyond the EU with a democratic government responsible for border security and commanding a joint army.¹⁵⁹ Germany has furthermore strongly supported closer coordination of procurement, coordination, joint development, and military mobility in the EU through the European Defence Union, the European Defence Fund (SAFE), and the ‘Rearm Europe’ initiative.¹⁶⁰

Yet, for all these three ideas to become credible deterrence instruments for the acute challenge emanating from Russia, the EU’s primary treaties would have to be significantly changed or incorporated into a wholly new legal structure. Already existing cleavages around common taxation and debt, veto players within Europe, and fundamentally differing visions on the importance of defence sovereignty and the role of the U.S. in the future of the continent’s security would fundamentally complicate and draw out any serious negotiations.

While adapting or creating European institutions remains an unrealistic perspective for the foreseeable future, expanding the nuclear security umbrella of France and/or the U.K. with a German financial or technological contribution has emerged as the central cornerstone of the deterrence debate in Germany. As opposition leader and as Chancellor after his election in 2025, Friedrich Merz has repeatedly welcomed French President Macron’s initiative to open a strategic dialogue on the issue.¹⁶¹ Paris is not offering to Europeanise its nuclear deterrent but is inviting partners to better understand French doctrine, participate in scenario formulation, and observe exercises.¹⁶² Indeed, Germany and other partners could help France address some important capability gaps in satellite and radar surveillance, electronic warfare, suppression of enemy air defence and deep strike capabilities, on which Berlin and London are closely cooperating.¹⁶³ President Macron has also signalled openness to forward-deploy French nuclear weapons on the territory of other EU partners. In any case, command and control over the warheads would remain with the French president.¹⁶⁴

Meanwhile, all presidents of the Republic since Francois Mitterand in the early 1990s have acknowledged that France’s security is intertwined with the integrating European Union, which places vital national interests outside physical French borders.¹⁶⁵ Furthermore, the Treaty of Aachen with Germany in 2019 stipulates that the two countries “shall afford one another any means of assistance or aid within their power, including military force, in the event of an armed attack on their territories,”¹⁶⁶ which could be read as an implicit acknowledgement of extended deterrence.

Despite a number of political declarations and space for technical cooperation, the now structural political instability in France and the 2027 election with a substantial chance of the Rassemblement National coming to power are looming large. Beyond that, deep disagreements remain even with a deeply pro-European president like Emmanuel Macron in the Elysée Palace. For Berlin, Paris remains a difficult and unpredictable partner on security issues that does not share Berlin’s transatlantic instincts or broader strategic culture. Perspectives on the full-scale Russian aggression against Ukraine, the issue of deploying European troops, and NATO membership for Kyiv continue to differ significantly. From Paris, the *Zeitenwende* appears transatlantic in its orientation at the expense of common European sovereignty and projects. A case in point is FCAS, a German-French venture to develop a next-generation fighter jet, which has been put into question by Berlin promptly buying the

competing F35 in 2022. Meanwhile, Germany's key decisions over the course of the war in Ukraine, like the delivery of main battle tanks in 2023, were closely coordinated with Washington, not Paris.¹⁶⁷

There has been much less debate about expanding the U.K. deterrent, as it remains highly dependent on the U.S., while Brexit has placed London outside the more intimate EU security community built around the strongly worded Article 42.7 of the EU Treaty.¹⁶⁸

In the end, there has not been substantive progress on coherent and credible bilateral or European deterrence alternatives to date.

Confronting Failure

Russia's full-scale invasion of Ukraine has shaken the very foundations of Germany's post-war conception of itself and international politics. The difficulty of both the broader society and the political elites to comprehend the return to Europe of genocidal imperial conquest and the threat of a nuclear exchange is palpable at every step of the way since 2022. That the perpetrator, Russia, is a country bound to Germany through a complicated history¹⁶⁹ that remains central to the country's political identity further complicates a consistent and credible defence of the international peace order in Europe. When the U.S. fundamentally reoriented its cooperative approach to the transatlantic relationship with the second election of Donald Trump in 2024, another core tenet of German foreign policy identity collapsed.

Many in Europe looked to Berlin for leadership, yet Germany's policy since 2022 has been characterised by reactive, delayed, and half-hearted adaptation to the momentum created by other actors. *Zeitenwende* was slow-rolled, military aid to Ukraine remained inconsistent, and the visible effect that Moscow's nuclear threats had on Chancellor Scholz, who even instrumentalised them for "peace"-focused election campaigning, deeply undermined Germany's position among its allies.¹⁷⁰ Moscow gladly took the opportunity to double down on both the threats and its overall war aims in and beyond Ukraine.

When Donald Trump humiliated President Zelensky in the Oval Office in early 2025, Berlin was again caught off-guard -- now called upon to play the primary role in deterring Russia and supporting Ukraine. The result was a frantic scramble to ramp up defence spending, as precious time had been wasted to re-arm and build defence industrial capacity since 2022.¹⁷¹ All the same, Russia is by far outpacing Germany in its rearmament while fighting a hot war against Ukraine.¹⁷²

The debate over the future, or current lack of a credible nuclear deterrence in Europe exemplifies this trend. Germany is unable to rely on its traditional partners as uncooperative right-wing populism is now in power in the U.S. and conceivably might soon be in France. Germany is unable to pursue a national deterrent because of its history. Germany is unable to put itself at the centre of a concerted push for deep European integration in defence matters because it lacks political will and is distrusted by many allies.

At the same time, Germany faces a poly-crisis of its overall business model as Berlin failed to respond to clearly visible trends over the 2010s: there was little effort to diversify energy supply away from an increasingly aggressive Russia post-Crimea. There was little effort to diversify export dependence on an increasingly assertive and protectionist China. There was little effort to take national defence seriously in the face of the rise of MAGA-type populism in the U.S. Republican Party since the 2010 Tea Party revolt. There is currently little effort to prepare for a Rassemblement National government in France post-2027.

It remains to be seen whether the repeated shocks since 2022 are able to alter German strategic discourse and culture for Berlin to move beyond its reactive and half-hearted policies. Berlin will have to understand that deterrence needs to be directed outward, not inward. Until that happens and a

sober debate across society takes root,¹⁷³ Germany will have to hope for the benevolence of shaky allies or the mistakes of its adversaries.

3.3 Conclusion

The analysis in this chapter demonstrates that the nuclear question has returned because of the political, institutional, and normative constraints that governed nuclear behaviour since the late Cold War are eroding simultaneously. The war in Ukraine accelerates this erosion in three distinct ways. First, it exposes the limits of security assurances when confronted with a nuclear-armed revisionist state willing to violate core international commitments. The collapse of the Budapest Memorandum as a functional guarantee has significantly weakened the perceived credibility of non-proliferation bargains elsewhere. Second, the dismantling of U.S.-Russian arms control, combined with Russia's instrumentalisation of nuclear coercion, removes the stabilising mechanisms that previously structured strategic competition. With New START effectively defunct, CTBT norms weakened, and INF constraints abandoned, the regulatory environment that once bounded escalation has largely disappeared. Third, geopolitical fragmentation and the rise of transactional great-power politics have undermined confidence in collective security architectures, prompting a re-evaluation of nuclear options even among long-standing U.S. allies.

Across the cases examined – Ukraine, South Korea, and Germany, – a common pattern emerges: states are not necessarily seeking nuclear weapons; they are seeking credible security guarantees in an environment where guarantees themselves have become contingent. Where alliances remained coherent and backed by demonstrable capability over past decades, as in NATO or the U.S.-ROK alliance (despite its current strains), the incentive to proliferate remains relatively low despite current trends. Where guarantees appear unreliable, inconsistent, or dependent on domestic political oscillations in Washington, hedging behaviour intensifies: through nuclear latency debates, expanded conventional strike capacity, or pursuit of asymmetric deterrence strategies or outright appeasement. They stem from shifting power balances, weakening regimes, and heightened uncertainty about future U.S. commitments.

What this chapter ultimately argues is that the international system is transitioning toward a nuclear environment defined less by formal regimes and more by ad hoc, capability-driven deterrence relationships. While the risk of an immediate wave of new nuclear states remains low, there is a growing risk of a breakdown of the legal and normative non-proliferation regime and a domino effect of middle-sized states pursuing nuclear deterrence. More likely, however, is the progressive normalisation of hedging, brinkmanship, and coercive nuclear signalling as routine features of statecraft. In such a context, the threshold for nuclear acquisition may remain formally high, yet the political distance between restraint and proliferation narrows as trust in institutional frameworks declines.

Preventing this trajectory requires more than rhetorical recommitment to the NPT or arms control. It demands substantial re-armament by U.S. allies, the development of broadly shared resilient strategic cultures, credible, sustained conventional, and political reassurance to and the conventional arming of vulnerable states, renewed forms of strategic coordination among established nuclear powers, and realistic pathways to rebuild verification and constraint mechanisms. Absent these measures, the dynamics identified in this chapter, such as latent proliferation, alliance anxiety, coercive nuclear use, and the weakening of normative taboos, are likely to deepen, making nuclear instability a defining feature of the coming international order.

4 – Confronting the New Proliferation Paradigm

Russia's aggression against Ukraine since 2014 and 2022 has significant repercussions for the future of nuclear deterrence and proliferation in Europe and far beyond. What is making this particular war so special is that it draws into question fundamental principles of how international relations have been organised since 1945. Three characteristics stand out in this context:

- (1) **State-on-State conflict with genocidal intent:** Despite unconvincing red herring narratives trying to paint Russia's motives as defensive against alleged NATO action and intent, there is overwhelming evidence that Moscow seeks to extinguish Ukrainian statehood, identity, history, and culture.¹⁷⁴
- (2) **Using nuclear threats for offense:** "Conventional" theory around nuclear weapons has so far understood these tools as insurance against threats toward the bare survival of a state. Invading a non-nuclear neighbouring state, claiming its territory in blatant breach of international law, and then threatening nuclear use should the international community help the attacked state attempt to defend the legal status-quo-ante is completely unprecedented.
- (3) **The Particular Bilateral and Multilateral Legal Regime of the Parties:** The Budapest Memorandum, signed in 1994 by Ukraine, Russia, the U.S., and the U.K., explicitly guaranteed Ukrainian borders, sovereignty, and freedom from coercion in order to achieve a significant non-proliferation victory. The war is thus inextricably linked to the credibility of global non-proliferation efforts and the Western alliance system overall.

In Ukraine itself, these stakes are part of the everyday experience of the entirety of society and understood in stark colours. After years of war with unreliable, lukewarm, and hesitant support from the international community to uphold its very principles, there is today no more trust in Ukraine when it comes to international legal mechanisms, institutions, and political declarations of support. Some Ukrainians thus argue that Kyiv's only remaining option is to draw on its inherited nuclear infrastructure and expertise to rebuild a nuclear arsenal, even though this would require overcoming major technical obstacles and defying strong international opposition. Indeed, building a proper arsenal with actual deterrent effect would likely take many years; yet, Ukraine is, in theory, able to build a single tactical low-yield nuclear device capable of strategic signalling. The country's political leadership has put a lid on all such considerations as Kyiv struggles to navigate the complicated politics of the West in its quest for means to defend itself against Russia's determined and brutal onslaught.

Nowhere else are the implications of Russia's war against Ukraine so clear as in South Korea. The country, after all, shares a number of Ukraine's predicaments: a nuclear-armed, overtly aggressive, radicalizing, militarised, increasingly confident, yet paranoid neighbour; an alliance with the U.S. and the West built on confidence and political credibility for its deterrent effect to work; and well-founded doubts due to the West's half-hearted support for Ukraine. The debate over how to respond to this constellation is ongoing: some call for a policy of nuclear latency as it provides a legal and political fallback, keeping a country only weeks away from building a bomb without formally violating the NPT. Yet, such a policy generates tensions within alliances, invites close scrutiny from the U.S. Congress, and unsettles the region. The argument for going nuclear is internally consistent and, as surveys indicate, widely supported, yet it would come with heavy costs. A conventional approach can still work, provided it meets Seoul's essential security requirements.

Much depends on the U.S. here. If Washington wants to keep a close ally non-nuclear, it must make nuclearisation unnecessary by providing credible, practiced deterrence. Conversely, if Washington defaults to declaratory statements while tolerating gaps in presence and planning, the gravitational

pull of nuclear options, either as weapons or as latency, will grow. The outcome is not preordained. It will be decided by whether the alliance can supply, through conventional and institutional means, the assurance that publics in Seoul increasingly seek through the bomb.

The question before the international community, and Western countries as a strong bloc within it, is simple and systemic: given the fundamental challenge that Russia's invasion poses, will the world order built around the UN Charter, the NPT, the U.S. alliance system, NATO, the Helsinki Final Act, and the Charter of Paris be defended? If the answer is no, the logical implication is systemic evolution towards a more chaotic and anarchic system as countries internalise that Russia's behaviour has not been met with a rebuke. In such an environment, the proliferation of nuclear weapons could be real as countries, small and large, must ensure themselves against the hostile intentions of neighbours or non-regional superpowers pursued by wholly unchecked means.

The West and the international community have, however, a simple, effective, safe, and relatively cheap lever to pull that should reliably prevent such an outcome: committing sufficient conventional weaponry to support Ukraine's defensive efforts.

This approach is simple, as it works against all of the fundamental legal and normative challenges posed by Russia's war. It upholds the international peace order and directly dampens any debate within countries like Ukraine and South Korea, among others, on acquiring a sovereign nuclear deterrent.

It is effective as the Ukrainian Army has shown on numerous occasions that it is able to halt and counter Russia's invasion if sufficiently armed by allies and partners.

It is safe, as deterrence in both directions has created a stable equilibrium where the delivery of cruise missiles, drones, heavy armoured vehicles, and fighter jets poses no threat of triggering a nuclear cataclysm.

It is relatively cheap compared to a scenario where Europe must defend itself against Russia, following through on its already stated threats, with a battle-hardened army and a window of opportunity before Europe can catch up with its re-armament programs. It is also radically cheaper in comparison with the necessary resource allocation and wealth losses under the more anarchic system outlined above.

The goal of decisively arming Ukraine would be to shape Russian regime incentives towards a point where it calculates that the cost of military aggression outweighs its benefits.

The prospect of resisting Russian aggression at times is met with fears that the Russian state might disintegrate into chaos in the event of military defeat in Ukraine, with fragmentation of central power and the loss of unified control over the country's nuclear weapons. It is, however, crucial to consider the limits of Western agency: if the Russian state is so far on the edge that such scenarios are in the cards, the structural factors that shape collapse options will bring them about sooner or later, regardless of the West's policy choices with regard to Ukraine. Western capitals should prepare for these scenarios by building intelligence capacities, developing contingency plans, hardening domestic detection and defence systems, and monitoring key indicators in Russia, such as elite splits, failures to implement explicit Kremlin policy, breakdowns in federal budgetary streams, and active empire-building by local elites.

All of the above must be flanked by persistent efforts to build a strategic culture in Western countries that understands the nature of the described challenge and the stakes involved. Politicians should openly communicate the necessary resource allocation and trade-offs involved. Scientists, experts, journalists, and other multipliers in society must be more persistent in establishing a nuanced, broad-based policy debate where crude Russian narratives can no longer take root.

Furthermore, Berlin, Paris, Warsaw, Rome, London, and others must finally invest the necessary political capital to overcome defence cooperation roadblocks built around national lobbies that create inefficiencies and unnecessarily weaken Europe in relation to other world powers.

Much deeper defence integration would also be a bulwark against populists in government as these actors must respond to the incentive structure around them -- which can be positively shaped in advance.

This goes hand-in-hand with coordinating much more consistent communication towards Moscow from Europe and the U.S. that includes clear "if-then" scenarios to shape Russian perceptions regarding options and methods.

At the same time, strengthening Europe's overall readiness to confront Russia must not come at the expense of continued support for Ukraine. Ukraine remains the first and most important frontline that deters Russia in a way no other country can, and sustaining assistance is essential both for regional security and for preventing further Russian aggression.

Equally important is ensuring that this effort is carried out both at the level of conventional deterrence and through the provision of concrete, long-term security mechanisms for Ukraine, supported by EU member states. Such mechanisms would help safeguard Ukraine's resilience, ensuring that Europe's security architecture remains robust no matter what happens on the other side of the Atlantic.

However, an analysis of foreign and defence policy and debate in Germany reveals in part, why a decisive approach on the side of Ukraine's defence and core international legal norms has not been forthcoming from Europe's largest and richest country. Russia's full-scale invasion of Ukraine has upended Germany's post-war self-image and its conception of international politics. Since 2022, both the wider public and political leaders have visibly struggled to process the re-emergence in Europe of genocidal imperial warfare and the possibility of a nuclear confrontation. The fact that Russia, the aggressor, is intertwined with Germany through a complex shared history that still shapes German political identity made it even harder for Berlin to put up a determined and consistent defence of the international peace order. When the United States sharply shifted its cooperative stance toward the transatlantic relationship following Donald Trump's second election in 2024, yet another pillar of Germany's foreign policy identity broke away.

Under these hammer blows, Germany's policy since 2022 has been characterised by reactive, delayed, and half-hearted adaptation to the momentum created by others. Critically, Berlin's core instincts when it comes to policy formulation are ineffective under these new circumstances: Germany is unable to rely on its traditional partners as uncooperative right-wing populism is now in power in the U.S. and conceivably might soon be in France. With the U.S. nuclear umbrella for Europe in question, Germany is unable to pursue a national deterrent because of its history and deep-seated norms in society. Germany is unable to put itself at the centre of a concerted push for deep European integration in defence matters because it lacks political will and is distrusted by many allies.

On the one hand, this paper has shed light on the astonishing complexities around domestic and international political processes, their stakeholders, incentive structures, narratives, and underlying norms. Yet, it has also laid bare the core of the challenge to non-proliferation and core legal regimes today and has outlined how pulling a relatively simple lever can address a large spectrum of issues that can bring about undesirable scenarios if left to deteriorate.

What is lacking in adequately addressing these issues is not analytical capacity but political will. It was Germany's first post-war Chancellor, Konrad Adenauer, who, facing challenges that rhyme to some extent with today's, connected a moral dimension -- "Freedom creates obligations,"¹⁷⁵ -- with cold-blooded security considerations: "I've said more than once that we will have to be ready for a day when America will withdraw its troops from Europe. Then, European countries, and Germany in

particular, will find themselves next to this Russian colossus with all its expansive impulses. We thus have to do everything in our power not to be caught unarmed if a challenge ever comes."¹⁷⁶

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Abbreviations

- › **2+4** — Two Plus Four Treaty (Treaty on the Final Settlement with Respect to Germany)
- › **AfD** — Alternative für Deutschland
- › **AUKUS** — Australia–United Kingdom–United States security partnership
- › **AUV** — autonomous unmanned vehicle
- › **BM-21** — BM-21 *Grad* multiple rocket launcher
- › **BM-27** — BM-27 *Uragan* multiple rocket launcher
- › **BMD** — ballistic missile defence
- › **BSW** — Bündnis Sahra Wagenknecht
- › **C2** — command and control
- › **CDU** — Christlich Demokratische Union Deutschlands (Christian Democratic Union)
- › **CH-47F** — Boeing CH-47F *Chinook* (heavy-lift helicopter)
- › **CSG** — carrier strike group
- › **CSU** — Christlich-Soziale Union in Bayern (Christian Social Union)
- › **CTBT** — Comprehensive Nuclear-Test-Ban Treaty
- › **DPRK** — Democratic People’s Republic of Korea (North Korea)
- › **EU** — European Union
- › **EW** — electronic warfare
- › **F35** — F-35 *Lightning II* (fighter aircraft)
- › **FCAS** — Future Combat Air System
- › **FDP** — Freie Demokratische Partei (Free Democratic Party)
- › **FPV** — first-person view (drone)
- › **G8** — Group of Eight
- › **GDP** — gross domestic product
- › **IAEA** — International Atomic Energy Agency
- › **ICBM** — intercontinental ballistic missile

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- › **ICJ** — International Court of Justice
 - › **INF** — Intermediate-Range Nuclear Forces Treaty
 - › **ISR** — intelligence, surveillance, and reconnaissance
 - › **JCPOA** — Joint Comprehensive Plan of Action
 - › **KAB** — guided aerial bomb (Russian designation: KAB)
 - › **KAMD** — Korea Air and Missile Defense
 - › **KMPR** — Korea Massive Punishment and Retaliation
 - › **MLRS** — multiple launch rocket system
 - › **MoD** — Ministry of Defense
 - › **MP** — Member of Parliament
 - › **NATO** — North Atlantic Treaty Organization
 - › **NCG** — Nuclear Consultative Group
 - › **NGO** — non-governmental organization
 - › **NPT** — Treaty on the Non-Proliferation of Nuclear Weapons
 - › **OSCE** — Organization for Security and Co-operation in Europe
 - › **ROK** — Republic of Korea
 - › **SDP** — Social Democratic Party of Germany (Sozialdemokratische Partei Deutschlands)
 - › **START** — New START (Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms)
 - › **THAAD** — Terminal High Altitude Area Defence
 - › **UAS** — unmanned aircraft system
 - › **UCAV** — unmanned combat aerial vehicle
 - › **USSR** — Union of Soviet Socialist Republics

References & Notes

1 Linguistic note: the term “regime” is often used to describe undemocratic polities and carries with it a negative connotation. In the non-proliferation context, the term “regime” refers, however, to a legal norm based upon a number of international treaties.

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