CENTER FOR GLOBAL SECURITY RESEARCH

Lawrence Livermore National Laboratory

Europe's Nuclear Future: 16th Annual Conference on Extended Nuclear Deterrence and Assurance (WP3585)

Annotated Bibliography

September 10-13, 2025

Annotated Bibliography

Europe's Nuclear Future: 16th Annual Conference on Extended Nuclear Deterrence and Assurance (WP3585)

Wilton Park, Wiston House, Steyning, West Sussex, UK
September 10-13, 2025

Prepared By: Paige Gasser and Austin Coffey[1]

Key Questions:

- What impact have recent developments in U.S. and Russian policy had on extended deterrence and assurance in the transatlantic context?
- What alternative futures should be considered?
- What European deterrence architecture best serves the interests of the United States and its NATO allies? What steps are needed?

Panel Topics:

1. NATO's Deterrence Pathway Forward from the June 2025 Hague Summit
2. US Deterrence Strategy in the Trump Era
3. Russia's Campaign Against the European Security Order: A Status Report
4. The Promise and Limits of Alternative European Nuclear Umbrellas
5. NATO's Russia Strategy: Beyond the Three No's?
6. The Regional Nuclear Order Amidst Global Disorder
7. Asia's Potential Impact on Europe's Nuclear Future
8. Toward Constructive Transatlantic Engagement and the 2026 NATO Summit

[1] *The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or Lawrence Livermore National Security, LLC, and shall not be used for advertising or product endorsement purposes.*

Panel 1: NATO's Deterrence Pathway Forward from the June 2025 Hague Summit

- What summit outcomes were most relevant to the future of the alliance's deterrence strategy and posture?
- What new commitments were made?
- What new debates can be expected?

Chantal Li, "Unpacking the 76th NATO Summit," Nuclear Threat Initiative (July 10, 2025). https://www.nti.org/risky-business/unpacking-the-76th-nato-summit/.

> At the June 2025 NATO Summit in The Hague, leaders addressed concerns over U.S. commitment and security threats by pledging to raise defense spending to 5 percent of GDP by 2035, with targeted investments in military capabilities and infrastructure. This move aimed to bolster NATO's deterrence, especially given Russia's ongoing threat and uncertainty around Ukraine. The summit also launched new technology initiatives, including the Defence Production Action Plan and the NATO Commercial Space Strategy, to accelerate advanced capabilities. The United Kingdom (UK) announced the purchase of 12 F-35A jets, marking the first time since the end of the Cold War that the UK will field nuclear-capable aircraft in support of NATO's nuclear mission. Despite a significantly shorter final declaration, NATO reaffirmed its "ironclad commitment" to collective defense under Article 5, underscoring unity and resolve.

Alessandro Marrone, *NATO after The Hague: A Single-issue, Sustainable and More European Alliance*, Istituto Affari Internazionali (IAI) Commentaries No. 25 | 37 (July 4, 2025). https://www.iai.it/sites/default/files/iaicom2537.pdf.

> Marrone argues that The Hague summit was a relative success for NATO, as it prioritized Euro-Atlantic peace by reaching consensus on a new spending target focused on deterring Russia, ensuring continued U.S. commitment, and accommodating member states' budget constraints. With the Trump administration ruling out Ukrainian NATO membership and the summit communiqué omitting any mention of it, Marrone highlights the pragmatic move to count military aid to Ukraine toward the 3.5 percent spending target, incentivizing allies to support Kyiv. He notes a major shift in NATO's approach under Trump, with the alliance narrowing its agenda to a single-issue focus and abandoning references to partnerships, EU cooperation, and broader security challenges. Marrone contends that a more sustainable NATO is now a more European one, requiring European allies to assume greater responsibility in investment, personnel, strategic capabilities, and decision-making. This shift makes NATO's deterrence and defense more credible, even with reduced U.S. leadership.

Giuseppe Spatafora, *Fit for Purpose? Reforming NATO in the age of Trump 2.0*, European Union Institute for Security Studies (June 4, 2025). https://www.iss.europa.eu/sites/default/files/2025-06/Brief_2025_13_NATO%20and%20European%20defence.pdf.

Spatafora asserts that simply spending more is not enough—NATO's effectiveness depends on the increasingly uncertain assumptions that the United States will stay central to Europe's defense and that individual countries can fill capability gaps. To address unpredictable U.S. commitments, the author recommends identifying and replacing U.S. assets likely to be withdrawn, setting more collective targets, reforming force structures to give Europeans more responsibility, and using EU financial tools to support these changes. These shifts would spark debate about burden-sharing and the future of transatlantic cooperation, but the author concludes that to be transformational, NATO must prepare for possible U.S. disengagement and build a genuine European pillar, or risk weakening deterrence and inviting future aggression.

Jordan Embree and Wilson Beaver, "What a Success Story Looks Like: Top U.S. Priorities for the June 2025 NATO Summit in The Hague," (Washington, D.C.: Heritage Foundation, May 16, 2025), https://www.heritage.org/sites/default/files/2025-05/IB5379.pdf.

The Heritage Foundation highlights NATO's need to strengthen deterrence and defense through increased spending, modernization, and improved readiness, especially in response to Russia and other threats. While the summit achieved a raise in defense spending targets, several topics are anticipated as future debates, including how to manage support for Ukraine, the balance of burden sharing, and the alliance's approach to China. Specifically, the brief notes the need for a comprehensive NATO China Strategy, as current recognition of China's threats and challenges has not yet translated into a unified operational approach. Without such a strategy, the authors highlight that NATO risks indecision that could disadvantage its members. While European NATO members should focus on deterring Russia, they can also contribute to deterring China by restricting defense-related technology transfers, condemning Chinese aggression in regions like the South China Sea, and collaborating on defense industrial initiatives with partners such as Australia, Japan, South Korea, and Taiwan. Other ongoing debates include potential alliance enlargement and increased investment in new technologies and cyber defense.

Panel 2: U.S. Deterrence Strategy in the Trump Era

- To what extent is the Trump administration building on the recommendations of the Strategic Posture Commission?
- What is the place of extended deterrence in Trump's strategy?
- What role will Golden Dome capabilities have in deterrence strategy?

Congressional Commission on the Strategic Posture of the United States, *America's Strategic Posture, Final Report*, (October 2023). https://www.ida.org/-/media/feature/publications/A/Am/Americas%20Strategic%20Posture/Strategic-Posture-Commission-Report.pdf.

The Strategic Posture Commission argues that the United States faces an unprecedented threat: two nuclear-armed near-peer adversaries. To ensure strategic security from 2027–2035, it calls for a whole-of-government response across six areas—Strategy, Posture, Infrastructure, Non-Nuclear Capabilities, Allies, and Risk Reduction. The report stresses the need for an integrated deterrence strategy, combining nuclear, conventional, space, cyber,

and missile defense capabilities. It advocates for conventional forces able to deter or defeat simultaneous aggression from China and Russia, and a nuclear arsenal sized and structured accordingly. The Commission urges the urgent completion of the U.S. nuclear modernization program, while also recommending strengthened space capabilities, leadership in artificial intelligence and emerging technologies, and the development of integrated air and missile defenses for the homeland. The report highlights that extended deterrence is under increasing strain as adversaries expand their nuclear capabilities and calls for meaningful consultation with allies before adjusting deterrence policy. Broadly, the Trump administration aligns with the Commission on missile defense and nuclear modernization but has shown inconsistency in consulting allies.

Liviu Horovitz and Elisabeth Suh, "Trump II and US Nuclear Assurances to NATO: Policy Options Instead of Alarmism," Stiftung Wissenschaft und Politik Comment 17, (April 25, 2024). https://www.swp-berlin.org/publications/products/comments/2024C17_TrumpII_NATO.pdf.

Horovitz and Suh describe extended nuclear deterrence as resting on two pillars—military capabilities and political resolve—which together support the "roof" of strategic communication. While President Trump's campaign comments weakened the "roof" component, "extended deterrence is not a house of cards that collapses immediately if strategic communication fails." American capabilities clearly persist, and a complete abandonment of U.S. assurance is unlikely, as such a move would undermine core administrative interests: coercion, leverage, and global influence. More plausibly, a situation of "problematic continuity" may emerge, in which extended deterrence remains official policy even as the assurance it provides becomes more transactional and contingent. Although the likelihood of "inadvertent collapse" or "foolish relinquishment" is low, the authors emphasize the importance of hedging against these risks. They argue that Europe should develop plans for an independent deterrent, which would offer medium-term leverage with Washington and enable long-term hedging against fundamental changes in the international order.

Ankit Panda, Vipin Narang, and Pranay Vaddi, "Nuclear Proliferation Will Haunt 'America First'," War on the Rocks (March 10, 2025). https://warontherocks.com/2025/03/nuclear-proliferation-will-haunt-america-first/.

The authors argue that under Trump's "America First" strategy, the U.S. commitment to extended deterrence has become less reliable and more uncertain. Trump's rhetoric and policies make these guarantees seem transactional and dependent on allies' financial contributions or alignment with U.S. interests, raising doubts about U.S. reliability in a crisis. The authors warn that this weakened credibility could prompt allies to consider developing their own nuclear weapons, increasing proliferation risks and undermining decades of nonproliferation efforts. While this could save American resources by shifting the deterrence burden, it would come at the cost of a core Trump administration objective: the reliability and ease of American unilateralism. The authors highlight two main tradeoffs: first, withdrawing extended deterrence increases the risk of allies pursuing their own nuclear deterrents and adversaries exploiting perceived vulnerabilities, potentially drawing the United States into conflict; second, if allies do proliferate, diminished U.S. influence over multiple new nuclear decision-makers could lead to less consultation with Washington and potentially a greater risk of nuclear crises.

Héloïse Fayet, Andrew Futter, Ulrich Kühn, Łukasz Kulesa, Paul van Hooft, and Kristin Ven Bruusgaard, "Forum: European Nuclear Deterrence and Donald Trump," *Survival* 67, no. 1 (2025), pp.123-142. https://www.tandfonline.com/doi/full/10.1080/00396338.2025.2459011.

> This discussion brings together authors from across Europe to reflect on the implications of the second Trump administration for U.S. extended deterrence policy in Europe. The Nordic perspective suggests that while the U.S. nuclear presence in Europe is likely to continue—serving to contain Russia's nuclear threat to America—there may be reductions in conventional forces. The Polish analysis expresses doubt that European efforts, even with Anglo-French cooperation, could fully replace the U.S. extended deterrent, and warns that an overt focus on European nuclear capabilities could distract from the urgent need to strengthen conventional forces. The Dutch article considers the credibility of an Anglo-French deterrent but stresses the need for broader European participation and joint exercises. Overall, the discussion reveals that under Trump, extended deterrence is still present but is perceived as less reliable, prompting European states to explore alternative arrangements and greater self-reliance.

James D.J. Brown, "What Will the U.S. Golden Dome Missile Defense Mean for Russia?" Carnegie Politika, (May 19, 2025). https://carnegieendowment.org/russia-eurasia/politika/2025/05/golden-dome-missile-russia?lang=en.

> Brown observes that the Golden Dome marks a fundamental shift in U.S. extended deterrence policy. Unlike previous missile defense systems, which were designed to counter limited strikes from rogue states or non-state actors, the Golden Dome aims to defend against large-scale attacks from peer or near-peer adversaries. Russia likely believes that it can overcome the Golden Dome but is unlikely to accept such a risk and instead will develop countermeasures through modernization of each leg of the triad and a "renewed emphasis on exotic weapons that promise to evade all conceivable missile defense systems," such as the *Burevestnik* nuclear-powered cruise missile and the *Poseidon* nuclear torpedo. Brown also notes that Russia may intensify its interest in anti-satellite nuclear weapons, which could threaten entire constellations of U.S. military satellites. Ultimately, he concludes that the Golden Dome will push Russia into a new arms race, forcing it to allocate even more resources to its strategic forces at a time when the country can least afford it.

Panel 3: Russia's Campaign Against the European Security Order: A Status Report

- What are President Putin's objectives?
- What are likely next steps in his campaign? What scenarios are plausible?
- How would he assess his prospects for success? Do we see it the same way?

"Panel 1: Putin's Russia and a World of "New Rules or No Rules," from Asmeret Asghedom et. al, Workshop *Summary: A New Axis? Bloc Rivalry and the Future of Conflict*, (Lawrence Livermore National Laboratory, Center for Global Security Research, February 2025).

https://cgsr.llnl.gov/sites/cgsr/files/2025-03/Axis%20Workshop%20Summary_Feb%202025_Final.pdf.

> Workshop participants identified a major objective of Putin as dismantling the post-Cold War U.S.-led security order: to contain the United States, divide it from its allies, and undermine the rules-based order established after World War II. In this effort, Russia is joined by Iran, China, and North Korea, though to varying degrees, with overlapping but not identical interests. This "axis" has shifted from more ad hoc cooperation to more substantive and sustained cooperation, though it is still significantly less institutionalized than that of NATO or other Western alignments. Their cooperation is most evident in the transfer of dual-use technologies, UAVs, and munitions from China, Iran, and North Korea to support Russia's war effort. Russia, in turn, has moved away from Soviet-style autarky, accepting strategic dependencies on these partners, who have a vested interest in ensuring that Russia does not fail in Ukraine.

Thomas Graham, "The Limits of Putin's Ambitions," Council on Foreign Relations (June 20, 2025). https://www.cfr.org/article/limits-putins-ambitions.

> Graham articulates three plausible motivations for Putin: the drive to expand control to enhance security, the desire to reclaim Russian state lands lost over time, and the ambition to reunite the three branches of the greater Russian nation. Putin has expressed support for each of these aims since the war began. The first two motivations suggest Russian aggression could extend well beyond Ukraine, while the third would focus primarily on Ukraine and Belarus. To address these possibilities, Graham suggests a four-pronged approach for the West: strengthen deterrence to stabilize the Russia-West frontier, including future ceasefire lines in Ukraine; increase domestic consolidation and resilience to mitigate Russian meddling; support the preservation of a sovereign Ukrainian nation-state; and initiate a dialogue with Russia about long-term coexistence. As Graham concludes, "coexistence with a nuclear-armed Russia remains a geopolitical imperative," and publicly acknowledging this reality "would have the added benefit of reassuring parts of the Russian political elite that there is a way forward."

Pavel Luzin and Evgeny Roshchin, "Russia's Strategy and Military Thinking: Evolving Discourse by 2025," Center for European Policy Analysis (CEPA) (April 24, 2025). https://cepa.org/comprehensive-reports/russias-strategy-and-military-thinking-evolving-discourse-by-2025/.

> Luzin and Roshchin categorize Russia's strategic and military elite as ideologues, public strategists, and practitioners. While there is a general recognition that "the current Russian armed forces are far from what they should be for modern warfare," each group is more responsive to Putin's preferences and views than to formal directive. Within the ideologue camp, hardline figures such as former president Medvedev and former FSB director Patrushev serve as "critical signals of Russia's ambitions and resolve." Public strategists are divided between those like Karaganov and Trenin, who advocate for a more proactive nuclear deterrence strategy, and others like Lukyanov and Timofeev, who emphasize the risks of misperception and warn against undermining the nuclear taboo. Practitioners assess that the strategic goal of the United States and NATO is the "elimination of Russia's statehood" and foresee a long-term struggle even after the battlefield in Ukraine quiets.

Seth G. Jones, "Russia's Shadow War Against the West," Center for Strategic and International Studies (CSIS) (March 18, 2025). https://www.csis.org/analysis/russias-shadow-war-against-west.

> Putin is unlikely to alter any of Moscow's fundamental goals: establishing a buffer zone in Eastern Europe, weakening NATO, and reducing U.S. influence on the continent. To achieve these objectives, Russia is increasingly relying on hybrid tactics such as sabotage, espionage, cyberattacks, and assassinations, with a sharp rise in attacks against Western targets—including transportation, government, critical infrastructure, and industry—as highlighted by CSIS data. This escalation has been marked by a shift toward using local recruits rather than professional agents, especially after the expulsion of hundreds of Russian operatives from the West. Looking ahead, Putin is likely to intensify and diversify these hybrid operations, with plausible scenarios including further escalation of sabotage and cyber activities, targeting new sectors, or adapting tactics in response to Western countermeasures. In light of these developments, Jones argues that the West should move beyond defensive strategies and adopt a calibrated offensive campaign to deter further Russian aggression in this ongoing "shadow war."

Jacek Durkalec, *Russian Net Assessment and the European Security Balance*, (Livermore, CA: Larence Livermore National Laboratory, 2024). https://cgsr.llnl.gov/sites/cgsr/files/pubs/2024-08/CGSR_Livermore_Paper_13_Russian-Net-Assessment.pdf.

> Durkalec argues, in a deeply researched paper comparing American and Russian concepts of strategic assessment, that the view in Moscow remains generally optimistic. Despite the unanticipated challenges the Russian military has faced in Ukraine, the belief that the West is in decline and a "polycentric world order" is emerging has not substantially changed since 2022. Russian strategic elites broadly believe they can succeed in setting conditions in peacetime for wartime advantage, gaining a decisive edge early in conflict, and managing escalation. Moscow's confidence is rooted not only in its capabilities but also in the belief that Western resolve is brittle and that time ultimately favors Russia. However, while Russian leaders remain confident in their prospects for success, Durkalec views this optimism as potentially misguided, noting that it is based on questionable assumptions about relative strength and the resilience of Western resolve. He concludes by warning that Russian leaders' confidence—however faulty their estimates of relative strength may be—is difficult for NATO to influence.

Panel 4: The Promise and Limits of Alternative European Nuclear Umbrellas

- What alternatives are in discussion?
- How plausible are they from deterrence and assurance perspectives?
- What new capabilities are needed?

Polina Sinovets and Adérito Vicente, *Europe's Nuclear Alternatives: A Time of Reckoning*, Istituto Affari Internazionali (IAI), IAI Papers (June 13, 2025). https://www.iai.it/sites/default/files/iaip2513.pdf.

> As Russia's nuclear brinkmanship grows and the United States shows signs of "strategic reorientation," this paper examines the uncertainty of the U.S. nuclear guarantee and Europe's alternatives. Options like extending French or British deterrence, creating a collective European force, or relying more on conventional and missile defenses all face major obstacles, including limited arsenals and lack of political consensus. To make alternatives credible, Europe would need nuclear modernization, stronger command structures, better missile defense, and greater political unity. The authors recommend enhancing European responsibility in nuclear deterrence—through dialogue, exploring a bigger French role, deepening Franco-British cooperation, and assessing a European Multilateral Nuclear Force—while reaffirming the U.S. guarantee and promoting European self-reliance. A more resilient European security architecture will require both practical investments and sustained political will.

Alexander Sorg, "Force de l'Europe: How Realistic is a French Nuclear Umbrella?" War on the Rocks (March 24, 2025). https://warontherocks.com/2025/03/force-de-leurope-how-realistic-is-a-french-nuclear-umbrella/.

> Sorg considers if France could extend its nuclear deterrent to other European countries, but notes France has traditionally insisted on sole control, despite some recent openness from French leaders. He outlines political, legal, and strategic obstacles, such as trust among allies and doubts about France's smaller arsenal but argues that concerns over a French nuclear umbrella may be overstated, as similar issues exist with the U.S. guarantee. Sorg suggests France could offer protection without giving up ultimate authority, perhaps through a consultation body or by joining NATO's Nuclear Planning Group (NPG). While some in Poland and Germany are considering independent nuclear options, Sorg concludes that a strengthened French deterrent could address the very concerns that fuel such "radical proposals", without destabilizing the nonproliferation order.

James Cameron, "Eurodeterrent: A Vision for an Anglo-French Nuclear Force," War on the Rocks (March 31, 2025). https://warontherocks.com/2025/03/eurodeterrent-a-vision-for-an-anglo-french-nuclear-force/.

> This article examines three options for European security: continued reliance on U.S. nuclear deterrence, nuclear proliferation among European states, or a joint Anglo-French "Eurodeterrent." The author argues that combining the nuclear capabilities of France and the UK is the most feasible and effective path, since new nuclear programs elsewhere would be costly, slow, and unlikely to provide credible deterrence. The article recommends developing air-delivered missile capabilities, increasing warhead numbers, and supplementing with advanced conventional precision-strike systems. It also highlights the need for a clear, unified Anglo-French nuclear policy, similar to the U.S. Nuclear Posture Review. Cameron's argument rests on the idea that a jointly managed Anglo-French deterrent, ideally as part of a negotiated shift in security responsibility from the United States to NATO allies, would help Europe respond to evolving security challenges and ensure long-term stability.

Marion Messmer and Julia Cournoyer, "France should join NATO's nuclear sharing arrangements to strengthen European deterrence," Chatham House (April 16, 2025).

https://www.chathamhouse.org/2025/03/france-should-join-natos-nuclear-sharing-arrangements-strengthen-european-deterrence.

> Recent rhetoric has suggested that the United States might lack the resolve to support Europe in a crisis; however, simply matching U.S. forward-deployed nuclear weapons is not feasible, and relocating French nuclear forces—such as nuclear-capable *Rafale* aircraft—to other countries would miss the point, as it does not address the core issue of strategic coordination and crisis decision-making. Developing new nuclear weapons in European countries would be destabilizing, so the pragmatic step, as articulated by Messmer and Cournoyer, is for France to join NATO's NPG and commit its nuclear weapons to the alliance's collective deterrence. Meanwhile, a more immediate and effective approach for non-nuclear European states would be to invest in conventional military capabilities, particularly long-range strike systems and air defense.

Panel 5: NATO's Russia Strategy: Beyond the Three No's?

- Does NATO have a Russia strategy? If so, what are its main elements?
- How much transatlantic consensus exists on this topic?
- How important are continued nuclear assurances to Russia?

Rebecca Patterson, *2025 - NATO's Future Russia Strategy*, NATO Parliamentary Assembly, Preliminary Draft General Report Defence and Security Committee (DSC) (April 28, 2025). https://www.nato-pa.int/download-file?filename=/sites/default/files/2025-04/013%20DSC%2025%20E%20-%20NATO%27S%20RUSSIA%20STRATEGY%20-%20PATTERSON%20REPORT.pdf.

> This preliminary report for the Defence and Security Committee (DSC) notes that NATO still lacks a comprehensive strategy for Russia. The report warns Allies not to underestimate Russia's military strength, emphasizing that reconstitution of Russian forces is a matter of when, not if, and that some Allied leaders believe Russia could attack NATO within three to five years. The report emphasizes that the next era of NATO-Russia relations must be a redefinition rather than a renunciation, recommending that NATO prioritize a forward defense posture and scrap the NATO-Russia Founding Act, while still upholding the "three no's," provided that the NPG and the three nuclear powers agree the Alliance can modernize and adapt its nuclear deterrent to the new strategic environment without expanding NATO's nuclear sharing program. This approach aims to clearly communicate that NATO does not seek escalation or direct conflict. The report also details how nuclear arms control could play a role in enhancing Allied security in a post-war context.

Ian Brzezinski and Ryan Arick, *Issue brief: A NATO strategy for countering Russia*, Atlantic Council (February 20, 2025). https://www.atlanticcouncil.org/wp-content/uploads/2025/02/A-NATO-strategy-for-countering-Russia.pdf.

> Brzezinski and Arick review Moscow's actions affecting Euro-Atlantic security and outline the enduring realities and objectives that should shape a strong NATO strategy against the Russian threat. They argue that NATO must move beyond ad hoc responses and adopt a

comprehensive, long-term approach that treats Moscow as a persistent threat rather than a temporary crisis. Their proposed strategy centers on four core objectives: defeating Russia in Ukraine, deterring Russian aggression, containing Russia's influence, and degrading its capabilities and resolve. The approach should emphasize deterrence, resilience, and Allied unity, while remaining open to dialogue if Russia's behavior changes. Key recommendations include updating NATO's nuclear posture, ending the NATO-Russia Founding Act (including the "three no's"), and reinforcing NATO's eastern flank. The authors stress the urgency of action, warning that Russia already sees itself at war with NATO and is determined to leverage its partners, especially China, Iran, and North Korea, to challenge the Alliance.

Kaspar Pucek and Bob Deen, "NATO's new Russia strategy requires a better understanding of the threat from Moscow (and how to counter it)," Clingendael, Netherlands Institute of International Relations (June 17, 2025). https://www.clingendael.org/publication/natos-new-russia-strategy-requires-better-understanding-threat-moscow-and-how-counter.

While there is broad consensus within NATO on needing to deter Russian aggression, this article articulates that NATO's current approach to Russia is too reactive and insufficiently informed by a nuanced understanding of Russia's strategic thinking, goals, and hybrid tactics. The authors recommend investing more in intelligence and dialogue to better anticipate Russian actions, and they warn against fueling an arms race that could provoke a Russian first strike. They call for a more proactive and comprehensive strategy that combines credible deterrence with renewed efforts at arms control and risk reduction, to negotiate from a position of strength, maintain alliance unity, and manage tensions with Russia.

Gregory Weaver, "The urgent imperative to maintain NATO's nuclear deterrence," *NATO Review* (September 29, 2023). https://www.nato.int/docu/review/articles/2023/09/29/the-urgent-imperative-to-maintain-natos-nuclear-deterrence/index.html.

Weaver argues that Russia's frequent nuclear rhetoric and ongoing modernization of its nuclear forces highlight the central role of nuclear weapons in its military strategy. Russia's poor conventional performance in Ukraine has further increased its reliance on nuclear capabilities. As a result, NATO must maintain an effective deterrent to address the heightened risks of Russia's nuclear dependence. Weaver contends that, to deter Russia from limited nuclear use, NATO needs credible nuclear capabilities and a Flexible Response strategy. This ensures that Russia cannot politically coerce NATO or gain a military advantage through limited nuclear escalation, making clear that such actions could lead to uncontrolled escalation and will not force NATO to accept Russian terms. Deterring Russian nuclear use against NATO will remain a critical priority, even after the war in Ukraine ends. Failure to deter or counter limited Russian theater nuclear use would increase the likelihood of both Russian conventional aggression and nuclear escalation against NATO, particularly in scenarios involving opportunistic aggression by Russia.

Panel 6: The Regional Nuclear Order Amidst Global Disorder

- How is the European nuclear order affected by developments in the international political system?
- What elements of the nuclear order are most consequential for European security?
- What should allies do to safeguard the existing regional nuclear order?

Gerlinde Niehus, *The Future of NATO: Demise, Reform, or Rebirth?* ed. Peter Hefele, Wilfried Martens Centre for European Studies (June 12, 2025). https://www.martenscentre.eu/wp-content/uploads/2025/06/The-Future-of-NATO.pdf.

> Niehus argues that the European security order is threatened by two distinct forces: first, the erosion of the U.S. commitment to NATO; second, by Russian aggression in Ukraine and beyond. If present trends continue and the United States withdraws its extended deterrence commitments, Europe could face a "nuclear trilemma," which would entail choosing between strategic vulnerability, proliferation, and reliance on a British-French deterrent. Niehus proposes three approaches to strengthen nuclear deterrence, which he identifies as the most important feature of the nuclear order: (1) enhancing the European Leadership group—comprising France, Germany, the UK, Poland, and potentially Italy and Spain; (2) reforming existing NATO and EU institutions, or establishing a "Western Defense Alliance" of willing states to provide mutual defense capabilities independent of the United States; and (3) developing additional European strategic and conventional capabilities, both by increasing defense funding and by exploring a British-French nuclear deterrent for the continent.

Davis Ellison, Samuel Zilincik, and Tim Sweijs, *From the Euronuke to a Nuclear Weapon Free Zone: Europe's Options in an Era of Eroding American Extended Deterrence*, Hague Centre for Strategic Studies (HCSS) (March 27, 2025). https://hcss.nl/wp-content/uploads/2025/03/From-the-Euronuke-to-a-Nuclear-Weapon-Free-Zone-HCSS-2025.pdf.

> This HCSS report argues that the collapse of arms control agreements, the transactional approach of the Trump era, and the rise of multipolarity have significantly undermined the credibility of American extended deterrence—which, the authors contend, was "already an incredible prospect." Multipolarity is a structural challenge to the nuclear order—one that would persist regardless of changes in American leadership. With more actors, threats, and alliance asymmetries, multipolarity increases the risks of misperceptions, prioritization dilemmas, and unstable assurance commitments. However, the authors argue that independent nuclear proliferation is "politically untenable, strategically dubious, and technically unviable." Such a move would require breaking with the nonproliferation regime and would likely deepen hostilities between Russia and Europe. Similarly, the idea of Europe as a nuclear weapons-free zone is deemed unfeasible, as it would expose the continent to the risk of Russian nuclear blackmail. Given these constraints, the authors advocate for exploring the concept of a "Euronuke," beginning with consultative mechanisms between Paris and Berlin. Simultaneously, Europe should participate in arms control forums, strengthen its conventional deep-strike capabilities, and consider the possibility of expanding nuclear sharing to include Poland.

Jacek Durkalec, "Counterforce at the Regional Level of War: A European Perspective," in Brad Roberts (ed.) *Counterforce in Contemporary U.S. Nuclear Policy,* (Livermore, CA: Lawrence

Livermore National Laboratory, May 2025), https://cgsr.llnl.gov/sites/cgsr/files/2025-05/2025-0529-CGSR-Occasional-Paper-Counterforce-In-Contemporary-US-Nuclear-Strategy.pdf.

> Durkalec calls for a regional counterforce strategy in Europe, which he defines as "a deterrence strategy that relies on holding at risk an adversary's non-strategic nuclear weapons and their associated delivery systems." This strategy would have several distinct features: first, it would rely on deterrence by denial rather than by punishment; second, it focuses exclusively on non-strategic nuclear weapons; third, it relies on non-nuclear capabilities. According to Durkalec, this strategy would offer Europe several advantages. It would create uncertainty among Russian leaders regarding the effectiveness of their non-strategic nuclear weapons for both use and coercion. It could also incentivize Moscow to participate in arms control dialogues. Furthermore, it would help prevent a situation in which Russia, feeling secure in its regional nuclear escalation dominance, miscalculates that it can gain strategic advantage by employing nuclear weapons against NATO.

Florence Gaub and Stefan Mair, "Europe's Bad Nuclear Options: And Why They May Be the Only Path to Security," *Foreign Affairs* (July/August 2025). https://www.foreignaffairs.com/europe/europes-bad-nuclear-options-gaub-mair.

> Gaub and Mair identify Russia's potential willingness to use nuclear weapons for coercion and blackmail—evident in "Putin's repeated nuclear threats against Ukraine and its European supporters"—as a critical vulnerability for Europe if American extended deterrence were to weaken. The three potential responses they consider are an extended Franco-British nuclear deterrent that covers other European nations, the creation of a pan-European nuclear force controlled by a European institution, and individual states acquiring their own nuclear weapons, each presenting significant tradeoffs. Because Britain and France lack tactical nuclear options, only "deterrence by punishment" is feasible, which may not be adequate against salami-slicing tactics. A pan-European deterrent, given the complexities of nuclear command, control, and communications (NC3), would "transfer an existential political decision to an entity with only indirect democratic legitimacy." Meanwhile, proliferation carries legal and political risks that, for now, are too great for European leaders to consider. The authors suggest that proliferation may first occur in East Asia, potentially prompting Europe to follow suit, but for now, the continent's best approach is to "prepare for all contingencies."

Panel 7: Asia's Potential Impact on Europe's Nuclear Future

- What impact might China's nuclear modernization have on Europe?
- Is North Korea a factor in Europe's nuclear security?
- How might a collapse of assurance in Northeast Asia affect assurance in Europe?

Alexander Mattelaer, "China's Nuclear Shadow Reaches Europe," Royal United Services Institute for Defence and Security Studies (RUSI) (October 8, 2024). https://www.rusi.org/explore-our-research/publications/commentary/chinas-nuclear-shadow-reaches-europe.

Mattelaer identifies three key effects of China's emergence as a nuclear peer competitor to the United States: it raises new questions about nuclear strategy and posture for the United States, France, and the UK; it complicates deterrence decision-making and signaling; and it puts renewed emphasis on theater-level, rather than strategic-level, nuclear deterrence. The intertwining of the Euro-Atlantic and Indo-Pacific theatres means that every posture change or deterrence signal in response to China's nuclear rise will prompt reassessments and responses by both allies and adversaries, fueling uncertainty rather than producing predictable nuclear equilibria. This dynamic leads to renewed focus on theater-level nuclear deterrence and the need for a regional nuclear posture that is more survivable, robust, and diversified than at present. Achieving this may require the introduction of a second theater-level weapons system, especially since many key capabilities needed to maintain extended deterrence in both Europe and Asia are currently in short supply.

Elizabeth Suh, "North Korea's Arms Policy as an Indirect Security Threat to Europe: How Pyongyang Expands its Partnerships with Moscow and Tehran," Stiftung Wissenschaft und Politik (SWP) Comment, No. 49 (October 2024). https://www.swp-berlin.org/publikation/north-koreas-arms-policy-as-an-indirect-security-threat-to-europe.

Suh argues that North Korea threatens Europe's nuclear security by enhancing Moscow's conventional and strategic capabilities, and by straining American extended deterrence through increased demands in the Indo-Pacific. Ongoing and significant cooperation between Pyongyang and Moscow in Ukraine also suggests the potential for future collaboration in nuclear technology, satellite technologies, and satellite launch vehicles. The fact that North Korea has exported its most modern short-range missiles to Moscow, rather than older stockpiles, indicates that it is likely accommodating Moscow's purchasing preferences. The emerging DPRK-Iran-Russia axis forms a supra-regional network that evades sanctions, strengthens anti-Western military capacity, and bypasses the institutions and norms that underpin European strategic stability.

Matthew Fuhrmann, "U.S. Allies and Adversaries are Attempting Nuclear Deterrence without Weapons – Will It Work?" War on the Rocks (April 7, 2025). https://warontherocks.com/2025/04/u-s-allies-and-adversaries-are-attempting-nuclear-deterrence-without-weapons-will-it-work/.

Fuhrmann argues that not only Iran, but also Poland and potentially other European states, are pursuing a strategy of "latent nuclear deterrence," where the threat of developing nuclear weapons and delivery systems—rather than relying on existing arsenals—serves deterrent and coercive purposes. U.S. allies are engaging in "deterrence by proliferation" to pressure the United States into more accommodating policies, but this requires balancing a credible ability to proliferate with a commitment to nonproliferation under certain conditions. While Poland currently lacks the necessary capabilities, Germany and the Netherlands are better positioned, and Japan is perhaps the best example among U.S. allies. However, if a future U.S. administration were to accept Japanese nuclearization, Fuhrmann contends that "deterrence by proliferation would completely lose its bite."

Linde Desmaele, "US Security Assurances and Nuclear Tripolarity," *Survival* 66, no. 2 (2024), pp. 143-156, https://doi.org/10.1080/00396338.2024.2332066.

Desmaele argues that U.S. extended deterrence and assurance are fundamentally linked across regions in a tripolar nuclear context. This is partly logistical, reflecting constraints on U.S. capabilities and policymaker bandwidth, and partly perceptual, as allies' perceptions of U.S. assurance may shift in response to changing commitments elsewhere. The tripolar context heightens old questions of assurance and entrapment, as "the United States must now synchronize its assurances to allies in both Europe and Asia." Unlike during the Cold War, when U.S. nuclear strategy could adapt to Soviet actions without neglecting entire regions, today "changes to the U.S. commitment in one region will have a more immediate opportunity cost for its commitment to another." In a tripolar context, the reason behind a collapse of assurance in Northeast Asia—whether reprioritization, retrenchment, or dysfunction—would be as significant as the collapse itself, since each sends different signals to the region.

Also see the following CGSR workshop summaries:

- Extended Deterrence in a Multipolar Nuclear World, March 2025.
- U.S. Extended Deterrence in Europe and in the Asia-Pacific: Similarities, Difference, and Interdependencies, January 2018.
- Thinking Globally about U.S. Extended Deterrence New Regional Challengers and Challenges, November 2015.

Panel 8: Toward Constructive Transatlantic Engagement and the 2026 NATO Summit

- What should allies do in the near term to assure extended nuclear deterrence?
- What new workstreams are needed, if any?
- What new capabilities are needed, if any?

Robert G. Bell, *Modernize, Expand or Complement? NATO's Nuclear Posture in the post-2022 Strategic Environment,* Centre for Security, Diplomacy and Strategy, March 2024, In-Depth-Paper-112024.pdf.

Bell argues that, in the near term, the most credible and politically sustainable way for allies to assure extended nuclear deterrence is to modernize NATO's existing Dual-Capable Aircraft (DCA) infrastructure. This includes upgrading B61 bombs, transitioning to F-35 platforms, and enhancing command-and-control systems. Bell notes that more dramatic steps—such as expanding DCA deployments eastward into countries like Poland or Finland or introducing new systems like the sea-launched cruise missile-nuclear (SLCM-N)—would be politically disruptive and strategically unnecessary. He concludes that sustaining assurance in Europe relies less on new deployments and more on reinforcing the credibility, cohesion, and survivability of NATO's current nuclear posture.

Tomáš A. Nagy, *From Assurance to Resilience: Adapting NATO's Nuclear Deterrence Policy*, (Bratislava, Slovakia: GLOBSEC Future Security and Defence Council, May 2025). https://www.globsec.org/sites/default/files/2025-06/From%20Assurance%20to%20Resilience%20-%20Adapting%20NATO%E2%80%99s%20Nuclear%20Deterrence%20Policy_0.pdf.

American extended deterrence remains the backbone of NATO's nuclear posture, but political uncertainty in the United States has raised doubts about its reliability, making deeper allied involvement and modernization essential. This report discusses several new workstreams and capabilities, including improving survivability, flexibility, and readiness, upgrading infrastructure and command and control, and better integrating advanced conventional forces. Stronger political-military ties, regular exercises, and clear communication are vital for reassurance and preventing misperceptions. The report recommends broadening participation in the nuclear mission, with countries operating or acquiring F-35s contributing through tiered roles such as training, technical integration, and crisis support, without requiring full nuclear responsibilities. NATO should also incorporate missile defense, precision strike, and space-enabled targeting as enablers of deterrence. Cross-domain planning will boost NATO's credibility, stability, and preparedness for limited-use scenarios.

Jeffrey H. Michaels, *Deterrence Warning Messages: A Short Guide for NATO*, Hague Centre for Strategic Studies (HCSS) (June 2025). https://hcss.nl/wp-content/uploads/2025/06/Deterrence-Warning-Messages-a-short-guide-for-NATO-HCSS-2025.pdf.

To assure extended nuclear deterrence in the near term, allies should prioritize strengthening NATO's deterrence posture by delivering clear, credible, and unified strategic communications, as emphasized by Michaels, through key actors such as the Secretary General, the North Atlantic Council, and the Public Diplomacy Division. New workstreams should focus on enhancing the effectiveness of deterrence warning messages by integrating strategic communications with timely intelligence-sharing and scenario-based planning, drawing on lessons from NATO's response to Russia's invasion of Ukraine. In terms of capabilities, NATO should invest in tools and processes that support rapid, coordinated messaging and enable the alliance to adapt its communications to evolving threats, including the use of strategic ambiguity where appropriate. Ultimately, as Michaels notes, the greatest challenge for policymakers is the reluctance to fully confront the consequences of deterrence failure, underscoring the need for a more rigorous and honest approach to risk assessment and decision-making within the alliance.

Scott Lee, Andrew Michta, Peter Jones, and Lisa Bembenick, *NATO 2027: European Leadership Will be Key to Deterrence against Russia*, The Atlantic Council, Issue Brief (June 2, 2025). https://www.atlanticcouncil.org/wp-content/uploads/2025/05/NATO-2027-European-leadership-will-be-key-to-deterrence-against-Russia.pdf.

To achieve overmatch against Russia by 2027 without overreliance on U.S. military power, this report urges NATO to prioritize operational integration, logistics, and joint force capabilities among European allies through increased defense spending, improved interoperability, investment in rapid deployment infrastructure, and regular joint exercises. These steps will enable European NATO members to respond more effectively to threats near the alliance's borders and reduce dependence on U.S. forces. The report also recommends enhancing nuclear deterrence by improving consultation, modernizing dual-capable assets, upgrading command and control systems, and maintaining readiness exercises. Additional priorities include developing a unified multidomain warfare doctrine, establishing pan-European logistics networks, forming specialized multidomain and cyber/influence task forces, and investing in advanced C2 and ISR infrastructure, integrated

air and missile defense, open system architectures, and military mobility to build a more capable and unified NATO by 2027.

William Alberque and Artur Kacprzyk, “More Pillars Needed: Ten Options for Europe to Improve NATO’s Nuclear Deterrence,” Stimson Center (October 2, 2024). https://www.stimson.org/2024/more-pillars-needed-nato-nuclear-deterrence/.

While NATO allies do not need to match Russian nuclear capabilities warhead for warhead and system for system, Alberque and Kacprzyk argue that allies could do much more to enhance nuclear deterrence. The authors recommend establishing new delivery systems, such as nuclear-capable ALCMs, and replacing or supplementing the B61-12 with nuclear-armed AGM-158B Joint Air-to-Surface Missile-Extended Range (JASSM-ER). They suggest that deploying nuclear-capable missiles on mobile launchers would further improve the survivability of NATO’s nuclear forces. Finally, NATO allies should provide SACEUR with enhanced conventional strike options, not just for conventional defense but also to support nuclear operations. Relevant capabilities include conventionally armed cruise missiles launched from air, ground, and sea, as well as longer-range artillery systems (such as the Precision Strike Missile for HIMARs), airpower, and specially trained covert penetration special operations forces.