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# From umbrella to arsenal: boosting Europe's nuclear deterrence

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## INTRODUCTION

Europe is entering its most dangerous decade since the Cold War. The post-Cold War peace has been shattered by Russia's full-scale invasion of Ukraine and an escalating campaign of hybrid aggression aimed at destabilising the continent. Military and intelligence leaders are sounding the alarm with growing urgency: within the next three to five years,[1] Russia could be in shape to launch a direct attack on a NATO member, plunging the Alliance into open war.

To prevent such a catastrophe, deterrence must remain the bedrock of Europe's defence strategy. In response to these threats, frontline states along NATO's eastern and northern flanks have begun unprecedented rearmament efforts. However, deterrence without a nuclear dimension is incomplete—and, in the face of a nuclear-armed adversary, potentially ineffective.

Nuclear deterrence has long been central to European security. During the Cold War, it was the US nuclear umbrella, combined with forward-deployed conventional forces, that held the Soviet threat in check. Today, however, cracks are emerging in the transatlantic bond, as the current US administration's mixed signals on NATO commitments have deepened European anxieties about the reliability of American security guarantees.

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Even more concerning, Russia has developed and deployed new intermediate-range nuclear missiles on NATO's doorstep, while intensifying its nuclear sabre-rattling through explicit threats and provocative rhetoric aimed at undermining allied resolve.

Against this backdrop, Europe must confront a pressing question: how can it strengthen its own nuclear arsenal to ensure a credible deterrent against Russia—with or without the backing of the US umbrella?

## RUSSIA'S EVOLVING NUCLEAR THREAT

Europe faces a threat that goes beyond Russia's sprawling war machine, which—though not the most technologically advanced—relies on a wartime economy capable of producing weapons and ammunition at a large scale.[2] Recent history, especially the war in Ukraine, has shown that Moscow is unafraid to use nuclear sabre-rattling to exert pressure on NATO allies. Although Moscow's nuclear threats did not prevent Ukraine's Western allies from eventually delivering main battle tanks, fighter jets, and long-range strike systems, they significantly delayed decision-making, particularly in Washington and Berlin, where the governments adopted a cautious approach.

Russia's posture stands in contrast to nuclear powers like the United States, France, and the United Kingdom, which treat their nuclear arsenals as weapons of last resort and refrain from issuing nuclear threats, even to achieve their geostrategic objectives. However, it must be acknowledged that NATO's deterrence posture, underpinned by the US nuclear arsenal, has successfully prevented Russia from "moving on one single inch of NATO territory", as US President Joe Biden stated in his speech in Warsaw in March 2022.[3]

Departing from the 1987 Intermediate-Range Nuclear Forces (INF) Treaty—which prohibited the United States and the Soviet Union from developing or possessing ground-launched ballistic and cruise missiles with ranges between 500 and 5,500 kilometres—Russia has moved to develop[4] the 9M729 cruise missile and the *Oreshnik* ballistic missile, both of which violate the treaty's range restrictions and are capable of carrying either conventional or nuclear warheads.

In November 2024, Russia revised its nuclear doctrine to authorize the use of nuclear weapons in retaliation against any non-nuclear state acting with the "participation or support of a nuclear state."[5] This change can be interpreted as a strategic warning aimed at deterring continued Western military support for Ukraine, particularly the provision of long-range weapons capable of striking Russian territory.[6]

To reinforce this message, Russian President Vladimir Putin has repeatedly issued nuclear threats against Ukraine's backers, underscoring Russia's vast nuclear arsenal and warning of a possible nuclear conflict.[7] These threats have not remained solely rhetorical. In a show of force following Ukraine's first US-authorized ATACMS strikes on targets inside Russia, Moscow launched an *Oreshnik* ballistic missile armed with a conventional warhead at the Ukrainian city of Dnipro, signalling its readiness to escalate.[8]

Continuing its strategy of nuclear intimidation, Russia announced it would deploy the *Oreshnik* missile system in Belarus by the end of 2025, complementing the already-deployed dual-capable Iskander-M missile in Kaliningrad.[9] The move followed a request from Belarussian President Alexander Lukashenko, who cited security concerns over NATO military activities in neighbouring Poland and Lithuania in December 2024.[10]

With *Oreshnik* missiles in Belarus and *Iskander* systems in Kaliningrad, Russia could hold at risk a broad arc of European capitals, from Berlin, Warsaw, and Stockholm to Vienna, Brussels, and potentially even Paris. This forward posture significantly enhances Moscow's ability to intimidate NATO allies through long-range strike capabilities capable of delivering both conventional and nuclear payloads (in addition to its strategic nuclear forces).

## DETERRENCE WITHOUT WASHINGTON

Besides American withdrawal from the INF treaty and the ongoing modernisation of the US B61 gravity bomb,[11] NATO's nuclear posture has remained largely unchanged. Even with the threat of escalating Russian nuclear rhetoric and potential deployment of new missile systems close to NATO's borders, the Alliance has done little for its own nuclear posture[12] beyond condemnation of these deployments.[13]

In response to the growing nuclear threat from Russia, Poland has repeatedly requested, albeit unofficially, to join the US nuclear sharing program, under which US B61 nuclear gravity bombs have been deployed in several allied countries.[14] Its requests, however, have so far been denied. Although US President Donald Trump has reaffirmed his commitment to Poland's security on several occasions, it remains unclear whether his administration will reconsider the US position on extending nuclear sharing arrangements to Warsaw. Given that no NATO member which joined the Alliance after the fall of the Berlin Wall has been included in the nuclear sharing programme, the continued uncertainty remains concerning.

Discussion around strengthening European nuclear capabilities should not be solely dictated by the hostility and unpredictability of the Trump administration. Even under a more transatlantic-friendly White House, a growing consensus was emerging within US defence and security policy circles that the United States could not sustain two full-scale wars in different theatres simultaneously.[15] As a result, many in Washington argue that both conventional and nuclear deterrence should increasingly prioritize maintaining the balance of power in the Indo-Pacific—leaving Europe as a secondary strategic priority.

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The American shift in focus toward the Indo-Pacific, coinciding with a revisionist Russia armed with a powerful conventional and nuclear arsenal, has revived the old nightmares of the Cold War era. Since the dawn of the nuclear age, European leaders have worked tirelessly to secure the extension of the US nuclear umbrella over Western Europe, recognizing that the British and French nuclear deterrents were primarily designed to serve national, rather than collective, defence interests.[16] Extending deterrence to Europe also served US interests, helping to prevent allied nuclear proliferation and ensuring that the Russian threat was confronted on European soil, rather than on the US homeland.

Should the United States withdraw or significantly scale back its commitment to European security—particularly its nuclear deterrence—Europe would, for the first time in the nuclear age, be forced to rely solely on the nuclear arsenals of Paris and London to deter the Russian threat. While the possibility of another European country, such as Poland or Sweden, pursuing their own nuclear deterrent cannot be entirely ruled out, such a move would starkly contradict the non-proliferation principles enshrined in the 1968 Nuclear Non-Proliferation Treaty, to which all NATO countries are signatories.

When considering the potential implications of US disengagement from Europe, it is important to recognize that forward deployment does not automatically confer credibility, just as credibility does not inherently depend on physical presence. A pertinent example is South Korea, which continues to benefit from the US nuclear umbrella despite the absence of US nuclear weapons on its territory. Ultimately, it is political will—not merely the positioning of assets—that underpins the credibility of deterrence and alliance commitments. In this light, US disengagement would not necessarily entail the physical withdrawal of nuclear or conventional forces from Europe, although that remains the most visible scenario. More likely, it could manifest as a political shift within the United States that is unfavourable to European interests, leading to a reduced willingness and interest in upholding Washington's security commitments to the continent.

## FILLING THE GAP: A EUROPEAN-LED NUCLEAR UMBRELLA

The idea of a more autonomous European nuclear deterrent is not new. It dates back to French General Charles de Gaulle who, amid the collapse of the French colonial empire and a desire to preserve France's global influence, developed a fully independent nuclear capability. Unlike the United Kingdom, which has relied on US missiles and technical support for its nuclear arsenal, France succeeded in developing a self-sufficient nuclear force.

Over the years, several French presidents have floated the notion of extending this deterrent to cover all of Europe. From Jacques Chirac's 1995 concept of a "concerted deterrence"[17] to Emmanuel Macron's March 2025 statement[18] offering to open discussions on broadening France's nuclear umbrella to European partners, the idea has periodically resurfaced in response to growing security concerns.

Macron's 2025 statement was met with a cautious optimism, notably from German Chancellor Friedrich Merz and Polish Prime Minister Donald Tusk. Macron spelled out the conditions of his offer in a television interview in May 2025, saying he was open to discussing the deployment of French nuclear-armed aircraft in allied European countries provided that "France would not finance it, it would not reduce what we currently have, and we would not share the power to make the final decision" on using such weapons. France would not pay for the security of others, but there could be national financial contributions or joint European financing, he said.[19]

Yet, despite France's declared willingness to assume a larger role as Europe's nuclear guarantor in the face of potential US disengagement, significant hurdles remain. France's arsenal consists of 290 warheads,[20] and its nuclear doctrine remains primarily, albeit not exclusively, focused on the protection of the French national territory—factors that complicate any broader European deterrence role.

France's commitment to an autonomous and independent nuclear deterrent has also meant that it does not participate in NATO's Nuclear Planning Group, which is underpinned by the US nuclear umbrella. The United States' nuclear doctrine affirms that "as long as nuclear weapons exist, the fundamental role of US nuclear weapons is to deter nuclear attack on the United States, our allies, and partners."[21] In contrast, France's nuclear posture is rooted in the principle of "strict sufficiency".[22] This is achieved by ensuring that its nuclear forces are capable of inflicting "absolutely unacceptable damage"[23] on an adversary's centres of power—defined as damage so severe that it outweighs any strategic advantage an enemy might gain by attacking France and its vital interests.

France's nuclear doctrine is also reflected in the relatively limited size of its arsenal and reliance on just two delivery systems. Its deterrent is built around two platforms: more than 60 M51 ballistic missiles deployed aboard four *Triomphant*-class nuclear-powered submarines;[24] and approximately 50 ASMP-A air-launched cruise missiles—soon to be replaced by ASN4G hypersonic nuclear missiles[25]—carried by Rafale B and Rafale M fighter jets.

Despite the United Kingdom's more expansive doctrine, which states that the UK would consider the use of nuclear weapons in "extreme circumstances of self-defence, including the defence of NATO allies",[26] the UK's nuclear deterrent remains relatively limited. It consists of approximately 225 warheads deployed exclusively on Trident II D5 submarine-launched ballistic missiles,[27] carried by four *Vanguard*-class submarines. The UK has no other nuclear delivery systems, relying solely on its sea-based deterrent.

In sum, the combined "European" nuclear arsenal, shared between France and the United Kingdom, amounts to roughly 600 warheads—a number that pales in comparison to Russia's estimated 4,380 nuclear warheads, as of 2025.[28] While not all of Russia's warheads are deployed, it remains the largest confirmed stockpile in the world. But the disparity goes beyond numbers. While the French and British arsenals are almost exclusively strategic, Russia possesses a broad spectrum of delivery systems, ranging in range and payload. This includes a vast array of so-called tactical or sub-strategic nuclear weapons, such as the already mentioned 9M729 cruise missile or *Oreshnik* ballistic missile, which provide Moscow with significantly greater flexibility in how and when it could use its nuclear forces.

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This asymmetry heightens the risk of nuclear coercion, enabling Russia to threaten or blackmail NATO members—particularly if France and the United Kingdom lack comparable capabilities or a credible, flexible response strategy. The lack of flexibility on the NATO side could also tempt Russia to consider resorting to a limited nuclear strike against a NATO member on the Alliance's eastern or northern flank as a means of deterring a collective military response. Given Moscow's aggressive and revisionist posture, this possibility cannot be entirely dismissed.

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## IMMEDIATE STEPS: LEVERAGING EXISTING CAPABILITIES

Since neither France nor the United Kingdom has yet signalled any significant changes to their strategic nuclear posture, this section focuses primarily on France's tactical (sub-strategic) air-launched forces, which offer greater flexibility for signalling, forward deployment, and cooperation with European partners. These more agile capabilities position France as the most likely candidate to take further steps toward a European-led nuclear posture.

To extend its nuclear deterrent to encompass broader European defence, France must begin with incremental but symbolically powerful steps—especially those that send clear signals to Moscow.

One such step is the geographic expansion of France's nuclear exercises to NATO's eastern and northern flanks, with active participation from European allies. A strong precedent was set during the Pegasus 2025 exercise in the High North, which featured French nuclear-capable Rafale jets operating alongside Swedish Gripens.[29] Similarly, Italy's involvement by contributing a refuelling aircraft to France's quarterly *Operation Poker* nuclear drills in 2022[30] illustrates the potential for allied cooperation.

On the institutional level, it is important that France pursue a structured dialogue on nuclear posture with its NATO allies. The most obvious option is for France to join NATO's Nuclear Planning Group (NPG), a move historically seen as controversial in Paris[31] due to concerns regarding the independence of France's nuclear arsenal. Alternatively, France, possibly alongside the United Kingdom and other interested allies, could establish a dedicated multilateral European forum for nuclear planning and information-sharing. However, the coexistence of two overlapping frameworks—NATO's Nuclear Planning Group (NPG) and a French-led bilateral or multilateral structure—risks creating duplication and policy inconsistencies that could undermine the coherence of NATO's overall nuclear planning. In this context, France's integration into the NPG may represent the most effective and strategically sound approach.

To reinforce its commitment, France could consider building storage facilities for its ASMP-A cruise missiles and future ASN4G hypersonic nuclear missiles on allied territory, such as in Sweden or Poland. While this would fall short of formal forward deployment, the creation of such infrastructure, combined with the training of local non-French personnel in loading procedures for Rafale jets, would send a strong deterrent signal. This would not only enhance symbolic reassurance for allies, but also give France greater flexibility to pre-position nuclear-capable Rafale aircraft, thereby expanding its options for nuclear signalling toward Moscow.

Furthermore, periodic drills and exercises involving the deployment of French aircraft and equipment, whether carrying dummy rounds or real weapons, on allied territory would deepen operational integration. These exercises could include practice runs for mounting weapons, aircraft take-offs, and dispersal procedures. Coupled with a regular rotation of French nuclear-capable aircraft through these sites, this approach would establish a credible and flexible deterrence posture that keeps Russia uncertain while avoiding the permanent stationing of nuclear weapons outside of France.

Since arrangements such as constructing storage facilities for nuclear missiles or training personnel would require substantial financial investment, host nations should be prepared to provide the necessary funding. Such a commitment would demonstrate the host country's long-term strategic alignment with France as a deploying state, as well as its willingness to share the financial burdens associated with extending the nuclear umbrella.

## THE NEXT BIG STEP: GROUND-BASED STRIKE CAPABILITIES

Effectively deterring Russia's vast and diverse nuclear arsenal without the United States will demand more than the current capabilities of France and the United Kingdom. To establish a credible deterrent, both nations will need to undertake significant modernisation and expansion of their nuclear forces. This includes not only increasing the number of warheads but also investing in the development and deployment of new, more flexible delivery systems.

While the air-launched cruise missiles remain backbone of France's airborne nuclear deterrent, mobile ground-launched cruise or ballistic missile systems would provide clear operational advantages to deter Russia's growing tactical arsenal. Mobile land-based missiles

can be launched rapidly from within defended territory, ensuring a prompt and reliable second-strike capability. Their mobility makes them harder to detect and neutralize, offering a persistent and resilient deterrent with proportionate, low-yield strike options.

Given the high cost, the development of ground-launched nuclear-capable missile systems would require significant investment from France and/or its allies. With Paris already dedicating roughly 15% of its annual defence budget to nuclear deterrence,[32] such capabilities (particularly the delivery vehicles) could be funded through strategic partnerships. The 2010 Lancaster House Treaties already provide a framework for bilateral cooperation with the United Kingdom in this domain and could be expanded to support joint development of a ground-launched ballistic or cruise missile.

France's role would be key as, aside from ArianeGroup, no other major European defence firm is able to produce ballistic missiles beyond short-range systems.[33] In the case of cruise missiles, MBDA already produces the Storm Shadow/SCALP missile operated by both the UK and France, as well as France's already mentioned nuclear tipped ASMP-A, and could also play a central role.

Alternatively, a broader European effort could be envisioned. The European Long-Range Strike Approach (ELSA), launched at the July 2024 NATO Summit by France, Germany, Italy, and Poland, and later joined by Sweden and the United Kingdom, aims to deliver a European-made long-range strike capability with a range of 1,000 to 2,000 kilometres.[34] However, as ELSA focuses on conventional strike systems, it remains unclear whether the platform designs under consideration could also be adapted for nuclear payloads. Participating states should consider incorporating requirements for potential nuclear compatibility as an additional pillar of the ELSA initiative.

## CONCLUSION

Without the United States, Europe's nuclear deterrent pales in comparison to the vast and varied arsenal that Moscow commands. Recent history has shown that, unlike NATO, Russia does not hesitate to use nuclear threats as instruments of coercion.

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While nuclear weapons alone do not guarantee deterrence, effective deterrence against a nuclear-armed adversary is impossible without credible nuclear capabilities of one's own. Yet, given the political and legal constraints, particularly those enshrined in the international non-proliferation regime, the creation of a unified European nuclear force remains unrealistic.

What is realistic, and urgently needed, is a strategic shift by France and the United Kingdom. Understandably, concerns may arise about how Russia would react to the deployment of new nuclear capabilities in Europe. However, it is important to remember that the Western response to Russian aggression—whether in Georgia in 2008, Crimea in 2014, or Ukraine in 2022—has consistently been reactive, measured, and far from escalatory. Russia has, in turn, interpreted these Western responses as weakness, and continued its aggression.

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The essence of Cold War nuclear diplomacy was not escalation management, but balance: responding in kind to preserve stability. With Russia having withdrawn from the INF Treaty, developed new intermediate-range nuclear missiles, and now preparing to deploy the *Oreshnik* system on NATO's doorstep, it is imperative that European allies respond adequately. Failure to do so, especially in the event of reduced US commitment, risks creating a dangerous nuclear asymmetry on the continent that Moscow will undoubtedly seek to exploit.

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