

NATO's nuclear deterrence: is it time for change?

Jakub Graca, Justyna Gotkowska

NATO is in the process of adjusting its nuclear deterrence in response to the modernisation of Russia's nuclear capabilities, the deployment of Russian tactical nuclear weapons near NATO's borders, and the Kremlin's increasingly aggressive rhetoric. However, the changes to NATO's nuclear strategy, capabilities (aside from the ongoing modernisation of the US, UK, and French strategic forces), and strategic communication have so far been limited.

Currently, there is no agreement on whether to further strengthen NATO's tactical nuclear potential in Europe by expanding the nuclear sharing programme to include additional allies or by deploying nuclear-capable land-based missile systems in Europe. Nevertheless, it will be necessary to adapt NATO's tactical nuclear potential further in the future as the US's nuclear capabilities will be most likely adjusted to the growing challenges posed not only by Russia but also China. This may spur a discussion on the European allies increasing their participation in nuclear sharing program and on strengthening the roles of France and the UK in nuclear deterrence in Europe.

The evolution of NATO's nuclear deterrence in Europe

During the early Cold War, in the face of Soviet superiority in terms of conventional capabilities, the Alliance made nuclear weapons a central element of its deterrence and defence doctrine. The first NATO strategy in 1949 envisioned ensuring "the ability to carry out strategic bombing promptly by all means possible with all types of weapons, without exception."¹ In the third strategy from 1957, the approach was refined by adopting the concept of 'massive retaliation'.²

In July 1953 Washington announced the deployment of tactical nuclear warheads in Europe. Their number quickly grew, and the systems of delivery (while maintained under US control) were varied, ranging from artillery shells to gravity bombs to short-range and ballistic missiles. By 1960 the US had signed bilateral agreements on nuclear weapons storage with Germany, Belgium, the Netherlands, the UK, Italy, Turkey, and Greece.

¹ The Strategic Concept for the Defence of the North Atlantic Area (D.C. 6/1), NATO, 1 December 1949, nato.int.

² Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area (MC 14/2), NATO, 23 May 1957, nato.int.



In the early 1960s, concerned about the development of nuclear weapons by some European countries (France conducted its first nuclear weapon test in 1960), Washington took a dual-track approach. It supported the development of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) at the UN and proposed the creation of a nuclear multinational force under the auspices of NATO. The latter never materialised, but bilateral arrangements between the US and the aforementioned European allies regarding nuclear sharing were formalised. Under this programme, the US stored nuclear warheads on their territories, and the European allies provided the systems of delivery. In 1966, the Nuclear Planning Group (NPG) was established, and this body still decides NATO's nuclear policy.³

As the Soviet Union achieved relative nuclear parity with the US, and as NATO's conventional capabilities were strengthened over

” **After the end of the Cold War, NATO decided to transition from the ‘flexible response’ doctrine to reduced reliance on nuclear weapons’ in 1991.**

time, the Alliance moved away from the concept of ‘massive retaliation’ and adopted the strategy of ‘flexible response’ in 1968.⁴ The late 1960s and early 1970s marked the peak of the US tactical nuclear presence in Europe (around 7300 warheads) and the beginning of the *détente* era in relations with the Soviet Union, resulting in arms control agreements between Washington and Moscow (including the 1987 INF Treaty on eliminating ballistic and cruise missiles, as well as missile launchers with ranges of 500 to 5500 km).

After the end of the Cold War, NATO decided to transition from the ‘flexible response’ doctrine to ‘reduced reliance on nuclear weapons’ in 1991. This led to significant reductions in US tactical nuclear forces in Europe, abandoning artillery shells and ground-launched short-range nuclear missiles, and ceasing the deployment of tactical nuclear weapons on surface vessels and attack submarines “in normal circumstances.”⁵ By 1993, the number of US nuclear warheads in Europe had dropped below 1000, and the next two decades saw further reductions in the number of warheads, storage sites, and allies actively participating in the nuclear sharing programme.⁶

The current state of NATO's nuclear deterrence

NATO's current nuclear policy is based on the 2012 Deterrence and Defence Posture Review (DDPR),⁷ the 2022 NATO Strategic Concept,⁸ and declarations from NATO summits post-2012. The DDPR states that nuclear weapons are a core component of NATO's overall capabilities for deterrence and defence, and they form part of an “appropriate mix” of capabilities alongside conventional ones including missile defence capabilities. The latest documents include two additional elements of the mix: space and cyber capabilities. NATO's current strategy for using nuclear weapons reflects the US doctrine of ambiguity, which does not specify the circumstances under which the US would be willing to employ nuclear weapons.⁹ NATO's documents state that the circumstances in which nuclear weapons might have to be used are extremely remote, and the current NATO nuclear force posture meets the criteria for an effective deterrence and defence posture.

NATO's nuclear potential includes strategic and tactical nuclear weapons. The former includes higher-yield nuclear warheads delivered by long-range missiles designed to hit strategic targets

³ NATO's nuclear deterrence policy and forces, NATO, 30 November 2023, nato.int.

⁴ *Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area (MC 14/3)*, NATO, 16 January 1968, nato.int.

⁵ Paragraphs 39 and 56, *The Alliance's New Strategic Concept (1991)*, NATO, 8 November 1991, nato.int.

⁶ S. Pifer, *NATO, Nuclear Weapons and Arms Control*, Brookings Institution, July 2011, brookings.edu.

⁷ *Deterrence and Defence Posture Review*, NATO, 20 May 2012, nato.int.

⁸ *NATO 2022 Strategic Concept*, NATO, 29 June 2022, nato.int.

⁹ *2022 National Defense Strategy of the United States of America*, 27 October 2022, media.defense.gov.

(cities, military bases, industrial compounds, etc.). The latter can be used primarily on the battlefield. The strategic nuclear forces in NATO are provided particularly by the US, and constitute the supreme guarantee of the security of the Alliance. This is complemented by US tactical nuclear weapons, which are deployed in six bases located on the territory of five European allies (Germany, Belgium, the Netherlands, Italy, and Turkey) under the nuclear sharing programme (see Map).

Currently, the US maintains around 100 gravity bombs in Europe, which are being modernised to a precision version with limited

” The adaptation of NATO’s nuclear policy began in 2014 as a consequence of Russia’s annexation of Crimea and its invasion of the Donbas.

guiding capability (B61–12). Under the nuclear sharing programme, the European allies provide so-called dual capable aircraft (DCA). Decisions on the use of nuclear weapons and doctrine are made by all NATO members (except France) within the NPG.¹⁰ Once a year, NATO conducts “Steadfast Noon” nuclear exercise in Europe. These involve US strategic bombers, European DCA aircraft, and fighter jets from other European NATO countries (including Poland) within the Conventional Support to Nuclear Operations (CSNO) strategy.

The nuclear forces of the UK and France complement the US’s nuclear potential and contribute to overall Alliance security, which was first recognised at the Ottawa summit in 1974.¹¹ NATO acknowledges that three separate decision-making centres contribute to deterrence by complicating the calculations of potential adversaries. While the UK assigned its nuclear forces to the defence of NATO as early as the early 1960s, France maintains a more ambiguous policy. As the only NATO member which does not participate in the NPG, its nuclear doctrine envisions the use of nuclear weapons for self-defence and the defence of Paris’s vital interests. The latter term is deliberately vague as it is up to the president of France to continuously assess threats and select a proper response measures case by case.¹²

Limited changes since 2014

The adaptation of NATO’s nuclear policy began in 2014 as a consequence of Russia’s annexation of Crimea and its invasion of the Donbas. The final communiqué from the 2016 Warsaw summit called out Russia’s irresponsible and aggressive nuclear rhetoric, and warned that any employment of nuclear weapons against NATO would fundamentally alter the nature of conflict. This narrative has been maintained in subsequent NATO documents. In parallel, the language used in the NATO Secretary General’s statements has become more assertive, and NATO has started to report its annual nuclear exercises and overflights by US strategic bombers in Europe. Additionally, efforts have been made to increase the combat readiness of DCA aircraft, and simulations and exercises involving decision-makers have been organised to familiarise them with nuclear issues.¹³

In parallel, the US, the UK and France have been modernising their nuclear forces both in terms of warheads and/or delivery systems. Additionally, under the nuclear sharing programme, the process of replacing the fourth-generation DCA aircraft (F-16s and Tornados) with fifth-generation F-35s is underway in Germany, the Netherlands, Belgium, and Italy (Turkey was excluded from the F-35 programme by the US).

An additional impetus for NATO to modify its post-Cold War approach to nuclear deterrence was Russia’s violation of the INF Treaty: specifically, Moscow’s development of 9M729 missiles with a range

¹⁰ *NATO’s Nuclear Sharing Arrangements*, NATO, February 2022, nato.int.

¹¹ *Declaration on Atlantic Relations (The Ottawa Declaration)*, NATO, 19 June 1974, nato.int.

¹² *Defence and National Security Strategic Review 2017*, ORBIS, espas.secure.europarl.europa.eu.

¹³ A. Kacprzyk, *NATO Nuclear Adaptation: Rationales for Expanding the Force Posture in Europe*, PISM, 23 November 2023, pism.pl.

of 2500 km for the Iskander ground-based missile system, and the deployment of the first modified Iskander-K launchers. This led to the US withdrawing from the INF Treaty in 2019 with NATO's support.¹⁴

Russia's full-scale invasion of Ukraine resulted in further changes. The 2022 Strategic Concept envisages that the Alliance will work to ensure "the greater integration and coherence of capabilities and activities across all domains and the spectrum of conflict" while reaffirming "the unique and distinct role of nuclear deterrence."¹⁵ The declaration from the 2023 Vilnius summit announced the continuation of modernising NATO's nuclear capability and updating planning to increase the flexibility and adaptability of the Alliance's nuclear forces.

Overall, however, the Alliance (and the US) has so far approached the fundamental changes in this area with caution and restraint. It recognises that allied unity and technological superiority in the conventional area over Russia, along with a slightly modified nuclear strategy, are sufficient for effective deterrence and defence. The unwillingness of some allies to take further steps in adapting NATO's nuclear posture has been related to anti-nuclear social movements and a reluctance to 'antagonise' Russia.

Discussions on expanding the nuclear sharing programme

The modernisation of Russia's nuclear forces, the expansion of their delivery systems, the deployment of tactical nuclear weapons in Belarus, the Russian nuclear exercises, as well as the threats of nuclear use against Ukraine and NATO member states, have initiated a broader discussion on the necessity of further changes in the Allies' nuclear strategy, capabilities, and strategic signalling. This particularly relates to the tactical nuclear arsenal in Europe, which was significantly reduced in the 1990s. The option most frequently raised involves including additional countries in the nuclear sharing programme: deploying US tactical nuclear weapons on their territory, and/or certifying the F-35s held by additional allies as DCA aircraft.

Deploying US tactical nuclear weapons on the territory of NATO countries on the north-eastern flank would be an additional

” Overall, however, the Alliance (and the US) has so far approached the fundamental changes in nuclear deterrence with caution and restraint.

demonstration of the will to defend the most threatened allies. One military argument against this might be the greater risk of their destruction in the first phases of a conflict by Russia. Regardless of whether such a decision is made or not, this NATO debate is significant. It relates to the NATO-Russia Founding Act of 1997, which is still formally valid. In this document, NATO committed itself not to deploy nuclear weapons and not to permanently station substantial combat forces on the territory of new members as part of the developing partnership with Russia (this was before the 'big' NATO enlargement of 1999).¹⁶

The chronic violation of the document's provisions by the Russian Federation, along with the full-scale invasion of Ukraine in 2022 did not lead to the document being completely revoked, but instead brought about a kind of unwritten compromise. The Act would apply in terms of nuclear restrictions, but not conventional ones. Based on this, NATO is increasing its conventional military presence on the eastern flank, including deploying a brigade in Lithuania and Latvia. However, the allies do not

¹⁴ *Statement by the North Atlantic Council on the Intermediate-Range Nuclear Forces Treaty*, NATO, 2 August 2019, nato.int.

¹⁵ See footnote 8.

¹⁶ *Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation signed in Paris, France*, NATO, 27 May 1997, nato.int.

want to discuss expanding the nuclear sharing programme to countries on the north-eastern flank of NATO, citing the provisions of the Act.¹⁷ In fact, the document should have been formally renounced long ago.

Due to the lack of consensus on this issue, a compromise solution for expanding the nuclear sharing programme has emerged in the

” **The prospects for developing a European nuclear deterrent or acquiring nuclear weapons on a national basis are currently unrealistic.**

allied debate. This could involve not so much deploying US tactical nuclear weapons on the territory of north-eastern flank NATO allies but certifying their F-35 aircraft to the role of DCAs. Nuclear missions would be carried out from existing European bases where US nuclear weapons are stored, i.e. Germany, Belgium, the Netherlands, Italy, or Turkey. Including additional F-35s from the ‘new’ allies would require bilateral agreements with the US, including certifying F-35 aircraft as DCAs, and reaching agreements with at least one of the aforementioned European allies regarding exercises, training, and transferring US nuclear weapons from their territory.

Additionally, Russia’s violation of the INF Treaty and its subsequent end have led to calls for deploying American or developing European ground-based dual-capable (conventional and nuclear) missile systems with ranges from 500 to 5500 km. The main argument in favour of this is that Russia is not only developing but also deploying such systems, including in Belarus. NATO meanwhile is solely reliant on DCA aircraft using gravity bombs, and lacks ground-based missile systems analogous to Russia’s. Moreover, the success of the NATO nuclear missions carried out by DCA aircraft requires the integration of various conventional capabilities such as electronic warfare, suppressing enemy air defences, reconnaissance, and aerial refuelling.

Alternatives: European or national nuclear deterrents?

Since autumn 2023, there have been renewed media discussions about creating a European nuclear deterrent independent of the US or developing national nuclear programmes for military purposes in case Donald Trump returns to power and the US withdraws from NATO. The need to take such actions at the national or European level has been dismissed by individual European governments. However, a public debate is taking place in those European NATO member states (including Germany and Poland) that do not have nuclear weapons, and fear a second Trump presidency or feel vulnerable to Russian nuclear blackmail and attacks.

The proposal for a European nuclear deterrent is being considered in two variants. In practice, this process would involve the ‘Europeanisation’ of French and/or British nuclear potential, either within the European Union (with French participation) or by creating separate multinational European structures (with both French and British participation). The challenges associated with this would be significant.

First, Paris views its nuclear potential in strictly national terms, while London closely cooperates with the US in developing its own. Second, reaching a compromise among about 30 countries and creating a mechanism that would ensure the credibility of European nuclear deterrence – in terms of strategy, sharing a nuclear arsenal, financing its maintenance and development, and ensuring its security – would be extremely difficult.

Third, the challenge would be to create a full nuclear triad by expanding the number of strategic & tactical nuclear warheads and their delivery systems. The UK only has Trident II submarine-launched ballistic missiles (SLBM) (about 225 warheads). Besides SLBM missiles, France has only cruise missiles

¹⁷ See the interview with the defence ministers of France and Germany: P. Carstens, M. Wiegel, „Es ist eine bahnbrechende Ausrüstung“, 24 April 2024, faz.net.

with nuclear warheads (ASMP) carried by French Rafale fighters (about 290 warheads in total). Furthermore, both Paris and London are much less credible in Moscow's eyes than Washington, which currently possesses the only proportional nuclear arsenal to Russia's.

Developing national nuclear programmes could theoretically be considered in the event of the end of NATO and of the US nuclear umbrella for Europe, and if the international nuclear arms control regime (the NPT Treaty) collapsed. This would most probably result in the proliferation of nuclear weapons worldwide. However, the development of nuclear weapons in Germany and Poland would still be limited by several factors. For Berlin, an additional barrier would be the Two plus Four Treaty of 1990, which enabled Germany's reunification under the condition of renunciation of the manufacture, possession and control of nuclear, biological, and chemical weapons. Berlin's withdrawal from its civilian nuclear programme and public opposition to nuclear weapons would not favour the acquisition of a German nuclear bomb.

In Poland's case, in such a hypothetical international situation, Polish society would probably be more inclined towards developing national nuclear capabilities. However, the lack of a civilian nuclear programme and the development of domestic missile technologies, as well as the risk of preventive strikes on nuclear installations from Russia, would call the development of a Polish military nuclear programme without strong US support into doubt.

Conclusions and forecasts

The prospects for developing a European nuclear deterrent or acquiring nuclear weapons on a national basis are currently unrealistic. Although the US increasingly prioritises containing China in the Indo-Pacific region, and Washington is pushing European countries harder to increase their conventional contributions to deterrence and defence, there are no discussions in the US on abandoning the extended nuclear deterrence in Europe. This would generate discussions about developing additional European capabilities that would undermine the nuclear arms control regime and have global consequences, which the US would not want to cause.

However, two possibilities for strengthening nuclear deterrence in Europe are emerging. The first one involves greater coordination on the part of France (and the United Kingdom) with NATO in this area. In 2024, President Emmanuel Macron again expressed a readiness to discuss the role of French nuclear deterrence in Europe. France is not ready to 'Europeanise' its potential in the decision-making and operational dimension, but one can imagine actions bolstering European security by synchronising French (and British) and NATO nuclear exercises and combining them with the Alliance's conventional manoeuvres.¹⁸

The discussion also includes proposals for France to join the NPG (although this is rather unlikely due to the resistance from Paris), moving the debate on NATO's nuclear strategy to the North Atlantic Council, or increasing consultations (outside the NPG) among the US, the UK, France, the countries participating in nuclear sharing, and the allies which provide conventional support for nuclear operations (including Poland). Moreover, all the European allies could increase their investments in conventional support for nuclear missions in electronic warfare, suppressing enemy air defences, reconnaissance, and aerial refuelling.

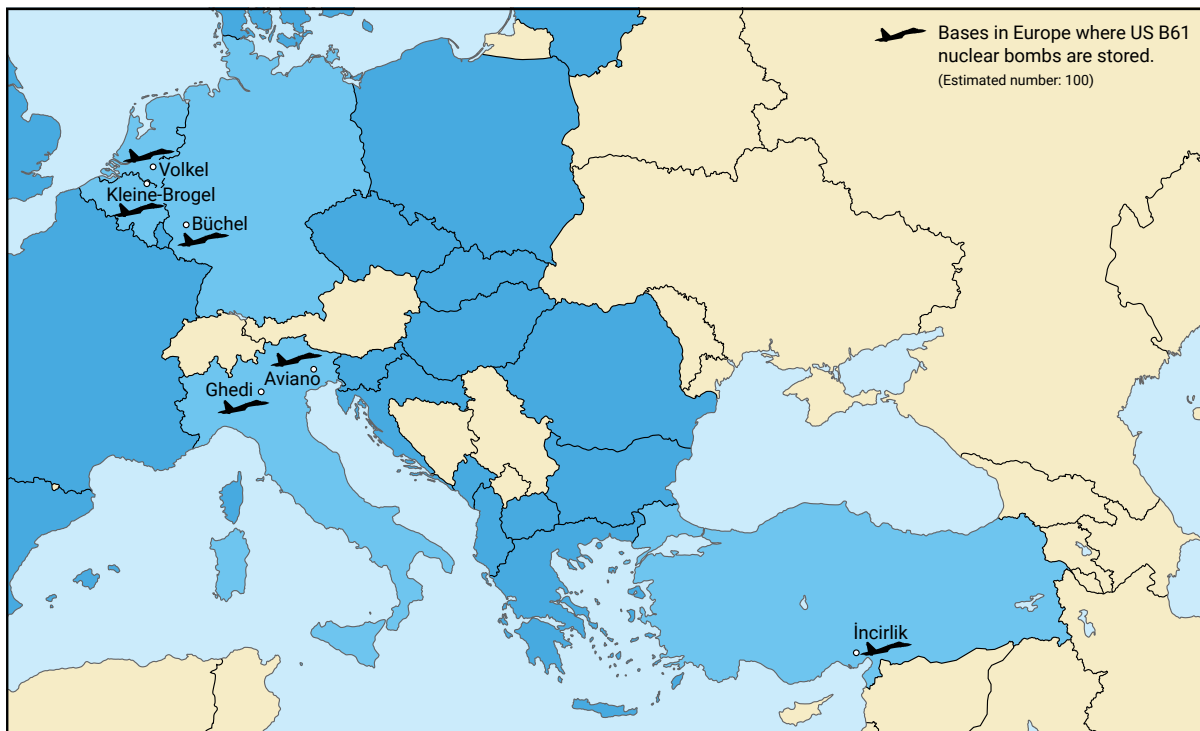
The second option is to begin significantly adapting NATO's nuclear capabilities in Europe to the changed security environment. The Alliance will need to adapt more effectively to the increasingly important role that nuclear weapons play in Russian doctrine and to the (currently declarative)

¹⁸ Ł. Maślanka, President Macron proposes a European defence initiative, 29 April 2024, osw.waw.pl.

lowering of the threshold for their use.¹⁹ Putin has openly suggested that Russia may employ nuclear weapons to defend the state's sovereignty and territorial integrity (including the Ukrainian territories it has illegally annexed), and not just in response to a nuclear attack and/or in a situation threatening the state's existence. Ongoing US discussions on adapting the country's strategic and tactical nuclear capabilities to growing challenges from both Russia and China may soon force Washington to reconsider its tactical nuclear posture in Europe, along with the European contribution to NATO's nuclear deterrence.²⁰ This could pave the way for expanding the nuclear sharing programme to the new allies in Europe (at least in terms of DCA aircraft). Sweden and/or Finland might be interested in some form of participation in this programme in the future, although at present these countries are not considering this publicly.²¹

The primary condition for further-reaching changes in the Alliance, however, involves increasing awareness and knowledge about nuclear deterrence among the political elites and societies in NATO European member states. At the same time, building up psychological resilience and adjusting strategic communication are as important as changes in the Allies' strategy and nuclear posture.

Map. US tactical nuclear weapons in Europe



Source: Center for Arms Control and Non-Proliferation, armscontrolcenter.org.

¹⁹ Пленарное заседание Петербургского международного экономического форума, 7 June 2024, kremlin.ru.

²⁰ *America's Strategic Posture. The Final Report of the Congressional Commission on the Strategic Posture of the United States*, October 2023, armedservices.house.gov.

²¹ K. Sörenson, *Tailoring Deterrence for the High North. Nuclear Consequences of Sweden's Accession to NATO*, IFRI, 26 March 2024, ifri.org.