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Understanding Russian strategic culture and the low-yield nuclear threat

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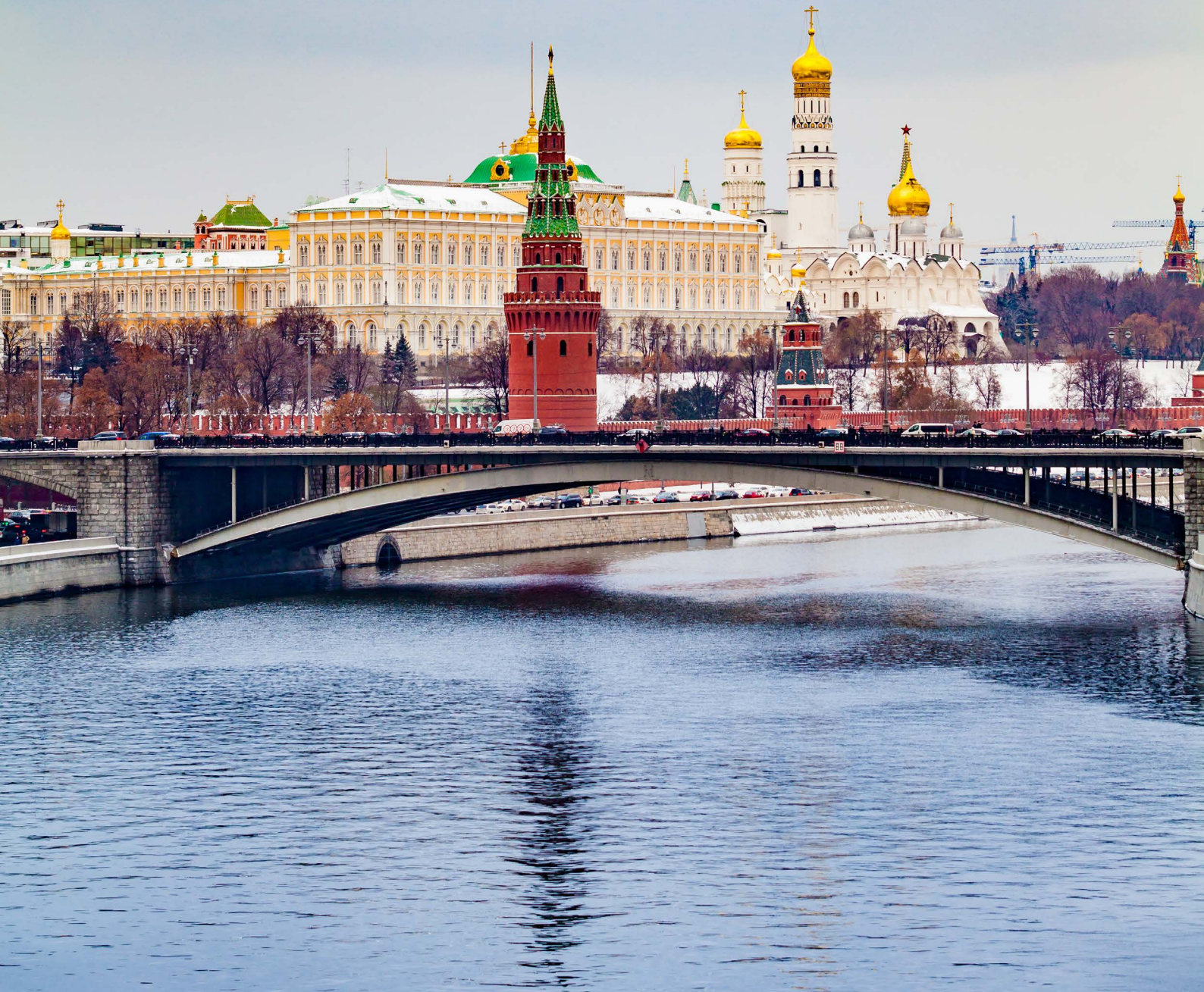

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Preface

The concept of strategic culture was formulated in 1977 by RAND Corporation's Jack Snyder, specifically with regards to nuclear strategy. Looking at the Soviet Union, Snyder stated that 'a set of general beliefs, attitudes, and behavioral patterns with regard to nuclear strategy [had] achieved a state of semipermanence that [placed] them on the level of "culture" rather than mere "policy".[1] More generally, strategic culture can be defined as a collection of shared beliefs, assumptions and behaviours – stemming from common experiences and accepted narratives, both oral and written – that shape collective identity and relationships with other groups, determining the appropriate ends, ways and means for achieving security objectives.[2] Similarly, deterrence is not a one-size-fits-all concept; it is shaped by specific cultural contexts and therefore varies across strategic communities. Cultural factors influence how a state formulates its deterrence and coercion strategy and explain differences in national approaches.[3] To fully grasp an actor's deterrence strategy, it is therefore necessary to understand how they perceive and analyse information through the lens of their strategic culture.

The strategic culture of modern Russia plays a significant role in shaping its military doctrines, including its nuclear strategy. Despite this, however, most Western analyses tend to mirror image Russian thinking or, conversely, demonise Russia and thereby fail to explore how it perceives its own deterrence balance or how Russian strategic culture influences its coercion theory and strategy.[4] By interpreting data through the lens of Western strategic theory, with little consideration for Russian strategic culture or the intellectual and military traditions that shape Russia's approach to military strategy, Western scholarship likely misses the logic and implications behind Russia's actions. As a result, Western observers too often lack an appropriate framework for analysing Russian strategic theory and its operational applications.[5]

This study examines how the strategic culture of Russia influences its nuclear weapons posture, particularly in relation to its non-strategic nuclear weapons (NSNWs) and whether the country favours NSNWs over advanced conventional capabilities. In addition, this study explores the influence of Russia's strategic culture on its nuclear signalling, as observed in the ongoing Ukraine conflict. By considering the underlying cultural and historical factors that drive Russia's nuclear posture, this report seeks to provide a nuanced understanding of the complexities involved.

This report was commissioned in November 2024 by the UK Ministry of Defence (MOD) via

1 Snyder (1977).

2 Johnson et al. (2009).

3 Adamsky (2025).

4 Adamsky (2025).

5 Adamsky (2025).

its recently established Nuclear Deterrence Fund, alongside several other RAND studies.[6]

The research presented here was conducted by a dedicated team at RAND Europe, the European arm of RAND, a nonprofit research institute with a mission to improve public policy and decision making through objective and rigorous research and analysis. With offices in the UK, Belgium and the Netherlands, RAND Europe is well-positioned to address the strategic concerns of European and global security. RAND has an almost 80-year history of contributing to the development of theories and strategies related to military and nuclear issues, including leading the development of game theory, deterrence theory and nuclear strategy.

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6 Three additional RAND Europe studies are forthcoming in 2025, focusing on: (1) NATO perceptions of Russian behaviours; (2) Russian perceptions of the UK and French deterrents; and (3) implications of the future information environment for the UK's nuclear strategy and decision making. These studies have been commissioned by the UK MOD and the Nuclear Deterrence Fund.

Summary

This study analyses Russian strategic culture and its influence on the country's nuclear posture, particularly regarding non-strategic nuclear weapons (NSNWs). Through an examination of the cultural, historical and ideological factors that shape Russia's strategic decision making, Russia's strategic culture and potential nuclear strategies are examined. This improved comprehension of Russia's strategic culture provides context for interpreting Russia's actions and intentions, especially concerning its nuclear posture and signalling – for example in the context of the ongoing war in Ukraine. Moreover, the study integrates insights into scenario planning, resulting in the strategic culture scenarios featured in the report. These consider not only geopolitical and military factors but also the strategic cultural mindset that influences Russia's behaviour. The scenarios illustrate how Russia might employ NSNWs and elucidate the rationale behind such decisions, including the strategic cultural underpinnings that could drive nuclear escalations. Additionally, perspectives from subject matter experts, obtained through interview, illuminate Western perceptions of Russian strategic culture and its implications for nuclear posture. Such insights aid in shaping informed strategic planning and risk mitigation strategies for NATO Allies such as nuclear-armed France, the UK and the US.

The study illustrates distinct ways in which Russian strategic culture significantly informs the country's reliance on nuclear weapons as a central element of its national security policy. This reliance is characterised by a focus on deterrence through the threat of first use and on managing escalation in regional conflicts, offsetting Russia's conventional weaknesses. Russia perceives itself as conventionally inferior to the US (and, to a lesser extent, other Allied militaries), particularly in the aerospace domain, influencing its nuclear posture. Acknowledging NATO's superior combined military capabilities, Russia views its nuclear arsenal as a necessary insurance policy against Western threats – primarily, the fear of an overwhelming aerospace attack. Nuclear weapons also function as a significant status symbol within Russia's strategic culture. They represent one of the few domains in which Russia regards itself as 'equal' to other major powers (including China) and, in the case of NSNWs, superior to the West. This perception enhances Russia's sense of security, reinforces its international standing, and serves to counterbalance NATO's military capabilities.

Russia's zero-sum worldview, in which it sees international relations as a battleground of absolute gains and losses, is part of its strategic culture, including its reliance on nuclear deterrence to counter perceived threats from NATO and other adversaries. Nevertheless, the role of nuclear weapons in Russia's strategy is dynamic, fluctuating based on threat perceptions and assessments of conventional military strength. While nuclear use is considered a last-resort option in response to existential threats, the threshold for such threats remains deliberately vague. Russian deterrence therefore hinges on strategic uncertainty, a trait shared with other nuclear powers, with changes to nuclear doctrine designed to preserve this ambiguity. More so than in Western countries, however, in the Russian

system of deterrence, conventional and nuclear capabilities complement each other, enhancing the Russian posture through interchangeable options. Whereas the Western approach to escalation is typically more linear and vertical, Russian thinking is contrastingly more horizontal and holistic. NSNWs remain integral to this system, with nuclear strikes retained as a worst-case option – but Russia's approach allows for a flexible and expansive stance, leveraging both conventional and nuclear capabilities to enhance overall coercion efforts.

It is recommended that NATO Allies should deepen their understanding of Russian strategic culture to anticipate actions and develop effective deterrence strategies. Monitoring of Russia's NSNWs, particularly regarding changes in national-level storage and deployments to base-level facilities, should be prioritised to ensure preparedness. Additionally, Allies should continue to prepare for further Russian strategic gestures and geopolitical uncertainty, conducting assessments to enhance deterrence against potential Russian attacks or nuclear deployment. Exercises based on potential Russian escalation pathways could improve coherence within the Alliance and thus help with coordinating appropriate responses. Given the centralised decision making in Russia and potential for Kremlin miscalculation, NATO countries should not dismiss Russia's nuclear signalling and must exercise prudent judgement regarding the limits of Russian strategic deterrence. Developing a contingency plan for a quicker response to Russian nuclear signalling is advised, with a more assertive stance reminding Russia of NATO Allies' nuclear capabilities.

Addressing the challenges posed by Russia's nuclear posture requires consideration of both nuclear and conventional advanced weapons capabilities. NATO and individual nations could examine credible conventional deterrence models, such as increased reliance on advanced conventional weapons and air policing missions using modern dual-capable aircraft (DCA). In the nuclear domain, France, the UK, the US and non-nuclear Allies could expand deliberations on the role and number of NSNWs in Europe to overcome gaps in the escalation ladder. Potential solutions include expanding NATO's nuclear sharing agreement, with NSNWs stationed in eastern Europe or the Baltic, or adding a sovereign air capability to the UK deterrent, while carefully analysing potential drawbacks and industrial capacity. This is particularly relevant for European NATO Allies, including not only nuclear-armed France and the UK, but also major non-nuclear players such as Germany or Poland, as the issue of Russian NSNWs is predominantly a concern in the European theatre of operations.

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Abbreviations

C2	Command and control
C3I	Command, control, communications and intelligence
DCA	Dual-capable aircraft
DDoS	Distributed denial of service
DNO	Defence Nuclear Organisation
EFP	Enhanced Forward Presence
EMP	Electromagnetic pulse
ICBM	Intercontinental ballistic missile
INF	Intermediate-Range Nuclear Forces Treaty
IMEMO	Institute of World Economy and International Relations
MOD	Ministry of Defence
NATO	North Atlantic Treaty Organization
NC3	Nuclear command, control and communications
NSNW	Non-strategic nuclear weapon
Kt	Kiloton
SLBM	Submarine-launched ballistic missile
SME	Subject matter expert
SODCIT	Strategic operations to destroy critically important targets
SORASA	Strategic Operation for Repelling Aero-Space Attack
START	Strategic Arms Reduction Treaty
TNT	Trinitrotoluene
WMD	Weapon of mass destruction
ZNPP	Zaporizhzhia Nuclear Power Plant

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Chapter 1. **Introduction**

This chapter introduces the context, scope, objectives and methodology of this study.

1.1. Context

This study's examination of Russia's strategic culture focuses on tactical or non-strategic nuclear weapons (NSNWs), as the balance of capabilities between NATO's three nuclear powers and Russia is most skewed in this area. NSNWs are compact nuclear warheads designed for use via delivery vehicles such as rockets and missiles, aerial bombs, torpedoes, or even artillery shells and demolition charges, and are intended for battlefield use (as opposed to strategic nuclear weapons, used on both military and non-military targets far from the battlefield). Typically, NSNWs have lower yields, ranging from around 0.3 to 50 kilotons (kt), although some can yield over 300 kt, the latter equating to an explosive force of 300,000 tonnes of conventional explosive TNT.[7] By comparison, the nuclear bomb that was dropped on Hiroshima during World War II had a yield of approximately 15 kt.

Russia has a distinct quantitative advantage in NSNWs, and understanding the lens through which the country considers using them is thus imperative. It currently possesses approximately 1,500 low-yield nuclear weapons of varying types; the US has around 200 weapons of this kind in total, of which about 100 are stationed in Europe as part of NATO's nuclear sharing arrangements.[8] The UK withdrew its own NSNWs in the late 1990s, leaving the strategic, submarine-launched Trident missile system as its sole nuclear capability; however, it announced in June 2025 that it would be joining NATO nuclear sharing arrangements and acquiring dual-capable F-35As to offer a NSNW option.[9] France retains approximately 50 of its own nuclear-armed, air-launched cruise missiles, although it does not consider them to be NSNWs as such, given their high yields and the strategic nature of France's deterrent. Furthermore, in keeping with French nuclear doctrine, France retains an independent arsenal; at present its nuclear weapons are not assigned to the defence of NATO, unlike the UK's nuclear arsenal, though the two European nuclear powers recently issued the Northwood Declaration signalling their intent to deepen coordination in the nuclear space.[10] The US nuclear weapons stationed in Europe are exclusively B61 aerial bombs. These are 'variable yield' weapons, adjustable between 0.3 and approximately 340 kt. When set to the lower end, they can function as low-yield nuclear weapons; however, at their maximum yield, they exceed the size typically associated with NSNWs and are more akin to strategic weapons.[11] Figure 1 below outlines the size of the NSNW and strategic nuclear weapon arsenals of the major nuclear powers as they pertain to the European theatre.

7 Kaszeta (2025).

8 Kristensen et al. (2024).

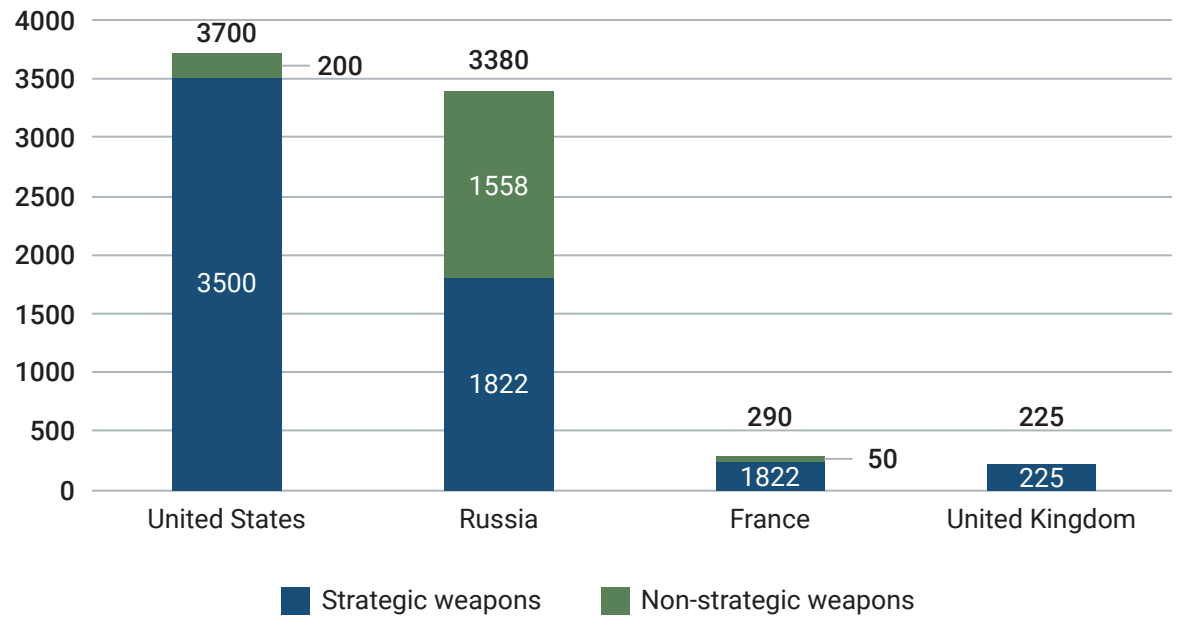
9 UK Government (2025a).

10 Ritchie & Walker (2024); UK Government (2025b).

11 Kaszeta (2025).

In contrast to Western thinking, Russian literature does not define NSNWs in terms of yield but is instead primarily focused on delivery platforms, such as non-strategic intercontinental ballistic missiles (ICBMs). This reflects a significant difference between Russian strategic culture and the Western notion of NSNWs as having lower yields.[12] However, for Western policy makers, factors beyond yield – such as delivery system, target selection, perceived effect on an adversary, and the broader political context – do factor in when defining NSNWs. Additional nuances exist; for example, when considering weapon numbers, the distinction between NSNWs and strategic nuclear weapons is often based on treaty definitions, such as those in the Strategic Arms Reduction Treaty (START) and the now collapsed Intermediate-Range Nuclear Forces Treaty (INF), rather than solely on yield. Nevertheless, the concept of yield as a key distinction between strategic and non-strategic nuclear weapons is more prominent in Western literature, as compared to Russian sources. Furthermore, the strategic imbalance of non-strategic nuclear capability in Europe raises significant concerns for France, the UK and other European NATO Allies, particularly regarding the measures required to deter Russian use of these weapons and in light of questions over reliance on the United States. This issue is exacerbated by existing gaps in the escalation ladder for the UK in particular, given its lack of sovereign NSNWs (notwithstanding the newly announced plans to join NATO nuclear sharing arrangements). The limited nature of nuclear sharing arrangements may similarly hinder effective deterrence and response strategies.

Figure 1. Size of the strategic and NSNW arsenals of NATO Allies and Russia



Source: RAND Europe analysis.[13]

12 RAND Europe interview, 19 March 2025.

13 Data sourced from Kristensen et al. (2023) and Kristensen et al. (2024a; 2024b; 2025). Defensive systems are grouped with non-strategic nuclear weapons. Submarine-launched ballistic missiles (SLBMs) are classified as strategic due to their fixed yield. The UK previously modified a small number of SLBM Trident warheads for lower yield, but specific figures are unavailable. Retired warheads awaiting dismantlement are excluded for all nations.

1.2. Research scope and objectives

This study addresses how Russian strategic culture (as defined in the preface) informs the country's non-strategic nuclear posture, and whether there is a preferential emphasis on NSNW capabilities over advanced conventional weapons. Additionally, the study analyses Russia's nuclear signalling, particularly as observed during its ongoing war of aggression in Ukraine. By dissecting the strategic cultural influences on Russia's nuclear posture, the study aims to enable NATO Allies' governments, militaries and analyst communities to better understand Russian actions and mitigate the risks associated with nuclear escalation – especially regarding NSNW capabilities, in which Russia holds a clear numerical advantage.

1.3. Methodology

To analyse the influence of Russia's strategic culture on its low-yield nuclear weapons posture, the research team undertook the following steps:

Narrative literature review. The study conducted a review of relevant literature from 2014 to the present by both Russian and Western scholars written in English. The analysis evaluated Russia's strategic stance, official declarations and media coverage, with emphasis on cultural and historical factors that have shaped Russia's nuclear strategy and signalling. This provided a foundational understanding of the narratives and beliefs that underpin modern Russia's emphasis on NSNWs.

Development of strategic culture scenarios. The research team developed hypothetical scenarios to illustrate potential Russian use of NSNWs or other forms of radiological warfare, grounded in the cultural and historical insights identified in the literature review. The scenarios were designed to clarify the circumstances under which Russia might contemplate employing such weapons, and to examine the strategic cultural factors influencing its decisions. The conceptual foundation for these scenarios was Russia's holistic and horizontal approach to deterrence. Using a thematic analysis of the literature, the team produced an initial longlist of seven possible scenarios (see Appendix B), which were subsequently refined for inclusion in this report.

Expert interviews. The research team then engaged in semi-structured interviews with subject matter experts to gather responses to the scenarios (see Annex A for a list of interviewees). Interviews focused on capturing how experts perceive Russian strategic culture and its impact on nuclear posture.

Assessment of implications for NATO Allies. Finally, the research team assessed the implications of the perceptions identified in the interviews for the strategic planning and crisis management efforts of NATO Allies and for the UK MOD as the study's sponsor. This assessment was intended to inform the evolving understanding of Russian strategic thinking to allow Allied governments to more effectively respond to and manage potential nuclear escalation scenarios involving Russia.

The findings presented in this report – undertaken within a short time frame – are not intended as definitive, but rather as the basis for further research and discussion. The report begins with an overview of the key features of Russia's strategic culture (Chapter 2), before moving on to the impact of Russia's strategic culture on its NSNW posture (Chapter 3) and the scenario analysis (Chapter 4), and concludes with a section covering implications for NATO Allies (Chapter 5).

Chapter 2. **Russian strategic culture**

This chapter offers an analysis of the key features of Russia's strategic culture and aims to provide the foundational context necessary for understanding Russia's potential actions and decisions with regards to its nuclear posture, including NSNWs. In previous work for the UK government, RAND has analysed the essential facets of Russian strategic culture and mapped them against different dimensions, as illustrated in Table 1.

The purpose of this chapter is to build on the above analysis and unpick the web of historical, cultural and ideological factors that shape Russia's strategic outlook and influence its military and political strategies. Drawing from a review of relevant literature, both Russian and Western, this chapter delves into the narratives and beliefs that underpin Russia's strategic thinking. By examining historical experiences, leadership dynamics and prevailing geopolitical perceptions, the analysis aims to illuminate the core elements defining this strategic culture. This chapter lays the groundwork for understanding how these elements might manifest in practical decision making, particularly concerning the potential use of NSNWs as discussed in Chapter 3 and in the scenarios covered in Chapter 4.

Table 1. Themes identified in Russian strategic culture

Category	Russia
Religious belief system	Orthodoxy and messianism
Political system	Autocracy, lack of rule of law, centralisation
View of history	Strategic consistency throughout history
Approach to international relations	Russia is under threat from the West and within; Russia has a regional sphere of influence; zero-sum approach
Way of war	Force is the foundation of strategic interaction; emphasis on distortion / deception / asymmetry
Approach to development	Catch up with the West

Source: RAND Europe analysis.

2.1. Key characteristics of Russian strategic culture

2.1.1. Territorial anxieties and 'besieged fortress' mentality

History plays a central role in shaping Russian strategic culture.[14] Russian political elites often draw parallels between past events and current circumstances, utilising historical narratives to justify strategic claims. For instance, Russian anxiety regarding its territory and an inability to defend its own borders can be traced back to historical experiences, ranging from the Mongol invasions in the 13th century to Nazi Germany's Operation Barbarossa in World War II and, most recently, the Ukrainian incursion into Kursk Oblast in 2024 as a consequence of the full-scale Russian invasion of Ukraine. Such events have ingrained a deep-seated concern for territorial security within Russian strategic thinking, whether justified or not.[15]

Russia perceives the West, in particular, as the principal threat in terms of foreign invasion.[16] This perception is rooted in the historical difficulty of defending Russia's western border and a deep-seated sense of vulnerability and military inferiority. Consequently, Russia believes it must always be prepared for an attack and employ all available means to secure its position. At the core of this perception is a fear that the West is undermining Russia's survival, or at least that of the regime, by encroaching upon the country's sphere of influence. This belief contributes to a siege mentality, also referred to as the 'besieged fortress' among the leadership.[17] This reflects a broadly held anxiety in Russia regarding its status and a perceived victimisation by the West. Any opposition against Russia, or its regime, is consequently viewed as Western interference. In the mindset of Russia's elite, it is considered unacceptable that Ukraine, Belarus or any other state formerly of the Russian Empire seeks a system modelled after the West. Such an outcome would mean that Russia has failed as a regional hegemon.[18]

This sense of vulnerability and siege mentality among Russia's elite is largely attributed to NATO and the enlargement of the Alliance, particularly into the territories of the former Soviet Union in the Baltics and eastern Europe.[19] Russia views this as expansionism and a direct threat to its security.[20] Indeed, 'containing' NATO is part of the justification for Russia's nuclear rhetoric.[21] The belief that Russia has faced, and continues to face, constant threats is a fundamental aspect of Russian strategic culture.[22] The notion that Russia is perpetually engaged in a struggle for survival is deeply ingrained in the national psyche, a mindset forged through centuries of conflict and a pervasive fear of being unprepared. This is further intensified by the immense disparity in losses suffered by the

14 Becker (1993); Barnes (2015).
15 Becker (1993).
16 Kanet & Moulioukova (2021).
17 van Hooft & Ellison (2023).
18 Berzins (2023).
19 Berzins (2023).
20 Woolf (2019).
21 Trenin et al. (2024).
22 German (2020).

Soviet Union during World War II compared to countries such as the UK or the US, with the collective trauma of the staggering losses continuing to influence Russian strategic thinking and cultural identity. Furthermore, Russia's culture of war prioritises morale and psychological factors over material considerations. In essence, according to this view, victories are achieved through the spiritual and psychological resilience of Russian servicemen and their superior ability to endure hardship.[23] As a result, Russian military doctrine emphasises the threat of subversion, framing confrontation as a constant state of existence.[24]

In the Russian perception, the West has actively fostered Colour Revolutions across the former Soviet Union over the past three decades, notably in Ukraine and Georgia. Russia frequently characterises its confrontation with the West as a 'civilisational contest', seeing it as an effort to alter the Russian cultural code.[25] Foreign influence is seen as an attempt to undermine the value system of Russia's elite, with the goal being to manipulate the mentality of the population and impose false national interests. Such subversive efforts, they believe, would compel Russia to voluntarily make ideological concessions, resulting in geopolitical, military and economic submission to the West.[26] This view is compounded by the Russian perception of the Western interventions in Iraq and Libya in 2003 and 2011 respectively, where the West, seemingly without an international legal mandate, deposed Saddam Hussein and Muammar Gaddafi. These interventions showcased the West's superiority in air, space and precision strike capabilities, with decapitation strikes swiftly dismantling the Soviet-equipped Iraqi and Libyan militaries. Such demonstrations of military prowess, dating back to the First Gulf War of 1991, have alarmed the Russian leadership, highlighting vulnerabilities in their own defence postures and underscoring Russian technological inferiority compared to the US.[27] As long as these deficiencies in Russian strategic capabilities persist (including problems with C2 and an insufficient conventional arsenal), the Russian military will continue to fear aerospace attacks.[28]

2.1.2. Zero-sum worldview and great power status

In the realm of international relations, Russia frequently perceives interactions as a zero-sum game.[29] Any gain by an adversarial external power is viewed as a loss for Russia, prompting the Russian state to employ a wide variety of means to achieve its objectives. However, it remains unclear whether the reverse holds true – whether a Russian victory necessarily equates to a loss for Moscow's adversaries, such as the West. This ambiguity may represent a potential vulnerability for Russia. In addition, Russia is grappling with the challenge of maintaining its great power status while attempting to catch up with the

23 Adamsky (2025).
24 German (2020).
25 Adamsky (2024).
26 Adamsky (2024).
27 Reach (2023).
28 Adamsky (2021).
29 Kerrane (2022).

West technologically and economically.[30] This struggle to compete drives the Russian state to reassert its influence over former Soviet states or satellites, as projecting power in such regions is considered a fundamental aspect of Russia's great power status, alongside the ability to challenge US hegemony.

The fear of a loss of status and of influence has often been used by Russia as a justification for actions – often characterised by the leadership as 'defensive' – that contradict international norms as understood in the West.[31] For instance, the Kremlin viewed its military operations in Georgia in 2008 and in Ukraine in 2014 and 2022 as defensive measures.[32] This also underscores Russia's zero-sum approach to international relations, the harsh logic being that if Russia cannot achieve its objectives in regions such as Georgia, then no other power should be permitted to succeed there either. In this context, preventing the loss of influence in its near abroad could be perceived as a victory for Russia. Additionally, Russian doctrine incorporates offensive and defensive measures within a concept known as 'active defence'.[33] This approach avoids a clear distinction between offensive and defensive operations, as opposed to the more linear approach to escalation adopted by the West. 'Active defence' encompasses pre-emptive measures designed to deter conflict, as well as wartime operations aimed at denying an opponent a decisive victory early in a conflict by degrading and disorganising their forces. Offensive actions are also framed as defensive measures to pre-emptively counter perceived threats.[34]

To external observers, however, such 'defensive' actions by Russia appear unreservedly aggressive. Ensuring that signals are absorbed and interpreted as intended is a critical yet often overlooked aspect of deterrence efforts and scholarship. There is a significant discrepancy between Moscow's reputation in the West and the Kremlin's self-perception – and vice versa. This is demonstrated primarily by the West's view that NATO enlargement has brought stability to Central and Eastern Europe, with Russia misunderstanding such developments as unequivocally aggressive actions.[35] While most Western strategists view Russia as an aggressive revisionist power, the Kremlin sees itself as signalling from the position of a defensive, status quo power. One contributing factor to the West's 'confusion' may be the insufficient attention that Russian strategists have paid to the communication of signals. In many ways, Russia appears to have assumed that the West would naturally understand its coercive signalling, even though the context in which the signals are sent is often unclear to Western observers.[36] It remains uncertain to what extent the evaluation of effectiveness has been institutionalised within Russian deterrence operations. Assessment of coercion efforts appears more intuitive than systematic, undermining the clarity and impact of Russia's signalling.[37]

30 Borozna (2022).

31 Götz & Staun (2022).

32 Götz & Staun (2022); Osflaten (2020).

33 Kofman et al. (2021).

34 Kofman et al. (2021).

35 Adamsky (2024).

36 Adamsky (2024).

37 Adamsky (2024).

Russian strategic culture also exhibits a degree of flexibility by employing narratives based on convenience. For example, pan-Slavic narratives have been used to justify the invasion of Ukraine, while Eurasian narratives have been employed to rationalise Russia's strategic pivot towards Asia, as seen in its partnerships with China and North Korea.[38] This adaptability allows Russian leaders to interpret historical events and themes in ways that support their strategic decisions, ensuring that historical narratives remain relevant to their contemporary geopolitical objectives. Nevertheless, the Russian leadership's underlying siege mentality continues to fundamentally shape its strategic interactions. There is a perceived necessity to ally with convenient likeminded authoritarian regimes, such as China, to counter what Russia views as a US-led unipolar world order. Creating a multipolar world where Russia is a geopolitical centre with influence in its near abroad is critical for the Russian leadership.[39] Building strong bonds with nations such as China, North Korea and Iran to push back against US dominance on the global stage is a traditional Russian 'balancing' behaviour – but through the 'besieged fortress' mentality and employment of flexible narratives this behaviour is also driven by Russia's strategic culture.

There are several elements of Russian strategic culture that are different – sometimes subtly so – from other nuclear-armed states, with implications for both the nuclear and non-nuclear elements of strategic culture. Firstly, since the imperial era, Russian political elites have held a belief in *derzhavnost*, the notion of Russia as a great power.[40] This in itself is not unique to Russia – it is common to former imperial powers such as the UK and France, as well as to the US as a current superpower. However, the Russian quest for great power status differs in that it is existential – for Russia, great power status is a condition for survival given its perceived vulnerability and history of invasions. Consequently, Russian strategic culture is built on the self-perception that the country is a great power by fact, right and necessity.

Russian society has further institutionalised militarism (as well as martial-influenced conceptions of Russian manhood) and glorifies power.[41] President Putin, a former KGB officer, has established a government largely dominated by a cadre of security officials (*siloviki*) who were trained during the Soviet era. These *siloviki* are tasked with restoring Russia's international power.[42] Furthermore, as former KGB officers or individuals who lived through the chaos and humiliations of the 1990s following the collapse of the Soviet Union, many feel betrayed by what they see as broken promises regarding Russia's reintegration into the Western liberal international order, among other grievances. Many of the *siloviki* regard the collapse of the Soviet Union as having led to widespread corruption and poverty, which, in turn, have undermined Russia's standing and reputation on the global stage. Militarism, and by extension nuclear weapons, are thus seen a key part of Russia's strategic culture – with the armed forces viewed as central to the objective of Russia regaining its global standing.

38 Nieman (2016); Borozna (2016).

39 Berzins (2023).

40 Busygina (2023); Götz & Staun (2022); Neumann (2008); Tsygankov (2008).

41 Kerrane (2022); Herd (2022).

42 Herd (2022).

2.1.3. Centralisation of power and leadership dynamics

Russian strategic decision making is characterised by a high degree of centralisation and reliance on a relatively unconstrained executive.[43] Again, this aspect is not unique to Russia's strategic culture as most nuclear powers, such as France and the US, are also highly centralised with regards to their nuclear postures. Historically, Russia has favoured strong leaders capable of imposing order across its vast territory and varied peoples and local jurisdictions, and today such leaders can utilise the military and other state resources to achieve their goals with minimal opposition.[44] A strong leader is seen as a personification of the power of the Russian state and is part of an autocratic tradition where power is concentrated in an individual; as encapsulated in the contemporary saying 'if there is Putin, there is Russia; if there is no Putin, there is no Russia'.[45] This tradition of equating leaders to the state itself can be traced back to the tsars.[46]

With regards to Russian centralisation, in the current context President Putin is the most pivotal actor. His dominant role in Russia's military-political systems means that he holds ultimate control over military doctrine and key organisations.[47] Indeed, Putin frequently establishes parallel, competing organisations to ensure that no single entity becomes strong enough to challenge him, and to provide him with alternative power bases to isolate potential challengers. This dynamic is further intensified by the fact that, unlike during the Cold War when Soviet leaders governed with the backing of the Politburo, contemporary Russia is far more dependent on a single individual – namely Putin. Crucially, the emphasis on strong centralised leaders in the Russian military means that its strategic culture is driven by its top leaders, who may misinterpret cues, react to perceived provocations, or take pre-emptive actions if they judge conflict to be unavoidable.[48] Russian leaders are frequently told what they want to hear in intelligence briefings, with little to no debate about decisions.[49]

This centralisation stems from the fact that the Russian military, historically reliant on conscription, draws from a diverse population across the Russian Federation, including many individuals who are not well-educated or do not speak Russian fluently. This diversity has led to a general lack of trust in the competence and political reliability of lower echelons of the armed forces. Consequently, there is a strong desire to centralise authority at the top levels of the military and manage operations from higher echelons. This contrasts sharply with NATO militaries, which embrace the concept of 'mission command' that advocates delegating authority as far down the chain of command as possible (with the exception of nuclear responsibility outside of specific crisis conditions) and trusting subordinates to solve problems independently rather than deferring upwards.

43 Barabashev & Semenov (2019).
44 Eitelhuber (2009).
45 Prozorova (2024).
46 Prozorova (2024); Surkov (2008).
47 Kremlin (2023).
48 Boston & Massicot (2017).
49 Galeotti (2023).

Russia's autocratic tradition is further reinforced by the significance of Christian Orthodoxy and the current Russian state's 'messianic' aim to unite all 'Russian and Slavic people' under a new 'Rus'.[50] Within Russia, orthodoxy and the state have developed a mutually reinforcing relationship, with each justifying the other's role and actions.[51] Under Putin, the relationship has intensified, with the Russian Orthodox Church routinely cooperating with and aligning itself to the state's official policies.[52] The religious aspects of Russian nuclear thinking are particularly unusual; when Russia launched its full-scale invasion of Ukraine in 2022, it did so against the backdrop of a nexus between the Russian Orthodox Church and the nuclear establishment – a phenomenon referred to as Russian nuclear orthodoxy.[53] This political myth, endorsed by Putin himself, posits that nuclear weapons and traditional values (orthodoxy) are the twin pillars of Russia's statehood and the guarantors of its national security. According to this belief, preserving Russia's national character requires maintaining its status as a strong nuclear power. Contemporary Russia is characterised by the fusion of politicised religious philosophy, conservatism, nationalism and militarism.[54]

The image of being deeply religious additionally provides Russia with a reputation that secular actors lack. Adversaries might perceive religiously motivated actors as undeterrable and willing to take extreme risks, which could enhance the credibility of their threats.[55] Another parallel trend is the emergence of an extraordinary pro-nuclear climate within Russia. Nuclear weapons have become a frequent topic in public discourse, with the notion that their use should be a last resort – but not an unthinkable option – becoming commonplace in the media and shaping public perceptions of escalation.[56] This 'new nuclear normal' has been reinforced by the messianic and existential framing of the war with Ukraine by the Kremlin and the Orthodox Church, as well as the ecclesiastical legitimisation of nuclear assertiveness. A powerful armed force is central to this view, as seen in the nuclear threats made against Ukraine. In the zero-sum worldview adopted by Russia, a state equipped with nuclear weapons and sufficient resources can take whatever measures it deems necessary to achieve its goals. Therefore, it is essential for Russia to maintain robust nuclear forces.[57]

Russia's highly centralised military system nevertheless creates a gap between top-level nuclear decision making and military implementation. While political leaders use nuclear threats as strategic and political tools, the military views escalation during wartime as a real risk and trains accordingly. This disconnect causes confusion among military commanders, who must navigate between formal doctrine and the leadership's shifting intentions.[58] It is to this strategic culture impact on Russia's nuclear forces and doctrine that the next chapter will now turn to in detail.

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50 Adamsky (2020).

51 Drozdova (2021).

52 Igumnova (2011).

53 Adamsky (2025).

54 Adamsky (2025).

55 Adamsky (2025).

56 Adamsky (2025).

57 Kerrane (2022); Herd (2022).

58 RAND Europe interview, 4 April 2025.

Chapter 3. **Impact on low-yield nuclear posture**

This chapter examines the intricate relationship between Russia's strategic culture and its nuclear posture, with a particular focus on NSNWs. It aims to dissect how the cultural, historical and ideological underpinnings of Russia's strategic mindset shape its approach to nuclear deterrence and warfare. By analysing the foundational elements of Russia's strategic culture, the chapter explores how these elements specifically influence nuclear strategy and posture.

Special attention is given to NSNWs and their role in Russia's deterrence strategy since Russia has a clear advantage over European NATO Allies in this class of weapons, at least numerically. This chapter additionally investigates the conditions under which these weapons might be deployed, the strategic purposes they serve, and the extent to which they are integrated into broader military doctrine. Through this exploration, the chapter seeks to offer insights into the complexities of Russia's nuclear posture.

3.1. Russian deterrence philosophy

The Russian concept of deterrence differs from the traditional Western understanding in a number of notable ways. The etymology of the English term 'deterrence' suggests an infliction of fear, whereas the Russian term for deterrence, *sderzhivanie*, translates to preventing something from occurring. Even when Russian sources use a similar term to the English one, such as that for intimidation, *ustrashenie*, the Russian approach to deterrence emphasises proactively shaping the adversary's behaviour.[59] A slightly different interpretation of *ustrashenie* suggests that it literally means '(re)awakening fear in the hearts and minds of adversaries'.[60] While this interpretation involves the instillation of fear, similar to the English term, it also aligns with a broader understanding of Russian deterrence efforts: the proactive shaping of adversary behaviour.

Furthermore, in both the nuclear and conventional domains, Russian experts often dismiss the typical Western typology of deterrence by punishment versus deterrence by denial in favour of a taxonomy that emphasises forceful versus non-forceful approaches.[61] Part of the explanation for this differing outlook on deterrence is historical. Unlike their US counterparts, Cold War-era Soviet strategists did not develop detailed doctrines of deterrence or theories of escalation dominance, instead relying on the threat of massive retaliation to deter the use of nuclear weapons by the US.[62] The notion of NSNWs as tools for limited war was also dismissed, as Soviet planners rejected the possibility of being able to contain any type of nuclear confrontation. Consequently, Soviet

59 Adamsky (2025).

60 Trenin et al. (2024).

61 Adamsky (2025).

62 Zysk (2018); Adamsky (2024).

military strategists did not fully differentiate between conventional and nuclear war, treating them as a single continuum.[63]

In post-Soviet Russia, however, attitudes toward deterrence underwent a significant shift. Faced with conventional military inferiority (in a qualitative sense) relative to the West, Russia's leadership sought an immediate solution to the threat of war. This prompted Russian experts to begin developing a regional nuclear deterrence posture and missions for NSNWs from the ground up.[64] This was an inversion of the Cold War, in which NATO had relied on nuclear weapons to offset the Soviet Union's quantitative military superiority. Russian professional military publications began discussing the role of NSNWs in deterring and de-escalating regional conventional aggression. The post-Cold War Russian rationale was that regional conventional wars would not involve adversaries willing to tolerate the risk of even a single nuclear strike. The threat of limited nuclear use, they argued, could therefore deter or terminate a conventional conflict without escalating to a full-scale nuclear exchange involving strategic weapons.[65]

Despite differences in nomenclature and overall outlook, there are also similarities between Russian and Western concepts of deterrence. In its deterrence practices, the Russian strategic community prioritises flexibility across domains and aims to take actions that may have psychological impacts on specific adversaries. Western experts also recognise these qualities, which are central to the concept of tailored deterrence.[66] Both Western and Russian concepts of deterrence also have a focus on manipulating negative incentives and influencing the strategic calculations, choices and behaviours of adversaries.[67] Additionally, Western and Russian deterrence practitioners aim to be cross-domain, in that they integrate military and non-military measures, in accordance with the principles of integrated deterrence.

When competitors from distinct strategic cultures employ deterrence strategies against one another, however, the risks of misperception, miscommunication and inadvertent escalation increase significantly.[68] A key feature of the integrated approach to deterrence is the ability to respond to coercion in one domain by using tools from another. Yet some argue that NATO and Russian reliance on integrated deterrence heightens the likelihood of overreaction by either side.[69] For example, Russia's strategy leverages nuclear coercion – an approach that is feared in the West – to compensate for its conventional military shortcomings. Meanwhile, what Moscow interprets as Western informational coercion targeting Russia's collective mentality is perceived by the Kremlin as a greater menace than nuclear or conventional threats, the latter being viewed as a greater menace in the West. Moscow views what it sees as Western political warfare as a direct challenge to Russia's vital interests and even as an existential threat, akin to its most significant

63 Adamsky (2024).

64 Ven Bruusgaard (2020).

65 Zysk (2018).

66 Adamsky (2025).

67 Trenin et al. (2024).

68 Boston & Massicot (2017); Adamsky (2025).

69 Adamsky (2025).

strategic defeat – the collapse of the Soviet Union. Many Russians believe that this collapse was the result of Western informational subversion, given that the Soviet Union's nuclear and conventional arsenals remained intact throughout.[70]

Despite such similarities, the underlying differences in the strategic philosophies of NATO and Russia have led to notable variations in how deterrence is conceptualised and implemented. Above all, Russian experts tend to define deterrence more broadly than Western counterparts. In Russia, deterrence encompasses the use of threats – occasionally accompanied by force – not only to maintain the status quo but also to compel change, shape the strategic environment, prevent escalation and de-escalate conflict.[71] The term is used also in the Russian context to describe signalling and coercive military activities both before and during a conflict. As such, the Russian conceptualisation of deterrence is more akin to how Western experts understand pre-war and intra-war coercion.[72] Russia's strategic deterrence philosophy is therefore an expansive concept that blends the logics of deterrence and coercion, including compelling an adversary to concede in a confrontation.

When exploring potential nuclear use, Russian strategists envision a transition from conventional to nuclear war in the context of a 'regional war', which could involve a confrontation with NATO.[73] This approach is seen by some commentators as part of an 'escalate to de-escalate' strategy, where the use of nuclear weapons is intended to compel an adversary, thereby de-escalating the situation within the conventional sphere.[74] The 2018 US Nuclear Posture Review outlined a potential scenario for nuclear use in which Russia might execute a land-grab on a NATO Ally and then presented the Alliance with a fait accompli by threatening nuclear use to deter a response. However, many external experts have disagreed with this assessment, questioning its likelihood.[75]

Furthermore, Russia's nuclear posture sees nuclear weapons serving multiple strategic functions. While perceived as weapons of last resort, their fundamental purpose is deterring adversaries through the threat of first use, embedding the fear of nuclear escalation deeply into Western decision making processes. Additionally, nuclear weapons serve as a means of coercion, far more so than in the West, with Russia leveraging the potential for nuclear escalation to influence and manipulate geopolitical dynamics. In the event of an attack on Russia itself, these weapons also provide retaliatory options. This range of uses reflects the multifaceted role of nuclear weapons in Russia's strategic doctrine and their central role in its strategic culture.

Russian deterrence concepts reflect the holistic and systematic approach that defines broader Russian strategy, in which various issues are viewed as interconnected within a unified framework.[76] This holistic mindset leads to a view of strategy as a continuous, uninterrupted engagement, with no clear distinction between

70 Adamsky (2025).

71 Trenin et al. (2024); Adamsky (2025).

72 Adamsky (2025).

73 Giles (2023).

74 Schneider (2019).

75 Woolf (2019).

76 Adamsky (2025).

peacetime and wartime – merely a variation in the intensity of effort. This perspective explains Russia's broader interpretation of deterrence, which includes merging forceful and non-forceful methods into a single overarching coercion framework and operating simultaneously across multiple domains. One advantage of Russia's emphasis on holistic thinking is that it has developed an ability to think creatively and develop innovative theories of victory, often 'outside the box'.[77] This strategic flexibility allows Russia to adapt to complex challenges and devise novel solutions in pursuit of its objectives.

At the same time, Russia faces a disconnect between its ability to develop sophisticated strategic theories and its capacity to implement them effectively. This disparity may explain occasional apparent incoherence in Russia's nuclear force posture and its doctrinal visions. While Russia's conceptual frameworks are sometimes more advanced than those of the West, its military assets, force posture, industrial capabilities and operational procedures frequently fall short. Russia's emphasis on developing a holistic approach to deterrence has historically made it good at theoretical formulation, but notably poor at the implementation of theories in practice.[78]

This aligns with arguments made by cultural psychologists regarding Russia's tendency to favour descriptive knowledge over procedural knowledge – characterising Russia as a culture that excels in thinking but struggles in doing.[79] The political scientist Andrew Monaghan describes this aspect of Russian managerial tradition using the Russian word *oblomovshchina*, which reflects the belief that 'writing something down on paper is equivalent to accomplishing it'.[80] This is indicative of broader endemic shortcomings within Russian strategic culture, including recklessness, negligence, staging of events for appearance, and falsification of information.[81] These factors can have significant implications for nuclear decision making. Recklessness and negligence may lead to poorly considered or inadequately prepared decisions, while the emphasis on appearances and the manipulation of information can obscure the true state of readiness or intent, both to Russian decision makers and external observers. This environment increases the risk of miscalculation, misunderstanding and unintended escalation, complicating efforts to accurately assess and respond to Russia's nuclear posture.

3.2. Impact on nuclear decision making

Several facets of Russia's strategic culture directly influence its nuclear decision making. These include a longstanding belief in the use of force as a fundamental element of strategic interaction; a pervasive perception of threat from the West, leading to the view that nuclear weapons are an essential safeguard; and the conviction that Russia is entitled to a sphere of influence, and, by extension, to nuclear weapons as a marker of great power status. However, among these factors, the most significant is Russia's autocratic and highly centralised system of government. Within President Putin's inner

77 Adamsky (2025).
78 Adamsky (2025).
79 Adamsky (2025).
80 Monaghan (2020).
81 Adamsky (2025).

circle, an institutionalised confirmation bias prevails, where the poor use of information leads to uncertainty and a lack of challenge.[82] This dynamic alters perception of Russian decision making, making it more opaque and potentially erratic. Furthermore, Russia's conception of international relations as a zero-sum game provides justification for the potential use of nuclear weapons. In the Russian view, achieving policy goals by any means necessary, including nuclear use as a last resort, is warranted. The perception of a world in which 'might makes right' necessitates Russia maintaining a robust nuclear capability alongside its conventional forces.[83]

Russia perceives its conventional capabilities as inferior to those of the West, particularly in the aerospace domain, which significantly influences its nuclear posture. Historically, aerospace attack has been one of the most pressing military challenges within Moscow's threat perception. By the late 1970s, the Soviet General Staff had concluded that a strategic-scale aerospace attack by NATO had become capable of achieving war objectives independently.[84] This led to the formulation of the concept of the Strategic Operation for Repelling Aero-Space Attack (SORASA). The Russian military continues to view the repelling of aerospace attacks as a comprehensive endeavour that combines all strike and defensive capabilities, including nuclear options, to counter all forms of aerospace aggression.[85] However, due to systemic shortcomings – such as issues with C2 and an insufficient arsenal of advanced long-range precision-guided weapons – Russian experts have raised doubts about the ability of its strategic air defence capabilities to counter a conventional precision aerospace attack across multiple axes.[86]

The Russian military leadership therefore assumes that adversaries could exploit these weaknesses to defeat Russia militarily. As long as these deficiencies in SORASA remain unresolved, the Russian military will continue to fear the prospect of aerospace attacks. Contemporary sources reveal that the primary threat perceived by the Russian nuclear establishment today is still a US-led conventional, long-range prompt global strike designed to decapitate Russia's supreme command and neutralise its nuclear retaliation capability.[87] Consequently, Russia might be more likely to resort to nuclear use, including NSNWs, during the initial stages of a conflict for fear of losing its arsenal.[88] Overall, the likelihood of nuclear use increases when, from the Russian perspective, it is considered the least undesirable option among a series of poor choices.[89] The likelihood of the Kremlin resorting to a limited nuclear option would rise, for example, if Moscow perceives NATO's increasing involvement in Ukraine as a threat to its existence or territorial integrity. The more dire the situation appears to the Kremlin, the

82 Davies & Steward (2022).
83 Kerrane (2022).
84 Adamsky (2021).
85 Adamsky (2021).
86 Wachs (2023).
87 Adamsky (2025).
88 Adamsky (2021).
89 Frederick et al. (2023).

greater the probability of escalating through non-conventional means.[90] This is a crucial conclusion and means that NATO Allies need to understand when this point is reached and how to change the Russian calculus beforehand.

Given that Russia cannot rely solely on its conventional forces in a potential conflict with NATO, it views nuclear capability as a necessary and justified insurance policy against threats from Western powers.[91] In particular, Russia fears the loss of a secure second-strike capability. Attacks that diminish Russia's nuclear potential, particularly its strategic nuclear weapons arsenal – whether through a counterforce attack using conventional precision capabilities, disruption of the command, control, communications and intelligence (C3I) infrastructure needed for a successful retaliation, or even deployment of missile defences that could blunt a second strike – are seen as significant threats to Russia's strategic deterrence posture.[92] Russian sources openly acknowledge that NATO has superior combined military capabilities, and that overall military parity is not possible.[93]

The Russian desire to be recognised as a great power also shapes its nuclear posture. The collapse of the Soviet Union and Russia's subsequent decline have left the country with limited options to project power. Nuclear weapons and associated threats offer Russia a means to continue exerting influence on the global stage.[94] They represent one of the few areas where Russia can still perceive itself as 'equal' to other major powers, at least numerically, and superior to the West in the case of NSNWs.[95] Such weapons are therefore seen as offering Russia a lifeline, bolstering both its security and its international standing and prestige, as well as offsetting NATO's combined military capabilities. As of 2021, Russian military strategists still saw NSNWs as the primary tool for regional deterrence and warfighting, and the ongoing transition to rely more on non-nuclear capabilities is still incomplete, as will be discussed further in Section 3.5 below.[96]

It is important to note that the role and significance of nuclear weapons in Russia's strategy are not static; rather, they fluctuate based on Moscow's threat perceptions and its assessment of its conventional military strength.[97] It should also be reiterated that Russia considers nuclear use as a last-resort option in response to an attack that threatens its existence. However, there is no clear threshold defining what constitutes such a threat, and the terminology used is deliberately vague.[98] Russian nuclear threats are therefore akin to a 'game of chicken', where perceived irrationality and a willingness to risk nuclear disaster can compel opponents to back down. This strategy exploits the socio-psychological impacts of such threats and the fear of nuclear escalation for coercive purposes and is intended to deter through the threat of

90 Boston & Massicot (2017); Adamsky (2024).
91 Kristensen et al. (2023); Jackson (2022).
92 van Hooft & Ellison (2023).
93 Trenin et al. (2024).
94 Kobrin (2016).
95 Zysk (2017).
96 Reach et al. (2023).
97 Wachs (2023).
98 Wachs (2023).

first use.[99] The overarching goal of Russia's nuclear coercion is to bring back fear of nuclear consequences into the West's decision making, as seen during the war in Ukraine.

3.3. Nuclear signalling in Ukraine

From the outset, the war in Ukraine has had a nuclear dimension, consistent with Russia's preference for cross-domain coercion. Prior to the full-scale invasion in February 2022, the Kremlin employed nuclear threats in an attempt to establish a cordon around the emerging theatre of operations, creating a sphere where Russian conventional military activity could take place effectively.[100] The objective was to constrain military activity and prevent the conflict from escalating into a broader 'regional war'.[101] However, the use of nuclear signalling and threats by Russia during the war in Ukraine has yielded mixed results. While Russia perceives that its signalling may have deterred direct Western intervention on the ground, it also recognises that it did not halt Western support and aid to Ukraine – it merely delayed them.[102] Some Russian commentators have argued that adversaries, principally the US and European countries, have stopped taking Russian nuclear warnings seriously because of the historical mismatch between rhetoric and action.[103] For example, when Russia raised its nuclear alert level following its invasion of Ukraine in 2022, it did not move NSNWs out of storage or undertake any other type of nuclear force generation.[104]

The primary lesson the Russian defence establishment seems to have drawn from the conflict thus far is that it needs to restore its coercive credibility, which has been undermined by the war in Ukraine.[105] Additionally, Russia wants to refine its nuclear coercion strategies to address conventional scenarios that, while not posing existential threats to Russia itself, nevertheless jeopardise its interests. Finally, Moscow seeks to develop a coercion framework tailored to a non-nuclear near-peer competitor.[106] Currently, Russia lacks well-defined concepts for addressing such competitors and has not sufficiently considered the possibility that coercive efforts against them might fail. This challenge mirrors the one faced by Western deterrence experts in the early 2000s, when states grappled with deterring non-state actors.[107] While Russian sources consider these improvements achievable, they acknowledge the significant challenges posed by Russia's longstanding social and managerial shortcomings.[108]

Having so openly put nuclear use on the table in 2022, the Kremlin has had to look for other ways to remind adversaries of its nuclear status, as seen in its decision to deploy NSNWs in Belarus.[109] This decision also reflects Moscow's

99 Hesse (2024).
100 Adamsky (2024).
101 Adamsky (2024).
102 RAND Europe interview, 19 March 2025.
103 Trenin et al. (2024).
104 RAND Europe interview, 19 March 2025.
105 Fink et al. (2024).
106 Adamsky (2025).
107 Adamsky (2025).
108 Adamsky (2025).
109 Trenin et al. (2024).

transition from critiquing US policy to actively emulating it. Such mimicry seeks to highlight instances where norms are selectively or inconsistently enforced, thereby deflecting international scrutiny from Russia's actions, and additionally showcases the flexibility inherent in its strategic culture.[110] Previously, Russia had contended that NATO's nuclear sharing agreements contravened the Nuclear Non-Proliferation Treaty (NPT). Now, Moscow justifies its own such arrangements with Belarus by referencing those same NATO agreements.[111] This has also led Russian commentators to discuss the state of Russia's nuclear doctrine and posture, with some experts explicitly or implicitly acknowledging that the country's stance has evolved due to the war in Ukraine, particularly through its decision to deploy NSNWs in Belarus. Overall, Russian experts who have publicly commented on this decision concur that it represents a shift in Russia's nuclear doctrine and, consequently, its nuclear posture. However, there remains uncertainty about the implications of the deployment for military planning, especially given that Kaliningrad (the Russian exclave on the Baltic Sea between Poland and Lithuania) already hosts various dual-capable missile systems and a nuclear weapons storage facility.[112]

3.4. Conditions for nuclear use

Before its invasion of Ukraine, Russia's declaratory policy was outlined in the June 2020 Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence. This document elucidates the strategic role of nuclear weapons and delineates the potential scenarios under which they might be deployed.[113] It asserts Russia's prerogative to utilise nuclear weapons in retaliation against the use of nuclear or other weapons of mass destruction (WMDs) targeting Russia or its allies. Furthermore, it includes scenarios involving conventional military aggression that threatens the very survival of the Russian state.

Specific conditions for nuclear weapon use include the acquisition of credible intelligence on ballistic missile launches aimed at Russian or allied territories, adversarial use of nuclear weapons or other WMDs against Russia or its allies, attacks on critical governmental or military infrastructure that could compromise Russia's nuclear response capabilities, and conventional military aggression that endangers the state's existence.[114] This stance aligned with Russia's 2014 military doctrine, which emphasised the importance of nuclear weapons in averting nuclear conflicts initiated through conventional warfare, and marked the beginning of Russia's view of nuclear weapons as having a wider coercive role.[115]

Starting in the summer of 2023, and following the mixed results of Russia's nuclear signalling in Ukraine, Russian experts engaged in a relatively public discourse concerning nuclear policy and posture. These discussions were instigated by an article penned by foreign policy expert Sergey Karaganov, who contended that Russia should revise its nuclear policy to restore the credibility of its nuclear deterrence. He specifically advocated for Moscow to lower its nuclear threshold to encompass the possibility of pre-emptive nuclear strikes on non-nuclear NATO member states. Karaganov

110 Fink et al. (2024).
111 Fink et al. (2024).
112 Fink et al. (2024).
113 Fink et al. (2024).
114 Fink et al. (2024).
115 Sinovets (2023).

argued that Russia's high nuclear threshold enabled the West to instigate 'a full-scale war' via Ukraine.[116] Without Western assistance to Ukraine, he posited, the conflict would have been brief and contained, culminating in a swift Russian victory. However, Western leaders did not perceive Russia as likely to escalate to nuclear use and thus were undeterred from supporting Ukraine. Karaganov asserted that Russia must ensure its adversaries are aware of its readiness to execute a pre-emptive strike on a NATO country, such as Poland, to avert global thermonuclear war. Although this statement is not part of official policy, Karaganov argued it should be incorporated into Russia's formal nuclear doctrine.[117]

Karaganov's proposal sparked a robust debate, with some senior foreign policy commentators expressing cautious support for his vision.[118] Critics, on the other hand, predominantly challenged his confidence in managing escalation risks. Several experts within the Russian nuclear community dismissed the notion that Russia's existing nuclear doctrine was inadequate, highlighting the country's non-nuclear capabilities and emphasising its nuclear modernisation plans. Staff from the Institute of World Economy and International Relations (IMEMO) had already previously argued that Russian nuclear weapon use would be reciprocal rather than pre-emptive.[119] They maintained that the Ukraine conflict did not align with the criteria for nuclear use, including NSNWs, nor did Ukraine contain targets that could not instead be targeted using Russia's conventional long-range strike capabilities.

At the 2023 Valdai Conference, President Putin directly addressed Karaganov's arguments in person, stating: 'I understand all this and, take my word for it, we do respect your perspectives. That said, I do not see the need to change our conceptual approaches. The potential adversary knows everything and is aware of what we are capable of.'[120] Nonetheless, even after Putin dismissed Karaganov's suggestions directly, the latter continued arguing for the lowering of the nuclear threshold and altering Russia's nuclear doctrine. In articles published in January and February 2024, Karaganov once again advocated for Moscow to enhance its reliance on nuclear deterrence, reiterating the necessity for 'accelerated movement up the escalation ladder' and arguing for the resumption of nuclear testing.[121]

These debates do not necessarily signal a change in Russian nuclear doctrine or a lowering of the nuclear threshold – despite the increase in nuclear rhetoric by Russia following its invasion of Ukraine. Kremlin statements and military documents do not indicate a shift towards an even greater reliance on nuclear weapons, including NSNWs, or an inclination towards their early limited use.[122] According to official statements, Russia will still consider nuclear responses to attacks it perceives as violations of its sovereignty and territorial integrity.[123]

However, Russia's interpretation of 'violation of sovereignty' is expansive and has been further expanded upon, as outlined in the most recent

116 Karaganov (2023).
117 Karaganov (2023).
118 Fink et al. (2024).
119 IMEMO (2022).
120 Kremlin (2019).
121 Karaganov (2024).
122 Wachs (2023).
123 Boston & Massicot (2017).

update to its nuclear doctrine released in November 2024.[124] This interpretation includes not only threats to state authority but also to internal regime stability, freedom from external political interference, and more. The deliberate elasticity of these phrases creates uncertainty around the conditions for nuclear use by Russia.[125] The crucial principle of Russian deterrence is thus one of strategic uncertainty, and changes to Russia's nuclear doctrine – including to a (theoretically) lower nuclear threshold – are designed to preserve this uncertainty.[126] Many Western nuclear powers, including the UK and France, also maintain ambiguous nuclear postures designed to preserve uncertainty. Such attitudes reflect efforts to preserve stability by introducing uncertainty into the conditions for nuclear use, thus maintaining deterrence. Ambiguity ensures that adversaries remain uncertain about what actions might provoke a nuclear response. However, in the Russian case, there still seems to be a disconnect between doctrine and practice: the war in Ukraine has shown that doctrine is evolving, allowing for the deployment of NSNWs in Belarus, but nuclear practice continues to show a restricted approach by Russian leaders to their use.[127]

The evidence suggests that Russia feels it must re-establish deterrence credibility – and as such, nuclear rhetoric in the context of Ukraine is likely to persist. However, Russia may reach a point where diminishing returns continue to erode the credibility of its coercive threats.[128] In such a scenario, the Kremlin may consider transitioning to a more assertive nuclear muscle-flexing as a precursor to limited nuclear use. Moscow might therefore proceed through a series of 'strategic gestures', or in other words coercive signalling designed to deter and compel.[129] This could include actions such as raising alert levels, transporting NSNWs to bases equipped with delivery systems, and other escalatory moves. The extreme end of this process could be a nuclear test followed by limited nuclear use, which would mark a critical turning point.[130] Even if limited nuclear use were to occur on the battlefield it would likely be driven by the logic of coercion – escalation aimed at achieving de-escalation – rather than by the pursuit of operational military objectives.[131] However, the Kremlin would likely exhaust all other options, including expanding conventional use, to prolong the muscle-flexing phase as much as feasible, seeking to deter and compel without resorting to actual nuclear use.[132]

3.5. Conventional and nuclear entanglement

The development of non-nuclear capabilities, including advanced conventional weapons, has provided Russia with greater flexibility below the nuclear threshold.[133] For instance, long-range conventional strike capabilities may suffice to manage or resolve a conflict

124 Ministry of Foreign Affairs of the Russian Federation (2024).
125 Grajewski (2024).
126 Trenin et al. (2024).
127 RAND Europe interview, 31 March 2025.
128 Trenin et al. (2024); Adamsky (2024).
129 Adamsky (2024).
130 Adamsky (2024).
131 Schneider (2019); Zysk (2017).
132 Wachs (2023).
133 Giles (2023).

before it escalates to the nuclear level. Since the tenure of Marshal Nikolai Ogarkov, Chief of the Soviet General Staff from 1977 to 1984, Russia has pursued the goal of developing a balanced military composed of conventional general-purpose forces capable of generating non-nuclear deterrence alongside nuclear deterrence forces.[134] The creation of a conventional reconnaissance-strike complex capable of producing comparable effects to NSNWs would enable conventional forces to assume some of the combat tasks traditionally assigned to NSNWs, thereby extending deterrence to conventional weapon systems.

Since the 2008 war in Georgia, Russia has undertaken significant modernisation efforts in its conventional capabilities, including the development of precision-guided munitions and advancements in C4ISR systems.[135] These developments have expanded Russia's options on the escalation ladder. As a result, in a war or crisis situation, selective damage inflicted by long-range conventional strikes would likely serve as the final warning shot before resorting to any use of NSNWs.[136] Believing that non-nuclear means – such as precision-guided munitions and information warfare – can produce both battlefield and deterrent effects, Russian experts have increasingly emphasised deterrence as a function of non-nuclear instruments, both hard and soft, to a greater extent than in the past.[137]

In line with increasing conventional capability, Russia has at times invoked the doctrinal concept known as strategic operations to destroy critical infrastructure targets (SODCIT).[138] SODCIT is primarily a conventionally focused strategy aimed at deep strikes against NATO civilian and military infrastructure. Officially adopted in around 2008, this concept likely emerged in response to Russia's expanding arsenal of long-range conventional weapons. Nuclear use is therefore not the preferred option for managing escalation and Russia has made significant efforts to overcome its conventional inferiority. Resorting to nuclear use is still therefore regarded as a last resort by the majority of the Russian military elite, who are keen to maintain robust conventional capabilities as options for escalation in response to non-existential threats.[139] Since its full-scale invasion of Ukraine, Russia has continued to advance up the non-nuclear escalatory ladder, as evidenced by the use of experimental ballistic missiles such as the Oreshnik.[140] This move reflects Russia's strategy to enhance its non-nuclear capabilities and options, thereby maintaining a broad spectrum of responses to potential threats without immediately resorting to nuclear means.

Notwithstanding the military modernisation efforts initiated after its wars in Chechnya and Georgia, Russia's conventional modernisation has been affected by significant battlefield losses in Ukraine since 2022, the expending of its advanced conventional weapon stocks, and sanctions that stymie – though do not entirely eliminate – access to Western technology

134 Zysk (2018); Reach et al. (2023); Adamsky (2024).

135 Ven Bruusgaard (2020); Adamsky (2024).

136 Adamsky (2024).

137 Adamsky (2024).

138 Reach (2023).

139 Wachs (2023).

140 Kaushal & Savill (2024).

and components.[141] The war in Ukraine has likely pushed back Russia's ability to rely on advanced conventional weapons for deterrence purposes. In addition, conventional capabilities do not replace nuclear capabilities, nor do nuclear capabilities replace conventional ones. Instead, each augments the utility of the other, with Russian deterrence concepts benefiting from having interchangeable nuclear and conventional options.[142] NSNWs remain a part of this integrated system, with nuclear strikes reserved as a worst-case option.[143] Conventional and nuclear weapons and their platforms are therefore entangled, and Russia does not draw a clear distinction between the two.[144] This approach allows for a flexible and adaptable posture, ensuring that both conventional and nuclear capabilities are leveraged to enhance Russia's overall deterrence strategy.

Given Russia's inability to fully rely on conventional capabilities for deterrence, and the wide interpretation of what constitutes a violation of sovereignty in its nuclear doctrine, it is therefore necessary to consider what situations might lead Russia to consider a nuclear response. Military failures could potentially lead to a situation where nuclear weapons are used to compensate for the ineffectiveness of conventional forces.[145] For example, while Russia feels the need to maintain a narrative of victory in Ukraine, and in a scenario where victory on the battlefield appears unattainable, a nuclear strike might be perceived as the only means of avoiding admitting defeat.[146]

Furthermore, if Russia were to resort to nuclear use, it might not exercise restraint. The leadership may calculate that the costs and risks associated with deploying nuclear weapons, even NSNWs, are not significantly different from those linked to using more numerous or higher-yield strategic weapons, especially if they believe the latter would help achieve battlefield objectives that the former would not.[147] Such a forceful use of nuclear weapons could be calibrated to reverse a negative military balance as well as demonstrate resolve. Additionally, nuclear use might not be limited to nuclear weapons per se. In Ukraine, for example, Russia has employed the tactic of weaponising the insecurity of nuclear power plants. It has repeatedly claimed that Ukrainian shelling around the Zaporizhzhia Nuclear Power Plant (ZNPP) could lead to a radioactive incident, while Russian forces in the area themselves exhibit apparently reckless or dangerous behaviours.[148] This situation highlights Russia's willingness to exploit nuclear fears as part of nuclear coercion.

The following chapter will explore in more detail potential scenarios for Russian non-strategic nuclear use, as informed by its strategic culture, and the responses to these scenarios from a range of Western experts.

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141 Radin et. al (2019); Binnendijk et. al (2024); Grisé et. al (2024).

142 Ven Bruusgaard (2020).

143 Zysk (2018).

144 Trenin et al. (2024).

145 Jackson (2022).

146 Giles (2023).

147 Frederick et al. (2023).

148 Hesse (2024).

Chapter 4. **Strategic culture scenarios**

This chapter presents a series of strategic culture scenarios, crafted to illustrate potential uses of NSNWs or other forms of radiological warfare by Russia. The scenarios represent archetypical ideas from our understanding of Russian strategic culture, in which NSNWs are central. Their purpose is to elucidate the conditions under which Russia might contemplate employing NSNWs, as well as to illustrate the strategic cultural factors and rationale that might underpin such decisions.

4.1. Scenario design

The starting point for the development of the scenarios was Russia's holistic and horizontal approach to deterrence. Drawing on a thematic analysis of the literature, an initial longlist of seven potential scenarios was identified (see Appendix B). An internal RAND workshop served to review and refine these, culminating in the selection of four final scenarios (see Box 1 below).

To ensure the scenarios were robust and reflective of real-world complexities, the research team engaged with a diverse array of Western experts and stakeholders. Semi-structured interviews were conducted with academic, government and think tank experts, inviting them to comment on and respond to the scenarios. This feedback was instrumental in providing insights into which scenarios for non-strategic nuclear use by Russia might be more plausible, or which factors may have been overlooked. Through this iterative process, the scenarios were designed to emphasise the interplay between Russia's strategic culture and its potential nuclear posture. By integrating expert insights and feedback, the team aimed to create scenarios that are not only theoretically sound but also practically relevant, offering perspectives for policymakers and analysts concerned with international security and nuclear deterrence.

Box 1. Strategic culture scenarios


1. Escalatory defensive use in a regional conflict


2. Demonstrative use to deter NATO


3. Response to a cyber attack


4. Failure of a hybrid warfare campaign

Source: RAND Europe analysis.

The following sections outline the four scenarios developed for this study, along with feedback from the expert interviews and implications for NATO Allies, including the UK as sponsor of this study.

4.2. Escalatory defensive use in a regional conflict

4.2.1. Scenario

A conflict erupts following heightened tensions over the disputed Pechorsky district on the Russia-Estonia border, an area historically contested and rich in cultural significance for both nations. Russia assumes that NATO will back down over this seemingly minor territorial dispute, believing that the Alliance is divided due to recent transatlantic disagreements over defence commitments in Europe. These disagreements include some NATO members still not meeting the old two percent GDP target on defence spending, let alone the new five percent one, as well as the imposition of tariffs between the US and European countries.

However, to reassure Allies in the Baltic and deter aggression, NATO deploys additional troops to Estonia in accordance with the NATO Force Model adopted at the Madrid Summit in 2022, mobilising thousands of troops within the first ten days of the crisis. Russia perceives this build-up of NATO forces as a direct threat to its sphere of influence and territorial integrity. It fears that NATO will exploit the fact that Russian border troops have been redirected to bolster its forces in Ukraine, a conflict that remains unresolved but with Russia effectively controlling eastern Ukraine. Additionally, transatlantic tensions have slowed Western aid to Ukraine, leaving it unable to mount counteroffensives and rendering the conflict a stalemate.

Russia views the build-up of NATO forces in Estonia as a provocation and a challenge to its regional dominance, with hardliners in the Kremlin arguing that action must be taken. The conflict initially unfolds with conventional military engagements between Russia and Estonia, including skirmishes along the border that turn into a major Russian ground incursion, with Russia establishing positions in Estonia during the opening days of the conflict, and clashes in contested airspace involving forces from the NATO Baltic Air Policing mission. However, Russia overestimates the ability of its air force and air defences to secure a swift victory. In the first days of the conflict, five advanced SU-57 fighter jets are lost, and Russia's S-400 air defence systems struggle against NATO's fifth generation fighters such as the F-22 and F-35. NATO forces, leveraging superior technology, intelligence and coordination, begin to make tactical advances into the Russian-held positions in Estonia, threatening military forces and supply lines.

Under mounting pressure and facing rapidly accumulating losses from overwhelming NATO airpower, the Russian military leadership convenes an emergency session. Amidst intense deliberations, they authorise the use of NSNWs, driven by the need to demonstrate resolve, deter further NATO advancement and re-establish coercive power. The Russian leadership selects a target comprising a grouping of Allied forces, including from the UK, stationed in Estonia as part of NATO's Enhanced Forward Presence (EFP), calculating the strike to minimise civilian casualties and avoid escalation to a full-scale nuclear conflict. Nevertheless, this raises stark questions for the UK and other Allied nations on how to respond, particularly given the limited options for non-strategic nuclear responses.

4.2.2. Strategic culture rationale

As explored in Chapter 3, numerous experts consider the 'escalate to de-escalate' strategy to be an unrealistic and inaccurate

interpretation of Russian doctrine. Nonetheless, the concept of such a posture, whether real or not, continues to influence discussions and perceptions of Russia's nuclear stance. Consequently, the research team deemed it fitting to incorporate such a scenario into their analysis and investigate whether it has any foundation in Russia's strategic culture. This scenario highlights the emphasis on sovereignty and regional influence. As discussed in Chapter 2, Russia has long perceived its western border to be vulnerable to invasions, fuelling a persistent sense of conventional military inferiority compared to NATO.[149] This perception is exacerbated in the above scenario, which seemingly confirms Russia's fears about NATO's superior aerospace power.[150] In the context of this scenario, the Kremlin perceives an opportunity to create a winning narrative after the stalemate in Ukraine. By having, in its view, fought NATO to a standstill in Ukraine, Russia sees a chance to further fracture the Alliance. Furthermore, the projection of power over former Soviet states is a core element of Russia's great power identity and strategic culture.[151]

Aware of its conventional limitations, Russia views its nuclear capabilities as a crucial counterbalance. NSNWs are seen as essential tools to offset NATO's conventional superiority. Russian strategists therefore consider NSNWs a legitimate and necessary insurance policy against perceived existential threats and unfair treatment from the West.[152] By integrating nuclear capabilities into its conventional military strategies, Russia aims to compensate for its weaknesses and achieve a strategic advantage. This approach blends defensive and escalatory measures, designed to deter adversaries and reinforce Russia's strategic objectives. Through this lens, nuclear weapons are not merely tools of last resort but integral components of Russia's broader geopolitical strategy, aimed at securing its regional dominance and challenging NATO's cohesion.

4.3. Demonstrative use to deter NATO

4.3.1. Scenario

In 2027 NATO conducts its BALTOPS 27 military exercise near Russia's borders. Russia perceives this manoeuvre as particularly provocative as it fears that combat aircraft and long-range fires, particularly those stationed in Finland, could threaten Russia's nuclear forces. Following the accession of Finland and Sweden to NATO, the Alliance now has a longer border with Russia near the strategically important Kola peninsula, the so-called 'bastion' that is home to many of Russia's second-strike capabilities such as the nuclear-armed submarines of the Northern Fleet. This situation intensifies existing geopolitical tensions and heightens security concerns for Russia, which views NATO's activities as a direct challenge to its sphere of influence. In response, the Russian leadership decides to execute a demonstrative nuclear test as a strategic message to NATO, aiming to display its nuclear prowess and resolve without engaging in direct military conflict.

149 Jackson (2022).

150 Adamsky (2021).

151 Dagi (2020).

152 Kristensen et al. (2024a).

The chosen site for this demonstration is a remote area of Novaya Zemlya in the Arctic Ocean, a location selected for its minimal human impact and strategic isolation. Nevertheless, the decision to conduct the test in the atmosphere is intended to maximise both visibility and psychological impact, sending a clear signal of Russia's capabilities. The nuclear demonstration is precisely planned and involves a low-yield detonation of a Novator 9M720 (SSC-8) ground-launched cruise missile. This action is carefully calibrated to avoid escalation into a broader conflict yet is designed to have a deep psychological impact on NATO countries. International monitoring systems quickly detect the test, prompting a wave of global attention and concern. Russia issues official statements emphasising its defensive stance, warning against further NATO activities near its borders, and reiterating its commitment to safeguarding national security. The intended message is clear: Russia is prepared to assert its power and defend its interests with all available means.

4.3.2. Strategic culture rationale

This scenario highlights Russia's perception of NATO as the primary threat within its strategic culture, a view shaped by the Alliance's enlargement into former Soviet and Warsaw Pact territories.[153] This collective sense of insecurity – the 'besieged fortress' mentality of Russia's leadership – and the perception of continuous threats are deeply ingrained in Russian strategic thinking.[154] As a result, within Russia's concept of deterrence, actions deemed 'defensive' by Russian leadership may appear overtly aggressive to external observers.[155] By employing nuclear weapons for demonstrative purposes, Russia seeks to reinforce its deterrence strategy and strategic messaging, and to underscore its willingness to use nuclear capabilities as tools of influence and intimidation.

Russian strategic deterrence philosophy blends deterrence with coercion, aiming to compel adversaries to yield in confrontations.[156] A demonstration nuclear strike could be viewed by Russia as seeking to intimidate adversaries into submission, reinforcing its stance against perceived Western aggression and asserting its intent to maintain regional dominance and uphold its international standing.[157] In addition, a nuclear test would be considered a 'strategic gesture' as part of increased nuclear flexing by Russia, and an attempt at coercive signalling designed to deter and compel.[158] This approach reflects a calculated effort to leverage nuclear capabilities not just as a deterrent but as a strategic tool in Russia's broader geopolitical strategy.

4.4. Response to a cyber-attack

4.4.1. Scenario

A significant cyber-attack severely impacts Russian critical infrastructure and military assets, triggering a national security crisis. This large-scale distributed denial of service (DDoS) attack cripples key systems within Russia's nuclear command, control and

153 Woolf (2019).
154 Gatov (2016).
155 Johnson (2016).
156 Wachs (2023).
157 Herd (2022).
158 Adamsky (2024).

communications (NC3), rendering the country potentially vulnerable to further threats. In response to this unprecedented challenge, Russia swiftly conducts an assessment and concludes that the attack is state sponsored. The investigation claims that an Estonian hacktivist group is the likely perpetrator. Although Estonia and NATO vehemently deny involvement, Russia remains unconvinced, believing that the Baltic states harbour vengeful intentions due to their long and troubled history with Russia, particularly during the Soviet period. Russia, feeling intensely threatened, claims it is being unfairly targeted as a form of retaliation for the 2007 cyberattacks on Estonia – incidents it has consistently denied involvement in. The current attack is perceived as an existential threat, compromising Russia's defences and raising fears of an inability to launch strategic nuclear weapons in response to any further NATO hostilities.

In a high-stakes decision, Russia opts to deploy a NSNW in a limited and controlled manner through a high-altitude atmospheric detonation. This action generates an electromagnetic pulse (EMP) that disrupts the cyber capabilities of Estonian hacktivist groups – and much more besides, given the impact on unshielded electronics and critical infrastructure below. Russia frames this as targeting the Baltic states, particularly Estonia, rather than NATO as a whole. It argues that the EMP is not a direct attack on NATO but a response to Estonia's alleged cyber-attack and the purported mistreatment of the Russian minority in Estonia over decades. This approach is designed to limit civilian casualties, including potential Russian ones, while delivering a tit-for-tat response and demonstrating Russian power, rather than constituting a direct attack on a NATO member state. The objective is to send a powerful deterrent message against perceived NATO aggression, reassert Russia's strategic position, and discourage further encroachments.

4.4.2. Strategic culture rationale

This scenario is deeply rooted in Russia's perception of the cyber and aerospace domains as vital to its national security and to upholding strategic deterrence. Russia is particularly concerned about maintaining its secure second-strike capability, a cornerstone of its defence strategy. Any attack that is seen as threatening Russia's nuclear potential – whether through conventional precision strikes, disruption of C3I infrastructure, or missile defence systems – poses a significant threat to its national security.[159]

Nuclear weapons are viewed as a last resort in response to perceived existential threats, yet the threshold for what constitutes such a threat is deliberately ambiguous. This is a strategic choice, creating uncertainty around the conditions under which nuclear weapons might be used. Russia's nuclear doctrine, as outlined in its latest release from November 2024, adopts a broad interpretation of violation of sovereignty. This encompasses state authority, internal regime stability, freedom from external political interference, and actions affecting critically important state or military infrastructure.[160] This breadth allows Russia to justify a wide range of responses to perceived threats, as demonstrated in this scenario. Deliberate ambiguity serves to keep adversaries uncertain and on edge, reinforcing Russia's deterrence posture and strategic messaging.

159 van Hooft & Ellison (2023).

160 Grajewski (2024).

4.5. Failure of a hybrid warfare campaign

4.5.1. Scenario

Russia initiates a 'grey zone' campaign against Georgia, aiming to reassert its influence over the former Soviet republic and achieve strategic objectives without resorting to overt military conflict. This campaign involves sophisticated cyber operations targeting critical infrastructure, widespread disinformation to sow discord and confusion, economic pressure to destabilise Georgia's economy, and support for local proxies.

However, Georgia, having learned from past Russian interference, is well-prepared and mounts a robust defence. The Georgian government strengthens its cybersecurity measures and counters Russian disinformation with well-coordinated information campaigns, declassifying intelligence to expose Russian tactics and rallying public support. Georgia also secures vital political and military backing from Western partners, including NATO countries, who are keen to maintain regional stability. Western partners play a crucial role in bolstering Georgia's resilience. They provide comprehensive intelligence sharing on Russia's grey zone activities, ensuring Georgia stays a step ahead. Economic aid flows into Georgia, stabilising its economy and bringing it closer to Europe, whilst countering Russian economic pressure.

As Russia's hybrid campaign falters against Georgia's unexpectedly effective resistance, bolstered by Western support, the Kremlin faces a significant strategic embarrassment. This failure inspires not only Georgia but also republics within Russia, such as Dagestan, to push back against the Kremlin. In Georgia, the pro-Russian president is overthrown, sparking fears in Moscow of a new wave of Colour Revolutions spreading throughout Russia's sphere of influence. In response, Russia feels compelled to reassert itself. To reclaim its strategic leverage, Russia launches a conventional strike on a Georgian IRT-M research nuclear reactor using Tu-160 bombers, which are capable of carrying nuclear payloads. Despite initiating the attack, Russia accuses Georgia of orchestrating a false flag operation. In response, Russia begins airborne patrols equipped with NSNWs. This action aims to flex Russia's nuclear might and put nuclear issues back into the minds of European policymakers, who recall Russia's irresponsible behaviour around the ZNPP in Ukraine as well as historical fears stemming from the Chernobyl disaster.

Russia justifies this extreme action by citing the threat to its regional dominance and the ineffectiveness of conventional means to achieve its objectives. Through this drastic measure, Russia seeks to demonstrate its willingness to go to great lengths to maintain its sphere of influence and deter Western interference, sending a powerful deterrent message aimed at regaining strategic leverage and discouraging further NATO or European Union involvement in the political crisis in Georgia.

4.5.2. Strategic culture rationale

In the face of setbacks, Russia's strategic calculus may shift towards utilising NSNWs, or creating a nuclear incident, to compensate for the ineffectiveness of its conventional forces or political influence. Within Russia's tightly centralised political system, maintaining a narrative of victory is essential

for the leadership's credibility and domestic stability.[161] When a conventional victory seems unattainable, a nuclear incident might be seen as the only option to avoid the humiliation of defeat. This strategic mindset is further compounded by Russia's historical willingness to resort to extreme measures in response to battlefield setbacks, as demonstrated in conflicts such as the Ukraine war.[162]

In this scenario, causing a nuclear incident could be seen as a punitive measure, aimed at delivering a decisive blow to adversaries and reinforcing Russia's resolve. Russia's leadership might rationalise a nuclear incident as a necessary step to punish adversaries, operating under the grim logic that if Russia cannot secure its objectives in regions like Georgia, then no other power should be allowed to prevail either.[163] Furthermore, as part of its strategic culture, Russia views international relations as a zero-sum game, believing that any gain by an adversary power equates to a loss for the Russian Federation. This perspective drives the state to use any means necessary to secure its goals, including the potential use of nuclear weapons. There is also a broader strategic culture where deterrence and coercion are intertwined, with nuclear capabilities wielded not only as deterrents but also as instruments of compellence and retribution. By weaponising civilian nuclear energy, as seen with the ZNPP in Ukraine and in this scenario, Russia further demonstrates its willingness to exploit nuclear threats to achieve geopolitical objectives. This strategy underscores Russia's readiness to employ extreme measures to maintain its sphere of influence and deter Western interference.

4.6. Responses to the scenarios

Western experts and stakeholders responded to the scenarios developed for this study by noting that most lacked a clear and compelling crisis point that would justify nuclear escalation using NSNWs by Russia. One conclusion that could be drawn from this is that those consulted for this study consider that escalation up to and including nuclear use would require more extreme circumstances than is often assumed. Consequently, there may be less justification for alarmism than is sometimes suggested; or at least, Russia does not appear to have a credible use case for NSNWs in the specific scenarios examined in this study. Nevertheless, it is possible that other, more plausible, interpretations exist.

Participants suggested that Russia could undertake several escalatory or signalling actions before resorting to a nuclear strike, such as moving NSNWs from their peacetime storage sites or raising nuclear alert levels.[164] Typically, Russia's NSNWs are stored at national-level facilities. During a so-called 'threatening period', weapons could be transferred to base-level facilities for storage in anticipation of further instructions, or they could be delivered directly to operational units – though this latter option would, in the view of one participant, be reserved for a genuine crisis.[165]

161 Giles (2023).
162 Giles (2023).
163 Giles (2023).
164 RAND Europe interview, 4 March 2025.
165 Podvig & Serrat (2017).

Russia has consistently stated that, in peacetime, all its NSNWs are concentrated at centralised storage bases, which include either 12 large national-level sites or approximately 35 base-level facilities. Base-level facilities may house weapons assigned to delivery systems located at the same site.[166] Transferring weapons to base-level storage could nevertheless occur in circumstances short of an open crisis, serving as a form of signalling by Russia. This practice was observed during deployment tests in February 2013.[167] However, in other instances when Russia raised its nuclear alert level, such as following its full-scale invasion of Ukraine in 2022, it did not move NSNWs out of storage or undertake other types of nuclear force generation.[168] Nevertheless, while NSNWs are not paired with their delivery systems during peacetime, Russia possesses a much broader range of these systems compared to the US and NATO, leaving countries such as the UK potentially vulnerable given the lack of sovereign options on the escalation ladder. The following sections contain more detailed responses to the four scenarios.

4.6.1. Escalatory defensive use in a regional conflict

In considering the first scenario, interviewees expressed scepticism about the 'escalate to de-escalate' strategy, highlighting that the role of nuclear weapons lies more in the threat of escalation rather than their direct de-escalatory potential, which serves as a deterrent.[169] Participants acknowledged the inherent uncertainty in the outcomes of such a strategy, as is the case with any deterrence approach. In examining Russian strategic culture, one interviewee suggested that the objective appears to be weakening NATO, rather than pursuing direct military intervention, as outlined in the scenario.[170] This aligns with the Soviet concept of 'reflexive control' – seeking to influence an adversary's decisions by shaping their assumptions and perceptions, thereby altering their behaviour. Both the Soviet Union and Russia have historically employed methods such as disinformation and provocation to achieve this form of indirect influence.

It was also pointed out that with no existential threat, it was unlikely that Russia would use nuclear weapons.[171] Another participant noted that, contrary to some prevailing narratives, Russia does not perceive itself to be as conventionally inferior to NATO following the conflict in Ukraine and consequent mobilisation of a wartime economy to recapitalise Russian forces – provided the US is not directly involved.[172] From this perspective, the Kremlin believes it could hold its own in any conflict as long as the US remained on the sidelines, rendering actual nuclear use unnecessary. This view supports the notion that Russia's escalatory actions are more likely to involve signalling the possibility of a nuclear response, rather than actual employment, except in the event of a direct attack on Russian territory.

166 Podvig (2023).

167 Podvig & Serrat (2017).

168 RAND Europe interview, 19 March 2025.

169 RAND Europe interviews, 4 March 2025 and 2 April 2025.

170 RAND Europe interview, 4 March 2025.

171 RAND Europe interview, 2 April 2025.

172 RAND Europe interview, 15 April 2025.

In contrast, one interviewee identified the first scenario as the most plausible for potential Russian nuclear use, especially if the conflict were near Russian territory.[173] Here, the decision to use nuclear weapons would likely hinge on the nature of the line of contact, with nuclear use being a potential response to extensive conventional strikes that lead to significant losses and devastation of strategic targets *within* Russia.[174] This perspective also highlights a distinction in decision making between NATO and Russia: while any NATO nuclear use would primarily serve as a political signal, Russia's employment of NSNWs would likely focus on achieving concrete military effects.[175] While Russian strategic nuclear strikes would be concentrated on countervalue targets, primarily in the US, regional nuclear weapons would be designated for counterforce missions in limited quantities.[176] These nuanced insights underscore the complexity of nuclear decision making within the context of Russian strategic culture.

4.6.2. Demonstrative use to deter NATO

In considering the second scenario, the potential use of nuclear weapons for demonstrative purposes was met with scepticism by most interview participants, particularly concerning the idea of atmospheric nuclear explosions, given the lack of a specific crisis point to provoke such a response.[177]

One interviewee highlighted that the legalistic tendencies within Russian leadership would likely prevent such actions unless there was a prior withdrawal from treaties such as the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which would itself serve as a signal of resolve.[178] Additionally, resuming nuclear testing might demonstrate resolve, but the anticipated international consequences and the diplomatic need to engage with the Global South to maintain influence would likely deter Russia from taking such steps.[179] The political repercussions of conducting an above-ground test were considered significant enough to make this scenario unlikely. Consequently, any demonstrations of resolve would likely be more restrained and contingent upon broader strategic considerations. It was observed that while Putin perceives the transatlantic alliance as a constraint in his efforts to reassert Russian influence and control, he is probably not overly concerned about a direct NATO attack, and that a NATO exercise would be unlikely to trigger a nuclear test.[180]

However, one interviewee pointed out that demonstrative use of nuclear testing was plausible, as Russia still reserves the right to conduct tests, if the US also does so.[181] Another participant agreed, highlighting that the scenario could be credible as no casualties would be reported, and it would provide a

173 RAND Europe interviews, 6 March 2025 and 9 April 2025.
174 RAND Europe interview, 6 March 2025; emphasis added.
175 RAND Europe interview, 6 March 2025.
176 Reach (2023).
177 RAND Europe interviews, 5 and 6 March 2025.
178 RAND Europe interview, 4 March 2025.
179 RAND Europe interview, 4 March 2025.
180 RAND Europe interviews, 6 March 2025 and 9 April 2025.
181 RAND Europe interview, 1 April 2025.

challenge for the international community to respond adequately.[182]

4.6.3. Response to a cyber-attack

In considering the third scenario, the majority of interview participants cast doubt on the use of electromagnetic pulses due to their non-discriminatory nature.[183] While there might be hints of resolve in such an action, the use of nuclear weapons in space or similar actions was considered unlikely, especially as this type of attack would also disrupt Russian communication channels.[184] However, due to Russia's asymmetry and relative lack of space-based capabilities – especially in terms of reconnaissance satellites – compared to NATO, it is likely that Russia will continue to develop and pursue anti-satellite capabilities to counterbalance this disadvantage.[185] Nevertheless, participants argued that Russia is not eager to employ nuclear weapons and that any escalatory signals would not rely on nuclear options, especially not as a first response in the context of a cyber-attack.[186] Similarly to the demonstration scenario, the trigger or underlying crisis was not clearly defined.[187] While the scenario might make sense in the context of an existing crisis, it was deemed insufficiently impactful on its own by the majority of participants.

However, one participant argued that the scenario was compelling as it delves into a more ambiguous domain by exploring the impacts of cyber and an EMP. This scenario was therefore viewed as more plausible than the others given Russia's widespread interpretation of a violation of sovereignty.[188] Indeed, one interviewee argued that the jump to nuclear use was too quick but agreed that nuclear threats in this scenario could be plausible.[189] Another participant noted that the scenario prompts considerations of whether Russia could achieve similar effects without deploying nuclear weapons. Prior to resorting to an EMP, there may be potential for actions involving space technologies, depending on the intended strategic effect. It is conceivable that Russia might leverage counterspace and electronic warfare capabilities to prevent a regional war, opting for space-based solutions such as satellite disruption and jamming to cause disruption before considering nuclear options.[190] Finally, one participant agreed with the potential plausibility of this scenario only in the case of an added layer of perception by the Russian elite of a threat of regime change.[191]

4.6.4. Failure of a hybrid warfare campaign

In considering the fourth scenario, there was scepticism among participants regarding the likelihood of Russia openly and deliberately attacking nuclear facilities. Such actions were, according to one participant, more likely to

182 RAND Europe interview, 2 April 2025.
183 RAND Europe interview, 4 March 2025.
184 RAND Europe interview, 1 April 2025.
185 Grossfeld (2025).
186 RAND Europe interview, 4 March 2025.
187 RAND Europe interview, 6 March 2025.
188 RAND Europe interview, 19 March 2025.
189 RAND Europe interview, 9 April 2025.
190 RAND Europe interview, 19 March 2025; Grossfeld (2025).
191 RAND Europe interview, 2 April 2025.

occur as accidents or threats, rather than deliberate strikes.[192] The situation in Ukraine was cited as an example where threats were made about potential incidents rather than explicit intentions to destroy facilities such as the ZNPP.[193] Furthermore, one participant argued Russia had already defeated the Georgian army conventionally during the 2008 war – if not without difficulty – so nuclear use would be unnecessary.[194] In addition, the potential international backlash was considered too severe. Although Putin has accepted being ostracised by the West, he remains cautious about becoming a pariah outside the West, as reputational risks would be substantial.[195] However, one interviewee pointed out that using nuclear coercion against a non-NATO state could be plausible to re-establish Russian hegemony in its sphere of influence.[196]

4.7. Conclusion and alternative scenarios

Overall, the expert stakeholders consulted for this study highlighted that the scenarios generally lacked a clear and compelling crisis point that would justify nuclear escalation with low-yield weapons by Russia. They suggested that Russia could engage in several escalatory or signalling actions, such as relocating NSNWs from their peacetime storage sites, before considering a nuclear strike. Further research is needed to determine whether the scenarios would be credible if they were preceded by Russian nuclear signalling or force generation. One expert pointed out that a maritime scenario could be a good addition to encompass the 2015 Russian maritime doctrine recognising the utility at sea of nuclear weapons.[197] Another participant suggested examining a scenario in which a neighbouring country developed nuclear weapons and Russia intervened militarily to halt the programme. Additional plausible or missing scenarios identified include ones initiated by Western actions. For example, a scenario in which the West takes a more assertive stance – such as halting maritime trade with Russia in response to Russian tankers smuggling oil or severing Kaliningrad's connection to the Russian mainland. Other possibilities involve Ukraine-related developments, such as Russia conducting a nuclear weapons test to break a negotiation deadlock or responding to Ukrainian strikes inside Russian territory that result in significant Russian losses or target nuclear infrastructure (especially if Russia perceives these actions as being directed by the West). Finally, a scenario in which Belarusian leader Aleksandr Lukashenko is forced to step down, potentially altering the regional security dynamic, was also mentioned as a possible alternative.[198] Nonetheless, scenarios involving a nuclear test, the destabilising impact of a cyber-attack, or a conventional conflict near or on Russian territory, were considered somewhat more plausible scenarios for NSNW use. These situations would likely provoke concern and fear in the Kremlin regarding state security and the integrity of second-strike capabilities. The following chapter will explore the implications of these considerations for the UK and Allied governments.

192 RAND Europe interview, 4 March 2025.
193 RAND Europe interview, 4 March 2025.
194 RAND Europe interview, 31 March 2025.
195 RAND Europe interview, 6 March 2025.
196 RAND Europe interview, 1 April 2025.
197 RAND Europe interview, 1 April 2025.
198 RAND Europe interviews, 31 March 2025 and 15 April 2025.

Chapter 5. **Conclusion**

This final chapter builds on the preceding analysis presented in this report, drawing out implications for NATO Allies, including the UK as sponsor of this study, as well as identifying areas for further research.

5.1. Key findings

This study has presented an overview of the deep-seated beliefs and influences that underpin Russia's military and nuclear strategies. It has drawn upon a combination of historical, cultural, and ideological perspectives to shed light on Russia's potential actions and decisions concerning its nuclear capabilities, with a particular focus on NSNWs.

Russia's strategic culture is characterised by a zero-sum worldview, which sees international relations as a battleground where gains and losses are absolute. This perspective shapes Russia's strategic preferences, including its reliance on nuclear deterrence and the potential use of NSNWs to counter perceived threats from NATO and other adversaries. Russia views its nuclear arsenal, particularly its NSNWs, as crucial tools in ensuring national security and deterring adversaries through the threat of first use, as well as in overcoming conventional weaknesses relative to NATO.

The scenarios developed in Chapter 4 highlight the potential situations in which Russia might consider deploying NSNWs. These scenarios, informed by historical and cultural insights, emphasise the complexities of the decision making process and underscore the strategic culture's influence on Russia's nuclear posture. While some scenarios, such as a conventional conflict with NATO or a substantial cyber-attack, were considered more plausible, the feedback from experts consulted for this study suggests that Russia would likely engage in several pre-emptive actions, such as repositioning its nuclear forces or raising alert levels, before resorting to NSNW use as described in the scenarios.

5.2. Implications for NATO Allies

When addressing the challenges posed by Russia's nuclear posture it is essential for NATO Allies to consider both nuclear and conventional advanced weapons capabilities.[199] Measures to strengthen conventional deterrence could include more assertive posturing, such as NATO air policing missions using modern dual-capable aircraft. Considering Russia's strategic culture and its deep-seated fear of NATO's dominance in the aerospace domain, this could offer the potential to compel a shift in Russia's posture.

NATO could, in addition, expand and deliberate on the role of nuclear weapons. It could, for example, expand the NATO nuclear sharing agreement, stationing stand-off NSNWs in eastern Europe or the Baltic states or adding a sovereign air capability to the UK deterrent. Although the UK announced in June 2025 that it would be joining NATO nuclear sharing arrangements and acquiring dual-capable F-35As, the limited nature of NATO nuclear

199 RAND Europe interview, 19 March 2025.

sharing arrangements may constrain the effectiveness of such a deterrence response. Further measures would underscore that Russia has no inherent right to a sphere of influence over the states of the former Soviet Union, as asserted in its strategic culture, while simultaneously reinforcing the independent and democratic character of NATO member states. These efforts would be of most relevance for European NATO Allies as the issue of Russian NSNWs, from a deterrence perspective, is predominantly a concern for the European continent given the lack of sovereign European NSNWs and options on the escalation ladder.[200]

Given the centrality of nuclear weapons to Russia's strategic culture, and to its own perceived standing as a great power, NATO Allies should also prepare for further Russian strategic gestures and geopolitical uncertainty.[201] At the same time, the experts consulted for this study consistently underlined that Russia is unlikely to consider nuclear use except in more existential scenarios. Nevertheless, Allies could conduct an assessment of how a coordinated response could enhance deterrence against a potential Russian attack on the Alliance or the possibility of nuclear use. Such a response could build on the July 2025 Northwood Declaration and the Nuclear Steering Group established by the UK and France. To further improve coordination, the UK and Allies should persist in conducting exercises based on potential Russian escalation pathways to gain a better understanding of Alliance dynamics and to develop strategies to counter specific threats.[202] Such exercises should also take into account the risks of inadvertent escalation arising from interactions between NATO and Russian conventional forces, particularly given the Russian armed forces' practice of dual-use, co-hosting, and comingling of conventional and nuclear capabilities.[203]

Allies should also visibly rebuild the connective tissue between conventional and nuclear exercises.[204] The highly centralised decision making in Russia and the possibilities of miscalculation in the Kremlin mean that Russia's actions could have unintended consequences. Therefore, the UK, France and other NATO Allies should not dismiss Russia's nuclear signalling and must exercise prudent judgement regarding the limits of Russian strategic deterrence.[205] Consequently, Allied forces should maintain vigilance in tracking the movement of Russia's nuclear forces, including its NSNWs (particularly with regards to basing) and invest in research to deepen the understanding of Russia's strategic culture and how its nuclear decisions are made.

Interview participants consulted for this study also highlighted the need to bolster NATO's coherence in order to continue influencing and deterring Russia collectively, underlining the need to improve understanding of Russian strategic culture.[206] One participant emphasised that the West does a lot of self-deterrence, arguing that it feels deterred by Russia without deterring Russia efficiently

200 RAND Europe interview, 19 March 2025.

201 Fink et al. (2024).

202 Fink et al. (2024).

203 van Hooft et al. (2023).

204 RAND Europe interview, 4 April 2025

205 Fink et al. (2024).

206 RAND Europe interview, 2 April 2025.

itself in return.[207] This dynamic could be seen as an example of reflexive control, where an adversary's perceptions and actions are manipulated to serve Russian interests. In response, it was suggested that there should be more communication from the NATO Nuclear Planning Group, including publishing when meetings have taken place, to streamline a rational approach to nuclear deterrence in the public discourse.[208] Overall, Allies need to have more coherent and clearer communications with Russia. As NSNWs are a particularly European problem due to geographical constraints, strengthening and developing European cohesion is crucial. [209]

A potential strategy for NATO Allies suggested by one interviewee would be to focus on delegitimising nuclear weapons, for example through a 'no first use' declaratory policy.[210] This would entail NATO, and especially France, the UK and the US, firmly committing to refrain from nuclear use. Proponents argue that, as seen in the initial global pushback against nuclear weapons following Russia's full-scale invasion of Ukraine, a clear and consistent message could be used to rally international support, including from the Global South, and shift the burden of escalation onto Russia.[211]

However, the key stumbling block to such an approach is not only political, but fundamentally one of credibility. In practice, very few states – including Russia or Western allies – regard a no first use policy (such as that stated by China) as credible, given the underlying mistrust among adversaries. In the context of deep-seated mistrust between NATO and Russia, and with NATO's extended deterrence resting on the possibility of nuclear use in extremis, a NATO no first use policy is unlikely to convince Moscow or reassure NATO populations. Without credible belief in its implementation, a no first use policy becomes symbolic at best and ineffective at worst as a deterrent. Adopting a declaratory no first use policy would therefore be politically contentious and ultimately unworkable, as it would directly undermine the principle of US extended deterrence – a key aspect of NATO's deterrence efforts in Europe. As such, developing contingency plans for a more rapid response to potential Russian nuclear signalling represents a more viable approach. For example, in 2022, the West initially struggled to respond effectively and coherently to Russian nuclear signalling and threats, but a more assertive stance was observed when French officials reminded Russia of France's nuclear capabilities following Russia's announcement that it was putting its nuclear arsenal on alert status.[212] While Western leaders may hesitate to alarm their populations, one potential avenue would be to find ways to remind Russia that nuclear conflict is not a one-sided affair.[213]

5.3. Areas for further research

For NATO Allies – especially France, the UK and the US, but also non-nuclear powers – and for policymakers or analysts concerned with international security and nuclear deterrence,

207 RAND Europe interview, 28 March 2025.
208 RAND Europe interview, 4 April 2025.
209 RAND Europe interviews, 28 March 2025 and 9 April 2025.
210 RAND Europe interview, 4 March 2025.
211 RAND Europe interview, 4 March 2025.
212 RAND Europe interview, 6 March 2025.
213 RAND Europe interview, 6 March 2025.

the findings of this short study highlight the importance of understanding the cultural and ideological underpinnings of Russia's strategic decisions. Such an understanding would help to guide strategic planning and crisis management efforts, particularly regarding the drive to enhance deterrence, thereby helping to mitigate the risks associated with potential nuclear escalation scenarios involving Russia.

As global security dynamics continue to evolve, this research reinforces the necessity for ongoing analysis and dialogue regarding strategic cultures and their impact on international security. While the report provides a foundational understanding, it also serves as a call to action for further research into the implications of strategic culture on nuclear policy and international diplomacy. Future studies could explore the divergence between Russian and Western perceptions of NSNWs, with a particular focus on yields and delivery systems. This could help clarify misunderstandings and contribute to the development of more effective deterrence measures. Additionally, such research would more clearly identify areas where Russia's nuclear posture diverges significantly from that of the West, as well as areas of similarity.

Moreover, simulation models or war games could examine Russian escalation pathways and decision making under various strategic culture scenarios, potentially uncovering vulnerabilities that NATO and countries such as France and the UK could exploit to bolster their defence strategies. Finally, as the potential for a conflict between NATO and Russia cannot be ruled out for the foreseeable future and given Russia's deterrence philosophy more resembling Western concepts of intra-war deterrence, examining what mechanisms there are to manage and deescalate an ongoing conflict between Russia and NATO, including a nuclear one, would be beneficial.

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Annex A. **List of interviewees**

Name	Organisation	Position
Anonymous	Organisation not provided	Position not provided
Anonymous	Organisation not provided	Position not provided
Anonymous	UK MOD	Senior Principal Analyst
Artur Kacprzyk	Polish Institute of International Affairs (PISM)	Nuclear Deterrence Analyst
Clint Reach	RAND US	International Defence Researcher
Jeffrey Michaels	RAND Europe	Associate
John Foreman	RAND Europe	Associate
Steven Pifer	Brookings	Non-resident Senior Fellow
Pavel Podvig	Russian Nuclear Forces Project	Director
William Alberque	International Institute for Strategic Studies	Former Director of Strategy, Technology and Arms Control

Annex B. **Longlist of strategic culture scenarios**

1. **Escalate to de-escalate:**
    - **Scenario:** In a conventional conflict where Russia feels overwhelmed by NATO forces, it might employ a low-yield nuclear weapon to signal its willingness to escalate, thereby forcing adversaries to negotiate or retreat.
    - **Strategic rationale:** This approach aligns with Russia's perceived need to demonstrate resolve and protect its sovereignty, leveraging nuclear weapons to restore strategic stability.
2. **Defensive use in a regional conflict:**
    - **Scenario:** Facing a significant military threat in a regional conflict, such as in Eastern Europe, Russia might use tactical nuclear weapons to halt advancing enemy forces and protect its territorial integrity.
    - **Strategic rationale:** Rooted in a defensive posture, this reflects the historical emphasis on protecting Russian territory and maintaining regional influence.
3. **Deterrence against NATO expansion:**
    - **Scenario:** In response to NATO's enlargement or military exercises near its borders, Russia could conduct a demonstration strike using a low-yield nuclear weapon to deter further encroachment.
    - **Strategic rationale:** This scenario underscores Russia's strategic culture of viewing NATO as a primary threat and using nuclear weapons to deter perceived aggression.
4. **Coercive diplomacy:**
    - **Scenario:** During a geopolitical crisis, Russia might threaten or conduct a limited nuclear strike to coerce adversaries into making political concessions or lifting economic sanctions.
    - **Strategic rationale:** This reflects a historical willingness to use nuclear threats as a tool of statecraft to achieve political objectives.
5. **Response to a cyber or aerospace attack:**
    - **Scenario:** If Russia perceives a debilitating cyber or aerospace attack as an existential threat, it might resort to tactical nuclear weapons to retaliate and signal its determination to defend its national interests.
    - **Strategic rationale:** This scenario is informed by Russia's view of cyber and aerospace domains as critical to national security and the need to maintain strategic deterrence.
6. **Pre-emptive strike in crisis escalation:**
    - **Scenario:** In a rapidly escalating crisis in which Russia anticipates an imminent large-scale attack, it might use tactical nuclear weapons pre-emptively to neutralise key military targets.
    - **Strategic rationale:** This aligns with the strategic culture of pre-emptive action to prevent overwhelming threats and maintain strategic advantage.

7. **Demonstrative use in a non-combat situation:**
    - **Scenario:** To demonstrate capability and resolve, Russia might conduct a low-yield nuclear test or a controlled strike in a remote area without direct military engagement.
    - **Strategic rationale:** This scenario demonstrates a strategy of showcasing nuclear capability to reinforce deterrence and strategic messaging.