



# NAVAL POSTGRADUATE SCHOOL

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**RUSSIA'S STRATEGIC RECALIBRATION AFTER THE  
UKRAINE CONFLICT: IMPLICATIONS FOR THE TWO NEAR-  
PEER COMPETITORS STRATEGIC ENVIRONMENT (PART 1)**

by

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October 2023

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## **ABSTRACT**

This research examines the evolving strategic partnership between Russia and China as near-peer, nuclear-armed adversaries for the U.S. in the wake of the war in Ukraine. It focuses on Russia's new security situation after the conflict in Ukraine, particularly how it might attempt to compensate for its depleted strategic capabilities and resources by partnering with China.

The research is organized along two parallel tracks. The first track, contained in this part of the technical report, analyzes how Russia's nuclear posture has evolved as result of the War in Ukraine, and assesses the impact of the Sino-Russian cooperation on Russia's space program. The second track of this research, contained in Part 2 of the technical report, examines the cooperation between Russia and China in the nuclear realm, and its implications.

This research was conducted through a combined team effort of subject-matter experts on Russian strategic doctrines, capabilities, and behavior. The researchers performed a rigorous analysis of the debates in the Russian literature, complementing and contextualizing this information through discussions with subject-matter experts in Washington, the U.S. Strategic Command, and the U.S. Space Command.

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# **I. EMBRACING PREEMPTIVE DETERRENCE? THE DEBATE ON REVISING RUSSIA'S NUCLEAR POSTURE AND ITS STRATEGIC IMPLICATIONS**

July 25, 2023

Dr. Aleksandar Matovski

## **EXECUTIVE SUMMARY**

A set of provocative articles by prominent Russian analysts, who advocate for lowering Russia's nuclear threshold and demonstration strikes against Poland to deter the West from supporting Ukraine, has sparked an unprecedented debate about Russia's nuclear posture. The proposed preemptive deterrence policy would be aimed to reverse the loss of fear of nuclear war: the main driver of the Western commitment to aiding Ukraine in its proponents' opinions.

These radical nuclear coercion proposals echo the views of the influential hardliner, pro-escalation faction within the Putin regime. Even though they are impractical from a deterrence standpoint, there is a non-trivial risk that the increasingly desperate Putin regime might embrace some of them to attempt to force a more favorable way out of the quagmire in Ukraine. The risk of such brinkmanship, driven by political survival considerations, increased significantly since the mutiny of the Wagner private military company – and they may increase further ahead of the high-stakes Russian presidential elections in March 2024.

The United States and its allies cannot eliminate the risk of such escalation while the Ukraine conflict is ongoing, but still have substantial leverage to discourage Russian nuclear brinkmanship. To deter the Kremlin from engaging in more extreme nuclear coercion, the Western allies should: (1) avoid symmetric responses to Russian escalatory steps and reinforce missile defenses in potential target states in East Europe; (2) consider publicly declaring that they will respond to Russian nuclear aggression with devastating conventional strikes, which will deny the Kremlin any battlefield benefits from nuclear use; (3) continue to strategically release intelligence exposing Russia's escalation plans, to further isolate it, and put domestic and international pressure on the Kremlin to refrain from nuclear use.

## **1. INTRODUCTION**

The catastrophic failure of Russia's aggression against Ukraine in 2022-3 and the resulting exhaustion of the Russian conventional capabilities have prompted the Kremlin to resort to increasingly more aggressive attempts at nuclear coercion in order to reverse the negative trends on the battlefield. These efforts, accelerated in the late spring and summer of 2023 with the deployments of tactical nuclear weapons in Belarus – the first tangible escalatory actions – and an unprecedented domestic debate on whether Russia should adopt a far more aggressive nuclear posture, which envisions preemptive demonstration strikes against key Eastern European NATO members.

This paper will analyze these developments and their strategic implications. It will first review the key arguments of the proponents of escalating the Russian nuclear coercion against the West. The second section of the paper will, in turn, summarize the key substantive critiques of this approach by prominent members of Russia's strategic deterrence and foreign policy expert community. In the third section of the paper, I will discuss how the radical new preemptive deterrence proposals resonate among the different factions of the Putin regime, and how it might affect the strategic rationale of the Russian leadership in the wake of the Wagner private military company mutiny. The final section of this paper will assess the potential scope and trajectory of Russia's nuclear coercion in the coming period and provide recommendations for possible US and allied responses.

## **2. THE PREEMPTIVE DETERRENCE ARGUMENT**

Against the backdrop of Ukraine's counteroffensive in the summer of 2023 and the mutiny of the Wagner private military company, Russian experts and policy commentators have engaged in an extraordinarily vigorous and public debate about the decline of the deterrent power of the country's nuclear arsenal and the need to take radical steps to reestablish it. This debate was triggered on June 13 by a provocative article by Sergei Karaganov, a prominent conservative analyst, who argued that Russia cannot win its "existential struggle" in Ukraine without forcing

the West to cease its support of Ukraine through nuclear coercion.<sup>1</sup> Karaganov claims that a key driver of the conflict in Ukraine is the loss of fear of nuclear escalation in Western circles, which can only be restored by a much more assertive nuclear posture with a considerably lower threshold for nuclear use. Crucially, Karaganov insists that to make this aggressive posture credible, it might be necessary to conduct a limited strike with a non-strategic nuclear weapon, aimed to demonstrate resolve and instill terror. The target of this strike, though not explicitly named in the article, would be Poland, where Russia would strike unspecified “facilities” (presumably involved in providing military aid to Ukraine) after providing warning and time to evacuate the affected areas.

Apart from this specific threat, the train of thought in Karaganov’s article is centered around the standard conspiratorial arguments aired by the key ideologues and propagandists of the Putin regime. He asserts that the decadent West, facing its inevitable decline, has temporarily consolidated itself and turned Ukraine into a “striking fist” to tie down rising Russia. The most aggressive among the “decadent liberal elites” leading this Western assertiveness, according to Karaganov, are US-controlled “local elites” in Europe (again, a likely reference to Eastern European supporters of Ukraine, like Poland and the Baltics), who have helped sustain a full-scale war in the underbelly of the Russian nuclear superpower – an action that would be unthinkable during the Cold War. According to Karaganov, a preemptive nuclear strike against these countries would restore the fear of nuclear escalation, thus forestalling Western aggression from gradually escalating into a catastrophic global conflict.

Karaganov’s argument is based on the wildly optimistic assumption that the United States will not retaliate against Russia if it carries out a demonstration strike against an Eastern European NATO member. He reasons that only a “madman” U.S. leader, who works against American interests, would sacrifice a “conditional Boston for a conditional Poznan.” This rationale is based on Karaganov’s reading of U.S. Cold War nuclear posture, according to which the threat of American retaliation for Soviet nuclear strikes against Europe was a bluff that was never seriously considered; in reality, he asserts that the U.S. would only have used nuclear weapons against advancing Soviet troops.

Furthermore, Karaganov assumes that Russia’s friends and allies (China, India and the Global South in particular) would initially condemn it for breaking the nuclear taboo, but would

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<sup>1</sup> Sergei A Karaganov, “A Difficult but Necessary Decision,” *Russia in Global Affairs*, June 13, 2023, <https://eng.globalaffairs.ru/articles/a-difficult-but-necessary-decision/>.

eventually forgive it, as they will be major beneficiaries of the resultant humbling of Western “irresponsible” power. Interestingly, in making this last point, Karaganov points at a fundamental divergence of interests between Russia and China in the conduct of the war in Ukraine. In his view, Beijing prefers the conflict to drag on, because it draws U.S. resources away from confronting China as it grows its power. It also desires that the conflict does not pass the nuclear threshold, as this is a realm where China is still weak in terms of its own capabilities. Hence, Karaganov proposes that Russia should not be constrained by its alliance with China in pursuing the strategy of a demonstrative nuclear use: an act that Beijing will eventually accept and forgive, because “those who win are always forgiven.”

A week after the publication of Karaganov’s arguments, they were given another rendering by Dmitri Trenin,<sup>2</sup> another prominent Russian strategic analyst who has adopted increasingly conservative views in recent years. Trenin is a former colonel in Russian military intelligence and former director of the Carnegie Moscow Center – one of the principal hubs for intellectual exchanges with the West until its closing in the wake of Russia’s invasion of Ukraine in 2022. He has been described by critics as a sophisticated intellectual propagandist, targeting Western expert audiences with interpretations of Russian behavior that amplify fears and increase the effects of the Kremlin’s nuclear coercion.<sup>3</sup>

Trenin’s article, which, like Karaganov’s analysis, was published in the influential, state-supported *Russia in Global Affairs* journal, repeats the thesis that the Ukrainian conflict is a product of the “fearlessness” of U.S. leadership in the face of potential Russian nuclear retaliation – a thesis Trenin articulated earlier in an interview for the same journal in the September 2022.<sup>4</sup> According to Trenin’s June 2023 article, Russia’s restraint thus far has reinforced the delusion that Moscow will not resort to nuclear weapons in the conflict in Ukraine, conceding escalation initiative to its Western adversaries. To avoid a much worse spiraling of this conflict down the line, Trenin argues that Russia’s proverbial nuclear bullet needs to be placed in the revolver with which the Western leadership is playing “Russian roulette” by supporting Ukraine. The Russian leadership, in Trenin’s view, should move beyond rhetorical threats, and start practical

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<sup>2</sup> Dmitri Trenin, “Ukrainskij konflikt i jadernoe oruzhie (The Ukrainian conflict and nuclear weapons),” *Russia in Global Affairs* (blog), June 20, 2023, <https://globalaffairs.ru/articles/ukraina-yadernoe-oruzhie/>.

<sup>3</sup> Andrei Piontkovsky, “Jadernyj poker (Nuclear Poker),” *Radio Free Europe/Radio Liberty*, March 28, 2016, <https://www.svoboda.org/a/27633151.html>.

<sup>4</sup> Dmitri Trenin, “Vernite strah! (Bring Back the Fear!),” September 29, 2022, <https://globalaffairs.ru/articles/vernite-strah/>.

preparations for potential nuclear use, by carefully considering possible options of employment of these weapons, as well as their consequences.

On the issue of limited demonstrative strikes against (Eastern) European NATO countries, raised by Karaganov, Trenin also assesses that the United States would not respond with strikes against Russia. But he allows for conventional retaliation, which would be painful and would aim to create panic in the Russian population and paralyze the Russian leadership. However, Trenin is confident that Russia can absorb this blow because its stakes in the Ukrainian conflict, unlike those of the West, are existential. For this reason, Russia would be willing to tolerate much greater sacrifices – and even respond to the U.S. retaliation with a strike against American territory, rather than that of its European “satellites.” In this sense, Trenin differs from Karaganov, who only envisions that limited nuclear strikes against European NATO members will be sufficient to compel the United States to cease its support for Ukraine.

Threatening the United States, in Trenin’s view, should serve as deterrent against U.S. retaliation for Russian nuclear strikes in Europe. In his previous article from September 2022, Trenin foresees that a Russian nuclear strike against Ukraine will not stop anybody from supporting it. A strike against European territory, in turn, will be seen as “critically dangerous, but not critically important” in Washington, and would still not have the desired effect. Only a potential strike against American territory would compel the United States to reverse its course, so the purpose of Russia’s updated nuclear posture, in Trenin’s view, is to convince its “main adversary” that this threat is plausible.

These arguments promoted by Karaganov and Trenin may appear absurd from the standpoint of the sensible strategic analysis, deterrence logic and existing Russian strategic doctrine. Nevertheless, they are significant because they reflect the current sense of strategic desperation, shared by important factions of the Russian political and security elite, and because they overlap with ideas aired by key figures in Vladimir Putin’s inner circle – particularly those of Nikolai Patrushev, the influential Secretary of Russia’s Security Council (a position roughly equivalent to the role of the National Security Advisor in the United States). Patrushev is one of a handful of closest Putin loyalists, who have served with him ever since the 1970s, and has been one of the very few who have participated in his most dangerous and escalatory decisions: the

decisions to annex Crimea in 2014, and to invade Ukraine in 2022.<sup>5</sup> Described as the “most dangerous man in Russia” and a “hawk’s hawk,”<sup>6</sup> Patrushev has been the chief ideologue of the aggressive nationalist, anti-Western turn of the Putin regime, and the principal architect of the Kremlin’s growing reliance on nuclear blackmail against the West.<sup>7</sup>

### 3. REBUTTALS OF THE PREEMPTIVE DETERRENCE THESIS

The radicalism of Karaganov’s and Trenin’s ideas, and the possibility that they are promoted by certain powerful factions in the Kremlin, provoked an unprecedented flurry of critiques and responses in the Russian academic and analytical circles, exposing a broad spectrum of opinions and the fault line in the debate on Russia’s nuclear posture in the wake of the Ukraine conflict. Alexei Arbatov, one of the foremost intellectual leaders in the fields of nuclear deterrence, arms control and international security in Russia – and a consistent moderate in terms of Russia’s nuclear posture – confirmed that Karaganov’s arguments are likely not just his own but are also be advocated by certain parts of the political elite.<sup>8</sup>

Providing a scathing criticism of Karaganov’s arguments, Arbatov evaluates them as so nonsensical that they are not worthy of criticism. Among the few substantive points he engages with, Arbatov underlines the absurdness of Karaganov’s idea about providing NATO warning of the specific demonstration strike location, as this would allow the adversary to detect and preemptively target the tactical nuclear weapons that would be used for this purpose. This would be facilitated by the fact that Russia does not keep non-strategic nuclear weapons (NSNWs) on ready alert, so they can be targeted during their deployment from storage to delivery vehicles. More

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<sup>5</sup> Steven Lee Myers, “Russia’s Move Into Ukraine Said to Be Born in Shadows,” *The New York Times*, March 8, 2014, sec. World, <https://www.nytimes.com/2014/03/08/world/europe/russias-move-into-ukraine-said-to-be-born-in-shadows.html>; “Kremlin Insiders Are Alarmed Over Growing Toll of Putin’s War,” *Bloomberg.Com*, April 20, 2022, <https://www.bloomberg.com/news/articles/2022-04-20/putin-s-war-in-ukraine-has-russian-elites-fearing-global-isolation>.

<sup>6</sup> Mark Galeotti, “The Most Dangerous Man in Russia,” In *Moscow’s Shadows*, accessed June 30, 2023, <https://www.buzzsprout.com/1026985/4169738>.

<sup>7</sup> Piontkovsky, “Jadernyj poker (Nuclear Poker)”; Thomas C. Moore, “Tailor-Surgeon, Soviet and Silovik : Russian Nuclear Strategy,” *Revue Défense Nationale* 801, no. 6 (2017): 42–50, <https://doi.org/10.3917/rdna.801.0042>.

<sup>8</sup> Aleksei Arbatov, “«Uprezhdajushhij udar vozmezdija». Dejstvitel’no li primenenie jadernogo oruzhija uberezh chelovechestvo ot katastrofy? Aleksej Arbatov otvechaet na voprosy o skandal’noj stat’e Sergeja Karaganova (‘Preemptive strike for retribution.’ Will the use of nuclear weapons really save humanity from catastrophe? Alexey Arbatov answers questions about the scandalous article by Sergei Karaganov),” *Novaya Gazeta*, June 19, 2023, <https://novayagazeta.ru/articles/2023/06/19/uprezhdaiushhii-udar-vozmezdiiia>.

broadly, Arbatov questioned expertise of Karaganov (a scholar of European politics) on matters of strategic deterrence, pointing out that targeting European NATO members with limited demonstration strikes will not minimize the risk of American retaliation. This, according to Arbatov, is only possible with a disarming first strike – a capability well beyond Russia’s reach.

Arbatov expands on this point in a subsequent article with Konstantin Bogdanov and Viktor Stefanovich – experts on nuclear postures and deterrence from the Institute of World Economy and International Relations under the auspices of the Russian Academy of Sciences.<sup>9</sup> Here, Arbatov and his colleagues stress that a shift toward demonstrative and preemptive strikes would represent a radical break with Russia’s existing nuclear doctrine and long-standing position on the inadmissibility of the use of nuclear weapons – as well as recent statements by Vladimir Putin, who appeared to reject the need for nuclear use at the time being. These authors insist that Karaganov’s and Trenin’s assumptions that a demonstration strike with a tactical nuclear weapon would only lead to a limited escalation with a bearable cost for Russia is ludicrous. They underscore that the consequences for breaking the nuclear taboo in the new global environment would be much worse, creating widespread global shock and condemnation. The West, as a consequence, will be compelled to respond with at least a massive conventional strike, making ceasefire in Ukraine practically impossible and increasing the odds of an uncontrollable escalation spiral that could easily reach a full nuclear exchange.

This last point is the starting premise of another rebuttal of the Karaganov and Trenin articles, published on June 20 by Ivan Timofeev, the director general of the Russian International Affairs Council. While accepting Karaganov’s premise that there are real risks of gradual escalation as Western powers continuously raise the bar for the kinds of weapons they supply to Ukraine, thus attempting to cook Russia on “slow boil,” Timofeev reasons that attempts to break this cycle with nuclear escalation would be the equivalent of jumping into the fire to escape the frying pan. Even if there is no full-blown NATO retaliation, the West, in this author’s view, will respond with an immense increase of arms supplies to Ukraine and a complete trade blockade of Russia. Furthermore, Poland may directly enter the war, and Moscow will become a “toxic asset” for China, India and the other Russia-friendly states in the Global South. This will lead to a rapidly

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<sup>9</sup> Alexei Arbatov, Konstantin Bogdanov, and Dmitry Stefanovich, “Jadernaja vojna — plohoe sredstvo reshenija problem (Nuclear war - a bad tool for solving problems),” *Kommersant*, June 21, 2023, <https://www.kommersant.ru/doc/6055340>.

worsening position for Russia on the frontlines, for which it has no other remedy apart from further escalation. Instead of pursuing this path, Timofeev proposes that Russia could learn to live with and gradually close the “bleeding wound” that the West has created for it in Ukraine. Timofeev reasons that Russia could afford to do this because the war is also a “bleeding wound” for the West, draining scarce resources and political capital from other priority areas – particularly confronting China.

In addition to these articles, there were several additional prominent reactions to the preemptive deterrence doctrine advocated by Karaganov and Trenin. These came out in the *Russia in Global Affairs* journal, where Karaganov’s original article appeared, and seem like an effort of the editorial board to balance out this debate, in light of some of the outrage for publishing his escalatory arguments. The first of these retorts was penned by Fyodor Lukyanov, the chief editor of the journal, chairman of the Presidium of the Council on Foreign and Defense Policy, and Research Director of the Kremlin-sponsored Valdai International Discussion Club. Lukyanov stresses that rather than stave off a creeping escalation, the preemptive deterrence will more likely accelerate it, as Western leadership is unlikely to back off in the face of nuclear intimidation.<sup>10</sup> As evidence for this, he cites the failure of Russia’s December 2021 threat of using of military force if it does not receive long-term guarantees for its security from the West – and the subsequent invasion of Ukraine. These preemptive actions, according to Lukyanov, initially shocked Western elites, but ultimately proved counterproductive, as they hardened their determination to counter Russia.

Alexey Frolov, military historian and analyst of Center for Comprehensive European and International Studies at Moscow’s Higher School of Economics, offers a similar critique of the Karaganov/Trenin proposals.<sup>11</sup> While he is sympathetic to Karaganov’s lamentations about the decline of the previous regime of nuclear deterrence and the loss of fear of nuclear escalation, Frolov warns that the escalation ladder in case of a direct conflict between Russia and the West would not be linear. Instead, it would resemble an ascent up Salvador Dalí’s surrealist stairs, where one step forward takes the climber five flights of stairs higher. As an illustration, Frolov cites

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<sup>10</sup> Fyodor Lukyanov, “Pochemu u nas ne poluchitsja «otrezvit’ Zapad» s pomoshh’ju jadernoj bomby [Why we can’t ‘sober up the West’ with a nuclear bomb],” *Russia in Global Affairs* (blog), June 21, 2023, <https://www.globalaffairs.ru/articles/otrezvit-zapad/>.

<sup>11</sup> Andrei Frolov, “Lestnica jadernoj jeskalacii v ispolnenii Sal’vadora Dali (The escalation ladder rendered by Salvador Dali),” *Russia in Global Affairs* (blog), June 23, 2023, <https://globalaffairs.ru/articles/lestnicza-salvadora-dali/>.

Robert McNamara's statement that during the Cold War that the United States did not intend to respond to Soviet aggression with tactical nuclear weapons, but instead planned to carry out immediate strikes against the decision-making centers that gave the invasion orders. Frolov reasons that a strike against a "hypothetical Poznan" may lead to a similar leap across the escalation ladder by the West, proving the preemptive deterrence approach counterproductive.

While Frolov rejects Karaganov's proposals, he agrees with his premise that the risk of conflict between Russia and the West is higher than ever, in no small part because of blind spots in Russia's current deterrent posture. In this sense, Frolov mentions the lack of a proper doctrinal response to a "dirty bomb," or radiological attack against Russia – such as a Ukrainian strike on the Zaporizhzhia nuclear power plant – as one of the blind spots in Russia's current nuclear posture, due to its high thresholds for nuclear retaliation. An analogous scenario that he mentions is the potential transfer of American tactical nuclear weapons to Ukraine (specifically, the B-61 gravity bombs) to carry out a "false flag" strike on Ukrainian and Polish territory and blame Russia. But despite highlighting these conspiratorial scenarios, Frolov makes a broader point cautioning that the Kremlin's reactions to any threats should be measured against the fact that the United States is actively attempting to provoke it to resort to first nuclear use to undermine Russian interests.

A similar argument is put forward by Ilya Fabrichnikov, a communications expert and Member of the Council on Foreign and Defense Policy that publishes the *Russia in Global Affairs* journal, who insists that statements by American commentators that the United States should provide tactical nuclear weapons, like the B-61 bomb, do not represent genuine intentions, but are part of a Western (dis)information campaign, aimed to provoke the Russian leadership to violate the nuclear taboo, exposing itself to widespread condemnation and isolation. Crossing, or even lowering the nuclear threshold in this context, would, according to Fabrichnikov, make Russia abandon its current well-thought-through nuclear doctrine, which has been forged and has proven its effectiveness during a long and difficult period of constant Western pressure. Noting that currently none of the scenarios for nuclear use envisioned by this doctrine has occurred, Fabrichnikov suggests that Karaganov's preemptive deterrence scheme would needlessly undermine Russia's fundamental long-term interests – particularly in preventing the emergence of a world with loosened restraints on nuclear use by the countries that are not part of the official "nuclear club" (Israel, Pakistan, India and North Korea).

The negative reactions of the Russian expert community to the Karaganov/Trenin culminated with an open letter by 21 members of the Russian Council on Foreign and Defense Policy (of which Karaganov was one of the founders), published on July 13, 2023.<sup>12</sup> Led by Alexey Arbatov, this group of prominent experts strongly condemned the calls for preemptive nuclear strikes as irresponsible. Describing hopes that nuclear conflict can remain limited as delusional, the signatories declare that following such policies will lead not just to a global catastrophe, but to Russia's loss of sovereignty and its collapse.

These strong rejections by the Russian foreign affairs and strategic deterrence expert communities are somewhat reassuring, as they point to a substantial resistance to the proposals for a more assertive nuclear posture in these circles. However, they should be considered within the Russia's broader political context, where extreme nuclear saber-rattling has become normalized and reached unprecedented levels. Over the past year-and-a-half, nuclear threats against the West have not only become a topic of virtually every news program in Russia, but they have been sanctioned and encouraged by virtually every major institution – ranging from the Orthodox Church to the Kremlin – and have led to calls from within the military establishment to radically revise Russia's nuclear posture.<sup>13</sup> Against this backdrop, it is hard not to be concerned that more rational expert opinions may become drowned out in Russia's broader “nuclear fever.”

#### **4. WHAT IS THE KREMLIN'S POSITION ON THE “PREEMPTIVE DETERRENCE” DEBATE?**

When asked about Karaganov's ideas for Russian use of non-strategic nuclear weapons in the context of the war in Ukraine on the margins of the St. Petersburg Economic Forum on June 16, President Putin seemed to respond negatively, arguing that the current situation does not warrant such a radical response. In this sense, Putin reaffirmed one of the thresholds for nuclear use in the current Russian nuclear doctrine: the existence of a threat to the territorial integrity, independence and sovereignty, and existence of the Russian state. Expressing confidence that the Ukrainian counteroffensive has little chance of success, Putin asserted that fears of Russia's

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<sup>12</sup> “O prizyvah k razvjazyvaniju jadernoj vojny (On the calls for unleashing a nuclear war)” (Russian Council on Foreign and Defense Policy, July 13, 2023), <https://svop.ru/main/48156/>.

<sup>13</sup> Dmitry Adamsky, “Russia's New Nuclear Normal,” *Foreign Affairs*, May 19, 2023, <https://www.foreignaffairs.com/russian-federation/russias-new-nuclear-normal>.

nuclear use are stoked by its enemies, who want to stigmatize Russia as evil and cruel and to provoke it into escalating the conflict.

While these remarks seem to reject radical proposals (and have been showcased as such by critics like Arbatov), they should be considered in the context of Putin's entire set of comments on this topic at the June 16 event, which have been far more equivocal. In the same statement, Putin also stressed that Russia is currently very restrained in its war effort – that it could destroy any object in Ukraine, but chooses not to, as this is not necessary at the moment. But this calculus may change, according to Putin, if Russia is pushed to the edge of strategic defeat.

Putin followed up with three additional comments, suggesting that tactical nuclear weapons would be the primary means for preventing this outcome. First, Putin boasted that these are the main area where Russia retains a comparative advantage over NATO's armies, and used colorful language to underscore that talks for their reduction are out of the question. Second, he reiterated that the precedent for nuclear use against a non-nuclear state was created by the United States in World War II, and that Russia will not hesitate to employ such weapons if it is faced with a danger to its statehood. Third, Putin emphasized that the deployment of tactical nuclear weapons in Belarus should be interpreted as a reminder to those who would like to inflict a strategic defeat to Russia.

These decidedly mixed signals suggest that Putin is, at the very least, using the preemptive deterrence debate as another opportunity to engage in a more substantial campaign of nuclear scaremongering against the West: a tactic that the Russian leader has engaged into for a long time without making actual steps to act on his threats. This time, the unfavorable trajectory of the war in Ukraine raises the possibility that the Kremlin may feel compelled take further, more concrete steps to demonstrate its credibility in making these threats.

Two recent actions by the Russian president over the last six months seem to point in this direction. The first was Putin's announcement that Russia will suspend its participation in the New START Treaty with the United States. According to prominent Kremlin observer Tatyana Stanovaya, this was Putin's most important statement during his 2023 annual state of the nation address on February 21. According to Stanovaya:

Putin's state of the nation address effectively suggests that in the growing confrontation with the West, Russia will rely on one sole argument: the nuclear option. In this respect, suspending the New START treaty also sends a warning to non-Western countries of the consequences for the

entire world of the West's anti-Russian policies. Moscow is presenting the global community with a choice between Russia or descending into a nuclear disaster.<sup>14</sup>

The second, more significant step that signaled greater willingness to move toward a more assertive nuclear posture is the Russian deployment of tactical nuclear weapons to Belarus. While this deployment is largely meaningless from the standpoint of the overall nuclear balance,<sup>15</sup> it was the boldest signal thus far that the Kremlin is prepared to engage in more tangible nuclear coercion. According to Nikolai Sokov, a former Soviet diplomat who took part in arms-control treaties negotiations, the Belarus deployment is a strong sign that the Russian leadership may be ready to revise its nuclear posture because it contradicts Russia's long-standing principles that nuclear weapons should be deployed only on national territory, and that nuclear sharing violates the non-proliferation treaty.<sup>16</sup> More ominously, because of the short range and vulnerability of the delivery vehicles, Sokov reasons that they may only serve as first-strike weapons that are clearly aimed at Poland – the NATO ally that was designated by Karaganov as the primary target for the “preemptive deterrence” strategy.

But perhaps the most crucial set of factors pushing the Kremlin toward a more assertive nuclear posture are internal. Two among them are the growing intra-elite tensions divisions about the conduct of the war in Ukraine, and the rising influence of the hardliner faction in the Kremlin, in which “nuclear blackmail” hawks like Nikolay Patrushev are key power brokers. The hardliner faction was simultaneously boosted and existentially threatened by the invasion of Ukraine.<sup>17</sup> On one hand, the war eliminated the remaining restraints on the repressive apparatus and made the whole country far more reliant on the security services, which are largely under the control of the hardliners. But, on the other hand, the costs of the war and the prospect of defeat have created a

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<sup>14</sup> Tatiana Stanovaya, “Divided in the Face of Defeat: The Schism Forming in the Russian Elite,” Carnegie Endowment for International Peace, accessed May 23, 2023, <https://carnegieendowment.org/politika/88630>.

<sup>15</sup> Steven Pifer, “Steven Pifer: Russian Nukes in Belarus - Much Ado About Little?,” Freeman Spogli Institute for International Affairs, Stanford University, February 28, 2023, <https://fsi.stanford.edu/news/russian-nukes-belarus-much-ado-about-little>.

<sup>16</sup> Nikolai N Sokov, “Russia Is Deploying Nuclear Weapons in Belarus. NATO Shouldn't Take the Bait,” *Bulletin of the Atomic Scientists*, April 24, 2023, <https://thebulletin.org/2023/04/russia-is-deploying-nuclear-weapons-in-belarus-nato-shouldnt-take-the-bait/>.

<sup>17</sup> Catherine Belton, “The Man Who Has Putin's Ear — and May Want His Job,” *Washington Post*, July 15, 2022, <https://www.washingtonpost.com/world/2022/07/13/nikolai-patrushev-russia-security-council-putin/>.

deep and growing schism among Kremlin insiders, pinning the more pragmatic regime elites against the hardliners.

According to Stanovaya, the pragmatists include *siloviki* (elites with backgrounds in the security services), senior technocrats, and prominent businessmen who stand to lose the most if Russia pursues a strategy of victory at all costs.<sup>18</sup> They believe that Russia cannot win the current war and should pause the fighting, freezing the frontline until it recovers its strength. The hardliners, in contrast, insist that Russia can only avoid defeat and collapse by prevailing on the battlefield – and favor mobilization and escalation until victory is secured. In Stanovaya’s assessment, troubles on the battleground in Ukraine have made the hardliner, pro-escalation faction more influential and as well as more threatened and radical, pushing Russia “toward a final battle between the radicals, for whom escalation is a way of life, and the realists [i.e., pragmatists], who understand that continuing to up the ante could lead to their country’s collapse.” Given the exhaustion of Russia’s conventional capabilities, escalation in the nuclear realm may seem, from the hardliners’ standpoint, as the final trump card, which could reverse both the precarious situation in Ukraine and help them prevail in the increasingly higher stakes internal power struggle.

A key factor that empowers the hardliner position on this matter is that their interests increasingly align with those of President Putin – the ultimate arbiter of Russian politics, who has staked his political fortunes on the conflict in Ukraine and whose growing vulnerability could make him see no other choice but to double down on more aggressive nuclear threats, attempting to turn the tide of his declining legitimacy by all means necessary.

## **5. THE PREEMPTIVE DETERRENCE DEBATE IN THE SHADOW OF THE WAGNER MUTINY**

The dramatic uprising of Russia’s private military company Wagner, orchestrated by its controversial owner Evgeniy Prigozhin on June 24-25, took place in the middle of the debate on the preemptive deterrence nuclear posture and appears to have increased its salience and the stakes involved.

In the wake of the mutiny, both Karaganov and Trenin published another set of articles with the state-owned RIA Novosti news agency, doubling down on the preemptive deterrence

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<sup>18</sup> Stanovaya, “Divided in the Face of Defeat.”

concept with even more extreme proposals. Karaganov's article of June 25 reiterates that Russia has no choice but to pursue this strategy because the West will otherwise "wear it down" in the proxy war in Ukraine because of its greater military-industrial capacity. Responding to his critics, Karaganov asserts that if the West carries out conventional strikes in response to a demonstrative nuclear strike on Poland, Russia would retaliate with massive nuclear strikes on European targets, which would "finish off Europe as a geopolitical entity."<sup>19</sup>

Karaganov also outlines a more gradual set of warnings and actions to demonstrate resolve, which Russia should take ahead of that initial nuclear demonstration strike. These would range from missile (re)deployments, testing strategic missiles at "shorter distances" (presumably in Europe's direction), as well as "psychological measures," such as breaking diplomatic relations with "the most Russophobic nations" (presumably Poland – the implied target of the demonstration strike), declaring that any retaliatory strikes against Belarus would be considered as attacks against Russia, and warning all Russian-speaking and "well-meaning" residents of the potential target countries to leave (creating mass panic and migration).

In addition, Karaganov further specifies his arguments on why the target of the demonstration strike should not be against Ukraine, as well as his expectations of the impact on the Sino-Russian relationship in the wake of this nuclear attack. Regarding the former, he stresses that it would make no sense to strike the "unfortunate and deceived" Ukrainian population (which he labels as "our people") that is being driven to slaughter; instead, the nuclear demonstration should be aimed against the European countries that provide the greatest assistance to the "Kyiv regime."

On the impact on Sino-Russian relations, Karaganov asserts that Russia and China share the same strategic goal (challenging Western hegemony), but their operational objectives differ because of the current Chinese weakness in the nuclear realm and Beijing's desire to delay a major escalation with the United States while it is still building its power. Nevertheless, Karaganov asserts that these differences could be resolved with an implicit strategic bargain: in a decade or less, when China assumes primacy in the nuclear sphere, Beijing would take on the primary

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<sup>19</sup> Sergei A Karaganov, "Vybora ne ostaetsja: Rossii pridetsja nanesti jadernyj udar po Evrope (There is no choice: Russia will have to launch a nuclear strike on Europe)," *RIA Novosti*, June 26, 2023, <https://ria.ru/20230625/yao-1880235742.html>.

responsibility for deterring the assertive West, while Russia would take a supporting role, presumably paying back China for its support during the conflict in Ukraine.

In his second article published on June 27, Trenin praises Karaganov's bravery for opening a debate on this crucial and difficult topic, which, in Trenin's view has unjustifiably become a taboo in Russia.<sup>20</sup> According to Trenin, the purpose of the public debate on this issue is not just to facilitate the exchange of ideas in Russia, but to serve as a signal – so that Russia's adversaries can also hear the concerns of its strategic commentators and “draw adequate conclusions.”

The main substantive point made by Trenin in this publication is that the fundamental flaw of the Russian strategy in the war in Ukraine is that it is founded on a strict policy of non-employment of nuclear weapons – an approach that must be corrected to avoid creeping escalation and a much larger catastrophe. In this sense, Trenin considers the deployment of tactical nuclear weapons to Belarus as only a stopgap measure to remedy this situation, which has already proven insufficient. What is needed, in his view, is for Russia's current nuclear doctrine to be reconsidered, and possibly corrected to deal with the new realities that have emerged during the Ukraine conflict. Trenin's July 27 article also echoes one of the trademark arguments of the hardliner faction in the Kremlin<sup>21</sup>: that Russia's core weakness is that its society – and parts of the governing apparatus – have developed a consumerist mentality and consider international crises as a nuisances that need to be remedied at all costs. Trenin argues that this mentality has allowed the United States to apply pressure against Russia without fearing a serious response – that it has led to a belief that Russia would not retaliate with nuclear weapons.

This once again underscores that Karaganov and Trenin's arguments represent the positions of the faction in the Kremlin that has favored escalation not just because it aligned with their beliefs, but also because escalation empowered them and weakened their opponents inside the Putin regime. The unfortunate consequence of the Wagner rebellion is that it further increased the sway of this hardliner lobby over President Putin and by extension, over strategic decision-making in Russia. In the first place, the unexpected scope of this mutiny demonstrated the fragility of the Putin regime to armed challenges from within. Early accounts of these events suggest that

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<sup>20</sup> Dmitri Trenin, “SShA igraju v jadernuju rusckuju ruletku — i doigrajutsja (The USA is playing a nuclear Russian roulette - and this can end badly for them),” RIA Novosti, June 26, 2023, <https://ria.ru/20230626/ruletk-1880366981.html>.

<sup>21</sup> Martin Kragh and Andreas Umland, “Putinism Beyond Putin: The Political Ideas of Nikolai Patrushev and Sergei Naryshkin in 2006–20,” *Post-Soviet Affairs*, May 27, 2023, 10, <https://doi.org/10.1080/1060586X.2023.2217636>.

the actions of hardliners, like Patrushev and ultra-nationalist media tycoon Yuri Kovalchuk, were instrumental for the successful suppression of the Wagner rebellion.<sup>22</sup> Now that his aura of invincibility has been ruptured, Putin may grow even more dependent on these radicals and the security forces and other assets under their control.

More broadly, the Wagner mutiny has demonstrated that Putin's most exposed flank is towards Russia's "turbo-patriots," who are strongly rooted among the ranks of the security services, and who have gained considerable influence as result of Putin's antagonism toward the West, Russia's growing international isolation, and the war in Ukraine.<sup>23</sup> Having come to rely on this constituency for his popular appeal, the repression of his opponents, and the prosecution of the war in Ukraine, Putin has become far more threatened by a rebellion of disillusioned nationalists than by any other part of Russia's elite or society. This was illustrated by the resonance that Prigozhin's criticism of Russia's failures in the Ukraine war had among some parts of the public<sup>24</sup> and throughout the ranks of the army and security services, which have put up a surprisingly feeble resistance to the Wagner rebellion.<sup>25</sup>

This will have significant implications for the conflict in Ukraine, as Putin's strategic behavior may become more dangerous after surviving a coup than if he was waging a war when he was safe at home.<sup>26</sup> After suffering the domestic embarrassment of the Prigozhin rebellion, he might become much more prone to escalate to avoid displeasing his core hardline constituency and to prevent further defeats on the battlefield.<sup>27</sup> As nuclear threats are one of the few remaining

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<sup>22</sup> Opinion Contributor Yulia Latynina, "The Failed Coup in Russia Has Turned Putin into a Lame Duck," Text, *The Hill* (blog), July 7, 2023, <https://thehill.com/opinion/national-security/4078428-the-failed-coup-in-russia-has-made-putin-a-lame-duck/>.

<sup>23</sup> Mark Galeotti, "Putin's Real Threat Comes from Russia's 'Turbo-Patriots,'" *The Spectator*, February 7, 2023, <https://www.spectator.co.uk/article/putins-real-threat-comes-from-russias-turbo-patriots/>.

<sup>24</sup> Kirill Ponomarev, "Russians Appeared to Welcome Wagner Rebels With Open Arms. The Truth Is More Complex.," *The Moscow Times*, July 3, 2023, <https://www.themoscowtimes.com/2023/07/03/russians-appeared-to-welcome-wagner-rebels-with-open-arms-the-truth-is-more-complex-a81716>.

<sup>25</sup> Andrei Soldatov and Irina Borogan, "Putin's Real Security Crisis," *Foreign Affairs*, July 6, 2023, <https://www.foreignaffairs.com/russian-federation/putin-security-crisis-wagner-rebellion>; Tatiana Stanovaya, "What Prigozhin's Half-Baked 'Coup' Could Mean for Putin's Rule," interview by Isaac Chotiner, *The New Yorker*, July 27, 2023, <https://www.newyorker.com/news/q-and-a/what-prigozhins-half-baked-coup-could-mean-for-putins-rule>.

<sup>26</sup> Liana Fix and Michael Kimmage, "The Beginning of the End for Putin?," *Foreign Affairs*, June 27, 2023, <https://www.foreignaffairs.com/russian-federation/beginning-end-putin-prigozhin-rebellion>.

<sup>27</sup> Mikhail Zygar, "Putin's Weakness Unmasked," interview by David Remnick, *The New Yorker*, June 24, 2023, <https://www.newyorker.com/news/daily-comment/vladimir-putins-weakness-unmasked-yevgeny-prigozhins-rebellion>.

sources of strategic leverage at his disposal, the temptation to engage in nuclear brinkmanship may become much higher.<sup>28</sup>

## 6. IMPLICATIONS AND POSSIBLE U.S. AND ALLIED RESPONSES

While the trends described above are concerning, and it is possible that Russian leadership may pursue some of the nuclear intimidation tactics outlined by Karaganov and Trenin, there are several limiting factors that suggest that the Kremlin is not yet prepared to escalate to the full extent of their proposals.

First, the preemptive deterrence argument, as currently stated, does not tie Russian nuclear escalation to specific behaviors by the West, such as the delivery of particular weapons to Ukraine, attempts to seize some of the annexed territories in Ukraine, or attacks against targets in Russia.<sup>29</sup> Instead, the conditions that would prompt Russia to adopt a more escalatory posture or perform demonstration strikes, according to Karaganov and Trenin, are vague (supporting Ukraine's war effort). They resemble the ill-defined "red lines" that Russia's leadership has laid out in the past year and a half since the invasion of Ukraine, only to back away from enforcing them with an escalatory response, as it found that the costs would outweigh the benefits.<sup>30</sup>

As journalist Leonid Bershidsky reasons, the purpose of such flexible escalation thresholds is to avoid committing to a threat that the Russian leadership does not intend to see through, while still making the West think twice before providing more aid to Ukraine – and reaping some propaganda points.<sup>31</sup> Such vague threats have allowed the Kremlin to deliver nuclear threats ahead of every major Western aid package and Ukrainian counterattack – ranging from the deliveries of U.S. Javelin and HIMARS missiles, Western main battle tanks, and other weapons platforms, to the liberation of Kherson in September 2022, and beyond – without too much damage to its credibility.

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<sup>28</sup> Mikhail Troitskiy, "Soblazn Provokacii (The Lure of Provocation)," *Bereg*, July 3, 2023, <https://bereg.io/feature/2023/07/03/soblazn-provokatsii>.

<sup>29</sup> Leonid Bershidsky, "Putin's Nuclear Scare Tactics Will Fall Flat," *Washington Post*, June 21, 2023, [https://www.washingtonpost.com/business/2023/06/21/putin-s-nuclear-scare-tactics-on-ukraine-will-fall-flat/0505aaba-0feb-11ee-8d22-5f65b2e2f6ad\\_story.html](https://www.washingtonpost.com/business/2023/06/21/putin-s-nuclear-scare-tactics-on-ukraine-will-fall-flat/0505aaba-0feb-11ee-8d22-5f65b2e2f6ad_story.html).

<sup>30</sup> Nigel Gould-Davies, "Putin Has No Red Lines," *The New York Times*, January 1, 2023, <https://www.nytimes.com/2023/01/01/opinion/putin-russia-ukraine-war-strategy.html>.

<sup>31</sup> Bershidsky, "Putin's Nuclear Scare Tactics Will Fall Flat."

In Bershidsky's view, having outsiders Karaganov and Trenin make these radical proposals also resembles the good/bad cop routine, which the Kremlin adopted to hedge against its own nuclear threats. The most familiar manifestation of this scheme so far has been having former President Dmitry Medvedev deliver the most outrageous warnings, while Vladimir Putin equivocates or (after a pause for dramatic effect) reassures the world of Russia's benign intentions. Combining these two observations together, the nuclear threats like the ones outlined by Karaganov and Trenin would become more credible if they are announced by Putin himself and if they are tied to specific triggers for a nuclear response.

The second reason why the Kremlin might be reluctant to commit to something like the preemptive deterrence scheme is because the costs of following this path have grown larger than ever – and are poised to increase still. Not only would limited nuclear strikes bring meager military benefits and expose the worn-down Russian forces to direct NATO intervention, but violating the nuclear taboo could have devastating consequences for Russia's economic base and international support: the foundations of its war effort and internal stability. The Kremlin has sustained the conflict in Ukraine by cannibalizing the Russian economy,<sup>32</sup> and has become progressively more dependent on the economic lifeline from its trade with nuclear powers like China and India.<sup>33</sup> Yet, both Beijing and New Delhi have warned the Kremlin against nuclear escalation<sup>34</sup> – and as critics of the preemptive deterrence argument point out, they are likely to impose severe penalties if Moscow violates the nuclear taboo – along with many other countries that Russia depends on to sustain its economy. Furthermore, the collective West has not yet exhausted its capacity to inflict major economic penalties to Russia. For instance, most of the tanker fleet moving Russia's oil across the world is owned by EU-based companies and nationals:<sup>35</sup> a vulnerability that could be used to cripple Moscow's key remaining income stream in case of a Russian nuclear use.

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<sup>32</sup> Jeffrey Sonnenfeld and Steven Tian, "How Putin Cannibalizes Russian Economy to Survive Personally," *Time Magazine*, June 30, 2023, <https://time.com/6291642/putin-cannibalizes-russian-economy/>.

<sup>33</sup> Thomas Grove, "China's Economic Lifeline to Russia Gives Beijing Upper Hand," *The Wall Street Journal*, March 23, 2023, sec. World, <https://www.wsj.com/articles/chinas-economic-lifeline-to-russia-gives-beijing-upper-hand-8d58c151>; Lazaro Gamio et al., "How India Profits From Its Neutrality in the Ukraine War," *The New York Times*, June 22, 2023, sec. Business, <https://www.nytimes.com/interactive/2023/06/22/business/india-russia-oil.html>.

<sup>34</sup> Max Seddon et al., "Xi Jinping Warned Vladimir Putin Against Nuclear Attack in Ukraine," *Financial Times*, July 5, 2023, sec. War in Ukraine, <https://www.ft.com/content/c5ce76df-9b1b-4dfc-a619-07da1d40cbd3>; "India's Defence Minister Warns Against Nuclear Weapons in Call with Russian Counterpart," *Reuters*, October 26, 2022, <https://www.reuters.com/world/indias-defence-minister-warns-against-nuclear-weapons-call-with-russian-2022-10-26/>.

<sup>35</sup> Gabriel Gavin, "Fight Against 'Shadow Fleet' Shipping Russian Oil Takes Eu into Uncharted Waters," *Politico*, May 22, 2023, <https://www.politico.eu/article/russia-shadow-fleet-eu-sanction-ukraine-war-oil/>.

In this context, not only could the shock from the demonstration strike decisively turn the world against Russia, but the strategy of gradual escalation proposed by Karaganov and Trenin may prove particularly counterproductive. Each of the steps along the escalation ladder, proposed by these two analysts, would provide an additional opportunity for China, India, and Russia's other key partners, to exert economic, political and diplomatic pressure on the increasingly more vulnerable Russian regime. To put it differently, Russia would not only absorb the costs after it breaks the nuclear taboo; it would also incur them as it climbs up the escalation ladder to reach this threshold.

The third reason why the Kremlin might restrain itself from following through with the full panoply of threats outlined in the Karaganov/Trenin articles is because doing so might be met with domestic resistance, which could undermine, rather than prop up the Putin regime. Despite constant exposure to propaganda containing nuclear threats against the West, the Russian population appears reluctant to support such saber-rattling. A survey by Russia's independent Levada opinion research center in April 2023 found that 56 percent of the Russian population considers that the use of nuclear weapons by their country in the conflict in Ukraine would be unjustified, as opposed to 29 percent who would accept this.<sup>36</sup> A more specific question by the Russian Field pollster in June 2023 on whether nuclear weapons should be used to "win the war in Ukraine" found that 74 percent reject this option, while only 16 percent would accept it.<sup>37</sup> The reason for this lack of support for nuclear escalation, as political scientist Mikhail Troitsky points out, is simple: neither the vast majority of Russian society, nor the elites are willing to sacrifice themselves in a conflict.<sup>38</sup> Their support for (or acquiescence to) the war in Ukraine is based on the belief that it poses a relatively low risk for their lives and the lives of their loved ones.

Given these sentiments, implementing something akin to the preemptive deterrence approach could destabilize, rather than bolster the Putin regime. The Ukraine fiasco has already severely undermined the elite's confidence in Putin's leadership and the military tools at his

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<sup>36</sup> "O Vozmozhnosti Primeneniya Yadernogo Oruzhija v Ukrainskom Konflikte (On the Possibility of Using Nuclear Weapons in the Conflict in Ukraine)," Levada Center, May 12, 2023, <https://www.levada.ru/2023/05/12/o-vozmozhnosti-primeneniya-yadernogo-oruzhiya-v-ukrainskom-konflikte/print/>.

<sup>37</sup> "'Special'naja Voennaja Operacija' v Ukraine: Otnoshenie Rossijan, 12 Volna (The 'special Military Operation' in Ukraine, Wave 12)," Russian Field, accessed July 10, 2023, <https://russianfield.com/12volna>.

<sup>38</sup> Troitskiy, "Soblazn Provokacii (The Lure of Provocation)."

disposal. There is a growing sense that the war is lost, even among its supporters.<sup>39</sup> Troitsky reasons that in this context, escalating the conflict with nuclear weapons would likely be perceived by the Russian elite and public as another desperate gamble and indicator of the incompetence of the country's leadership, creating mass panic.<sup>40</sup> We got a glimpse of what this might look like during Wagner mutiny, when panicked citizens were taking out cash from banks,<sup>41</sup> stocking up of food and fuel,<sup>42</sup> taking trains out of cities, and flights out of the country.<sup>43</sup> At the same time, large numbers of private jets of government ministers and regime-connected oligarchs were leaving Moscow.<sup>44</sup> In this context, a demonstration strike against Poland, or even a credible threat to carry it out, are as likely to cause a crippling panic in Russia as in the target state.

Taken together, these limiting factors, along with those cited by the critics of the “preemptive deterrence” scheme, may be why President Putin has still not committed to a more assertive nuclear posture and, according to intelligence sources, he has decided on previous occasions that the use of nuclear weapons would not provide any advantages to his forces in the conflict in Ukraine.<sup>45</sup> Nevertheless, the increasingly desperate position of the Putin regime and the trajectory of Russian nuclear saber-rattling leave no room for complacency. While Russian threats do not still specify the conditions that would trigger a nuclear retaliation, they have become more explicit in terms of the potential target (Poland or the Baltics), have increased in frequency, and have been accompanied, for the first time, with tangible steps (the deployment of warheads and delivery systems to Belarus).

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<sup>39</sup> Tatiana Stanovaya, Why Russian Élites Think Putin's War Is Doomed to Fail, interview by Isaac Chotiner, *The New Yorker*, May 3, 2023, <https://www.newyorker.com/news/q-and-a/why-russian-elites-think-putins-war-is-doomed-to-fail>.

<sup>40</sup> Troitskiy, “Soblazn Provokacii (The Lure of Provocation).”

<sup>41</sup> “Belousov: v treh oblastyah spros na nalichnye vyros na 70–80% vo vremja mjatezha ChVK «Vagner» (Belousov: in three regions demand for cash rose by 70-80% during the mutiny of PMC "Wagner"),” *Kommersant*, June 26, 2023, <https://www.kommersant.ru/doc/6068471>.

<sup>42</sup> “V Voronezhskoj oblasti na AZS obrazovalis' dlinnye ocheredi (Long queues formed at gas stations in the Voronezh region),” *Kommersant*, June 24, 2023, <https://www.kommersant.ru/doc/6067813>.

<sup>43</sup> “Aviability iz Moskvy za granicu podorozhali v razy (Prices have significantly risen for tickets for flights abroad from Moscow),” *Kommersant*, June 24, 2023, <https://www.kommersant.ru/doc/6067840>.

<sup>44</sup> “Potanin, Manturov, Rotenberg i, Predpolozhitel'no, Mladshij Koval'chuk Mogli Uletet' Iz Moskvy Na Fone Mjatezha Naemnikov. Chto Izvestno o Poletah «jelit» (Potanin, Manturov, Rotenberg and, Presumably, the Younger Kovalchuk Mayhave Flown out of Moscow amid the Mercenary Mutiny. What Is Known about the Flights of 'Elite'),” *Vazhnie Istorii*, June 24, 2023, <https://stories.media/news/2023/06/24/potanin-manturov-rotenberg-i-predpolozhitelno-mladshii-kovalchuk-mogli-uletet-iz-moskvi-na-fone-myatezha-naemnikov-chto-izvestno-o-poletakh-elit/>.

<sup>45</sup> Seddon et al., “Xi Jinping Warned Vladimir Putin Against Nuclear Attack in Ukraine.”

As some observers have pointed out, this escalating nuclear threat pattern evokes some parallels to the behavior of the North Korean dictatorship: another pariah regime and prolific nuclear coercer, which Putin’s Russia has increasingly come to resemble in recent years.<sup>46</sup> As prior research shows, the growing frequency, repetition, and specificity of nuclear threats issued by North Korea’s dictatorship are not simple “cheap talk,” but reflect deep anxieties of the regime, and tend to result with concrete actions, such as nuclear or missile tests.<sup>47</sup>

From this perspective, the key danger in Russia’s case is that a cornered and desperate Putin regime would adopt a more assertive nuclear posture and blunder toward carrying out a nuclear test or demonstration strike in a desperate gamble to stave off defeat in Ukraine and in an attempt a political “resurrection” at home. Such tendencies could be exacerbated by the very high-stakes presidential election in March 2024,<sup>48</sup> coupled with possible further setbacks in the conflict in Ukraine. As I have argued elsewhere,<sup>49</sup> in such circumstances, the logic of domestic survival for the Putin regime might dictate policies that are non-sensical from a deterrence perspective – and harmful to Russia’s national interests – but are still politically attractive for the country’s authoritarian leadership.

Further contributing to the risk of Russian nuclear brinkmanship in these circumstances are the pathologies of authoritarian decision-making in Putin’s highly personalized, insular inner circle. Characterized by lopsided information flows, paranoia, groupthink, and lack of alternative perspectives and dissenting voices, the strategic policymaking process in the Kremlin has led to the catastrophic plan to invade Ukraine and an unceasing stream of strategic blunders in the way the war has been conducted.<sup>50</sup> Recent decisions to double down on failed strategies and

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<sup>46</sup> James Dobbins, Howard J Shatz, and Ali Wyne, “Russia Is a Rogue, Not a Peer; China Is a Peer, Not a Rogue,” *RAND*, 2018.

<sup>47</sup> Lauren Sukin, “Rattling the Nuclear Saber: What Russia’s Nuclear Threats Really Mean,” Carnegie Endowment for International Peace, accessed July 10, 2023, <https://2023/05/04/rattling-nuclear-saber-what-russia-s-nuclear-threats-really-mean-pub-89689>.

<sup>48</sup> Andrei Kolesnikov, “Putin’s Second Front,” *Foreign Affairs*, April 7, 2023, <https://www.foreignaffairs.com/russian-federation/putins-second-front>.

<sup>49</sup> Aleksandar Matovski, “How Putin’s Regime Survivalism Drives Russian Aggression,” *The Washington Quarterly* 46, no. 2 (April 3, 2023): 7–25, <https://doi.org/10.1080/0163660X.2023.2223839>.

<sup>50</sup> Zoltan Barany, “Armies and Autocrats: Why Putin’s Military Failed,” *Journal of Democracy* 34, no. 1 (January 2023): 80–94, <https://doi.org/10.1353/jod.2023.0005>; Huw Dylan, David V. Gioe, and Elena Grossfeld, “The Autocrat’s Intelligence Paradox: Vladimir Putin’s (Mis)Management of Russian Strategic Assessment in the Ukraine War,” *The British Journal of Politics and International Relations* 25, no. 3 (August 2023): 385–404, <https://doi.org/10.1177/13691481221146113>; Julian Waller, “Putin’s Agency and the Decision for War,” *Riddle Russia*, May 15, 2023, <https://ridl.io/putin-s-agency-and-the-decision-for-war/>.

organizational choices show no signs that such distortions will be remedied.<sup>51</sup> Based on these experiences, it is entirely conceivable that under further duress, and guided by warped decision-making, the Kremlin could abandon its current, more sensible nuclear posture, and implement some of the ideas of the preemptive deterrence school of thought.

The United States and its allies cannot eliminate this risk as long as the Russian leadership is committed to the war in Ukraine,<sup>52</sup> but they still have significant leverage to reduce it. In this context, the debate stirred by the Karaganov/Trenin articles can be seen as both a signal of potential danger, as well as an opportunity for Western powers to develop and employ suitable deterrent measures. Although the ideas outlined by these authors are unofficial, they are representative of a broader “nuclear fever” in the Russian establishment,<sup>53</sup> which the United States and its allies should react to in order to discourage further escalatory steps by the Kremlin.

Based on past Russian behavior, there are three key steps that the United States and its allies might take to reduce the odds of such outcomes. First, the West should not respond symmetrically to further Russian nuclear saber-rattling and escalation. Steps like expanding NATO nuclear sharing to Poland in response to Russian nuclear deployments in Belarus, or responding in kind to Russian nuclear tests and demonstration strikes, would only reduce the domestic and international blowback against the Kremlin’s actions.<sup>54</sup> By reacting symmetrically, Western allies would assume part of the blame for the escalation, validate Russian efforts to draw false equivalences to Western behavior and to portray their own actions as defensive, rally Russian society and elites behind the regime, and reduce the pressure on Russian foreign partners, like China and India, to penalize the Kremlin for its brinkmanship and for violating the nuclear taboo.

Instead, the United States and its allies should use asymmetric measures that would demonstrate resolve to stand up to Russian nuclear coercion and deny the Kremlin its intended objectives. These could include reassuring exposed allies, like Poland, with further conventional U.S. and NATO deployments and arms transfers, and responding to Russian tactical nuclear use with conventional strikes against Russian forces in Ukraine or Belarus, or with measures like

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<sup>51</sup> Dara Massicot, “All Is Not Well on Russian Front Lines,” *The New York Times*, July 19, 2023, sec. Opinion, <https://www.nytimes.com/2023/07/19/opinion/putin-prigozhin-military-russia.html>.

<sup>52</sup> Hanna Notte, “The West Cannot Cure Russia’s Nuclear Fever,” *War on the Rocks*, July 18, 2023, <https://warontherocks.com/2023/07/the-west-cannot-cure-russias-nuclear-fever/>.

<sup>53</sup> Rose Gottemoeller, “The West Must Act Now to Break Russia’s Nuclear Fever,” *Financial Times*, June 15, 2023, sec. Nuclear proliferation, <https://www.ft.com/content/91c51eb9-65df-44f0-977d-db922c3e97e9>.

<sup>54</sup> Sokov, “Russia Is Deploying Nuclear Weapons in Belarus. NATO Shouldn’t Take the Bait.”

imposing a blockade of Russian seaborne oil shipments. These asymmetric approaches would reduce the risks of escalation and put Russian forces in Ukraine in a more precarious position, thus denying the Putin regime the benefits from nuclear brinkmanship. This strategy would also focus the domestic and international outcry at the Kremlin.

A specific strategy that would be worthwhile to explore in this context would be deploying more robust NATO integrated air and missile defense capabilities in Poland and the Baltics – the proposed targets of the Russian limited demonstration strike. The relatively high interception rates of Russia’s dual-capable cruise and ballistic missiles (including the hypersonic Kinzhal missiles) by Ukraine’s air defenses in the spring of 2023 have shown that Russian strategic planners cannot reliably count on being able to deliver pinpoint strikes with a single missile against targets protected by more advanced Western missile defense systems.<sup>55</sup> In this context, the positioning of a more extensive and integrated missile defense coverage in countries like Poland could force Russia to saturate a target for a nuclear demonstration with multiple missile launches to achieve a single guaranteed strike. This would greatly complicate assumptions about limited damage and containing escalation and undermine the logic of limited demonstration strikes.<sup>56</sup>

Second, past experience suggests that Russian aggression is strongly encouraged by the lack of clear and determined Western reaction to provocations. To avoid repeating such mistakes, the Western allies might take advantage of the current “nuclear fever” in the Russian establishment to announce some of the specific asymmetric responses they would take in case of Russian nuclear escalation. In particular, NATO nuclear powers should consider publicly declaring their previously issued private warning to the Kremlin that they will target Russian forces with conventional strikes if Russia employs tactical nuclear weapons.<sup>57</sup> This explicit warning would credibly signal Western commitment to confront Russian nuclear blackmail, and to inflict a cost for crossing the nuclear threshold that outweighs the benefits. In addition to this specific threat, the United States and its allies should maintain ambiguity as to the full extent of the costs they would impose on Russia, citing further “catastrophic consequences” in the case of Russian nuclear use.

Third, the United States and its allies could bring additional pressure to force the Kremlin to stop its nuclear brinkmanship by continuing to strategically release intelligence about

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<sup>55</sup> Sidharth Kaushal and Matthew Harries, “Russia’s Options for Theatre Missile Coercion” (Royal United Services Institute, July 7, 2023), <https://www.rusi.org><https://www.rusi.org>.

<sup>56</sup> Kaushal and Harries.

<sup>57</sup> Seddon et al., “Xi Jinping Warned Vladimir Putin Against Nuclear Attack in Ukraine.”

preparations for nuclear escalation and use. The use of secret intelligence to expose Russia's plans has proven to be a highly effective strategy to isolate the Kremlin even before it launched the invasion of Ukraine on Feb.24, 2022; since then, it was instrumental for unifying the West to impose unprecedented sanctions against Russia and to support Ukraine's struggle, putting pressure on China not to aid Russia directly, and exacerbating Putin's paranoias about the loyalty of his inner circle and the degree of Western intelligence penetration of it.<sup>58</sup> All of these objectives would become exponentially more important if the Kremlin decides to escalate its nuclear brinkmanship.

Furthermore, non-strategic nuclear weapons – the primary tools for Russia's escalation scenarios – are a particularly good target for this strategy. Unlike Russia's strategic arsenal, its NSNWs are not on ready alert, so before potential demonstration strikes, warheads need to be brought to and installed on their delivery platforms: a large and complex logistical undertaking that should be observable by U.S. and allied national technical means, and even with open-source satellite imagery.<sup>59</sup> The scale of this logistical "footprint" could be compounded by a deployment of a more robust and integrated missile defense over the target area for a Russian nuclear demonstration strike, which would necessitate the use of greater numbers of NSNWs to saturate defenses.<sup>60</sup> Furthermore, a potential NSNW demonstration strike would likely be accompanied with an even more observable increase in the readiness of Russian strategic forces as a precaution in case of further escalation.<sup>61</sup> Publicizing evidence of such massively escalatory moves could be used to catalyze strong international and domestic pressure on the Putin regime to stop short of nuclear use, as well as to maintain the cohesion of the Western coalition in facing these threats.

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<sup>58</sup> Amy Zegart, "Open Secrets: Ukraine and the Next Intelligence Revolution," *Foreign Affairs*, December 20, 2022, <https://www.foreignaffairs.com/world/open-secrets-ukraine-intelligence-revolution-amy-zegart>.

<sup>59</sup> William Alberque, "Russia Is Unlikely to Use Nuclear Weapons in Ukraine," IISS, October 10, 2022, <https://www.iiss.org/online-analysis/online-analysis//2022/10/russia-is-unlikely-to-use-nuclear-weapons-in-ukraine>.

<sup>60</sup> Kaushal and Harries, "Russia's Options for Theatre Missile Coercion."

<sup>61</sup> William J. Broad, "How America Watches for a Nuclear Strike," *The New York Times*, April 5, 2022, sec. Science, <https://www.nytimes.com/2022/04/05/science/nuclear-weapon-russia-satellite-tracking.html>.

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## **II. THE RUSSIAN SPACE INDUSTRY, WESTERN SANCTIONS, AND PROSPECTS OF FOREIGN ASSISTANCE**

August 14, 2023

Dr. James Clay Moltz

### **EXECUTIVE SUMMARY**

The specific effects of U.S. trade and technological sanctions on Russia's space program are difficult to measure. Russian officials frequently state that the impact has been minor and even counter-productive, as sanctions have reportedly stimulated Russia's own manufacturing and the creation of new partnerships with foreign countries. But the evidence since February 2022 in the space field does not support Moscow's rosy self-assessment. While some work-arounds have been developed with foreign space suppliers, the bulk of the evidence shows that these measures have not been able to make up for the much more significant losses of Western components and commercial launch orders. Moreover, the combined effects of Western sanctions, the disappearance of Western launch fees, and China's unwillingness to become either a major space supplier or commercial space client (thus far) have accelerated the already ongoing decline of the Russian space industry, which is weakening the Russian military. This report analyzes these trends, drawing primarily on Russian-language sources, including published interviews with leading Roscosmos officials. It concludes that Russia's supply problem in the area of space technology is significant, and that rebuilding the space industry is going to be a multiyear process. This timeline will be pushed out further if Russia's financial situation continues to deteriorate, Western sanctions continue, and Moscow fails to identify significant new foreign partners.

## 1. RUSSIA'S SPACE PROGRAM UNDER WARTIME CONDITIONS

Russia's full-scale invasion of Ukraine in February 2022 brought a wave of new sanctions on high-technology imports coming from the West and also stimulated hasty Russian policies under then-Roscosmos head Dmitri Rogozin to pull out of civil and commercial ventures with the West. Rogozin made a series of statements about how the sanctions would be ineffective and how China would step up and provide the technologies and resources to make up for these losses. In fact, this has not occurred. Instead, the lack of critical space components, the costs of the war, and the flight of know-how and personnel have put the Russian space industry in an increasingly dire situation.

A number of Russian sources report that that their country lags behind China and the United States considerably in its ability to produce satellites. Whereas the United States can build more than 1,000 satellites per year and China can produce about 450, one report states that Russia's capacity is only 42 satellites.<sup>62</sup> Roscosmos Deputy Director Nikolai Sevastyanov states that Russia will not be able to launch any mega-constellations without new public-private partnerships, given the lack of state funding.<sup>63</sup> Roscosmos Director Yuri Borisov explains that Russia still makes its satellites "by hand," while other countries now make them on a "conveyor belt."<sup>64</sup> He estimates that out-moded techniques, funding gaps, and component shortages mean that Russia is actually capable of building only about 15 to 17 satellites a year currently.<sup>65</sup> Borisov notes that almost all of the leading space enterprises failed to fulfill their obligations for domestic production in 2021 and 2022. But Borisov estimates that Russia will need to build at least 100 Earth observation satellites in order to meet its near-term national needs.<sup>66</sup>

The solution is to create a new, Russian industrial model that is capable of developing mega-constellations. Borisov states that Russia "overslept" this revolution in satellite production and now has to make up for lost time.<sup>67</sup> He has proposed new processes to make managers more

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<sup>62</sup> Danila Titarenko, "Borisov zayavil, chto 360 sputnikov u Rossii k 2030 godu—malo" (Borisov says that 360 satellites by 2030 won't be enough for Russia), *Gazeta.ru*, February 10, 2023.

<sup>63</sup> "Putin poruchil nachat' sozdaniye sverkhtyazheloi rakety-nositelya v 2024 godu—Borisov," (Putin orders work to start in 2024 on creation of a heavy-lift rocket—Borisov), TASS, April 14, 2023.

<sup>64</sup> "Yuriy Borisov: Rossiya dolzhna proizvodit' k 2025 godu 250 sputnikov ezhegodno" (Yuri Borisov: Russia needs to produce 250 satellites a year by 2025), RIA Novosti, February 10, 2023.

<sup>65</sup> *Ibid.*

<sup>66</sup> "RF nuzhno ne menee 100 sputnikov nablyudeniya, shtoby udovletborit' strany—Borisov" (Russia needs at least 100 observation satellites to meet its national needs—Borisov), TASS, November 17, 2022.

<sup>67</sup> *Ibid.*

accountable and to enforce more binding production timelines, but implementation of these reforms remains unclear. Borisov complains that efforts to attract domestic commercial funding for the needed space expansion have failed, largely due to what he calls problems in “Russia’s financial culture.”<sup>68</sup> The effects of the Ukraine war have exacerbated this situation, leading to budgetary shortfalls within Roscosmos of 31 billion rubles (\$416 million) in 2021 and more than 50 billion rubles (\$685 million) in 2022.<sup>69</sup>

A related problem is the effect of sanctions on the supply chain. As Borisov explains the effects of the Russian space industry’s entrance into the Western supply chain in the 1990s: “We stopped developing our production, and then they tightened the screws.”<sup>70</sup> Borisov states while the number of needed foreign parts has dropped from 30,000 to only about 1,000, critical shortages remain. This problem has contributed to the non-fulfillment of space orders, which Borisov blamed on “non-deliveries from the electronic-component base” as well as faulty organizational processes.<sup>71</sup>

In terms of new directions, President Putin recently ordered Roscosmos to begin work within the coming year on the development of a new heavy-lift booster. Borisov responded to the Russian media in frustration, “It’s in God’s hands. The situation in the country is difficult, there isn’t money for everything.”<sup>72</sup> He estimated an eight- to ten-year development process would be necessary. Part of the problem is anticipated budgetary shortfalls. Borisov noted the damaging effects on Roscosmos’s finances from the loss of engine contracts for the U.S. Antares and Atlas V rockets, as well as \$1.2 billion in lost revenues from the cancelled launches of hundreds of British OneWeb satellites. No major Western commercial contracts remain.

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<sup>68</sup> Lev Shadrin, “B ‘Roskosmos’ zayavili, chto u RF nyet sredstv na skhozhiye s zarubezhnyemy gruppировki sputnikov” (Roscosmos says that the Russian Federation lacks the means to match foreign mega-constellations), *Gazeta.ru*, February 16, 2023.

<sup>69</sup> Inna Sidovrovka and Ivan Cheberko, interview with Roscosmos Director Yuri Borisov, *Vedomosti*, December 21, 2022.

<sup>70</sup> “Yuriy Borisov: Rossiya dolzhna proizvodit’ k 2025 godu 250 sputnikov ezhegodno” (Yuri Borisov: Russia needs to produce 250 satellites a year by 2025), *RIA Novosti*, February 10, 2023.

<sup>71</sup> *Ibid.*

<sup>72</sup> “Putin poruchil nachat’ sozdaniye sverkhtyazheloi rakety-nositelya v 2024 godu—Borisov,” (Putin orders work to start in 2024 on creation of a heavy-lift rocket—Borisov), *TASS*, April 14, 2023.

## 2. FOREIGN PARTNERS

One possible source of hope cited by Russian officials is the development of new foreign partnerships with non-Western countries. Russia's main space partners currently are China and Iran, although Moscow also touts recent cooperative pacts signed with a variety of African, Asian, and Latin American nations.

The Chinese relationship is clearly the most important and a number of recent agreements are frequently cited, including plans for extensive cooperation in lunar development. But, in a recent interview, Roscosmos Human Spaceflight Director Sergei Krikalev stated that Sino-Russian lunar cooperation does not yet include any plans in the area of human spaceflight.<sup>73</sup> Similarly, recent discussions by Roscosmos's head Borisov make no mention of any Chinese contribution toward alleviating Russia's current satellite production gaps. Instead, Borisov cautions that Russia will have to negotiate carefully with China in the context of their planned joint *International Lunar Research Station* to ensure that China doesn't simply exploit Russia's know-how and fail to offer any substantial contracts for hardware, which Roscosmos is eager to obtain.<sup>74</sup> Meanwhile, Russia's security services continue to arrest scientists accused of sharing state secrets with China in areas of possible Russian advantage, such as hypersonics.<sup>75</sup>

As Russia begins to transition out of the *International Space Station*, President Putin has reiterated his interest in building a new Russian-only station in low-Earth orbit. Given Russia's allegedly close relationship with China, it is peculiar that Moscow has not instead announced plans to join forces with Beijing on China's existing *Tiangong* station, particularly when China refers to it as an "international" station. This suggests that there are some underlying tensions. In addition, the lack of funding for the Russian station and a series of planned lunar missions suggests that they will not arrive on schedule, if they arrive at all.<sup>76</sup> Russia's current *Luna 25* mission to the Moon's south pole is important both for national pride and for reassuring China that Roscosmos is still a

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<sup>73</sup> "V 'Roskosmose' rasskazali o vozmozhnostnyikh programmakh Rossii i Kitaya" (Roscosmo reports on possible Sino-Russian programs) RIA Novosti, April 24, 2023.

<sup>74</sup> "Yuriy Borisov: Rossiya dolzhna proizvodit' k 2025 godu 250 sputnikov ezhegodno" (Yuri Borisov: Russia needs to produce 250 satellites a year by 2025), RIA Novosti, February 10, 2023.

<sup>75</sup> Filipp Lebedev, Lucy Papachristou, and Mark Trevelyan, "Exclusive: Russian hypersonic scientist accused of betraying secrets to China," Reuters, May 24, 2023.

<sup>76</sup> Indeed, to cite an example, analysts note that the Institute for Space Research in Moscow, the center of the space science program, has had to develop substitutes for a number of imported components in preparation for the upcoming *Luna-27* mission planned for 2025.

worthy partner.<sup>77</sup> But success of this long-planned scientific mission will not remedy Russia's larger industrial challenges. Failure could be devastating to the future Sino-Russian civil space relationship.

In regard to Iran, Russia has deepened its military space relationship considerably in the past few years, engaging in sales of satellites and launches. Unlike China, Tehran still has much to learn from space cooperation with Moscow. Besides advanced satellite construction techniques, it also lacks a launch vehicle able to lift large satellites into low-Earth orbit or to reach geostationary orbit.<sup>78</sup> In August 2022, Moscow launched a Russian-built, high-resolution observation satellite for Tehran, from which the Russian military likely borrowed imagery to help fill gaps in its limited reconnaissance constellation covering the Ukraine war. Russia has plans to provide additional reconnaissance and communications satellites to Iran.<sup>79</sup> To date, this is one of the few examples of meaningful space cooperation for Moscow, although the flow of space technology is from Russia to Iran, not the reverse.

Another possible source of cooperation is Russia's close neighbor and former communist republic Belarus. One article indicates that Belarusian defense enterprises may soon participate in a joint production effort at building reconnaissance satellites for Russia with a resolution of 35 centimeters (about 14 inches).<sup>80</sup> If this effort comes to fruition, it could provide some limited relief to Russia's military. But the quality and number of such satellites are not yet clear, nor is the amount of the funding behind this effort.

Given these limitations, Russia has been eagerly seeking additional international partners for space. But many of these agreements remain mostly on paper. In the past few years, Russia has signed new cooperative space agreements with Angola, Algeria, Mexico, South Africa, Vietnam, and Zimbabwe.<sup>81</sup> Yet none possesses any significant space capabilities or the abundant financial resources needed to help Russia out of its current dilemma.

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<sup>77</sup> Roscosmos launched its last major deep-space mission, *Phobos-Grunt*, in 2011, which carried an important Chinese Mars payload. But the spacecraft become unresponsive shortly after launch, failed to deploy toward Mars, and crashed ignominiously back into the atmosphere, setting back China's Mars program considerably.

<sup>78</sup> Neil MacFarquhar, Ronen Bergman, and Farnaz Fassihi, "Russia Launches Iranian Satellite, a Sign of Closer Cooperation," *The New York Times*, August 9, 2022.

<sup>79</sup> See Bart Hendrickx, "Russian and Iran expand space cooperation," *The Space Review*, October 31, 2022.

<sup>80</sup> Vladimir Mukhin, "Soyuznaya armiya otrazit agressiyu s pomoshch'yu kosmicheskikh tekhnologiy" (The unified army will repel aggression with the help of space technologies), *Nezavisimaya Gazeta*, December 4, 2022.

<sup>81</sup> *Ibid.*

Finally, Russia has long ties in space with India. But, despite some general accords signed recently, India has begun to distance itself from Russia in regard to future programs. To Moscow's dismay, India joined the U.S.-backed Artemis Accords and accepted tracking support from the United States for its recent *Chandrayaan-3* lunar mission.

### 3. CONCLUSION

Overall, the international political effects of Russia's invasion of Ukraine (including Western sanctions), Moscow's declining financial resources, and its failure to develop new commercial space technologies have rendered it increasingly isolated. Russia's domestic space industry is struggling, and international partners seem leery of embracing it.

This should be worrisome for the Putin regime. Russian political analysts state openly that their country is not keeping up with the other great powers, noting that Russia's failure to develop in science and innovation "is putting national sovereignty at risk."<sup>82</sup> Russian military experts state bluntly: "the security threats in the space domain in its informational and military aspects are increasing year after year."<sup>83</sup> Meanwhile, they observe that Russia's military space leadership has done only "the minimum necessary to provide [space] defense and security."<sup>84</sup> The way out of this dilemma, these military experts say, involves multiple steps: a "qualitative improvement of the state of its orbital and ground components," the formation of new constellations of reconnaissance satellites, the creation of new networks for collecting and displaying space information to the warfighter, and the quantitative expansion of space platforms.<sup>85</sup> But they offer no clear path to such innovations under current conditions.

In sum, Russian experts are worried about their position in space. Despite the rhetoric the Kremlin trumpets to the international media, any positive effects of its sanctions work-arounds have not been able to reverse the ongoing degradation of Russia's space industry or its effects on the Russian military. Major structural reforms are necessary. But the political, economic, and

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<sup>82</sup> A.V. Pikover, in "Rossiysko-kitaiskiye otnosheniya v novuyu epokhu: noviye problemy—noviye vektory vzaimodeistviya" (Russo-Chinese relations in a new epoch: new challenges—new vectors for interaction), *Problemy Dal'nego Vostoka* (Problems of the Far East), No. 4, 2021, p. 24.

<sup>83</sup> D.V. Zhilenko, A.A. Romanov, and S.V. Cherkas, "Novyye vysovy i ugrozy bezopasnosti vi kosmicheskoi sfere" (New challenges and threats to security in the space domain), *Vestnik Akademii Voennykh Nauk* (Proceedings of the Academy of Military Sciences), No. 2 (75), 2021, p. 13.

<sup>84</sup> *Ibid.*, p. 15.

<sup>85</sup> *Ibid.*

organizational prerequisites to carry them out do not exist. Absent an end to the war in Ukraine, domestic political reforms, and a dramatic improvement in Russia's international relations, Russia's space industry is likely to tilt more and more in the direction of near-term military needs. But it will also face increasing difficulty in meeting these requirements.