



Deep Cuts Working Paper
No. 13, July 2019

RISING FROM THE ASHES: SECURING AND EXPANDING PAST ACHIEVEMENTS IN INF ARMS CONTROL

By Greg Thielmann, Oliver Meier, Andrei Zagorski



Introduction

The 1987 Intermediate-Range Nuclear Forces (INF) Treaty helped to end the Cold War, contributing greatly to the stability of Europe at a tense time, and setting the stage for the first negotiated reductions in strategic nuclear forces. But the treaty could not overcome the political hurdles, which arose in its third decade. As of August 2, 2019, the treaty will be in ashes – four months short of its 32nd anniversary.

The INF Treaty deserves not only a decent burial, but also an organized effort to secure a follow-on agreement that would preserve some of the achievements of the treaty and widen limits on the most dangerous INF weapons likely to emerge in its wake. Given political pressures for a new escalation in the development and deployment of new INF missiles, it is urgent to begin a discussion on what kind of arms control regime could mitigate this threat.

First, an Autopsy

To appreciate the difficulty of reaching an agreement, it is necessary to review how the current INF Treaty was created and how it ultimately failed. The strong political support provided by President Ronald Reagan and Secretary of State George Shultz on the American side and President Mikhail Gorbachev and Foreign Minister Eduard Shevardnadze on the Soviet side made it possible to conclude the treaty at the end of 1987. With intricate treaty provisions in place and continuing high-level support, the two parties accomplished the impressive feat of eliminating nearly 2,700 ground-based missiles within three years, removing a hair-trigger nuclear threat to both NATO Europe and to the western portion of the Soviet Union.

The 1987 treaty put an end to the “Euro-missile crisis” that had evolved at the end of the 1970s as a result of the deployment of new Soviet intermediate-range nuclear missiles target-



Picture: U.S. President Ronald Reagan and Soviet General Secretary Mikhail Gorbachev signing the INF Treaty on December 8, 1987. Link: <https://bit.ly/2J2eFsm>.

ing European NATO countries and NATO’s decision to counter-deploy U.S. nuclear cruise and ballistic missiles, beginning in 1983. The elimination of INF-range ground-launched missiles by both parties removed this enhanced nuclear threat to the countries of Europe. And, by removing the American nuclear missiles that could hit strategic targets in the Soviet Union/Russia with only a few minutes warning, it raised the threshold for using nuclear weapons in Europe and enhanced overall strategic stability.

While addressing a particular problem, the INF treaty did not address other INF-range (sea- or air-launched) or lower-range, non-strategic nuclear weapons. Nevertheless, it paved the way for further agreements (formal and informal) to reduce both strategic and tactical weapons of the United States and Russia.

As the security landscape continued changing after 1991, Moscow’s focus began to change over time, with the dissolution of the Warsaw Pact and the movement of NATO’s eastern boundary closer and with the US abandonment in 2002 of Anti-Ballistic Missile (ABM) Treaty limits on strategic defenses. Furthermore, the residual resentment within Russia’s military for Gorbachev’s

While addressing a particular problem, the INF treaty did not address other INF-range (sea- or air-launched) or lower-range, non-strategic nuclear weapons. Nevertheless, it paved the way for further agreements (formal and informal) to reduce both strategic and tactical weapons of the US and Russia.

inclusion in the INF ban of the 9K714 *Oka* (SS-23 *Spider*) – despite the Soviet claim that the missile’s operational range was less than 500 km – never fully subsided. Moreover, the treaty’s Special Verification Commission lost momentum and stature after the elimination and inspections were completed in December 2001. The addition of Ukraine, Belarus, and Kazakhstan in 1994, after the Soviet Union’s collapse, made SVC sessions more unwieldy and politically uncomfortable for Russia.

With third countries developing intermediate-range missiles, Moscow proposed multilateralizing the treaty in 2007. Washington supported the idea diplomatically, but it generated no interest on the part of third countries.

From Washington’s perspective, Moscow’s actions along Russia’s periphery seriously undermined trust. Russia’s 2014 incorporation of Crimea and intervention in Donbass, led the United States and the European Union to retaliate economically, and NATO to enhance its troop presence closer to Russia’s borders. U.S. assessments that Russia was flight-testing, and later deploying, a cruise missile banned by the INF Treaty further reduced trust in Moscow’s commitment to that treaty.

With the Trump administration’s more skeptical attitude toward arms control and an increased focus on countering China’s growing military strength, the INF Treaty’s limits were increasingly perceived in Washington as a liability. Although the Trump administration said that its goal was to bring Russia back into compliance, it has never appeared to have had a strategy to achieve that. Despite ongoing deployments of a missile Washington alleged to be illegal, Russia had continued to declare its commitment to the treaty, until the United States announced its intention to immediately suspend compliance and exercise the treaty’s six-months withdrawal option.

During the Cold War, the US-Soviet arms control process had survived some serious and seemingly insoluble compliance challenges – like the Soviet Union’s construction in 1983 of a large, phased-array radar at Krasnoyarsk, which was not on the “national perimeter and oriented outward,” as required by the ABM Treaty.

The “muscle memory” of earlier successes helped motivate the United States to reconvene the INF Treaty’s SVC in 2016 for the

During the Cold War, the US-Soviet arms control process had survived some serious and seemingly insoluble compliance challenges – like the Soviet Union’s construction of a large, phased-array radar at Krasnoyarsk.



Picture: Mark 41 Mod 0 Vertical Launching System [here on USS Chosin (CG-65)]. Link: <https://bit.ly/2KZKbcP>.

purpose of discussing the U.S. and Russian compliance charges that had been levied by the sides. The SVC last met for the 31st session in December 2017 in what was reportedly more substantive and interactive than the previous session, but neither side proposed any further meetings. The SVC meetings were complemented by a series of bilateral US–Russia meetings. However, a January 15, 2019 meeting between U.S. State Department Under Secretary Andrea L. Thompson and Russian Deputy Foreign Minister Sergey Ryabkov in Geneva likewise ended without progress.

Indeed, by the time of the last SVC session, the United States had finally identified publicly the designator and manufacturer of the Russian missile Washington alleged had been tested and deployed illicitly. The principal dispute had thus been narrowed to differences of assessment over the capabilities of two deployed weapon systems: Russia's 9M729 ground-launched cruise missile; and America's Aegis Ashore Mark 41 missile launcher, which the Russians asserted could hold offensive cruise missiles in addition to SM-3 missile defense interceptors. With the capabilities of these systems potentially subject to exhibition and on-site verification by experts, the most productive path to resolution seemed obvious to outside specialists.

For example, after closely following the dispute for four years, the Russian-German-American nongovernmental “Deep Cuts” Commission, of which the authors of this article are members, advocated that “Washington and Moscow should agree to reciprocal visits by experts to examine the missiles and the deployment sites in dispute.”¹

Unfortunately, the last, best chance to engage constructively to save the treaty was not seized by either Russia or the United States. The European governments, which played a vital role in setting the stage for the birth of the treaty, had little influence in preventing its death.

On February 2, the Trump administration declared a suspension of U.S. obligations under the INF Treaty and formally announced that it would withdraw from the treaty in six months. One month later, Russian President Vladimir Putin announced that Russia would also be officially suspending its treaty obligations.

Looking forward

As it has been throughout the nuclear age, the most important goal for arms control in the foreseeable future is to avoid the use of nuclear weapons. But the two largest nuclear powers do not separate this goal from their perceived need to credibly threaten the use of nuclear weapons to deter attack and resist (or exercise) coercion. Herein lies the rub, for both the US and Russia fear that de-nuclearization could render them or their allies more vulnerable to aggression.

Alteration in the security landscape and technological advances since the end of the Cold War require a re-examination of what kind of non-strategic nuclear arms control regime could best serve the security interests of Russia, the United States, NATO Europe, and the wider international community going forward. Given the countervailing pressures for and against development and deployment of new INF missiles, it is urgent to begin considering the framework for a future agreement.

The most obvious change in circumstances since the 1980s is the altered role of non-strategic nuclear weapons.² The United States no longer regards nuclear-armed, INF-range ground- and sea-based missiles as critical for either military targeting or political reassurance to allies. The role of comparable Russian systems has also waned, although the geographic expansion of NATO and relative decline of Russia's conventional force advantage in Europe may have made Moscow less willing to accept further constraints on its non-strategic nuclear arsenals.

Nuclear superpowers strategic forces are sufficiently large (> 1,500 operationally deployed warheads each), long-range (> 5,500 km), hugely destructive, and invulnerable to preemption so that there should be little incentive for acquiring or retaining non-strategic nuclear weapons to supplement strategic arsenals. Moreover, as weapons delivery vehicles for conventional warheads become more accurate, harder to detect and intercept, the perceived military need to arm them with nuclear warheads is declining.

Accordingly, the United States has removed all nuclear warheads from the land-attack cruise missiles carried by its submarines and surface warships. Even NATO's assessment that Russia has deployed illicit nuclear-capable cruise missiles has not (yet) prompted NATO to call for new nuclear-armed missile deployments in Europe. The new ground-based missiles the United States has decided to develop will be conventionally-armed, at least for the time being. Likewise, Russia's 9M729 cruise missile, which is the principal alleged culprit in the demise of the INF Treaty, is assessed to be nuclear-capable, but not necessarily nuclear-armed.

INF-range nuclear weapons still exist in the U.S. and Russian nuclear arsenals, but they are mostly delivered by aircraft. Their role is more political and less military than ever. Since they are less needed to satisfy military requirements, advocates justify such systems by arguing that they increase the prospect that any aggression will elicit a nuclear response, potentially leading to the engagement of strategic arsenals, thus enhancing the effectiveness of deterrence.

Yet given the continuing threat of miscalculation or misinterpretation during crises, the reliance on non-strategic nuclear weapons for deterrence is increasingly dangerous. It also feeds support among non-nuclear weapon states for more radical approaches to arms control that Washington and Moscow oppose, such as the Treaty on the Prohibition of Nuclear Weapons.

Evidence of backsliding can be found in the actions of both Russia and the United States in subsequent years. The most conspicuous example was Russia's disregard for its commitment in the 1994 Budapest Memorandum on Security Assurances to respect Ukraine's territorial integrity. Retrograde action was taken by the United States in 2018 when it unilaterally withdrew from the eight-party Iran Nuclear Deal, which Iran had been honoring. President Trump's preference for arms buildups over arms control agreements finds a parallel in President Putin's promotion of nuclear "*Wunderwaffen*." Neither seems likely to advance nuclear disarmament, to which their countries are committed under Article VI of the Nuclear Non-Proliferation Treaty NPT. In fact, this failure bodes ill for the prospects of the 2020 Review Conference of the NPT.

The current U.S. administration has withdrawn support for the vision offered by President Barack Obama in his Prague speech of April 2009, for the "the peace and security of a world without nuclear weapons," but such sentiments still exert a powerful influence on public opinion, which must be taken into account. There is no easy remedy for the absence of bold and enlightened leadership in Moscow and Washington. Without prejudice to the ultimate goal articulated by Obama, the two nuclear superpowers should concentrate on more modest, but urgent, practical steps to avoid lowering nuclear thresholds and avoid the waste and counterproductive impact of a new race to build and deploy non-strategic nuclear weapons.

A New Arms Control Framework

If the INF Treaty's ban on land-based intermediate-range nuclear-capable missiles is going to be abandoned, the sides should at least consider what is salvageable and how a future agreement could achieve similar or even enhanced benefits.

The new ground-based missiles the United States has decided to develop will be conventionally-armed, at least for the time being. Likewise, Russia's 9M729 cruise missile, which is the principal alleged culprit in the demise of the INF Treaty, is assessed to be nuclear capable, but not necessarily nuclear-armed.



Picture: Russian Defense Ministry officials present Russia's new 9M729 cruise missile on January 23, 2019. Link: <https://cbsn.ws/2Tbxn3i>

- The first and easiest step would be to **retain the INF Treaty's ban on ground-based ballistic missiles with ranges between 500 and 5,500 km**. None of the five parties to the treaty³ have deployed such weapons, nor prioritized research and development on such weapons in the past. However, the Trump administration is now planning to test a 3,000-4,000 km range ballistic missile in November 2019. It also intends to develop another mobile, land-based medium-range missile with a range of between 1,000-3,000 km. Both actions may be blocked by opposition from Democrats in the House of Representatives.⁴ Retaining the ban would mitigate Russian concerns about extremely short-warning attacks on Moscow command centers, as well as concerns among European members of NATO about comparable Russian attacks. The global ban on these U.S. and Russian systems would also help to dampen arms race dynamics in Asia.
- One step for a new INF arms control framework would be to **ban the nuclear-arming of all ground-based cruise missiles or drones of any range**, leap-frogging past disagreements over the range of Russia's 9M729 and of the distinction between U.S. cruise missiles and armed drones, and the future challenge of creating a new category of limits on ground-launched cruise missiles of intercontinental range – such as on Russia's nuclear-powered SSC-X-9 Skyfall (KY30 Burevestnik).
- Another step would be to **extend a nuclear-arming ban to all sea- and air-based non-strategic missiles**. This would be consistent with the current U.S. practice of deploying only conventionally-armed cruise missiles on its warships, but it would require Russia to do likewise. It would also limit deployment of air-launched nuclear-armed cruise missiles to strategic nuclear delivery vehicles such as heavy bombers, offering a net benefit to Russia, given the U.S. potential to exploit its tactical aircraft as nuclear-ALCM delivery vehicles along Russia's periphery.⁵
- An additional step would be to **ban the arming of any non-strategic delivery vehicle with nuclear gravity bombs**, like the B61-12 to be carried by the F-35 Joint

If the INF Treaty's ban on land-based non-strategic nuclear-capable missiles is going to be abandoned, the sides should at least consider what is salvageable and how a future agreement could achieve similar or even enhanced benefits.

Strike Fighter. This would offer Russia achievement of its long-standing objective – ending the nuclear mission of NATO tactical aircraft delivering U.S. nuclear bombs. Given the marginal military role of such systems, terrorism concerns about storage facilities, and growing popular opposition in some NATO basing countries, returning the weapons to the U.S. mainland would also have advantages for the United States and possibly even for NATO cohesion.

The last three steps would require negotiating ambitious innovations in nuclear weapons monitoring and inspection. The fourth step would be a political challenge for NATO, requiring a buy-in from members of the Alliance. But any combination of implementing the above measures offers the potential of exceeding the overall arms control benefit of the original INF Treaty. Expanding the framework in these ways would constitute a dramatic advance in the de-nuclearization agenda to which the nuclear weapons states are committed under the NPT.

Verification

The greatest challenges would be in the area of verification. But relevant precedents established in the verification provisions and practices of other nuclear arms control agreements – such as the conversion of SSBNs to SSGNs and nuclear-armed heavy bombers to non-nuclear-armed heavy bombers – can be exploited and adapted to increase confidence levels. Verification efforts can include combining national technical means and on-site inspections and conducting challenge inspections in response to suspicious activities.

To achieve an effective ban on the nuclear arming of non-strategic delivery vehicles, it would be necessary to verifiably concentrate nuclear warheads and bombs at central storage sites, away from their potential delivery systems. Several specific factors can be brought to bear in raising confidence that no nuclear arming of non-strategic weapons has occurred.

- Confidence- and security-building measures (CSBMs) can be established, beginning with information exchange, including on whether particular weapon systems are certified for nuclear warheads or not, and whether nuclear weapons for them exist – deployed or non-deployed – and discussions of nuclear postures. At a later stage, more intrusive measures could be agreed upon to enhance confidence that any nuclear arming of delivery vehicles would be detected.
- Information on possible cases of non-compliance with agreed rules on non-deployment of non-strategic nuclear weapons could be discussed at a consultative body. Failure to actively participate in consultation or clarification procedures would be an indication of non-compliant behavior.
- A new treaty should also close the INF Treaty gap in verification mechanisms and provide for specific procedures that would facilitate overcoming implementation debates – such as exhibitions and demonstration of weapons systems raising concerns.

If nuclear warheads exist for specific weapons systems, parties to the agreement should make sure that they are located in central storage sites and not available for operational deployment. (Russia claims to have already deployed all warheads for non-strategic weapon at such national level deployment sites.) Deployment at forward operating bases should be ruled out and empty bases should be available for inspection.⁶ Effective inspections of nuclear weapons storage sites themselves would require a high level of mutual trust, as would on-site inspections at the operational deployment bases to assure that no nuclear weapons were present. It could therefore be necessary to implement arms control limits and their corresponding verification measures in stages as successful implementation builds trust over time.

Any combination of implementing the above measures offers the potential of exceeding the overall arms control benefit of the original INF Treaty. Expanding the framework in these ways would constitute a dramatic advance in the de-nuclearization agenda to which the nuclear weapons states are committed under the NPT.

Although a treaty with adequate verification measures could deliver confidence that significant cheating would be detected, it would not entirely rule out the possibility of limited cheating. However, because limited, covert deployment cannot be easily exploited politically, a verifiable ban on agreed non-strategic nuclear weapons would constitute an outcome preferable to leaving such systems unconstrained. Given the target coverage already provided by modern, conventionally-armed weapons and nuclear-armed strategic

systems, the military impact would not be a game-changer.

In an echo of the way the first Strategic Arms Reduction Treaty benefited from the verification precedents established by the INF Treaty, a new treaty banning nuclear warheads rather than delivery vehicles could ultimately lead the way to a New START follow-on, which could even more dramatically reduce nuclear dangers. In this way the phoenix rising out of the ashes of the INF Treaty could really take flight.

In an echo of the way the first Strategic Arms Reduction Treaty benefited from the verification precedents established by the INF Treaty, a new treaty banning nuclear warheads rather than delivery vehicles could ultimately lead the way to a New START follow-on, which could even more dramatically reduce nuclear dangers.

¹ "Statement of the Deep Cuts Commission on the INF-Treaty Crisis and the Way Forward," 16 November 2018, p. 2 (http://deepcuts.org/files/pdf/Statement_of_the_Deep_Cuts_Commission_on_the_INF_Treaty_final.pdf).

² "The terms, "non-strategic," or "sub-strategic" nuclear weapons refer to those systems with ranges below the 5,500 km range floor of the strategic weapons covered under the New Strategic Arms Reduction Treaty (New START). "INF-range weapons" refers to the 500-5,500 km- range systems covered under the INF Treaty.

³ U.S., Russia, Ukraine, Belarus, Kazakhstan

⁴ Kingston Reif, "Trump Increases Budget for Banned Missiles," Arms Control Today, May 2019 (<https://armscontrol.org/act/2019-05/news/trump-increases-budget-banned-missiles>)

⁵ Although limitations on strategic nuclear delivery vehicles are not the focus of this paper, it should be noted that the logic in support

of a ban on all nuclear-armed non-strategic cruise missiles applies also to a ban on all nuclear-armed cruise missiles. Extending the ban to strategic systems would simplify the verification on non-strategic systems. Like the INF Treaty, it could also chart the path to establishing a more effective verification regime in the strategic realm.

⁶ For more detailed proposals, see Pavel Podvig and Javier Serrat: "Lock them Up: Zero-deployed Non-strategic Nuclear Weapons in Europe." United Nations Institute for Disarmament Research. Geneva (UNIDIR Resources), 2017, (<http://www.unidir.org/files/publications/pdfs/lock-them-up-zero-deployed-non-strategic-nuclear-weapons-in-europe-en-675.pdf>); Pavel Podvig, Ryan Snyder, and Wilfred Wan: "Evidence of Absence: Verifying the removal of nuclear weapons." United Nations Institute for Disarmament Research. Geneva, 2018 (<http://www.unidir.org/files/publications/pdfs/evidence-of-absence-verifying-the-removal-of-nuclear-weapons-en-722.pdf>).

About the Authors



Oliver Meier is Deputy Head of the Research Division on International Security at the German Institute for International and Security Affairs (SWP). His areas of expertise include problems related to the proliferation of weapons of mass destruction and ways to control and reduce biological, chemical and nuclear weapons as well as to cooperatively control military and risk technologies.



Greg Thielmann is a member of the Arms Control Association's Board of Directors, and previously served as an office director in the U.S. State Department's Bureau of Intelligence and Research, a professional staff member of the U.S. Senate Select Committee on Intelligence, and as a senior fellow at ACA.



Andrei Zagorski is Director of the Department of Disarmament and Conflict Regulation, Primakov Institute of World Economy and International Relations, Russian Academy of Sciences and Professor of International Relations, Moscow State Institute of International Relations (MGIMO-University).

About Deep Cuts

The Deep Cuts project is a research and consultancy project, jointly conducted by the Institute for Peace Research and Security Policy at the University of Hamburg, the Arms Control Association, and the Institute of World Economy and International Relations of the Russian Academy of Sciences. The Deep Cuts Commission is seeking to devise concepts on how to overcome current challenges to deep nuclear reductions. Through means of realistic

analyses and specific recommendations, the Commission strives to translate the already existing political commitments to further nuclear reductions into concrete and feasible action. Deep Cuts Working Papers do not necessarily reflect the opinion of individual Commissioners or Deep Cuts project partners.

For further information please go to:
www.deepcuts.org

Impress:
Institut für Friedensforschung und Sicherheitspolitik
an der Universität Hamburg (IFSH)
Beim Schlump 83
20144 Hamburg, Germany

Project Management
Lina-Marieke Hilgert
Götz Neuneck
Email: hilgert@ifsh.de

Phone: +49 (0)40-86 60 77-70
Fax: +49 (0)40-866 36 15

