European Security and the Future of the INF Treaty

Oliver Meier*

Abstract: The 1987 Intermediate-Range Nuclear Forces (INF) treaty, a key arms control agreement between Russia and the United States, is about to collapse. Both countries keep on raising mutual allegations over violations of the treaty. The treaty bans ground-launched missiles with a range between 500 and 5,500 km. While a possible breakdown of the INF treaty could have severe implications for the survival of other crucial arms control agreements, including the New START treaty, it also affects European security. Still, diplomatic and bilateral attempts so resolve the INF dispute have not proved successful thus far. One possible approach could be to enhance transparency measures on both sides, and to allow for mutual inspections. Additionally, the treaty should be adapted to new political and technological developments.

Keywords: INF, arms control, Russia, United States, nuclear weapons
Stichwörter: INF, Rüstungskontrolle, Russland, USA, Atomwaffen

The worsening relations between the West and Russia are increasingly affecting bi- and multilateral arms control, non-proliferation and disarmament agreements. This is not a new development: In 2002, the United States withdrew from the Anti-Ballistic Missile Treaty. In 2007, Russia ceased to implement the Conventional Forces in Europe Treaty. Russia and the United States for some time have accused each other of misusing the Open Skies Treaty for spying.[1] Since 2014, however, the arms control crisis has gained new acuteness. The 1987 Intermediate-Range Nuclear Forces (INF) Treaty could well be the next accord in line to fall. Its demise would be the most significant setback for European security yet. More than any other agreement, the INF treaty symbolizes the beginning of the end of the Cold War. The courageous initiative by then-Presidents Mikhail Gorbachev and Ronald Reagan to ban a whole class of nuclear weapons marked a historic breakthrough.

Previous arms control accords had merely contained upper limits for deployed systems, providing opportunities for both sides to maintain their most modern systems, while phasing out older ones. Monitoring was left to so-called national technical means, without joint verification measures, such as on-site inspections.

The INF treaty, which prohibited the Soviet Union and the United States from flight-testing, producing and deploying ground-launched ballistic missiles and ground-launched cruise missiles with a range of 500-5,500 km, was different in many ways. The treaty necessitated the destruction of some of the most modern weapons on both sides. By the mid-1990s, more than 2,700 treaty-limited items had been irreversibly destroyed, including SS-20, Tomahawk cruise missiles and Pershing missiles. The destruction process itself was highly symbolic. Some of the weapons were crashed by bulldozers, cut up by torches and blown up, with the world watching. These images unmistakably made clear that political relations between the East and the West were improving.

The INF treaty set "a new standard of openness".[2] Compliance was verified through five different types of on-site inspections. All in all, the parties conducted 851 such inspections over the period of the verification system's operation, from 1988-2001. The United States conducted 60 percent of these inspections, visiting 130 sites in Belarus, Kazakhstan, Russia and Ukraine. The other 40 percent of inspections took place at 31 sites in the United States, as well as in the five nations that hosted INF-systems: Belgium, Germany, Italy, the Netherlands and the United Kingdom.[3] The INF treaty was robust enough to survive the collapse of the Soviet Union in 1991, and was multilateralised by bringing in those former Soviet states that had inspectable sites on their territory.[4]

Today, more than 30 years after the signing of the treaty on 8 December 1987, these achievements are at risk. Moscow and Washington accuse each other of violating the INF treaty. Both are threatening to take countermeasures, should the other side withdraw. A new arms race in Europe is looming.

1. Evolution of the crisis

How did we get to where we are? The state of the INF treaty to some degree mirrors the downturn in East-West relations. Around 2007, Moscow began to publicly argue that the INF treaty was unfair because it disadvantaged Russia. The core argument was and is geopolitical: while the United States is not directly threatened by countries with INF-range systems, Russia to the south and east has neighbours with medium- and intermediate-range systems, not bound by the INF treaty.

The United States first publicly accused Russia of violating the INF accord in 2014. In the State Department's Compliance Report, Washington alleged that Russia was developing and

* The author would like to thank Julia Berghofer for research and editorial assistance.

1 For a good overview see Dan Smith, "The future of arms control remains in the hands of Russia and the US", *The Security Times,* February 2018, http://www.the-security-times.com/the-future-of-arms-control-remains-in-the-hands-of-russia-and-the-us.

2 Rose Gottemoeller, "LOOKING BACK: The Intermediate-Range Nuclear Forces Treaty", *Arms Control Today*, June 2007, https://www.armscontrol.org/act/2007_06/LookingBack.

3 Edward M. Ifft, "Verifying nuclear arms control and disarmament", in: Trevor Findlay and Oliver Meier (eds.), *Verification yearbook 2001*, London, Verification Research, Training and Information Centre (VERTIC) 2001, pp. 25–42, p. 26.

4 These were Belarus, Kazakhstan, Russia, Turkmenistan, Ukraine, and Uzbekistan. Of these six, Belarus, Kazakhstan, Russia, and Ukraine remained active participants in the process of implementing the treaty. They do still participate in meetings of the Special Verification Commission. See https://www.state.gov/t/avc/trty/102360.htm.

DOI: 10.5771/0175-274X-2018-2-74

had flight-tested a ground-launched cruise missile (GLCM) with a treaty-prohibited range.[5]

Over the next years, Washington tried to engage Russia to resolve the concerns, while becoming more and more specific about the allegations. In February 2017, reports emerged that Russia had deployed two battalions of the new system, which was given the U.S. designator SSC-8.[6] A senior U.S. official confirmed this in Congressional testimony one month later, saying that the deployed weapons primarily threatened Europe.[7] In early 2018, a U.S. official stated that the system in question had the Russian designator 9M729.[8] The Russian government subsequently acknowledged that such a system existed but maintained that it was treaty-compliant.[9]

While the mere knowledge of the technical type-number does not make it easier to judge the substance of the allegation, it nevertheless marks progress towards a possible resolution of the dispute. Since 2014, Russia had refused to engage in dialogue over the allegations, arguing it did not know which system the United States was talking about. Now, the question that needs to be resolved primarily is how far the 9M729 can fly and whether it has been tested over that full range.[10]

Russia itself has countered U.S. charges by alleging that the United States is violating the INF treaty in three ways. Russia argues that the NATO missile defence facility in Deveselu (and a similar installation to be completed in Poland in 2018) is capable of launching cruise missiles with a treaty-prohibited range. The Mk-41 vertical launch systems deployed at the Aegis Ashore site is also used on U.S. Navy ships to launch Tomahawk cruise missiles.[11] If it was used to deploy GLCM with an INF range, this would constitute a breach of the INF treaty. Moscow also argues that armed drones may fall under the treaty provisions. Finally, Russia believes that the use of certain missiles as training targets for missile defence interceptors violates the INF treaty.[12]

Washington rejects these charges and maintains that the Mk-41 launchers have "never contained, launched, or been tested for launching an INF-prohibited missile" and that the system "is only configured to launch a defensive interceptor, and lacks the weapons control systems, software, and support systems to launch an offensive missile."[13] To discuss these compliance concerns, Russia and the United States have met twice, in late 2016 and 2017, in the Special Verification Commission. These meetings apparently did not yield any specific results.[14]

2. Military implications of INF non-compliance and possible responses

The Soviet Union in 1976 triggered the crisis that eventually led to the negotiations on the INF treaty by deploying nuclear-armed intermediate-range SS-20 missiles in Europe. This road-mobile missile, with three independently targetable warheads, replaced older SS-4 and SS-5, which had had one warhead each. The SS-20 posed a novel kind of threat and "there was U.S./European agreement that the SS-20 created an unacceptable gap in the escalatory chain of nuclear threats–a flaw in the fabric of deterrence that it could not ignore".[15] In particular, there was a concern that the Soviet threat of using these weapons could "decouple" the European theatre from continental United States and thus weaken U.S. security guarantees.

NATO, in response to the Soviet deployments, decided to deploy Pershing II ballistic missiles and Tomahawk cruise missiles in Europe. The "double track decision" on the one hand aimed at balancing the Soviet increase in nuclear capability and on the other hand had the goal of incentivising Moscow to come to the negotiating table. Particularly the Pershing II, which could have reached Moscow within eight minutes, affected the Soviet leadership's threat perception and contributed to Mikhail Gorbachev's decision to negotiate a treaty on the elimination of land-based medium- and intermediate-range missiles.

Today, the strategic situation is different. To be sure, the deployment of a ground-launched cruise missile by Russia would directly threaten European NATO territory. Mobile ground-launched systems are attractive because their delivery systems can be concealed more easily than aircraft or ships. Land-based systems also tend to have a higher accuracy than air- and sea-based systems. Their flight times can be short. All of this makes them better suited for first strike scenarios.

However, over the last 30 years the relative importance of ground-launched cruise missiles has declined vis-à-vis air- and sea-launched systems. Russia already has such systems, which also hold targets in Europe at risk, such as the nuclear-capable

5 U.S. Department of State, "2014 Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments", Washington, D.C., July 2014, http://www.state.gov/documents/organization/230108.pdf, p. 8.

6 Michael R. Gordon, "Russia Deploys Missile, Violating Treaty and Challenging Trump", *The New York Times,* February 14, 2017, https://www.nytimes.com/2017/02/14/world/europe/russia-cruise-missile-arms-control-treaty.html?_r=1.

7 General Paul Selva, Vice Chairman of the Joint Chiefs of Staff, *Transcript of Hearing on Military Assessment of Nuclear Deterrence Requirements*, Washington, D.C., House Armed Services Committee, March 8, 2017, https://www.defense.gov/Portals/1/features/2017/0917_nuclear-deterrence/docs/Transcript-HASC-Hearing-on-Nuclear-Deterrence-8-March-2017.pdf, p. 8.

8 Dave Majumdar, "Novator 9M729: The Russian Missile that Broke INF Treaty's Back?", *The National Interest,* December 7, 2017, http://nationalinterest.org/blog/the-buzz/novator-9m729-the-russian-missile-broke-inf-treatys-back-23547.

9 "Russian diplomat rejects US claims new cruise missile fails to comply with INF Treaty", *TASS*, July 21, 2017, http://tass.com/politics/982316.

10 Pavel Podvig, "The INF Treaty culprit identified. Now what?", *Russian Strategic Nuclear Forces,* December 5, 2017, http://russianforces.org/blog/2017/12/the_inf_treaty_culprit_identif.shtml.

11 See Hans Kristensen/Oliver Meier/Victor Mizin/Steven Pifer/Alicia Sanders-Zakre: "Preserving the INF Treaty.", *The Deep Cuts Commission*, Special Briefing Paper, March 24, 2017, http://deepcuts.org/files/pdf/Special_Brief_-_Deep_Cuts_INF.pdf.

12 Ministry of Foreign Affairs of Russia, "Comments by the Russian Ministry of Foreign Affairs on the report of the U.S. Department of State on Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments", Moscow, August 1, 2014, http://russian-embassy.org/en/?p=1161.

13 U.S. Department of State, "30th Anniversary of the INF Treaty: Under Secretary Thomas A. Shannon's Interview with Kommersant daily", Washington, D.C., December 8, 2017, https://www.state.gov/t/avc/rls/2017/276364.htm.

14 Kingston Reif, "Trump Sets INF Response Strategy", *Arms Control Today* 48, No. 1 (January/February 2018), pp. 26–27, https://www.armscontrol.org/act/2018-01/news/trump-sets-inf-response-strategy.

15 Ronald Huisken, "Globalising the INF treaty. The best way to inhibit the proliferation of long-range missiles?", *SDSC working papers*, No. 409, Strategic and Defence Studies Centre at the Australian National University, Canberra, 2008, https://www.files.ethz.ch/isn/57115/wp_sdsc_409.pdf, p. 5.

Kh-55 and newer Kh-102 air-launched cruise missile (ALCM) and the Kalibr sea-launched cruise missile (SLCM).[16] There is thus some speculation about the Russian rationale for developing a new type of ground-launched cruise missile. The United States government believes that the GLCM is one of those Russian nuclear weapons designed for escalation control in a nuclear crisis ("escalate to de-escalate").[17] Others suspect that such an intermediate-range system might have been commissioned with the Asian theatre in mind or that it lacks a clear strategic rationale altogether.

U.S. Congress has allocated $57 million for the development of a new GLCM, in the hope of pressuring Russia to come back into compliance with INF.[18] Technically speaking, the United States would not violate the INF treaty, as long as it would not "flight test", produce or deploy such a system. Thus, the draft "INF Treaty Preservation Act of 2017" authorized the administration to facilitate "the acquisition and transfer to allied countries of missile systems with 17 ranges between 500 and 5,500 kilometers", in order to evade the INF treaty's limitation. Allied countries would not be bound by the INF restrictions because they are not party to the treaty. A new GLCM could be stationed in Europe on the basis of NATO consensus among all 29 allies or on the basis of bilateral agreements between Washington and the host nation.

To create additional leverage, the Trump administration also wants to develop a new SLCM, which "will not require or rely on host nation support".[19] The purpose for this new weapon is to incentivise Russia to comply with INF and other arms control agreements that, according to the United States, Russia is violating, including the Vienna Document and the Open Skies treaty. The new SLCM additionally has a role in strengthening the U.S. deterrence posture in Asia. This redundant rationale reduces the likelihood that a resolution of the INF dispute would lead to a cancellation of the system.

A decision to counter the deployment of Russian GLCM "tit-for-tat" by bringing back conventional and/or nuclear GLCMs to NATO might not fundamentally alter Russia's threat perception. The United States already possesses nuclear-armed ALCMs. The Trump administration wants to continue a programme dating back to the Obama administration to replace these weapons with more than 1,000 new Long-Range Stand-Off (LRSO) weapons.[20] The United States also has modern conventional stand-off weapons, such as the Joint Air-to-Surface Standoff *Missile (JASSM)*, which can hold targets in Russia at risk.

There are additional political reasons to be sceptical about an attempt to pressure Russia back into compliance. First, finding consensus within NATO for such a course would prove difficult. The United States has briefed allies on Russia's alleged violation at least since 2014, but NATO as a whole has yet to share Washington's intelligence assessment.[21] Second, the relationship between Moscow and Washington 30 years ago was on an upward trajectory, whereas today U.S.-Russia relations are in a downward spiral. Arguably, the leaderships in Moscow and Washington in the 1980s were pursuing more consistent and predictable policies and were more interested in reversing the nuclear arms race than their successors are today.[22]

While the upsides of new GLCMs in Europe are comparatively small, their deployment would risk triggering new arms races. NATO and Russia might develop and deploy countervailing options to hold such weapons at risk. The United States and NATO are also considering better missile defences to protect against new Russian GLCMs. It is currently and in the foreseeable future not possible to have a territorial defence against cruise missiles and particularly modern cruise missiles. This is because cruise missiles flying at very low altitudes evade detection by radar, unless those sensors "look down", for example from airplanes. Radar may be able to detect cruise missiles at close range but then interception is challenging because modern cruise missiles in their terminal approach may fly at supersonic speeds.

Thus, at best, point defences against cruise missiles may be possible. Strengthening the defence of key installations and facilities is reportedly one of the options NATO is considering in response to a Russian INF violation.[23] Such a deployment would appear to contradict NATO's policy of not aiming its missile defences at Russia.

Increased reliance by Russia and the United States on intermediate-range missiles, and particularly cruise missiles, might also fuel proliferation of cruise missiles to other countries, including in Europe.[24]

3. The political importance of the INF treaty

So far, neither Moscow nor Washington wants to take the blame for a collapse of the treaty. Both fear accusations of seeking a military advantage by withdrawing from INF.[25] Thus,

16 Hans M. Kristensen and Robert S. Norris, "Russian nuclear forces, 2017", *Bulletin of the Atomic Scientists* 73, No. 2, 2017, pp. 115–26.

17 Office of the Secretary of Defense, *Nuclear Posture Review*, U.S. Department of Defense, Washington, February 2018, https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF.

18 Kingston Reif, "Trump Sets INF Response Strategy", op.cit. Washington has also sanctioned entities suspected of being involved in the programme. U.S. Department of State, "U.S. Response to the Russian Federation's INF Treaty Violation: Integrated Strategy", Washington, D.C., December 8, 2017, https://www.state.gov/t/avc/rls/2017/276361.htm.

19 Office of the Secretary of Defense, *Nuclear Posture Review*, op. cit., pp. 54-55.

20 Will Saetren, "Five Facts About a Controversial Nuclear Weapon", *War on the Rocks,* August 10, 2017, https://warontherocks.com/2017/08/five-facts-about-a-controversial-nuclear-weapon.

21 This may be because allies independently would want to confirm the U.S. findings, by their own means. In December 2017, the NATO Council stated that "Allies" had identified a Russian missile system "that raises serious concerns" but stopped short of stating that "the Allies" collectively had identified such a system. See NATO, "Statement by the North Atlantic Council on the Intermediate-Range Nuclear Forces (INF) Treaty", Press Release (2017) 180, Brussels, December 15, 2017, https://www.nato.int/cps/en/natohq/news_150016.htm.

22 See Steven Pifer and Oliver Meier, "Are We Nearing the End of the INF Treaty?", *Arms Control Today* 48, No. 1, January/February 2018, pp. 20–25, p. 24.

23 Georg Mascolo, „Einer der wichtigsten Abrüstungsverträge wackelt", *Süddeutsche Zeitung,* September 1, 2017, http://www.sueddeutsche.de/politik/usa-und-russland-riskante-rolle-rueckwaerts-1.3648217.

24 Ian Anthony, "European Security after the INF Treaty", *Survival* 59, No. 6, 2017, pp. 61–76, p. 65.

25 Article XV (2) states that each party can decide to withdraw with six months notice from the treaty if "extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests". For a statement on the U.S. intention to remain committed to the INF treaty see, for example: U.S. Mission to the North Atlantic Treaty Organization, "Ambassador Hutchison on the North Atlantic Council Statement on the INF", Brussels, December 15, 2017, https://nato.usmission.gov/dec-15-2017-ambassador-hutchison-north-atlantic-council-statement-inf.

withdrawal is likely to take place only if one side can provide clear and irrefutable proof of the other side's violation.

The political implications of an INF collapse for European security would be severe. The treaty's demise would signify a breakdown of arms control, and thus a lack of willingness to jointly limit the most destabilizing weapons and weapons technologies. The INF treaty could be the first modern arms control accord that collapses because one side is cheating. A finding that Russia had been acting in bad faith would severely undermine trust in its reliability as a partner for arms control. Without the INF treaty, Russia and the United States would be free to develop, test, produce and deploy intermediate-range ground-launched missiles, including in Asia where some have called for such weapons to be deployed.[26]

Without a resolution of the INF dispute, it is unlikely that the New START treaty will be extended beyond its current expiration date of 4 February 2021. While the two treaties provide a clear distinction between intermediate-range and strategic nuclear weapons, there is a functional overlap between them. INF-range systems deployed in the easternmost regions of Russia would cover much of the continental United States, while US intermediate-range systems deployed in Europe would hold at risk many targets in Russia. There is also a strong political linkage between INF compliance and New START: U.S. Congress has threatened to cut-off funding for any measures that support an extension should Russia not be willing and able to demonstrate its compliance with the INF treaty.

4. What to do?

The INF treaty remains of paramount importance for European security. It is widely regarded as the litmus test for Russian and U.S. willingness to avoid a full-fledged military competition. The treaty is also of military significance because it prohibits Russia and the United States from developing new types of short- and intermediate range ground-launched missiles. It thus makes it unnecessary to develop options to defend against and defeat such weapons. The INF treaty also remains a crucial legal and normative point of reference. The accord is seen as the foundation for current and future arms control accords. Finally, the demise of the INF treaty would be used by some as an argument that arms control is a "good weather exercise", working when political relations are fine but becoming useless once these turn sour.

In reality, arms control and political relations are interdependent. Good arms control agreements build trust at different levels and thus boost political relations. In times of crisis, such a reservoir of trust can help to stabilize relations. Arms control can thus help to "shield" certain areas from competition, at least for a certain time. It does this, for example, by establishing channels for dialogue among competitors and adversaries.

Of course, arms control in the end cannot withstand a collapse of political relations. Thus, the downward spiral in political relations between Russia and the United States makes a resolution of the conflict over INF increasingly difficult. As long as both sides see the INF dispute merely as an opportunity to accuse each other of bad faith, the prospects for preserving the treaty look bleak. Ian Anthony has warned that if Russia is indeed violating the accord "it could be argued that we have already entered a post-INF Treaty era, in which the future of the treaty is still of interest to lawyers, but no longer considered a constraint by strategic analysts or force planners."[27]

We are indeed in a twilight zone, where the INF treaty is neither fully functional nor completely useless. What can be done to move back to brighter political territory and find a way out of the INF crisis?[28]

In the short term, it is essential to resolve the current concerns about compliance and heal possible violations. The identification of the 9M729 as the culprit should facilitate a dialogue to address non-compliance concern. The obvious and difficult challenge is to establish whether the 9M729 is treaty compliant or not. To do this, Russia could and should demonstrate that the system does not have a range greater than 500 km.[29]

But this sounds easier than it actually is. The INF treaty itself does not contain provisions for cooperatively establishing the range of missiles, nor does any other arms control treaty contain such procedures. By not prohibiting the development but only the testing of ground-launched medium- and intermediate-range ground-launched systems, the treaty drafters implicitly assumed that future violations would be detectable during tests, presumably through national technical means. (And if U.S. allegations turn out to be correct, treaty drafters would be proven right because the United States apparently has observed the testing of the 9M729 to a prohibited range.)

To clarify whether the 9M729 is treaty compliant, U.S. experts could be given an opportunity to observe the system and/or a flight test and/or to inspect the missile itself. The Vienna Document describes procedure for a "Demonstration of New Types of Major Weapon and Equipment Systems" which might be used as template to arrange such a visit.[30] It is not clear, however, how intrusive such an inspection would have to be to arrive at an informed judgment on the range of the 9M729. Changes in the outer appearance of the SSC-8/9M729 as compared to the predecessor model, such as greater length or a "hump" on the missile may be indicative of an increased range but would not be proof of a violation. The United States may also be reluctant to engage in such an exercise if it is concerned about being unable to prove a Russian violation.

Nevertheless, the issue could be put to rest if indeed the United States should come away from a joint inspection of the 9M729 convinced that the missile is treaty compliant.

26 Eric Sayers, "The Intermediate-Range Nuclear Forces Treaty and the Future of the Indo-Pacific Military Balance", *War on the Rocks,* February 13, 2018, https://warontherocks.com/2018/02/asia-inf/

27 Anthony, op.cit., p. 62.

28 Much of this is based on Hans Kristensen, et al., *Preserving the INF Treaty,* op.cit.

29 Steven Pifer, "Russia Denies it Violates the INF Treaty. OK, Show It", *The Moscow Times,* Moscow, January 22, 2018, https://themoscowtimes.com/articles/russia-denies-it-violates-the-inf-treaty-ok-show-it-op-ed-60200.

30 Vienna Document 1999 of the Negotiations on Confidence- and Security-Building Measures", Articles 31-35 and Annex IV.

The verification challenge becomes much harder if indeed the 9M729 is violating the INF treaty. The monitoring tasks associated with establishing that Russia is returning or has returned to compliance would include

- establishing a baseline of numbers and locations of prohibited systems,
- procedures for checking the completeness and correctness of such declarations,
- monitoring of the irreversible destruction of missiles and all launchers associated with the 9M729, and
- possibly ongoing monitoring of Russian (and U.S.) compliance.

Unfortunately, the INF treaty verification system ended in 2001, thirteen years after entry-into-force of the accord. The INF treaty drafters (wrongly) assumed that once all those declarable missiles were verifiably destroyed, the verification regime could be put to rest.

Thus, the INF Treaty contains no provisions for challenge inspections. It provides only few tools that could be helpful to clarify whether Russia is in the process of returning to compliance or has healed any violation of treaty provisions. INF procedures for declarations and monitoring were tailored specifically to the INF-range systems that existed in 1987 and to the locations where they were deployed and tested. Thus, U.S. Undersecretary of State Thomas Shannon has stated that "the INF Treaty itself suggests specific steps that Russia could take to eliminate these missiles and launchers in a manner the United States could confirm" but offered that "[i]f these procedures are unacceptable to Russia, the United States stands ready to negotiate other measures that would provide us with confidence the missile system has been eliminated from Russia's arsenal."[31]

The New START treaty's monitoring provisions may also be useful in resolving the issue, which insofar is not surprising because the treaty's verification system has evolved from INF. New START's verification is also more elaborate because the treaty contains upper limits, rather than complete prohibitions for certain systems. Monitoring thresholds is a more complex verification task than the verification of elimination.

New START provisions may be helpful in establishing a baseline of numbers and locations of declarable systems. Parties also exchange notifications when declarable systems are moved and can conduct short-notice on-site inspections to confirm the veracity of declared information. New START deals with the challenge of monitoring mobile systems by making it mandatory that each missile carries a "unique identifier" and checking such information against observations made during on-site inspections. Such verification instruments could be adapted to the challenge of monitoring INF compliance, if and when then parties come to an agreement to rectify possible treaty violations.

Any intrusive verification approach would have to be reciprocated by the United States, if it were to be politically acceptable for Moscow. There are several things Washington could offer in return. Inspections at the Aegis Ashore missile defence site in Deveselu, Romania would be on top of the list, as it has been consistently named by Russia as one key non-compliance concern. Other transparency and confidence-building measures may be added into the mix.[32] All of these would have to be agreed ad hoc, taking into account interests of allies, as the Aegis Ashore sites are under NATO command and control.[33]

Should it be possible to get past the current impasse, both sides, in the medium term, could begin discussions on adapting INF to the changed circumstances. In fact, the prospects for such a reform of the treaty might be an incentive for Russia to invest in clarification of current non-compliance concerns. Russia has raised concerns on technologies where the United States has a technological edge, including armed drones and missile defence.

Such an adapted, modernized INF accord could, in the long run, provide a basis to use the accord for a broader set of guidelines, agreements or treaties to deal with the destabilizing effects of cruise missiles more generally. Multilateralising the INF accord had already been on the agenda ten years ago, when the United States endorsed a Russian proposal to urge other countries to join the INF treaty.[34] The proposal at the time did not receive much support. Subsequent Russian proposals to revive the initiative were not pursued with much energy. A key problem is the lack of incentives for other countries to join the accord. In particular, countries possessing intermediate-range but not intercontinental ballistic missiles would be disadvantaged by broader prohibition of ground launched INF-range system.[35]

Pursuing multilateralization would be easier if Russia and the United States themselves would be willing to constrain their capabilities. The most far-reaching proposal in this regard is a ban of all nuclear-armed cruise missiles.[36] But it might also be feasible to pursue more limited restrictions on air- and/or sea-launched cruise missiles.

5. The INF treaty and European security

The future of the INF treaty will be a good indicator for the ability and the willingness of key actors to shield some arms control and non-proliferation accords from the broader

31 U.S. Department of State, "30th Anniversary of the INF Treaty: Under Secretary Thomas A. Shannon's Interview with Kommersant daily", Washington, D.C., December 8, 2017, https://www.state.gov/t/avc/rls/2017/276364.htm.

32 Ivanka Barzashka, "On missile defense, verify to trust", *Bulletin of the Atomic Scientists*, January 8, 2014, https://thebulletin.org/missile-defense-verify-trust.

33 NATO Allied Air Command, "Allied Air Command takes over NATO's first permanent Ballistic Missile Defence resource", Ramstein, August 19, 2016, https://www.airn.nato.int/archive/2016/allied-air-command-takes-over-nato-first-permanent-ballistic-missile-defence-resource.

34 "Statement by H.E. Mr. Sergey Lavrov, Minister of Foreign Affairs of the Russian Federation, at the Plenary meeting of the Conference on Disarmament", Geneva, February 12, 2008, http://www.geneva.mid.ru/disarm/19.html.

35 Huisken, op.cit.

36 Andy Weber and William J. Perry: "Mr. President, kill the new cruise missile", *The Washington Post*, October 15, 2015, https://www.washingtonpost.com/opinions/mr-president-kill-the-new-cruise-missile/2015/10/15/e3e2807c-6ecd-11e5-9bfe-e59f5e244f92_story.html.

geopolitical competition that has emerged between Russia and the United States.

Russia could and should pave the way for a solution of the dispute. If the 9M729 is a treaty compliant system, it could demonstrate this by exhibiting the missile. The refusal to do so increases suspicions that Russia is cheating. If Russia has indeed violated the INF accord by testing and deploying the 9M729, the road back to compliance will be long and difficult.

NATO could facilitate such a process by stating its willingness to provide transparency at the Aegis Ashore sites. The Alliance should also resist the Trump administration's pressure to put additional pressure on Russia by deploying GLCMs. There are other measures the Alliance can take to demonstrate cohesion and to incentivize Russia to return to compliance. Deploying U.S. conventionally armed air- and sea-launched cruise missiles to Europe would offer an alternative action. Temporary deployments of conventional B-1 heavy bombers combined with JASSMs, as well as more frequent deployments of U.S. warships and submarines carrying conventionally armed sea-launched cruise missiles to northern European waters, could also signal the U.S. commitment to Europe.[37]

In any case, Europeans could and should speak out more loudly on their concerns about INF. Thus, it is a positive sign that the new German government's programme lists INF compliance concerns as a high-profile issue to be addressed.[38] Europeans could also support efforts to develop new and adapted verification measures that would be needed to resolve compliance concerns. Finally, Europeans could and should engage other countries to begin discussions on how to extend INF to cover novel technologies and/or to cover other regions. INF, after all, is primarily a treaty about European security.

Dr **Oliver Meier** is Deputy Head of the International Security Division at the German Institute for International and Security Affairs (SWP) in Berlin.

37 Pifer/Meier, op.cit.

38 „Ein neuer Aufbruch für Europa. Eine neue Dynamik für Deutschland. Ein neuer Zusammenhalt für unser Land. Koalitionsvertrag zwischen CDU, CSU und SPD", Berlin, February 2, 2018, https://www.cdu.de/system/tdf/media/dokumente/koalitionsvertrag_2018.pdf?file=1, p. 150.