



SCHOOL OF PUBLIC POLICY

CENTER FOR INTERNATIONAL &
SECURITY STUDIES AT MARYLAND

Expanding Nuclear Weapons State Transparency to Strengthen Nonproliferation

By Jonas Siegel

CISSM Working Paper

March 2015

Center for International and Security Studies at Maryland
4113 Van Munching Hall, School of Public Policy
University of Maryland
College Park, MD 20742
(301) 405-7601

Abstract

In the years since the 2000 Nuclear Non-Proliferation Treaty (NPT) Review Conference, NPT nuclear weapons states have engaged in consequential transparency measures about their stockpiles of nuclear weapons and materials. The level of transparency thus far achieved, however, has proven uneven in terms of the types and amounts of information released and in terms of the frequency of those releases—and most importantly, has not contributed significantly to fulfillment of these states NPT commitments. Nuclear weapons states should reassess the scope of their transparency efforts to date and consider expanding the types of information that they reveal to provide international assurances and achieve gains in support of the nuclear nonproliferation regime. This paper identifies particular steps that these states could take to fulfill the desire for greater transparency that move beyond declarations of the number and status of nuclear weapons and nuclear materials. In particular, it focuses on how transparency can be expanded about the operational practices and protocols that govern the day-to-day management of their military nuclear materials—their warheads, weapons components, and material stockpiles—and how transparency in this area would contribute to fulfilling their disarmament and nonproliferation commitments.

Introduction

The Final Document from the 2000 Nuclear Non-Proliferation Treaty (NPT) Review Conference capped a decade during which global emphasis on transparency in nuclear materials and nuclear weapons had reached its high point and had already begun to recede. The Final Document nonetheless emphasized the need for greater transparency among NPT parties, particularly nuclear weapons state-parties to the treaty. “Increased transparency by the nuclear weapon states with regard to the nuclear weapons capabilities and the implementation of agreements pursuant to Article VI,” was part of the 13 “practical steps” that the parties agreed to pursue in the document. Increased transparency was also urged “as a voluntary confidence building measure to support further progress on nuclear disarmament.”

In the years since the 2000 Review Conference, nuclear weapons states have indeed engaged in consequential transparency measures. This transparency has primarily taken the form of making information available regarding their nuclear weapons and materials stockpiles. The United States, France, United Kingdom, and China have all made unilateral declarations about the sizes of their nuclear weapons arsenals—some in greater details than others. Similarly, the United Kingdom and the United States have released updated figures about the production of nuclear materials in their states, and all weapons states have continued to make information available about their plutonium holdings under INFCIRC/549 declarations. Additional information about the nuclear weapons and materials stockpiles of the United States and Russia were released as part of the START and New START treaties, and threat reduction initiatives such as the HEU purchase agreement and the plutonium management and disposition agreement.

The action plan developed at the 2010 NPT Review Conference attempted to stimulate further transparency from the nuclear weapons states. Indeed, the P-5 process that was initiated prior to the 2010 conference took up the disarmament-related items from the action plan in an attempt to focus on them in a structured manner.

Despite this progress, the level of transparency thus far achieved by NPT nuclear weapons states has proven uneven in terms of the types and amounts of information released and in terms of the frequency of those releases. The most telling measure of weapons states’ transparency efforts to date is the overwhelming dissatisfaction of NPT non-nuclear weapons states. In the run-up to the 2015 NPT Review Conference, representatives of non-nuclear weapons states and nongovernmental organizations around the world (including in nuclear weapons states) have repeatedly called for greater transparency from weapons states in pursuit of disarmament and nonproliferation objectives.¹

¹ See, for example, “Increased Transparency in the Disarmament Process,” a working paper submitted by the members of the Non-Proliferation and Disarmament Initiative to the 2014 Preparatory Committee Meeting for the 2015 NPT Review Conference, March 19, 2014, NPT/CONF.2015/PC.III/WP.10; Bill Richardson et al., “Universal Transparency: A Goal for the U.S. at the 2012 Security Summit,” *Arms Control Today*, January/February 2011, pp. 8-13.

Nuclear weapons states argue that greater transparency has run up against persistent concerns about the security and protection of nuclear warheads and materials, and against what weapon state governments deem to be the requirements of maintaining credible nuclear deterrence capabilities. While there is some credence to these concerns, nuclear weapons states should also consider reassessing the scope of their transparency efforts to-date and expanding the types of information that they could reveal to provide international assurances and achieve gains in support of the nuclear nonproliferation regime that have thus far proven elusive.

This paper identifies particular steps that nuclear weapons states could take to fulfill the desire for greater transparency that move beyond declarations of the number and status of nuclear weapons and special fissionable materials. In particular, it focuses on how nuclear weapons states could make publicly available information about the operational practices and protocols that govern the day-to-day management of their military nuclear materials—their warheads, weapons components, and material stockpiles—and how transparency in this area would contribute to fulfilling their disarmament and nonproliferation commitments.

Nuclear transparency, in practice

Nuclear transparency most commonly involves the disclosure of previously unavailable information relating to the production and use of nuclear technologies and materials, but the concept also includes “the accessibility and reliability of such information.”² Under this conception, transparency is often seen as a confidence building measure that produces “greater predictability with regard to the intentions and capabilities of states, thus facilitating mutual understanding, easing tensions, and reducing misperceptions.”³

Not all states see nuclear transparency the same way, however. Some states see transparency as a way for others to gain a competitive advantage or manipulate international relations and are thus hesitant to engage in its practice.⁴ Indeed, states more willing to engage in nuclear transparency than others have used calls for nuclear transparency as a means to draw attention to the hesitance of others to engage in transparency.

The intended and actual effects of transparency measures also differ according to the context in which they are pursued and in the details of their implementation. Many nuclear materials and

² Nicholas Zarimpas, “Introduction,” in Nicholas Zarimpas (ed.), *Transparency in Nuclear Warheads and Materials: The Political and Technical Dimensions* (Oxford, UK: Oxford University Press, 2003), p. 7.

³ *Ibid.*

⁴ See: Li Bin, “China and Nuclear Transparency,” in Nicholas Zarimpas (ed.), *Transparency in Nuclear Warheads and Materials: The Political and Technical Dimensions* (Oxford, UK: Oxford University Press, 2003), p. 55. Russian concerns about nuclear transparency have surfaced in discussions about tactical nuclear weapons, as well as in regards to nuclear material production. See: Alexander Pikayev, “Transparency and Security in Russian-U.S. Nuclear Relations,” Nicholas Zarimpas (ed.), *Transparency in Nuclear Warheads and Materials: The Political and Technical Dimensions* (Oxford, UK: Oxford University Press, 2003) and in Dmitry Kovchegin, “Developing a Nuclear Material Control and Accounting System in Russia,” CISSM Working Paper, December 2013, available at www.ciissm.umd.edu.

weapons transparency measures, including some of those listed in the previous section, are voluntary, unilateral measures, but transparency can also be an element of a formal, multilateral or bilateral agreement and can contribute to the verification of formal commitments. Indeed, the agreement that has brought the broadest and most consistent amount of transparency into the use of nuclear materials and technologies is the NPT, a formal, legally binding agreement that requires non-nuclear weapons states to provide detailed and regular declarations about all of their nuclear facilities, materials, trade, etc.

Transparency measures are also distinguished by the parties involved. When states make information *publicly* available, they are often trying to facilitate understanding, reduce misperceptions and, provide assurances about their capabilities and intentions to a range of actors, other states, international bodies, the nongovernmental community, and the public at large. The public release of information could also be used to deliberately intimidate other states or to boost national pride. Other transparency measures include the revelation of information to intergovernmental authorities alone, as is the practice with IAEA safeguards agreements. Still other transparency measures, such as those that are related to bilateral arms control agreements, involve the sharing of information between states. In these two later cases, the amount of public transparency is limited.

Before suggesting how it is possible to broaden the scope of nuclear weapons state transparency efforts, this paper reviews several prominent efforts from the past 15 years in which nuclear weapons states have tried to increase transparency. These overviews detail the measures' stated goals and their relative success in achieving them.

The NPT. In the direct context of the NPT, transparency primarily serves to ensure nuclear nonproliferation by allowing all states to have confidence that those states who foreswore developing nuclear weapons in joining the treaty are honoring that commitment. By making declarations, submitting to monitoring, and opening up facilities for inspections, an NPT signatory assures other states parties that they are not diverting nuclear material or technologies to the development of nuclear weapons.

The success of the NPT to date has rested in large part on the transparency non-nuclear weapons states have provided under the treaty. IAEA safeguards agreements are detailed documents that outline the specific types and frequency of reporting that are needed for each individual state to ensure compliance with the treaty. The level of detail and scope of safeguards agreements, including material accounting requirements and reports on facility design; the clarity of the ultimate goal that they serve—to ensure that non-weapons states don't divert nuclear materials or technologies for non-peaceful uses; and the ability of a third party (and other states) to assess the information made available all contribute to efficacy of the transparency requirements.

The five state-parties designated as nuclear weapons states under the treaty provide some but relatively little transparency about their civilian nuclear facilities and materials under their treaty

commitments. All of these states have voluntary offer agreements with the IAEA and make a range of facilities and materials available for safeguarding, but in practice, the IAEA safeguards relatively few civilian facilities and materials in these countries. In addition, these states provide no formal transparency under the NPT regarding their military stockpiles of nuclear weapons and materials. In other words, the transparency that has traditionally resulted directly from the NPT has not supported weapons reductions and disarmament, despite the fact that the passage of the treaty hinged on the inclusion of both nonproliferation and disarmament commitments.

The historical limits on nuclear weapons states' transparency under the NPT contributed to calls prior to the 2000 NPT Review Conference for nuclear weapons states to engage in further transparency in support of their Article VI disarmament commitments.⁵ While invoking nuclear weapons states' commitments under the NPT, the calls for transparency included in the final document from the 2000 Review Conference were vague and didn't have the legal force of treaty commitments. As such, the transparency that resulted—the unilateral public declarations of nuclear material production, of weapons stockpile size, and of weapons reductions—was limited and even held the potential to create confusion rather than clarity.

For instance, a May 2010 U.S. press release noted that the U.S. stockpile “consisted of 5,113 warheads,” a number that included active warheads that were deployed on weapon systems; “responsive” warheads that could be deployed on short notice and serve as a strategic hedge; and inactive warheads, intact warheads stored at Defense Department installations that had their limited-lifetime components removed. A subsequent State Department release noted that, as of December 2009, 1,968 of this total were deployed strategic weapons. Of the remaining 3,145 weapons, it was unknown precisely how many were included in the “responsive” force, which could be deployed on short notice, and how many were inactive. Officials were also vague in describing that “several thousand additional nuclear weapons are currently retired and awaiting dismantlement.”

Though the United States and the United Kingdom released information about their historical production of plutonium and HEU, including details about current holdings, this information was on the aggregate level. The United States recently updated its plutonium declaration, but it presented the same limitations as the initial declaration.

New START. Since its entry into force in February 2011, the New START treaty has facilitated additional transparency between the United States and the Russian Federation, as the two nations reduce their deployed warheads and launchers, and their non-deployed launchers to treaty limits. Most of the transparency brought about by the treaty, however, is limited to the exchange of information *between* the two countries. While the detailed data exchanges and notifications spelled out by the treaty provide assurances and contribute to the overall confidence of the two

⁵ A call for greater nuclear weapons state transparency was presented in the European Union's Common Position paper prepared for the 2000 NPT Review Conference, as well as by a review conference working papers submitted by the New Agenda Coalition and the “NATO-5” group, which included Belgium, Germany, Italy, the Netherlands, and Norway).

parties that the other is complying with its treaty commitments (more than 8,000 notifications of changes to data kept under the treaty have been sent between the two states as of early 2015), this kind of transparency has limited value to the other nuclear weapons states and to non-weapons state-parties to the NPT since they don't have access to the data and have to merely take the United States and Russia at their word.

The United States and, to a lesser extent, Russia have released aggregate data about the items limited by New START, giving all states a general sense for how they are progressing toward the treaty's goals. Yet, only Russian officials are verifying U.S. reductions, and vis-a-versa. And little to no information is made publicly available about the specific procedures that Russia and the United States use to verify the limits imposed by the treaty, not to mention how these states manage or dismantle their remaining weapons, launchers, and facilities—elements outside the scope of the treaty.

While the verification processes that the United States and Russia use under this treaty have been sufficient to sustain the treaty since its entry into force, the transparency that has resulted from the treaty has done little to assuage the concerns of the other nuclear weapons states or to assure non-nuclear weapons states that disarmament commitments are being pursued with vigor. Understanding the specific verification mechanisms under the treaty and having access to all of the data exchanged by the parties could in theory provide greater assurance that the limits imposed by the treaty were indeed being put into place, but this wouldn't provide any more assurance that nondeployed nuclear warheads are secure, being dismantled, etc. than the incomplete statements already made by these governments.

The P5 Process. In 2009, the British government hosted the first of several meetings of the “P5 Process” that was intended to allow the five NPT-sanctioned nuclear weapons states to review and devise the technical steps that would be needed to achieve and verify nuclear weapons disarmament. After the 2010 Review Conference, the P5 Process agenda evolved to include disarmament-related items from the conference's action plan, including its call for all states to “submit regular reports” on their implementation of the action plan (Action 20) and for weapons states to agree to “a standard reporting form” for information regarding their nuclear weapons and nuclear materials stockpiles, policies, and related activities outlined in the action plan (Action 21). This latter action item also encouraged these states “to determine the appropriate reporting intervals for the purpose of voluntarily providing information without prejudice to national security.”

The P5 Process has involved five subsequent meetings since its inauguration in 2009, the last of which took place in February of this year. While officials from the P5 Process have reached agreement about categories of information to be included on a standard reporting form (e.g. information regarding nuclear doctrines, arms control and disarmament activities, information on weapons arsenals and fissile materials), the process doesn't appear to have produced sufficient consensus about the specific types of information that could and should be included in these

categories, which means reporting will “not be uniform” in either its contents and its frequency of availability.⁶ It’s noteworthy that the categories on the standard reporting form are also meant to limit the amount of quantitative information included in the reports.⁷

Despite the limitations of the standard reporting form, all five NPT nuclear weapons states submitted reports to the NPT Preparatory Committee in an effort to comply with the contents of the disarmament-related action items. A review of the contents of each weapons state’s report reveals that they were primarily symbolic in nature and contained little in the way of new information about, for example, nuclear weapons doctrine, warhead or material stockpiles, or nuclear security and nonproliferation policies and procedures.⁸

The failure of the P5 states to agree on the detailed contents of a standard reporting form does not inspire confidence and might even draw unwanted attention to the inability or reticence of the weapons states to make tangible progress toward their disarmament commitments at the upcoming review conference. The reasons for the lack of positive impact from this P5 project are manifold, but a significant reason is the lack of clarity about what actions would constitute progress transparency in pursuit of disarmament. Without a clear objective to pursue, how could it be achieved? This could be because weapons states’ transparency is itself only a single item on the larger “13 steps” agenda. It also could be because non-nuclear weapons states and nongovernmental organizations haven’t identified the specific types of transparency that would provide sufficient assurance that nuclear weapons states are fully committed to holding up their part of the NPT bargain.

Expanding the scope of weapons state transparency

In working papers submitted to the 2015 NPT Preparatory Committee, members of the Non-Proliferation and Disarmament Initiative, an aligned group of states, emphasized the “sporadic and informal” nature of nuclear weapons state reporting on nuclear weapons and materials in response to calls for transparency in the final documents of previous NPT review conferences.⁹ To spur further action from the nuclear weapons states, the initiative devised its own draft

⁶ Gaukhar Mukhatzhanova, “Implementation of the Conclusions and Recommendations for Follow-on Actions Adopted at the 2010 NPT Review Conference, Disarmament Actions 1-22: 2014 Monitoring Report,” Center for Nonproliferation Studies, April 2014, p. 83.

⁷ Andrea Berger, “The P5 Nuclear Dialogue: Five Years On,” An Occasional Paper of the Royal United Services Institute (RUSI), July 2014.

⁸ Ibid.

⁹ “Increased Transparency in Nuclear Disarmament,” March 19, 2014; “Transparency of Nuclear Weapons: The Non-Proliferation and Disarmament Initiative,” a working paper submitted by Australia, Canada, Chile, Germany, Japan, Mexico, the Netherlands, Poland, Turkey, and the United Arab Emirates, to the 2012 Preparatory Committee Meeting for the 2015 NPT Review Conference, April 20, 2012; NPT/CONF.2015/PC.I/WP.12.

standard reporting form. Several nongovernmental initiatives have put forward similarly oriented draft reporting forms for consideration.¹⁰

While nuclear weapons states can and should do more to make available detailed and continuously updated information about their stockpiles of nuclear weapons and nuclear materials as a means to fulfill their disarmament commitments and to reassure one another, it is also worth reassessing the scope of transparency efforts to-date in an attempt to achieve gains in support of nuclear disarmament that have thus far proven elusive. Transparency about *how* warheads and materials are managed and accounted for could better provide assurances to non-nuclear weapons states and weapons states that announced changes in nuclear policy or nuclear posture are indeed being pursued and that the control and security of warheads and materials at every step of the weapons production and dismantlement process is assured so as to avoid accidental or unauthorized access. This type of transparency could give credibility to the cause of disarmament and provide short-term gains in nuclear security and nonproliferation, as well.

Starting in 2011, the Center for International and Security Studies at Maryland (CISSM) led a study to examine the nuclear material accounting practices of nuclear weapons states and non-nuclear weapons states.¹¹ A foundational element of nuclear safeguards, nuclear material accounting is also a key aspect of broader transparency initiatives in that declarations about nuclear warheads and materials rely on material accounting systems and reports, both past and present-day, to ensure that the information contained within reporting meets standards of accuracy and completeness. Absent standards for how material accounting is conducted and evidence that operations meet those standards, the information made available to other parties or the public as a whole is unlikely to provide reassurance or reduce confusion and misperception.

The CISSM study found that the nuclear material accounting standards and practices for civilian materials within nuclear weapons states are uneven, and some differ in important ways from material accounting requirements outlined in the model IAEA safeguards agreement. For instance, experts question whether China or Russia have accurate baselines of nuclear materials (based on material measurements) that have been produced and are presently held in their nuclear complexes.¹² The requirements for reporting changes in material inventories to national-level material accounting systems and for conducting physical inventories of all materials vary between several of the weapons states and IAEA safeguards requirements. More importantly for the purposes of this paper, the study found that little to no information is publicly available about material management and accounting practices for these states' military nuclear materials,

¹⁰ Nuclear Threat Initiative, "Verifying Baseline Declarations of Nuclear Warheads and Materials," a single volume from a series published as part of the "Innovating Verification: New Tools & New Actors to Reduce Nuclear Risks," July 2014; International Panel on Fissile Materials, "Increasing Transparency of Nuclear-warhead and Fissile-material Stocks as a Step toward Disarmament," Proposals for the NPT PrepCom, Geneva, April 24, 2013.

¹¹ Jonas Siegel, John Steinbruner, Nancy Gallagher, *Comprehensive Nuclear Material Accounting*, CISSM Monograph, March 2014.

¹² *Ibid.*, p. 41; Kovchegin, "Developing a Nuclear Material Control and Accounting System in Russia."

including those materials assigned for use in naval reactors and those materials assigned for use (or in use) in nuclear warheads of all statuses.¹³

Nuclear weapons states typically justify their reluctance (or refusal) to reveal how they account for or otherwise manage military materials and warheads by arguing that information about their management has the potential to make them vulnerable to theft or attack, or to introduce instability into deterrence relationships. (The same argument is made about details regarding material and warhead stockpiles, which is why transparency on these stockpiles has been so uneven and infrequent since 2000.) While there is undoubtedly some truth to this claim, and transparency doesn't always benefit nuclear security or nonproliferation goals, there has not been a thorough discussion about what types of information *can* be revealed without negatively affecting international security. Nor has there been a thorough discussion about under what arrangements—who would be the recipient of such information, how frequently would they receive it, etc.—such transparency could be achieved.

Would revealing information about how nuclear material and warhead stockpiles are managed and accounted for affect the security of the materials or deterrence relationships in the same way as revealing information about the materials and warheads themselves? Certain operational details about how physical access to warheads and materials is controlled or how materials are transported could certainly compromise security. Other information about warhead maintenance schedules and processes, the process through which warheads are recalled from operational status or deployed, or the specific movements of fissile components of warheads, could conceivably complicate current deterrence relationships.

Yet other forms of process transparency could be accomplished with seemingly little to no effect on security or deterrence. It is hard to imagine how general information about physical inventory practices for warheads and nuclear materials along the continuum of statuses, how changes in these inventories are reported, what types of systems are used to store the information about these stockpiles, how these systems are audited and how often, etc. would affect the physical security of the materials and warheads or deterrence relationships. The revelation of lax standards and practices in these areas would be embarrassing to government officials, but that is not the same as suggesting they could affect security and deterrence. An agreement to share this type of information with a delayed implementation date would create incentives to improve accounting and security practices before reporting begins. Furthermore, if this type of process information is controlled adequately—e.g. shared only with other weapons states or with a select grouping of non-weapons states—the potential for unintended effects is diminished.

One specific area ripe for further transparency is the warhead dismantlement process and the storage, processing and accounting of the fissile material components of these weapons. All NPT nuclear weapons states have reduced their operational stockpiles of nuclear warheads, but there

¹³ Ibid., p. 45.

is little clarity about what happens to these warheads or their fissile material components next. What factors dictate rates of dismantlement? Are states meeting their dismantlement plans? How are these non-operational warheads and nuclear components accounted for and secured? What standards are in place to ensure their nondiversion to state or non-state actors? Are these standards regularly met? Etc.

Previous efforts to establish transparency regarding the dismantlement of nuclear warheads have focused on ensuring that warheads slated for dismantlement are indeed warheads removed from operational stockpiles and that specific weapons components are indeed removed from the warheads in question.¹⁴ In other words, these forms of transparency were meant to be a part of a verification regime that accompanied a formal weapons reduction agreement. While this would be a desirable form of transparency under those circumstances, a more general, informal form of transparency could help to demonstrate weapons states' progress on their NPT disarmament commitments short of additional formal arms reduction agreements.

For instance, nuclear weapons states could declare in general terms how they structure and manage the warhead dismantlement process: How long does the process generally take? How are warheads accounted for and secured while they await dismantlement? What, if any, steps are taken that would slow the process of redeploying these warheads? To what standards are all of these processes held, and how frequently are they met? The same types of information can also be made available about materials removed from warheads but still in the form of weapons components. If a state has committed certain warheads to dismantlement, then providing some information about this process and providing some international assurance of how it will be completed could clearly communicate that it is committed to preparing for, if not achieving, stated weapons reductions. Other states might ultimately seek additional evidence to confirm that warheads slated for dismantlement are indeed dismantled, but that would involve a form of transparency that is more like that found within specific verification measures of formal treaties.

The potential effects of process transparency

While it may be possible to identify types of information about nuclear weapons states military nuclear enterprises whose revelation would not increase threats to their security or negatively affect deterrence relationships, the question remains whether transparency along the lines suggested above would adequately answer calls for nuclear weapons state progress on their NPT disarmament commitments.

¹⁴ The most prominent effort focused on this area was the IAEA Trilateral Initiative, which in the words of its head James O'Shea, was "an effort to develop a verification system under which Russia and the United States could submit classified forms of weapons-origin fissile material to International Atomic Energy Agency (IAEA) verification and monitoring in an irreversible manner and for an indefinite period of time." Other work was done on this issue in direct support of prospective nuclear arms reduction agreements, see: James Goodby, "Transparency and Irreversibility in Nuclear Warhead Dismantlement," in Harold A. Feiveson (ed.), *The Nuclear Turning Point: A Blueprint for Deep Cuts and De-Alerting of Nuclear Weapons* (Washington, DC: The Brookings Institution Press, 1999, pp. 171-192.

As explored in the previous section, transparency about how military nuclear materials and nuclear warheads are managed could help to communicate a state's intention to follow through on weapons reductions. It also holds the potential to make the application of international safeguards less discriminatory. By demonstrating a willingness to share information about nuclear warheads and materials that is similar in type to the information that is routinely made available as part of non-nuclear weapons states' IAEA safeguards commitments, weapons states could contribute to the fulfillment of Article VI commitments. Coupled with weapons states' commitments to subject their civilian materials to the requirements of model IAEA safeguards, this commitment could significantly reinforce the foundation of the NPT.

Counter to prevailing concern, this type of transparency could also reduce the overall risk of proliferation or theft of existing military materials and warheads. Before engaging in transparency about the processes that are used to manage warheads and nuclear materials, weapons states would be likely to review them internally and ensure strict compliance. Making available information about compliance with security standards, at least whether operations meet standards or not, would also motivate weapons states. Finally, enacting process transparency would ensure the development of a capability that is a prerequisite for the significant reductions of warheads and the realignment of policies that Article VI aims to achieve in the long run.

In December 2013, Austrian diplomat Alexander Kmentt pointed to the possibility that divergent points of view on what would constitute significant progress on Article VI commitments could place "too much stress on the credibility and cohesion of the NPT" for it to survive.¹⁵ The relative lack of perceived progress that nuclear weapons states have made in response to calls for greater transparency about their weapons programs and policies contributes to this divergence of views. Yet it also presents weapons states an opportunity to rethink how they can go about pursuing these commitments in a manner that both preserves their national prerogatives and fulfills their obligations to their international partners.

About the Author

Jonas Siegel is project manager at the Center for International and Security Studies at Maryland. He was the lead author of Comprehensive Nuclear Material Accounting (2014).

¹⁵ Alexander Kmentt, "How Divergent Views on Nuclear Disarmament Threaten the NPT," *Arms Control Today*, December 2013.