

**FUTURE OF THE NUCLEAR
SECURITY ENVIRONMENT
IN 2015**

PROCEEDINGS OF A RUSSIAN-U.S. WORKSHOP

NATIONAL ACADEMY OF SCIENCES
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FUTURE OF THE NUCLEAR SECURITY ENVIRONMENT IN 2015

*Proceedings of a
Russian—U.S. Workshop*

Ashot A. Sarkisov and Rose Gottemoeller, *Editors*

**Joint Committees on the
Future of the Nuclear Security Environment in 2015**

**Committee on International Security and Arms Control
Policy and Global Affairs**

In cooperation with the Russian Academy of Sciences

NATIONAL ACADEMY OF SCIENCES
THE NATIONAL ACADEMIES

THE NATIONAL ACADEMIES PRESS
Washington, D.C.
www.nap.edu

THE NATIONAL ACADEMIES PRESS 500 Fifth Street, N.W. Washington, DC 20001

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This study was supported by Contract/Grant No. 31867 between the National Academy of Sciences and Battelle Memorial Institute, Pacific Northwest Division (for the U.S. Department of Energy's Pacific Northwest National Laboratory). Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the organizations or agencies that provided support for the project.

International Standard Book Number 13: 978-309-13144-5

International Standard Book Number 10: 0-309-13144-8

A limited number of complimentary copies are available from the Committee on International Security and Arms Control, National Academy of Sciences, 500 Fifth Street, N.W., Washington, DC 20001; +202-334-2811.

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Printed in the United States of America.

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PREFACE AND ACKNOWLEDGMENTS

In the nearly two decades of transition following the dissolution of the Soviet Union, the United States and the Russian Federation have jointly cooperated on several Cooperative Threat Reduction Programs designed to safely and securely manage Russia's nuclear weapons and the materials used to build them.¹ Through the joint implementation of these programs, U.S. and Russian experts have developed an effective working relationship, collaborating to improve the safety and security of nuclear materials across Russian civilian and military facilities, and to prevent the proliferation of these materials and associated expertise beyond Russia. As became particularly evident following the terrorist attacks of September 11, 2001, these programs are of vital importance to the security of the United States, the Russian Federation, and the international community.

Now, after years of productive cooperation, the relationship between the United States and Russia is evolving from one of assistance to one of partnership, which has demonstrated the potential to address a wide range of challenges facing the international nuclear security environment, including issues of non-proliferation, the global expansion of nuclear power, and nuclear terrorism. The two countries are therefore poised to carry their experience and expertise as advanced nuclear states into a new phase of partnership, leading efforts to strengthen nuclear security bilaterally and in broader regional and international contexts.

The formal basis, upon which that partnership now rests, the Cooperative Threat Reduction agreement between the United States and Russia, is scheduled to expire in 2013.² Following this date, the Russian Federation will assume full programmatic and financial responsibility for managing and securing vast quantities of nuclear materials. During the February 2005 summit in Bratislava, Slovakia, Presidents Vladimir V. Putin and George W. Bush confirmed their commitment to strengthening their partnership as a means of addressing not only existing challenges of nuclear security and counter-terrorism, but also the challenges of coming decades.³

This commitment to continued cooperation provided the context for the joint National Academies' (NAS)-Russian Academy of Sciences' (RAS) public workshop on the *Future of the Nuclear Security Environment in 2015*, held November 12-13, 2007, in Vienna, Austria, with the support of the U.S. Department of Energy and the International Atomic Energy Agency (IAEA). The papers contained in this proceedings were presented at this two-day workshop convened at

¹ For further information regarding the Cooperative Threat Reduction programs, see http://www.nti.org/db/nisprofs/russia/forasst/nunn_lug/overview.htm; accessed April 8, 2008.

² The Bob Stump National Defense Authorization Act of 2003 mandates that a sustainable materials protection, control, and accounting system be transferred to sole Russian Federation support no later than January 1, 2013. For further information regarding the Bob Stump Act, see <http://www.army.mil/armybtkc/docs/PL%20107-314.pdf>; accessed May 1, 2008.

³ For further information regarding the "Joint Statement by President Bush and President Putin on Nuclear Security Cooperation," of February 24, 2005, see <http://www.whitehouse.gov/news/releases/2005/02/20050224-8.html>; accessed February 23, 2008. See also Appendix D for full text of this Joint Statement.

the Austria Center (see Appendix A for the workshop agenda). The workshop was held in Vienna as a means of placing the discussion in the larger context of international developments in nuclear security, many of which (e.g. safeguards and international access to peaceful energy) involve various aspects of the IAEA. Throughout the workshop, IAEA experts participated in the discussions and provided useful insights into areas of technical cooperation that would benefit from joint U.S.-Russian involvement (see Appendix B for the list of workshop participants). The workshop was organized by joint committees of the U.S. National Academies and the Russian Academy of Sciences, co-chaired by Rose Gottemoeller and Academician Ashot Sarkisov (see Appendix C for committee bios). The joint committees met in Washington, D.C. in June 2007, and in Moscow in August 2007, to plan the workshop and to seek the views and opinions of experts knowledgeable about the Cooperative Threat Reduction Programs and its potential for expanded cooperation and partnership.

Workshop presenters from the Russian Federation and the United States included employees of national laboratories of the two countries, former government officials of the two countries, a United Nations representative, independent consultants, academics, and those currently serving in private industries and non-governmental organizations.⁴ Each was asked to address, in part or in full, the following questions:

- What do U.S. and Russian experts perceive as the main challenges to nuclear security in 2015, and how can they work over the next decade to address these challenges as partners?
- What factors might assist or obstruct the partners as they address those challenges?
- How can this partnership concretely and effectively assist mutual non-proliferation goals in other regions such as Asia and the Middle East, and/or in multi-lateral arrangements such as the provision of international fuel services and broader technology cooperation?
- How can the U.S. and Russia work to sustain the non-proliferation advances gained through more than a decade of material protection, control, and accounting and other cooperative efforts?
- In addition to sustaining existing efforts, how can new approaches such as public-private partnerships, strengthened legal structures, and effective management tools be successfully employed to address emerging challenges?

In their written as well as oral remarks, participants expressed their own individual views and did not represent the views or positions of their governments or employers. This facilitated an open and frank discussion, and while no formal consensus among participants was sought, a surprising degree of agreement was articulated, particularly on the trends in the nuclear security environment, priorities for the U.S.-Russian partnership, and available tools to address future security challenges.

⁴ For more general discussion of public-private partnerships and creative incorporation of private organizations into future bilateral and multi-lateral non-proliferation cooperation, see the paper by Vyacheslav Apanasenko in this volume.

The workshop was designed to explore various views on where our U.S.-Russian security relationship in 2015 could and perhaps should be, and various means of achieving an “ideal relationship,” realizing that there are perhaps many “ideals.” Therefore, authors drew variously on past and present experiences to form their arguments and descriptions of that “ideal” future relationship. Some articulated these steps more clearly than others, but we hope that as a whole the volume is able to provide a broad spectrum of ideas and views for the future relationship in 2015.

TRENDS, PRIORITIES, AND TOOLS FOR EXPANDED PARTNERSHIP

An important trend identified by many workshop participants is that Russia and the United States are continuing the transition from an assistance relationship, which was prevalent during the 1990s, to a partnership relationship. A partnership relationship implies that the two countries are willing to share in setting priorities for cooperation, managing projects, and funding cooperative efforts. Priorities for this evolving partnership include both persistent challenges, such as further reductions in nuclear weapons in the pursuit of fulfilling Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons,⁵ and new challenges such as the expansion of nuclear energy technologies, nuclear forensics, nuclear terrorism, and challenges which may arise in third countries. Several workshop participants identified a particularly promising area for full partnership in efforts to develop nuclear fuel assurances for those countries seeking to expand nuclear power without developing all aspects of the nuclear fuel cycle. By partnering to address this immediate global opportunity, Russia and America may continue to lead the international community not only in scientific and technical advances, but also in nuclear non-proliferation policy.

Fortunately, more than a decade of cooperation has provided a wide variety of tools to experts from both countries as they seek to address these priorities, including: government-to-government and non-governmental arrangements, systematic approaches such as that of Strategic Master Plans, and public-private partnerships. A solid yet flexible legal foundation for cooperation, political support at the highest levels, projects of appropriate size and scale for the tasks at hand and the resources of those involved, and sustained engagement by qualified and dedicated individuals are well-proven mechanisms for developing the mutual understanding, trust, and commitment required for Russia and the United States to remain productive partners. Much work remains, however, to ensure that a successful transition to full partnership is accomplished in the coming years, well before 2015.

Now the third in a very successful series of joint NAS-RAS projects on nuclear security, this workshop proceedings serves as the basis for exploring the possibility of a further joint NAS-RAS effort to provide concrete recommendations for both Moscow and Washington on how they may proceed in transitioning to full partnership, in which both Russia and the United States can serve as leaders bilaterally and internationally in responding to the difficult nuclear security challenges that face us all in the coming decades.

⁵ To read the text of the Treaty on the Non-Proliferation of Nuclear Weapons, see <http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc140.pdf>; accessed April 6, 2008.