

# Future Outlook for Arms Control / Disarmament Talks on Non-Strategic Nuclear Forces\*

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## Abstract

Following the ratification of the New Strategic Arms Reduction Treaty (New START), the U.S. Obama administration has shown enthusiasm towards the inclusion of non-strategic nuclear forces – arsenals that were unaddressed in past nuclear arms control treaties between the two countries – into the agenda of talks with Russia. However, non-strategic nuclear forces have played different roles in each country, militarily and politically. For the U.S., the military value of non-strategic nuclear forces has been declining. Their significance is becoming increasingly difficult to discern, except for demonstrating commitment to visible extended deterrence to U.S. allies. NATO, on the other hand, has stated in the 2012 Deterrence and Defense Posture Review that it would explore reciprocal reductions of non-strategic nuclear forces with Russia, and as a nuclear alliance, reaffirmed the deterrent role of non-strategic nuclear forces. By contrast, Russia continues to attach importance to the role of non-strategic nuclear forces as an important element of deterrence, and has expressed growing wariness over the development of U.S.'s ballistic missile defense systems and conventional prompt global strike (CPGS) capability. The outlook for U.S.-Russian arms control and disarmament of non-strategic nuclear forces is by no means promising. Accordingly, it is imperative that U.S., Russia, and NATO continue to hold strategic dialogues and build trust if reductions of non-strategic nuclear forces are to take place. The U.S. initiative to reduce nuclear forces is particularly key. Critical tasks ahead will be the development of a new common understanding between the U.S. and its allies regarding strategic stability and the role of nuclear forces in deterrence, in addition to a shared understanding on the qualitative changes of the threats facing the U.S. and Russia, respectively.

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## Introduction

The New Strategic Arms Reduction Treaty (New START) between the United States (U.S.) and Russia entered into force in February 2011. In the treaty, the two sides agreed to reduce their strategic nuclear forces stockpiles to: 700 deployed intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and strategic bombers; 1,550 nuclear warheads on deployed ICBMs, SLBMs, and strategic bombers; and 800 deployed and non-deployed ICBM launchers, SLBM launchers, and strategic bombers. Following the entry into force of the treaty, it was announced by the U.S. Obama administration that it would seek to initiate new talks with

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Russia on arms control and disarmament, addressing all nuclear forces including non-strategic nuclear forces.<sup>1</sup>

Non-strategic nuclear forces are generally linked ambiguously to arsenals that have short ranges and a smaller yield compared with strategic nuclear forces. There is, however, no globally agreed role or definition of non-strategic nuclear forces. Nor has an arms control and disarmament treaty for non-strategic nuclear forces ever been concluded either between the U.S. and Soviet Union, or between the U.S. and Russia. The status and the overall situation of Russian non-strategic nuclear forces contain many ambiguities in particular. Even with the significant reductions since the end of the Cold War era, under the Presidential Nuclear Initiatives (PNIs), concerns have persisted over the risks posed by the vast quantity of non-strategic nuclear forces that remain from the former Soviet Union era – namely, the risk of the use of nuclear forces by false recognition or accident, and the possibility of nuclear arsenals falling into the hands of terrorists as “loose nukes.”<sup>2</sup>

Against this background, President Barack Obama incorporated non-strategic nuclear forces into the agenda for talks with Russia. It is speculated that the Obama administration was guided by a belief that this was a crucial step for living up to its political commitment to achieve “a world without nuclear weapons.”<sup>3</sup> Furthermore, the administration sought to respond to criticisms that the reduction of nuclear forces under New START was smaller than initially expected, and to the need for a comprehensive examination of non-deployed nuclear forces that were not included in past categories of negotiations. Moreover, the military value of non-strategic nuclear forces has declined for the U.S., except for a few “visible” non-strategic nuclear forces<sup>4</sup> which have been supplied for the extended deterrence of allies, including the European members of the North Atlantic Treaty Organization (NATO)<sup>5</sup> and Japan. These nuclear forces include the B-61 nuclear bomb which has strong political implications, and the TLAM-N nuclear Tomahawk land-attack missile whose retirement has already been decided. In this connection, it may have been deemed wise from a broad perspective to eliminate non-strategic nuclear forces altogether with Russia’s.

By contrast, Russia, which is believed to have the most operational non-strategic nuclear forces in present times, has been recently attaching increasing importance to non-strategic nuclear forces in its military doctrine. Russia has furthermore been deepening its concerns over the U.S.’s ballistic missile defense (BMD) system and advanced non-nuclear strategic forces. With Russia deeming that reductions of non-strategic nuclear forces could unilaterally put the country at a disadvantage,<sup>6</sup>

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<sup>1</sup> “United States to Hold Talks on Tactical Nuclear Weapons with Russia,” *RIA Novosti*, February 3, 2011 <<http://en.rian.ru/world/20110203/162430188.html>>.

<sup>2</sup> Ivo H. Daalder and Terry Terriff, “Nuclear Arms Control: Finishing the Cold War Agenda,” Ivo H. Daalder and Terry Terriff, eds., *Rethinking the Unthinkable: New Directions for Nuclear Arms Control*, Frank Cass, 1993, p. 15.

<sup>3</sup> The White House Office of the Press Secretary, “Remarks by President Barack Obama, Hradcany Square, Prague, Czech Republic,” April 5, 2009; For an explanation of the theoretical basis for President Obama’s “a world without nuclear weapons” proposal, see Sukeyuki Ichimasa, “Henkasuru Yokushiryoku no Gainen to ‘Kakuheiki no nai Sekai’ ni muketa Nihon no Anzen Hosho Seisaku eno Ichikosatsu,” *Gunshuku Kenkyu* [Disarmament Review], Vol. 3, 2012, pp. 22-23.

<sup>4</sup> Crew of “NHK Special,” “Kaku” wo Motometa Nihon: Hibakukoku no Shirarezaru Jijitsu, Kobunsha, 2012, pp. 130-134.

<sup>5</sup> Tom Sauer and Bob Van Der Zwaan, “U.S. Tactical Nuclear Weapons in Europe after NATO’s Lisbon Summit: Why their Withdrawal is Desirable and Feasible,” *Belfer Center Discussion Paper* (No. 2011-05) May 2011, pp. 6-11.

<sup>6</sup> James Acton, *Deterrence during Disarmament: Deep Nuclear Reductions and International Security*, Routledge, 2011, p. 37.

there are various concerns as to whether Russia would agree to post-New START talks with the U.S. that would address non-strategic nuclear forces.

Based on this understanding of the issues, this paper presents the challenges and future outlook of the arms control and disarmament talks on non-strategic nuclear forces, taking into account past U.S.-Soviet and U.S.-Russian initiatives related to non-strategic nuclear forces, and the circumstances surrounding the nuclear forces of other nuclear weapon states and de facto nuclear powers.

### **Challenges of Defining Non-Strategic Nuclear Forces**

Even today, 20 years after the end of the Cold War, there is no clear criteria that guide the differentiation of nuclear forces between strategic and non-strategic nuclear forces. This demonstrates strikingly how the category of non-strategic nuclear forces has been neglected in past nuclear arms control and nuclear disarmament talks.

Even by looking at documents that nuclear weapon states and other relevant international organizations have released on the topic of nuclear forces, it is obvious that there is a divergence of terms for nuclear arms other than strategic nuclear forces. These include “non-strategic nuclear forces,” “tactical nuclear forces,” “theater nuclear forces,” “sub-strategic nuclear forces,” and “battlefield nuclear weapons.” It can be considered that these terms have virtually the same meaning. In some cases, however, terms have been distinguished according to the political or historical context. This is seen, for example, in the U.S. Nuclear Posture Review (NPR) Report released in 2010. The report combined terms by referring to them as “non-strategic (or ‘tactical’).”<sup>7</sup> Meanwhile, the B-61, which the U.S. identifies as a non-strategic nuclear force, has been referred to by NATO as a sub-strategic nuclear force.<sup>8</sup> Furthermore, in the United Kingdom (U.K.) during the Cold War era, the role of the U.K.’s nuclear arsenals was divided into three categories: strategic nuclear forces for use against multiple targets in the adversary’s homeland (Polaris Chevaline missiles); sub-strategic nuclear forces for use in a more limited strike against targets on enemy territory (WE 177 free-fall nuclear bomb carried by the Vulcan bomber and Tornado aircraft); and low-yield tactical nuclear forces for use against enemy troops and their equipment on the battlefield (WE 177).<sup>9</sup> This was another slight variation of the definition used by the U.S. today. Conversely, some analysts have noted that whatever the term is which is employed for the non-strategic nuclear forces of the U.S. and Soviet Union, which have been deployed around the former “Iron Curtain” since the Cold War era, the fact remains the same, that the arsenals would still have a strategically important meaning for the countries falling within their ranges. In this vein, differentiating the terms in and of itself has no significant value.<sup>10</sup>

<sup>7</sup> U.S. Department of Defense, “Nuclear Posture Review Report,” April 2010, p. xiii.

<sup>8</sup> J. Gregory L. Schulte, “NATO’s Nuclear Forces in a Changing World,” *NATO Review*, Vol. 41, No. 1, 1993, pp. 17-22 <<http://www.nato.int/docu/review/1993/9301-4.htm>>; Scholars have pointed out that stemming from the U.K.’s recent abandonment of “sub-strategic nuclear forces,” NATO has shifted to “non-strategic nuclear forces.” Michito Tsuruoka, “Senjutsukaku no ‘Iten Mondai’ towa nanika: NATO Senryaku Gainen wo meguru Nihon no Kenen wo Kangaeru,” Eurasia Information Network, The Tokyo Foundation, April 2011 <<http://www.tkfd.or.jp/eurasia/europe/report.php?id=253>>.

<sup>9</sup> Select Committee on Defense, “The UK’s Strategic Nuclear Deterrent,” Eighth Report, Paragraph 32 <<http://www.publications.parliament.uk/pa/cm200506/cmselect/cmdfence/986/98605.htm>>.

<sup>10</sup> Alexei Arbatov and Vladimir Dvorkin, *Beyond Nuclear Deterrence: Transforming the U.S.-Russian Equation*, Carnegie Endowment for International Peace, 2006, p. 29.

In consideration of the above, this paper, for convenience, collectively refers to these arsenals as “non-strategic nuclear forces” unless otherwise noted.

### *Non-Strategic Nuclear Forces in the Cold War Era*

In the context of international security studies, non-strategic nuclear forces have often been explained in comparison with strategic nuclear forces. Strategic nuclear forces were a weapon system designed for attacking an adversary’s homeland to shatter the opponent’s ability or dampen its inclination to wage war, and assumed that the delivery vehicles were ICBMs, SLBMs, and strategic bombers.<sup>11</sup> Non-strategic nuclear forces, on the other hand, were identified as arsenals intended to give a country an upper hand in battle at individual battlefields.<sup>12</sup> In actuality, some of the non-strategic nuclear forces developed and operated by the U.S. and the Soviet Union, including nuclear landmines, nuclear shells, nuclear depth bombs, and air-dropped free-fall nuclear bombs, had clear differences from strategic nuclear forces in terms of the features of the delivery vehicles shared with conventional forces and their diversity.

In terms of detonation effects, while a variation can be found ranging from 0.1 kiloton to 1 megaton,<sup>13</sup> many non-strategic nuclear forces were relatively low yield nuclear forces compared with strategic nuclear forces. During the Cold War, the U.S. deployed non-strategic nuclear forces to NATO’s European member states to counter aggression by the Soviet Union and European Warsaw Treaty Organization (WTO) countries. Under NATO’s flexible response strategy, NATO maintained that it would control escalation by using non-strategic nuclear forces in response to large-scale conventional aggressions, and strategic nuclear forces in response to attacks by non-strategic nuclear forces.<sup>14</sup> In particular, the U.S. non-strategic nuclear forces, many of which were deployed on the East-West frontlines including in West Germany, were believed to assure the reliability of the U.S. extended deterrence to NATO’s European member states.<sup>15</sup>

With respect to the operation of non-strategic nuclear forces, it must be pointed out that at the beginning of the Cold War, non-strategic nuclear forces were identified as a substitute for conventional forces. The U.S. and NATO forward deployed many non-strategic nuclear forces, such as atomic demolition munitions (ADMs) and nuclear shells, as a visible deterrence of NATO until the strength of their conventional forces recovered and the countries reached the stage of Intermediate Nuclear Forces (INF) Treaty negotiations. Non-strategic nuclear forces were thus given a high political value. Even today, the U.S. Department of Defense provides that non-strategic nuclear forces shall be employed “against opposing forces, supporting installations or facilities, in support of operations that contribute to the accomplishment of a military mission of limited scope,

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<sup>11</sup> Shinichi Ogawa, “*Kaku*” *Gunbi Kanri-Gunshuku no Yukue* [The Prospects of “Nuclear” Arms Control and Disarmament], Ashi-shobo, 1996, p. 347.

<sup>12</sup> Yuzuru Kaneko, *NATO Kitataiseiyojyoyakukiko no Kenkyu: Beio Anzenhosho Kankei no Kiseki* [NATO: A Brief History of the US-European Security Relationship], Sairyusha, 2008, pp. 85-86.

<sup>13</sup> Brian Alexander and Alistair Millar, “Uncovered Nukes: An Introduction to Tactical Nuclear Weapons,” Brian Alexander and Alistair Millar, eds., *Tactical Nuclear Weapons: Emergent Threats in an Evolving Security Environment*, Brassey’s Inc, 2003, p. 5.

<sup>14</sup> Amy F. Woolf, “Nonstrategic Nuclear Weapons,” *CRS Report for Congress*, December 19, 2012, p. 8.

<sup>15</sup> Shuichiro Iwata, *Kakusenryaku to Kakugunbikanri: Nihon no Hikakuseisaku no Kadai* [Nuclear Strategy and Nuclear Arms Control: Challenges of Japan’s Non-Nuclear Policy], The Japan Institute of International Affairs, 1996, p. 31.

or in support of the military commander's scheme of maneuver, usually limited to the area of military operations."<sup>16</sup>

Bernard Brodie, who is believed to have been the first American to praise the utility of non-strategic nuclear forces, noted that an advantage of non-strategic nuclear forces in the context of the U.S.-Soviet nuclear confrontation was that their use would not immediately entail Soviet Union's fatal nuclear retaliation.<sup>17</sup> Samuel Cohen, physicist at RAND in the U.S., concluded that if the requirements sought for non-strategic nuclear forces are pursued, i.e., they are low yield, give off short-term exposure to radiation, and have high lethal force on the battlefield, then ultimately neutron radiation weapons would become the optimal solution.<sup>18</sup> Stanfield Turner, former commander in chief of NATO's southern flank, recollected that while non-strategic nuclear forces have been treated as conventional forces with large destructive power on the one hand, in fact hardly any consideration had been given to their collateral effects, such as radiation, heat, and blast effect.<sup>19</sup>

### *Non-Strategic Nuclear Forces of the U.S. and Russia*

Michael Quinlan notes, now that the U.S.-Soviet confrontation has become a thing of the past, dividing nuclear forces into the categories of strategic and non-strategic nuclear forces has become less and less significant.<sup>20</sup> Indeed, today, in the absence of an axis of confrontation on the European front, the way in which non-strategic nuclear forces were identified under the former flexible response strategy has become a thing of history. Meanwhile, it is also true that there have been moves in recent years to give a new role to non-strategic nuclear forces.

For example, in Russia today, non-strategic nuclear forces are considered as a means for: (1) deterring aggression and interference in domestic affairs; (2) serving as a counterbalance to the inferiority of conventional forces; (3) maintaining combat stability; (4) not escalating conflicts fought using conventional forces; (5) serving as a role to localize nuclear wars should nuclear forces be utilized; and (6) countering long-range precision strike systems using conventional forces.<sup>21</sup> As part of this new role of non-strategic nuclear forces, some analysts contend that in order to warn opponents about the possibility of escalating conflict, Russia is trying to strengthen its deterrence by intentionally using non-strategic nuclear forces in a low-key manner.<sup>22</sup> Scholars have commented that in Russia's 2010 new military doctrine, Russia has agreed to reduce its strategic nuclear forces while maintaining the U.S.-Russia balance, as the probability of a large-scale war with the U.S. or NATO has decreased. At the same time, against the increasing risk of regional conflicts, Russia has affirmed the "first use" policy, which is to say not eliminating the possible first use of nuclear forces, even if the opponent is a non-nuclear-weapon state, suggesting that Russia is strengthening

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<sup>16</sup> Defense Technical Information Center, "Tactical Nuclear Weapon Employment" <<http://www.dtic.mil/doctrine/jel/doddict/data/t/7471.html>>.

<sup>17</sup> Austin Long, *Deterrence: From Cold War to Long War*, RAND Cooperation, 2008, pp. 43-44.

<sup>18</sup> *Ibid.*, p. 45.

<sup>19</sup> Stanfield Turner, "Foreword," Alexander and Millar, eds., *Tactical Nuclear Weapons*, pp. viii-ix.

<sup>20</sup> Michael Quinlan, *Thinking about Nuclear Weapons: Principles, Problems, Prospects*, Oxford University Press, 2009, p. 18.

<sup>21</sup> David S. Yost, "Russia and Arms Control for Non-Strategic Nuclear Forces," Jeffrey A. Larsen and Kurt J. Klingenberg, eds., *Controlling Non-Strategic Nuclear Weapons: Obstacles and Opportunities*, Diane Publishing Company, 2001, pp. 123-127.

<sup>22</sup> Acton, *Deterrence during Disarmament*, p. 37.

its reliance on non-strategic nuclear forces.<sup>23</sup>

By contrast, for the U.S., which calls on Russia to engage in arms control and disarmament talks on non-strategic nuclear forces, the military and political need for forward deployment of non-strategic nuclear forces has decreased significantly with the end of the Cold War.<sup>24</sup> Nonetheless, it should be mentioned that even in the U.S., between the post-Cold War era and around the time of the 9.11 terrorist attacks in the U.S., the development of low yield non-strategic nuclear forces was explored as a means for defeating Hard and Deeply Buried Targets (HDBT). That is, the B-61-11 earth-penetrating bomb that was allegedly developed and deployed in the mid-1990s during the Clinton administration,<sup>25</sup> as well as the robust nuclear earth penetrator (RNEP) for defeating HDBT, such as the underground command and arsenal of rogue states and terrorist groups, whose development was explored as part of the counterproliferation measure during the George W. Bush administration that experienced 9.11,<sup>26</sup> are both examples of non-strategic nuclear forces which the U.S. developed or considered in recent years.

Some scholars have analyzed that the 2001 NPR from the George W. Bush administration suggests it had explored the possibility of adding low yield nuclear attacks not only against HDBT, but also against ground targets.<sup>27</sup> Furthermore, many of the U.S. strategic nuclear forces have very long ranges and were designed to have excessive destructive power, even if they were mounted with variable yield nuclear warheads. This was because their intended targets were missile silos and underground command centers of the former Soviet Union. Therefore, some have speculated that strategic nuclear forces were not necessarily optimal for use to deter rogue nations, and therefore, non-strategic nuclear forces which have lower yield and are easy to use on the battlefield were necessary.<sup>28</sup>

Since President Obama assumed office, the U.S. has stopped the development of new nuclear weapons, including RNEP, and has steered towards reducing its non-strategic nuclear forces. Nonetheless, it warrants consideration that Russia perceives the post-Cold War U.S. posture of exploring the development of low yield non-strategic nuclear forces as nothing short of regressing to the Cold War era. Furthermore, Russia has expressed concerns that even if the U.S. claims to reduce its reliance on nuclear forces, its development of an alternative precision-guided non-nuclear strategic arms with long-range strike capabilities, coupled with the promotion

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<sup>23</sup> Shinji Hyodo, "Joron: Roshia no Kokka Anzen Hoshō Seido [Introduction: National Security Policy of the Russian Federation]," *Kokusai Anzenhoshō* [Journal of International Security], Vol. 39, No. 1, 2011, pp. 6-8; Hiroshi Yamazoe, "'Roshia Renpo Gunji Dokutorin' ni Mirareru Gunji Seisaku Rongi: Teiryū toshiteno Tentoteki Anzen Hoshokan to Kakuheiki Jyushi [Defense Policy Debates in the Russian Military Doctrine: Emphasis on Traditional Military Concept and Nuclear Forces]," *Kokusai Anzenhoshō* [Journal of International Security], Vol. 39, No. 1, 2011, pp. 21-22.

<sup>24</sup> Robert Joseph, "Nuclear Weapons and Regional Deterrence," Larsen and Klingenberg, eds., *Controlling Non-Strategic Nuclear Weapons*, p. 88.

<sup>25</sup> Joshua Handler, "The 1991-1992 PNIs and the Elimination, Storage, and Security of Tactical Nuclear Weapons," Alexander and Millar, eds., *Tactical Nuclear Weapons*, p. 39.

<sup>26</sup> Fumihiko Yoshida, *Kaku no Amerika: Toruman kara Obama made* [Nuclear U.S.: From Truman to Obama], Iwanami Shoten Publishers, 2009, p. 196.

<sup>27</sup> Roger Speed and Michael May, "Assessing the United States' Nuclear Posture," George Bunn and Christopher F. Chyba, eds., *U.S. Nuclear Weapons Policy: Confronting Today's Threat*, Brookings Institution Press, 2006, p. 254.

<sup>28</sup> John M. Weinstein, "Ten Reasons Why Nuclear Deterrence Could Fail: The Case for Reassessing US Nuclear Policies and Plans," Max G. Manwaring, ed., *Deterrence in the 21st Century*, Frank Cass, 2001, p. 35.

of BMD deployments to U.S. allies, are bound to further destabilize the strategic environment surrounding Russia.<sup>29</sup>

*Definition of Non-Strategic Nuclear Forces and their Implications for Arms Control*

As has been argued, non-strategic nuclear forces entail a variety of points of contention, both politically and militarily. Another key issue related to the promotion of further U.S.-Russian nuclear arms control and disarmament talks is the definition of non-strategic nuclear forces. For example, defining non-strategic nuclear forces by a process of elimination has been mentioned frequently. The idea is that non-strategic nuclear forces refer to all U.S. and Russian nuclear forces which are not regulated under the U.S.-Soviet and U.S.-Russian nuclear arms control and disarmament talks (e.g., Strategic Arms Limitation Talks [SALT] and START).<sup>30</sup> According to this idea, in view of the criteria set forth by the U.S. and Soviet Union following their nuclear arms control and disarmament talks, non-strategic nuclear forces are deemed to be nuclear forces which have ranges between 500km and 5,500km, irrespective of yield. Additionally, strategic nuclear forces are deemed to be nuclear forces which have ranges exceeding 5,500km. There are also simpler ways of defining, including defining non-strategic nuclear forces as nuclear forces which have ranges covering a certain theater, or as arsenals which are simply easier to use on the battlefield than strategic nuclear forces.<sup>31</sup>

However, it seems that all of the above mentioned approaches are designed for the strategic circumstances of Europe in the Cold War era. All of them have both advantages and disadvantages. Furthermore, they leave room to discuss the appropriateness or comprehensiveness demanded by today's definition of non-strategic nuclear forces. In light of these issues, to try to come up with a comprehensive categorization of non-strategic nuclear forces, George Lewis and Andrea Gabbitas underscore suggestive observations. They tried to define non-strategic nuclear forces by seeing if they are a fit in terms of the following seven items: (1) range; (2) yield; (3) target; (4) ownership; (5) delivery vehicle; (6) capability; and (7) exclusion from definitions of other types of nuclear arsenals.<sup>32</sup> Of these seven items, (3) and (4) are particularly uncertain depending on the international security environment and nuclear doctrines of nuclear weapon states. Furthermore, in determining (6), factors such as the improvement in capabilities of not only strategic nuclear forces but also of conventional forces need to be taken into consideration. Therefore, it is not easy to come up with a fixed definition of non-strategic nuclear forces as of a certain moment in time. Furthermore, reaching a consensus on the definition of non-strategic nuclear forces requires a prudential consideration of the relationship with the other nuclear weapon states, international security environment, and overall situation of nuclear deterrence.

As described, there are many outstanding difficulties associated with defining non-strategic

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<sup>29</sup> Stephen J. Cimbara and Peter Jacob Rainow, *Russia and Postmodern Deterrence: Military Power and its Challenges for Security*, Potomac Books, 2007, pp. 106-107.

<sup>30</sup> William C. Potter and Nikolai Sokov, "Practical Measures to Reduce Risks Presented by Non-strategic Nuclear Weapons," Paper Published by The Weapons of Mass Destruction Commission (WMDC), 2006, p. 1 <<http://www.blixassociates.com/wp-content/uploads/2011/03/No8.pdf>>.

<sup>31</sup> Reaching Critical Will, "Outstanding Issues under the NPT," A Project of the Women's International League for Peace and Freedom <<http://www.reachingcriticalwill.org/legal/npt/issues.html>>.

<sup>32</sup> George Lewis and Andrea Gabbitas, "What Should be Done about Tactical Nuclear Weapons?" *The Atlantic Council of the United States Occasional Paper*, 1999, pp. 1-3.

nuclear forces. Nevertheless, for forging arms control and disarmament agreements, concerned states should declare and exchange information regarding the details of units or armaments (amount and types) and the location of the site subject to the agreement.<sup>33</sup> In order for the U.S.-Russian talks on non-strategic nuclear forces to proceed, it is essential that the two sides at least establish an agreeable definition and mutually confirm the full picture. Additionally, while coming up with a definition of non-strategic nuclear forces itself is a political issue between the two countries, attention also needs to be given to what this effort is ultimately aiming at. That is, if the above mentioned efforts are identified as a step towards realizing “a world without nuclear weapons,” then the definition must encompass all nuclear forces which were excluded from the U.S.-Soviet and U.S.-Russian talks prior to New START. Conversely, if the intention is to improve strategic stability or address nuclear terrorism risks, a definition will need to be explored upon which the two countries can agree from the perspectives of yield and range.

Meanwhile, some observers hold the view that in discussing the definition of non-strategic nuclear forces, the scope cannot necessarily be limited to the U.S. and Russian nuclear forces. According to Gabbitas, one of the pretexts Russia identifies for maintaining non-strategic nuclear forces is deterrence against China’s conventional forces and nuclear forces. If the pretext is true, then China’s nuclear forces must be brought into the U.S. and Russian nuclear arms control talks. China has concerns about the nuclear forces of its neighbor, India, and India’s nuclear forces are placed under the observation of Pakistan. As such, all of these countries build and maintain their own nuclear forces with an eye on each other’s distribution of nuclear forces. Therefore, any advancement in the U.S.-Russia consultations on the reduction of non-strategic nuclear forces could have an impact of some kind on any other nuclear weapon state and de facto nuclear power. Furthermore, if non-strategic nuclear forces are defined without presuming these other relevant countries, for example, if it is assumed that India’s strategic nuclear forces were categorized as non-strategic nuclear forces, then India’s nuclear forces, which have been increasingly legitimized as a lever for increasing national prestige and promoting global nuclear disarmament, would lose their value. In the worst case scenario, India may turn to developing new nuclear weapons with a range and yield that are internationally deemed applicable to strategic nuclear forces. Thus, as scholars point out, there is a risk that such a situation could lead to unintended consequences, ultimately causing grave impacts also on the nuclear situations of China and Pakistan.<sup>34</sup>

In addition, considering the risk of non-strategic nuclear forces falling into the hands of non-state actors, some analysts note from the standpoint of ensuring the security of “loose” non-strategic nuclear forces, that reductions of non-strategic nuclear forces should include not only Russia, but also North Korea and Iran in the future.<sup>35</sup> Conversely, there are criticisms that in order to avoid further complications of problems surrounding the definition of non-strategic nuclear forces, remaining nuclear weapon states, as well as de facto nuclear powers, should not be included in the

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<sup>33</sup> Jeffrey A. Larsen, “An Introduction to Arms Control and Cooperative Security,” Jeffrey A. Larsen and James J. Wirtz, eds., *Arms Control and Cooperative Security*, Lynne Rienner Publishers, 2009, p. 1.

<sup>34</sup> Andrea Gabbitas, “Non-Strategic Nuclear Weapons: Problems of Definition,” Larsen and Klingenberg, eds., *Controlling Non-Strategic Nuclear Weapons*, pp. 28-34.

<sup>35</sup> Jonathan Dean, “Tactical Nuclear Weapons and the Promise of Arms Control,” Alexander and Millar, eds., *Tactical Nuclear Weapons*, p. 166.

consultations on future reductions of non-strategic nuclear forces.<sup>36</sup>

Meanwhile, it is also true that the momentum for the global reduction of non-strategic nuclear forces has increased significantly in today's international community. For example, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the only multilateral treaty which obliges nuclear-weapon states to pursue negotiations relating to nuclear disarmament, identifies the reduction of non-strategic nuclear forces as one of the critical points of contention. At the 2000 NPT Review Conference, the states parties to the NPT agreed to 13 steps to execute their nuclear disarmament negotiation obligations. Namely, all nuclear-weapon states agreed on the further reduction of non-strategic nuclear forces, based on unilateral initiatives and as an integral part of the nuclear forces reduction and disarmament process, for the stability of the international community and the advancement of nuclear disarmament.<sup>37</sup> This agreement is referred to in the nuclear disarmament resolution 1887 adopted unanimously at the United Nations Security Council in 2009.<sup>38</sup> At the NPT Review Conference convened in 2010, the states parties to the NPT adopted an action plan for nuclear disarmament which called on nuclear weapon states to take swift steps to reduce global stockpiles of all types of nuclear forces (\*including non-strategic nuclear forces) and to report the outcomes at the NPT Review Conference Preparatory Committee session in 2014.<sup>39</sup>

Opinions expressed by internationally distinguished experts and others have included the following. The Weapons of Mass Destruction Commission (WMDC), which is chaired by former International Atomic Energy Agency (IAEA) Director General Hans Blix, has proposed that beginning with the U.S.-Russia agreement on non-strategic forces deployment restrictions, the two countries should establish an agreement on the verification, transparency, and irreversible reduction of their non-strategic nuclear forces, pledge not to deploy non-strategic nuclear forces to areas outside of their national territories, and to restrict the development of new non-strategic nuclear weapons to safety improvement and security enhancement purposes.<sup>40</sup> On the other hand, the Global Zero Commission, whose members include world-renowned politicians, practitioners, and scholars, has proposed that all types of nuclear forces are reduced globally upon establishing specific deadlines, without distinguishing between strategic and non-strategic nuclear forces.<sup>41</sup>

### **The Global Distribution of Non-Strategic Nuclear Forces**

The deep-rootedness of the debate concerning the definition of non-strategic nuclear forces is as was explained in the previous section. However, the non-strategic nuclear forces situation demanded to implement arms control and disarmament has not necessarily been sufficiently transparent. In the following section, this paper attempts by relying on previous studies to provide an overview of the

<sup>36</sup> Jack Spencer, "A Realistic Strategy for Controlling Tactical Nuclear Weapons," Taina Susiluoto, ed., *Tactical Nuclear Weapons: Time for Control*, Manas Publications, 2004, p. 48.

<sup>37</sup> "2000 NPT Review Conference Final Document," *Arms Control Today*, June 2000 <[http://www.armscontrol.org/act/2000\\_06/docjun](http://www.armscontrol.org/act/2000_06/docjun)>.

<sup>38</sup> S/RES/1887/2009.

<sup>39</sup> Mitsuru Kurosawa, *Kaku Gunshuku to Sekai Heiwa* [Nuclear Disarmament and World Peace], Shinzansha, 2011, pp. 180-181.

<sup>40</sup> Weapons of Mass Destruction Commission, Masashi Nishihara (supervisor of Japanese report), Akira Kawasaki, Maiko Morishita, Meredith Joyce (trans.), *Tairyohakaiheiki: Haizetsu notameno 60 no Teigen* [Weapons of Mass Destruction: 60 Proposals for Elimination], Iwanami Shoten Publishers, 2007, pp. 84-87.

<sup>41</sup> Global Zero Commission, "Global Zero Action Plan," June 29, 2009 <[http://www.globalzero.org/files/pdf/gzap\\_3.0.pdf](http://www.globalzero.org/files/pdf/gzap_3.0.pdf)>.

current situation regarding what the share is of non-strategic nuclear forces in the global distribution of nuclear forces.

### *U.S.*

During the NPT Review Conference in 2010, the U.S. disclosed that it had 5,113 arsenals in its nuclear weapons stockpile. According to the American Forces Press Service, the number of non-strategic nuclear forces in the U.S. has been reduced by about 90% from September 30, 1991 to September 30, 2009.<sup>42</sup> To date, the U.S. government has not released details and breakdowns of its non-nuclear forces. However, based on the projections and calculations made by scholars and NGOs worldwide, it is believed that there are around 200 B-61 nuclear bombs in total for nuclear sharing with NATO's European member states.<sup>43</sup> Furthermore, with respect to the non-B-61 non-strategic nuclear forces stockpiles for reserve or waiting for destruction, it is deemed that there are 80 nuclear warheads for TLAM-N whose retirement has already been decided.<sup>44</sup> According to the calculation released by the International Institute for Strategic Studies (IISS) in the U.K., it is estimated that the U.S. held 2,200 strategic nuclear forces as of 2011, versus 500 non-strategic nuclear forces.<sup>45</sup> On the other hand, according to the *Bulletin of the Atomic Scientists*, the number of non-strategic nuclear forces believed to be held by the U.S. as of 2011 was 300 TLAM-N and around 200 B-61<sup>46</sup> – generally falling within the range of IISS's calculations and other figures.

In the 2010 NPR, the U.S. indicated that it would ensure further reductions and transparency of nuclear forces beyond New START through formal agreements and/or approaches based on unilateral measures, and that the talks would address all nuclear forces, including forces other than deployed strategic nuclear forces.<sup>47</sup> The NPR also touched on the existence of non-strategic nuclear forces which the U.S. would be able to forward-deploy to key regions in order to provide a credible extended deterrence, in addition to the three principal strategic forces of ICBMs, SLBMs, and strategic bombers.<sup>48</sup> Furthermore, the NPR revealed that the U.S. had deployed a limited number of non-strategic nuclear forces to Europe and kept a very small number in the U.S. which could be used for extended deterrence to allies and partners.<sup>49</sup>

It is regarded that even today, B-61s, which make up nearly half of the existing U.S. non-strategic nuclear forces, are deployed to some European NATO member states. Nonetheless, in NATO's Strategic Concept of 2010,<sup>50</sup> one year after the Prague speech of President Obama, NATO did not

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<sup>42</sup> Donna Miles, "U.S. Declassify Nuclear Stockpile Details to Promote Transparency," American Forces Press Service, May 3, 2010 <<http://www.defense.gov/news/newsarticle.aspx?id=59004>>.

<sup>43</sup> Federation of American Scientists, "Status of World Nuclear Forces 2011" <<http://www.fas.org/programs/ssp/nukes/nuclearweapons/nukestatus.html>>.

<sup>44</sup> Peace Depot, *Zusetsu Chikyujō no Zenkakudanto Deta* [Pictorial Explanation: Data on All Nuclear Warheads on Earth], July 2011 <[http://www.peacedepot.org/nmtr/bcknmbr/nmtr358-9\\_map.pdf](http://www.peacedepot.org/nmtr/bcknmbr/nmtr358-9_map.pdf)>.

<sup>45</sup> International Institute for Strategic Studies, *The Military Balance 2011*, Routledge, 2011, p. 469.

<sup>46</sup> Hans M. Kristensen and Robert S. Norris, "US Nuclear Forces, 2011," *Bulletin of the Atomic Scientists*, March 2011, p. 74; Robert S. Norris and Hans M. Kristensen, "Global Nuclear Weapons Inventories, 1945-2010," *Bulletin of the Atomic Scientists*, July/August 2010, p. 78.

<sup>47</sup> "Nuclear Posture Review Report," p. 30.

<sup>48</sup> *Ibid.*, pp. 27-28.

<sup>49</sup> *Ibid.*, p. 27.

<sup>50</sup> "Strategic Concept for the Defense and Security of the Members of the North Atlantic Treaty Organization," Adopted at the NATO Summit in Lisbon, November 19-20, 2010, pp. 23-24.

make any explicit references to the future of non-strategic nuclear forces, except for concerns over the disparity with Russia's short-range nuclear forces. In the Deterrence and Defence Posture Review (DDPR)<sup>51</sup> released in 2012 as well, the report stated that based on the premise that NATO's current nuclear forces are suitable for effective deterrence and defense posture, NATO would consider creating conditions which would make further reductions of non-strategic nuclear forces possible. At the same time, it stated that as long as NATO remained a nuclear alliance, NATO members will have significant interest in ensuring that all components of NATO's nuclear deterrence (including non-strategic nuclear forces) remain safe, secure, and effective. Furthermore, the report stated that NATO would consider further reducing its non-strategic nuclear forces in the context of reciprocal steps by Russia.

Subsequently, President Obama in his Berlin remarks in June 2013 stated that the U.S. was on track to cut U.S. and Russian deployed nuclear warheads to their lowest levels since the 1950s thanks to the establishment of New START. At the same time, he stated that the U.S. could maintain a strong and credible deterrence for the U.S. and its allies, even while further reducing its deployed strategic nuclear forces by up to one-third of current levels as a step for further reductions of nuclear forces. On this basis, President Obama pledged that as the U.S. and Russia find ways to negotiate to move beyond Cold War nuclear postures, the U.S. will work with NATO members towards bold reductions of U.S. and Russian non-strategic nuclear forces that have been deployed to Europe.<sup>52</sup>

The nuclear sharing policy of NATO traces back to the launch of the Nuclear Planning Group (NPG) in 1965 for discussing the nuclear forces operation program among NATO members, namely, the U.K., West Germany, the Netherlands, Italy, Turkey, Belgium, Greece, and Canada. From the Cold War era to the post-Cold War era, Canada, Greece, and the U.K., which hosted U.S. nuclear forces on national territories, allegedly removed nuclear forces. Furthermore, as a result of the U.S.'s removal of land-based non-strategic nuclear forces under PNIs discussed later in the paper, it is believed that there are currently five countries (Germany, Italy, Turkey, Belgium, and the Netherlands) which host around 200 to 350 B-61s.<sup>53</sup> These B-61s are closely controlled under dual key arrangements. In the event of a contingency, host countries are expected to carry and operate B-61s on dual capable aircraft (DCA), e.g., the F-16 and Tornado, based on an agreement with the U.S. In addition, a system of supervising and consulting on the operations of B-61s has been maintained through: the NPG, which serves as ambassador-level talks; the Staff Group, whose principal members are NATO headquarter delegates and others; and the High Level Group (HLG) comprised of senior officials and others from NPG member countries.

However, since 2000, there has been a growing movement in Europe, led by Germany, for the withdrawal of B-61s. Furthermore, a major debate has erupted in the respective host countries over the pros and cons of procuring replacement aircrafts for aging DCAs.<sup>54</sup> Alongside criticisms

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<sup>51</sup> "Deterrence and Defense Posture Review," Issued on May 20, 2012.

<sup>52</sup> Whitehouse, "Remarks by President Obama at the Brandenburg Gate—Berlin, Germany," June 19, 2013 <<http://www.whitehouse.gov/the-press-office/2013/06/19/remarks-president-obama-brandenburg-gate-berlin-germany>>.

<sup>53</sup> Claudine Lamond and Paul Ingram, "Politics Around US Tactical Nuclear Weapons in European Host States," *BASIC Getting to Zero Papers*, No. 11, January 2009, p. 2.

<sup>54</sup> Sukeyuki Ichimasa, "Kakufukakusantaisei niokeru Kakukyoyuseisaku no Inpurikeshon: Reisenki kara Posuto 9.11 niokeru Beikan deno Giron wo Chushin ni" [Nuclear Sharing under the Nuclear Nonproliferation Regime: NATO's Experience and Its Implications], Paper presented at the 2009 Annual Convention of the Japan Association of International Relations (JAIR), A/B-1 International Security I, pp. 8-12.

that the B-61 has lost military significance in today's security environment and that the risks and costs of its safety management was an even larger problem, some observers evaluate that the B-61 is precisely what creates the bonds between the U.S. and NATO's European members for their continuous nuclear risk sharing. They also contend that the B-61 maintains the kind of relationship in which NATO's European members share relevant information and consult about the U.S.'s nuclear strategy and nuclear doctrine.<sup>55</sup> It is not hard to imagine the difficulty involved in reaching a political agreement on strategic issues among the NATO member countries, which has increased to 28.<sup>56</sup> It can be concluded that at the 2012 NATO Chicago Summit, no concrete roadmap for reductions in non-strategic nuclear forces was presented because of the disparities in the understanding of the security environment among the member countries.

For future reductions of nuclear forces, the U.S. underscores three requirements. Future nuclear reductions must: strengthen the deterrence against potential regional adversaries; ensure strategic stability vis-à-vis Russia and China; and assure U.S. allies and partners.<sup>57</sup> However, while the 2010 NPR notes that it is not meant to forejudge the future decisions of NATO, the U.S., in cooperation with its allies and partners, will take steps to extend the life of and make enhancements to the B-61, and as the successor aircraft of the DCA, newly procure F-35s which have stealth capabilities.<sup>58</sup>

### *Russia*

Russia's arms control and disarmament initiatives for non-strategic nuclear forces began and ended with the INF Treaty and the "double zero agreement" for eliminating short-range missile systems in 1987, and the PNIs in 1991 and 1992. However, Russia has not conducted follow-ups on the PNIs since around year 2000. As a result, while it is not known if this was because of the grave financial situation that Russia faced at the time, there are no means to confirm whether the destruction of non-strategic nuclear forces that Russia committed to in the PNIs were effected continuously and whether they were completed.<sup>59</sup> It has been noted that with 1999 as the turning point, Russia's nuclear strategy has shifted from attaching importance to strategic nuclear forces to reevaluating non-strategic nuclear forces, amid a series of events which dramatically changed the strategic environment of Russia, including NATO's eastward expansion, response to the Chechnya conflict, and the U.S. missile defense (TMD/NMD) initiative.<sup>60</sup>

Russia's non-strategic nuclear forces today are designed for use in geographically limited battlefields. According to Russian scholars, such non-strategic nuclear forces deter regional powers such as Iran and Turkey from expanding its influences into the former Soviet Union New

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<sup>55</sup> Stanley R. Sloan, "NATO Nuclear Strategy Beyond the Cold War," Larsen and Klingenberg, eds., *Controlling Non-Strategic Nuclear Weapons*, p. 51.

<sup>56</sup> Nuclear Threat Initiative, "Article: Chicago and Beyond," May 14, 2012 <<http://www.nti.org/analysis/articles/chicago-and-beyond/>>.

<sup>57</sup> "Nuclear Posture Review Report," pp. 29-30.

<sup>58</sup> *Ibid.*, pp. 27-28.

<sup>59</sup> Taina Susiluoto, "The Challenged Regime on Tactical Nuclear Weapons: Debate on Legal Aspects," Susiluoto, ed., *Tactical Nuclear Weapons*, p. 56.

<sup>60</sup> Junko Sendoda, *Soren/Roshia no Kakusenryaku Keisei* [Formation of Soviet/Russian Nuclear Strategy], Keio University Press, 2002, p. 133.

Independent States (NIS).<sup>61</sup> On the other hand, it has been noted that Russia still has a considerable number of non-strategic nuclear forces deployed near the border of NATO member countries.<sup>62</sup> In this connection, the 2011 IISS report estimated that Russia has 2,700 deployed strategic nuclear forces and around 2,000 deployed non-strategic nuclear forces based on open source information.<sup>63</sup> As such, it is believed that non-strategic nuclear forces still account for a large proportion of all nuclear forces. Furthermore, the *Bulletin of the Atomic Scientists* estimated that of the 5,390 non-strategic nuclear forces believed to be held by Russia as of 2010, around 2,050 were operational.<sup>64</sup> The breakdown was: 1,900 SA-10 Grumble (ABM) launchers; around 630 SA-10 Grumble (ABM) warheads; 68 53T6 Gazelle (ABM) launchers; around 68 53T6 Gazelle (ABM) warheads; 682 nuclear bombs for strategic bombers in number of launchers; around 800 warheads; and a total of around 590 submarine-launched cruise missiles (SLCM), sea-launched ASW, SAM, ASM, torpedoes, and other weapons in number of warheads. In addition to these nuclear forces, the *Bulletin of the Atomic Scientists* noted that Russia has short-range ballistic missiles capable of carrying non-strategic nuclear forces, while their numbers are unknown.<sup>65</sup>

A Russian scholar explains that these non-strategic nuclear forces were never considered to have direct impact on the U.S.-Russian strategic balance. Whereas the U.S. has around 200 non-strategic nuclear forces deployed outside of its territories, Russia stores all of its non-strategic nuclear forces – estimated at around 2,000 – in its territory. Furthermore, the level of reductions under arms control and disarmament agreements must be equal for both parties. If the agreement specifies that the U.S. shall reduce the number of its non-strategic nuclear forces to around 500 in total, then Russia has no other option but to aim to reduce its number to the same level.<sup>66</sup> For verifying the agreement on non-strategic nuclear forces reductions, it is unrealistic for parties to monitor and verify the control and destruction of non-strategic nuclear forces deployed outside of their territories. From this standpoint, it would appear that the former point is an indirect criticism of NATO's nuclear sharing policy and the latter point is a demonstration of Russia's passive posture towards nuclear arms control that deals with non-strategic nuclear forces.

Conversely, from the beginning of the post-Cold War era through the 2000s, the U.S. treated non-strategic nuclear weapons of former Soviet Union origin, which were unequipped with launch control apparatuses and which proliferated to NIS countries, as grave security concerns, alongside the risk of the proliferation of other strategic nuclear forces, fissile material, and brain drain from nuclear-related fields.<sup>67</sup> Nuclear weapons, including portable ADMs and suitcase bombs, are not equipped with appropriate safety locks, and rigorous control may not have been implemented

<sup>61</sup> Yuri Fedorov, "Russia: 'New' Inconsistent Nuclear Thinking and Policy," Muthiah Alagappa, ed., *The Long Shadow: Nuclear Weapons and Security in 21st Century Asia*, Stanford University Press, 2008, p. 149.

<sup>62</sup> "Nuclear Posture Review Report," p. xiii.

<sup>63</sup> International Institute for Strategic Studies, *The Military Balance 2011*, p. 469.

<sup>64</sup> Robert S. Norris and Hans M. Kristensen, "Global Nuclear Weapons Inventories, 1945-2010," *Bulletin of the Atomic Scientists*, July/August 2010, p. 78.

<sup>65</sup> Hans M. Kristensen and Robert S. Norris, "Russian Nuclear Forces, 2011," *Bulletin of the Atomic Scientists*, May 2011, p. 68.

<sup>66</sup> Alexander G. Savelyev, "After New START: What's Next?" Paper Presented at the International Nuclear Security Seminar Organized by the Korea National Defense University, Seoul, June 2011, pp. 21-23.

<sup>67</sup> William C. Potter and John M. Shields, "Introduction: Assessing the Dismantlement Process," John M. Shields and William C. Potter, eds., *Dismantling the Cold War: U.S. and NIS Perspectives on the Nunn-Lugar Cooperative Threat Reduction Program*, The MIT Press, 1997, pp. 3-4.

since the former Soviet Union years. Thus, there were strong international concerns about theft by terrorists.<sup>68</sup> Therefore, the U.S., in accordance with the Nunn-Lugar Program, carried out the Nunn-Lugar Cooperative Threat Reduction (CTR) Program by investing approximately US\$400 million annually in the 1990s and US\$1 billion annually from 2000 to 2010. The U.S. took steps to destroy chemical weapons and to prevent the proliferation of biological weapons, in addition to transporting and storing nuclear forces from NIS countries (Ukraine, Kazakhstan, and Belarus) to Russia, dismantling nuclear warheads, ensuring the safety of nuclear stockpiles, safeguarding nuclear materials, and ensuring material accounting and implementing export control of nuclear materials.<sup>69</sup> It can be said that this program was highly commended from the international community as mutually-beneficial non-proliferation measures implemented by the U.S. and Russia.

However, in October 2012, shortly before the expiration of the CTR Program in 2013, Russia expressed its intent not to extend the CTR Program on the grounds that Russia's financial capacity had improved significantly and that many of the sources of proliferation concerns had already been resolved. Until then, Russia's military-industrial complex had been obliged to make compromises every time it confronted requests from the U.S. regarding transparency enhancements, including the acceptance of inspectors pursuant to the CTR Program.<sup>70</sup> Thus, some observers believe that Russia refused to extend the CTR Program in order to shut out U.S. involvement from sensitive information related to Russia's nuclear forces.<sup>71</sup> As a result, in June 2013, the U.S. and Russia agreed to a pared-down replacement for the CTR Program concerning their joint efforts to control and destroy Russian weapons of mass destruction and their delivery vehicles.<sup>72</sup>

As of writing this paper, many aspects remain unclear as to what the replacement agreement for the CTR Program will entail. Nevertheless, the fact that the CTR Program is forced to undergo a review itself is a demonstration that Russia is sending across a clear will and message that it will keep a certain distance from the U.S. Obama administration's efforts towards further reductions of nuclear forces.

### *U.K., France, China and De Facto Nuclear Powers*

As described, the U.K. used to have categories of non-strategic nuclear forces called "sub-strategic nuclear forces" and "tactical nuclear forces." However, between 1991 and 1997, the U.K. withdrew anti-submarine bombs from maritime vessels and from anti-submarine helicopters, as well as abandoned all land-based and short-range nuclear weapons systems and free-fall nuclear bombs, leaving them with only the SLBM Trident strategic nuclear force.<sup>73</sup> At the 2010 NPT Review Conference, the U.K. announced that it had 225 nuclear forces, of which deployed nuclear forces

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<sup>68</sup> Potter and Sokov, "Practical Measures to Reduce Risks Presented by Non-Strategic Nuclear Weapons," p. 6.

<sup>69</sup> NTI Research Library, "The Nunn-Lugar Cooperative Threat Reduction (CTR) Program" <[http://www.nti.org/db/nisprofs/russia/forasst/nunn\\_lug/overview.htm](http://www.nti.org/db/nisprofs/russia/forasst/nunn_lug/overview.htm)>.

<sup>70</sup> Sarah Weiner, "The End of Cooperative Threat Reduction (As We Know It)," *CSIS Blog*, October 18, 2012 <<http://csis.org/blog/end-cooperative-threat-reduction-we-know-it>>.

<sup>71</sup> *Sankei Shimbun*, October 11, 2012.

<sup>72</sup> Daniel Horner and Tom Z. Collina, "Nunn-Lugar Program Scaled Back," *Arms Control Today*, July/August 2013, pp. 33-34.

<sup>73</sup> Lawrence Freedman, "The United Kingdom: British Perspectives on Nuclear Weapons and Nuclear Disarmament," Barry Blechman, ed., *Unblocking the Road to Zero: Perspectives of Advanced Nuclear Nations*, The Henry L. Stimson Center, 2009, pp. 28-30.

would not exceed 160.<sup>74</sup> However, the U.K. did not specify in the breakdown how many non-strategic nuclear forces it had owned. Today, the U.K. identifies the role of non-strategic nuclear forces as “an option for a limited strike that would not automatically lead to a full scale nuclear exchange.”<sup>75</sup>

In France, its tactical nuclear forces, which were seen as an extension of conventional forces, were renamed to sub-strategic (or pre-strategic) nuclear forces in 1984.<sup>76</sup> This was based on the view that they would function as France’s ultimate warning against any military aggressor and suggest the possibility of preemptive strike using sub-strategic nuclear forces (short-range, low yield Pluton missiles).<sup>77</sup> However, since 1996, France has taken the stance that all of its nuclear forces are strategic nuclear forces, deeming it senseless to distinguish between strategic and non-strategic nuclear forces as its nuclear forces and their delivery vehicles had acquired high flexibility in both use planning and operations.<sup>78</sup>

The Chinese government has never officially acknowledged the existence of non-strategic nuclear forces. Some observers believe China may possess non-strategic nuclear forces based on the past exercise scenarios of the People’s Liberation Army (PLA), as well as Chinese magazines which reported throughout the 1970s to the early 1980s that China was ready to use tactical nuclear forces in the war against the Soviet Union.<sup>79</sup> Some analyze that in addition to the deployed strategic nuclear forces – estimated at around 300 – China has around 150 non-strategic nuclear forces, such as nuclear shells and nuclear landmines.<sup>80</sup> It is unknown whether either of these speculations is correct. The Chinese PLA has defined non-strategic nuclear forces explicitly as follows: “Tactical nuclear weapons (TNW) are used to support troops in combat, and to affect the enemy’s actions. In general, TNW systems are less powerful nuclear weapons delivered from shorter ranges by air or ground launch systems and have a command and control organization. TNW systems include short-range surface-to-surface missiles, bombs dropped by tactical bombers, ship-to-ship and ship-air missiles, antisubmarine missiles, depth charges, artillery shells, and land mines.”<sup>81</sup>

As noted in Section 1 of this paper, even if the U.S. and Russia were to define nuclear forces sharing similar characteristics, such as range and yield, as non-strategic nuclear forces, this would not necessarily imply that the nuclear forces of other countries with characteristics similar to U.S. and Russian nuclear forces will be likewise deemed as non-strategic nuclear forces. To start with, it is unclear how many nuclear forces are held by de facto nuclear powers (India, Pakistan, Israel, and

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<sup>74</sup> Foreign & Commonwealth Office, “News: UK Minister attends Review Conference following UK disclosure of nuclear stockpile,” May 26, 2010 <<http://www.fco.gov.uk/en/news/latest-news/?view=News&id=22285726#>>.

<sup>75</sup> Freedman, “The United Kingdom: British Perspectives on Nuclear Weapons and Nuclear Disarmament,” pp. 28-30.

<sup>76</sup> Olivier Debouzy, “A European Vocation for the French Nuclear Deterrent?” Nicholas Witney et al., *Western European Nuclear Forces: A British, a French, and an American View*, RAND, 1995, pp. 36-37.

<sup>77</sup> Michel R. Gueldry, *France and European Integration: Toward a Transnational Policy?* Greenwood Publishing Group, 2001, pp. 152-153.

<sup>78</sup> Bruno Tertrais, “French Perspectives on Nuclear Weapons and Nuclear Disarmament,” Barry Blechman, ed., *Unblocking the Road to Zero: Perspectives of Advanced Nuclear Nations*, The Henry L. Stimson Center, 2009, p. 12.

<sup>79</sup> Kenneth W. Allen, “China’s Perspective on Non-Strategic Nuclear Weapons and Arms Control,” Larsen and Klingenberg, eds., *Controlling Non-Strategic Nuclear Weapons*, pp. 171-173.

<sup>80</sup> Robert S. Norris et al., *Nuclear Weapons Databook: British, French and Chinese Nuclear Weapons*, Westview Press, 1994, p. 324.

<sup>81</sup> Kenneth W. Allen, “China’s Perspective on Non-Strategic Nuclear Weapons and Arms Control,” Larsen and Klingenberg, eds., *Controlling Non-Strategic Nuclear Weapons*, pp. 159-160.

North Korea which asserts possession of nuclear weapons), what the lineup is, or the accuracy of the information. The IISS identifies that all of the deployed nuclear forces of nuclear weapon states other than the U.S. and Russia (i.e., U.K., France, China) and de facto nuclear powers are strategic nuclear forces.<sup>82</sup> The *Bulletin of the Atomic Scientists*, while noting its reservations that the details are unknown, maintains that it is possible China has non-strategic nuclear forces but all nuclear forces possessed by other nuclear weapon states (U.K. and France) and de facto nuclear powers are strategic nuclear forces.<sup>83</sup> A report of the U.S. Congressional Research Service describes that while the nuclear forces of India and Pakistan may be identified as non-strategic nuclear forces on the sole basis of their ranges and yield, it is unclear what kind of a role these countries assign to their nuclear forces, strategically or tactically. The report also notes that some nuclear forces of China may be deemed as non-strategic nuclear forces from the perspective of their missions, in addition to their delivery vehicles (ranges).<sup>84</sup> The International Commission on Nuclear Non-Proliferation and Disarmament (ICNND) co-chaired by former Minister for Foreign Affairs of Japan Yoriko Kawaguchi and former Minister for Foreign Affairs of Australia Gareth Evans has pointed out that in addition to the U.S., Russia, and France, other countries, likely China, India, Pakistan, and Israel, may have sub-strategic nuclear forces and tactical nuclear forces.<sup>85</sup>

Some analysts have also attempted to identify de facto nuclear powers which have non-strategic nuclear forces by focusing on the operational aspects. For example, Timothy D. Hoyt identified that the nuclear forces of India and Pakistan fall under tactical nuclear forces because they have short ranges, because their yield is believed to be kept proportionately low according to projections made on the basis of the nuclear tests conducted in 1998, and because of the topographical conditions of the disputed area between the two countries.<sup>86</sup> However, in any case, non-strategic nuclear forces belonging to countries other than the U.S. and Russia have the problem of transparency, aside for some exceptions. This makes it difficult to engage in any in-depth discussions at the present stage on non-strategic nuclear forces. Accordingly, the first step may be to start with the U.S.-Russian talks on reductions of non-strategic nuclear forces, and in doing so, increase the transparency of information, including regarding conventional forces, and build confidence. Then, as the next step, countries may comprehensively consider and hold consultations on the nuclear forces held by other nuclear-weapon states and de facto nuclear powers.

### **Non-Strategic Nuclear Forces: Outlook for the Future**

In terms of scale, there is a large disparity between U.S. and Russian non-strategic nuclear forces. However, if non-deployed nuclear forces are included, the number of non-strategic nuclear forces for both countries combined is estimated to reach into the several thousands. Hence, if the two

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<sup>82</sup> International Institute for Strategic Studies, *The Military Balance 2011*, p. 469.

<sup>83</sup> Norris and Kristensen, "Global Nuclear Weapons Inventories, 1945-2010," p. 78.

<sup>84</sup> Woolf, "Nonstrategic Nuclear Weapons," p. 21.

<sup>85</sup> ICNND categorizes non-strategic nuclear forces into sub-strategic nuclear forces (nuclear forces with ranges shorter than 5,500km which were not included in START) and tactical nuclear forces (nuclear forces which have ranges shorter than 500km and a low yield), and then notes on the countries which have the respective nuclear forces. International Commission on Nuclear Non-Proliferation and Disarmament, *Eliminating Nuclear Threats: A Practical Agenda for Global Policymakers*, Paragon, 2009, p. 18.

<sup>86</sup> Timothy D. Hoyt, "The Buddha Frowns? Tactical Nuclear Weapons in South Asia," Alexander and Millar, eds., *Tactical Nuclear Weapons*, p. 95.

countries are able to reach an agreement on reductions, it is expected that this would also give momentum to global disarmament talks on nuclear forces, numbering nearly 20,000 worldwide today. Furthermore, reductions of non-strategic nuclear forces have significance from the perspectives of addressing the heightened concerns over the use of nuclear weapons by false recognition or accident and countering the risks of nuclear terrorism. Against this background, the following section will consider why an arms control and disarmament treaty on non-strategic nuclear forces is yet to be concluded, and examine the outstanding challenges and the future outlook.

*U.S.-Russian Presidential Nuclear Initiatives (PNIs) and their Follow-up*

PNIs have been the first and last effective attempt at reducing non-strategic nuclear forces to date. From shortly after the end of the Cold War in 1991 to 1992, the U.S. and Russia declared and implemented a series of PNIs, which are unilateral measures based on reciprocal actions. They were initially nuclear force reduction initiatives that the U.S. George H. W. Bush administration announced in September 1991 to give Russia (former Soviet Union) an incentive to reduce its non-strategic nuclear forces stockpiles, and were comprised of the following four pillars:

- (1) Elimination of all non-strategic nuclear missile warheads and nuclear shells deployed on land;
- (2) Withdrawal of non-strategic nuclear forces from surface vessels and attack submarines, and their partial dismantlement;
- (3) Dealerting of all strategic bombers and all ICBMs scheduled for reduction under START; and
- (4) Elimination of mobile MX missiles, mobile small ICBM Midgetman programs, and short-range missiles.

In response to these measures, during the same year, Soviet President Mikhail Gorbachev announced: the destruction of all nuclear shells, nuclear warheads for tactical missiles, and nuclear landmines; the withdrawal of all tactical nuclear forces from maritime vessels and submarines; and the control of tactical nuclear forces removed from navy aircrafts at central storage facilities. In 1992, President Boris Yeltsin of Russia declared to continue and expand PNIs and: destroy one-third of its tactical nuclear forces deployed in the sea; destroy half of the ground-to-air nuclear missile warheads; halve its tactical nuclear stockpiles carried on aircrafts; and as reciprocal actions with the U.S.'s, retire the remaining half and place them under the control of central storage facilities.<sup>87</sup>

As explained, PNIs took an unprecedented approach, i.e., promoting the voluntary execution of a wave of nuclear arms controls and disarmaments according to unilateral commitments premised on reciprocal actions. However, they had mixed reactions from the initial stage. Those in support of PNIs have described that, unlike arms control and disarmament treaties which require many years of negotiations among relevant countries, PNIs not only made it possible for the U.S. and Soviet Union and the U.S. and Russia to quickly withdraw non-strategic nuclear forces from a status of operational readiness, but they also became one of the momentums for advancing the movement of nuclear disarmament internationally.<sup>88</sup> Some also assess that while PNIs were not turned into treaties, they were equivalent to official pledges.<sup>89</sup> Conversely, those who are not necessarily in support of PNIs have criticized that, while voluntary withdrawals and reductions of non-strategic

<sup>87</sup> Daalder and Terriff, "Nuclear Arms Control: Finishing the Cold War Agenda," pp. 13-14.

<sup>88</sup> Rose Gottenmoeller, "Advantages and Disadvantages of Unilateral Arms Control Policy," Susiluoto, ed., *Tactical Nuclear Weapons*, p. 3.

<sup>89</sup> Handler, "The 1991-1992 PNIs and Elimination, Storage, and Security of Tactical Nuclear Weapons," p. 107.

nuclear forces do have advantages, PNIs, unlike other arms control and disarmament treaties, do not entail an agreement on mutual monitoring and verification methods, and therefore, the U.S. and Russia are unable to determine how nuclear warheads are being controlled exactly and if they have been reduced.<sup>90</sup>

*Arguments for the Arms Control and Disarmament of Non-Strategic Nuclear Forces*

As part of the process which led to the post-PNI U.S.-Russia talks on non-strategic nuclear forces, it needs to be pointed out that during the 1997 Helsinki Summit, U.S. President Clinton and Russian President Yeltsin announced their readiness to engage in talks on non-strategic nuclear forces under the New START framework. While the summit declaration did not become a reality as START II and III did not enter into force,<sup>91</sup> it nevertheless speaks to the strong expression of political will by the U.S. and Russia which existed at that time regarding the need for the arms control and disarmament of non-strategic nuclear forces.

However, a more important issue is that during the two decades dating back to the contentious PNIs, no individual arms control and disarmament talks had addressed the issue of non-strategic nuclear forces, while the START II and START III processes were deadlocked. In this connection, some analysts have identified the deficiencies of PNIs, namely, that: because they were kept as voluntary reduction initiatives, their execution was not legally binding; the U.S. and Russia could not carry out additional adjustments or consultations with regard to the approach or scope of reductions; and no sustained mutual transparency measures were taken, e.g., exchange of information and verification regarding non-strategic nuclear forces.<sup>92</sup> As an extension of this criticism, it can further be pointed out that the U.S. and Russia were unable to delve further on the subject of the definition of non-strategic nuclear forces throughout the post-Cold War era. PNIs did not maintain the principle of irreversibility in nuclear disarmament. Furthermore, because the U.S.-Russian unilateral actions of PNIs were left as informal regimes, it was difficult for PNIs to lead to the establishment of international norms on the disarmament of non-strategic nuclear forces.

On the other hand, some analysts argue against aiming to conclude a legally binding treaty between the U.S. and Russia on non-strategic nuclear forces. For example, Michael Levi and Michael O'Hanlon, on account of the importance of effectiveness, note that creating a treaty is not necessarily wise for reasons related to agreement compliance verification, among other reasons, and that careful consideration should also be given to the issues of verification feasibility and the advantages of creating a treaty.<sup>93</sup> Nevertheless, PNIs, in parallel with the 1997 Helsinki Summit agreement, have a historical significance in terms of U.S.-Russian reductions of non-strategic nuclear forces, and therefore, should be followed-up on in future arms control and disarmament talks on non-strategic nuclear forces.

In thinking about the outlook for the arms control and disarmament talks on non-strategic nuclear forces in light of today's international security environment, it is particularly essential to

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<sup>90</sup> Gottemoeller, "Advantages and Disadvantages of Unilateral Arms Control Policy," pp. 4-5.

<sup>91</sup> Sauer and Van Der Zwaan, "U.S. Tactical Nuclear Weapons in Europe after NATO's Lisbon Summit: Why their Withdrawal is Desirable and Feasible," pp. 9-10.

<sup>92</sup> William C. Potter, "An Update on Efforts to Reduce Tactical Nuclear Weapons," Susiluoto, ed., *Tactical Nuclear Weapons*, p. 7.

<sup>93</sup> Michael A. Levi and Michael E. O'Hanlon, *The Future of Arms Control*, Brookings Institution, 2005, p. 46.

understand Russia's situation. Observers have pointed out that, for example, Russia's non-strategic nuclear forces remain critical as a deterrent to U.S. non-strategic nuclear forces deployed in Europe and to U.K. and French nuclear forces. These analysts note that Russia, while carefully monitoring the execution of New START, should urge the U.S. to withdraw all of its non-strategic nuclear forces deployed in Europe, and that multilateral talks must involve all nuclear states and not restrict the category of nuclear forces.<sup>94</sup> In addition, there are a variety of other non-easily resolvable issues concerning the maintenance of Russia's strategic balance and superiority over the countries concerned, including the Eastward expansion of NATO,<sup>95</sup> BMD deployment in Europe,<sup>96</sup> conventional prompt global strike (CPGS) which the U.S. identifies as one of the means for decreasing reliance on nuclear forces,<sup>97</sup> and concerns over the rise of China.<sup>98</sup>

The U.S. takes the position that BMD and CPGS are not targeted at Russia, and that the items agreed upon in New START do not impose any constraints on these non-nuclear capabilities.<sup>99</sup> Nonetheless, in Russia, there are deepening concerns that BMD and CPGS could infringe upon its strategic deterrent. Russia has even hinted secession from New START should the U.S. significantly enhance its strategic defense capabilities, including BMD.<sup>100</sup> Russia maintains that CPGS should also be included in the post-New START arms control and disarmament talks.<sup>101</sup> For Russia, it is essential that the talks on reductions of non-strategic nuclear forces are linked with the discussion on conventional forces, including CPGS. Some analysts add that even if the focus of the talks were narrowed down to just nuclear forces, it is not easy to foresee that this would incentivize Russia to join the talks, as there is a disparity in the U.S. and Russian non-strategic nuclear forces and non-deployed nuclear capabilities, both qualitatively and quantitatively.<sup>102</sup>

As long as Russia continues to believe that non-strategic nuclear forces would allow the country to maintain deterrence and external superiority, it is doubtful that progress can be achieved on the U.S.-Russian arms control and disarmament talks on these issues. Accordingly, as stated in the 2010 NPR, the U.S. and Russia should begin by carrying out candid strategic consultations and promote mutual understanding regarding European countries' concerns over Russia's non-strategic nuclear forces modernization program and its military doctrine, in addition to the intentions behind

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<sup>94</sup> Savelyev, "After New START: What's Next?" pp. 21-22.

<sup>95</sup> David E. Hoffman, "The Nuclear Bombs to Nowhere," *Foreign Policy*, November 29, 2011 <[http://hoffman.foreignpolicy.com/posts/2011/11/29/the\\_nuclear\\_bombs\\_to\\_nowhere](http://hoffman.foreignpolicy.com/posts/2011/11/29/the_nuclear_bombs_to_nowhere)>.

<sup>96</sup> Josh Rogin, "Medvedev Announces Failure of U.S.-Russia Missile Defense Talks: Threatens to Withdraw from New START," *Foreign Policy*, November 23, 2011 <[http://thecable.foreignpolicy.com/posts/2011/11/23/medvedev\\_announces\\_failure\\_of\\_us\\_russia\\_missile\\_defense\\_talks\\_threatens\\_to\\_withdraw?wpisrc=obnetwork](http://thecable.foreignpolicy.com/posts/2011/11/23/medvedev_announces_failure_of_us_russia_missile_defense_talks_threatens_to_withdraw?wpisrc=obnetwork)>.

<sup>97</sup> Amy F. Woolf, "Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues," *CRS Report for Congress*, February 13, 2012, p. 27.

<sup>98</sup> Hyodo, "Joron: Roshia no Kokka Anzen Hoshō Seido," p. 6.

<sup>99</sup> The White House Office of the Press Secretary, "Key Facts about the New START Treaty," March 26, 2010 <<http://www.whitehouse.gov/the-press-office/key-facts-about-new-start-treaty>>.

<sup>100</sup> CSIS Next Generation Working Group on U.S.-Russian Arms Control, "Beyond New START: Advancing U.S. National Security through Arms Control with Russia," September 2011, p. 11 <[http://csis.org/files/publication/110824\\_Acton\\_BeyondNewSTART\\_WEB.pdf](http://csis.org/files/publication/110824_Acton_BeyondNewSTART_WEB.pdf)>.

<sup>101</sup> Diana Ray, "Beyond New START: Arms Control to Enhance US-Russian Relations," *Voice of Russia*, September 8, 2011 <<http://english.ruvr.ru/2011/09/08/55848185.html>>.

<sup>102</sup> Anatoly Diakov, Eugene Miasnikov and Timur Kadyshev, "Nuclear Reductions after New START: Obstacles and Opportunities," *Arms Control Today*, May 2011, pp. 18-20.

the BMD establishment and CPGS development of the U.S.<sup>103</sup>

An important lesson which was learned from past U.S.-Soviet and U.S.-Russian nuclear arms control and disarmament talks was that verification and inspection frameworks that are based on exchange of information and reciprocity play a vital role in ensuring the effectiveness of the agreement.<sup>104</sup> Even to verify compliance with the agreement on non-strategic nuclear forces, depending on whether the definition of non-strategic nuclear forces refers to nuclear warheads themselves or includes their delivery vehicles, it is possible that the verification will require warhead design information in order to distinguish the non-strategic nuclear forces being inspected from other strategic forces. It is also possible that sensitive information directly concerning the operation of nuclear forces, such as details about delivery vehicles and location, will be required.<sup>105</sup> In the process of considering such verification frameworks, it is necessary to narrow down the scope of applicable nuclear forces against a set of criteria, such as yield, range, or purpose of use. However, these items entail a high degree of interference both politically and militarily and are sensitive. As long as the U.S.-Russia strategic dialogues do not advance, and as long as there are no significant changes in the existing security environment facing Russia, the outlook is not promising for a verifiable reduction or destruction of non-strategic nuclear forces agreement. Moreover, because the reduction or destruction of non-deployed nuclear forces and their verification demand information transparency and a degree of intrusiveness of a similar or higher level than non-strategic nuclear forces, it is anticipated that many difficulties will lie ahead in establishing a new foundation for future treaty negotiations.

## **Conclusion**

This paper has shown that on the one hand international interest in reductions of non-strategic nuclear forces has increased. However, on the other hand, there are still a variety of challenges which need to be overcome for the arms control and disarmament of U.S. and Russian non-strategic nuclear forces. Furthermore, the outlook is not necessarily a bright one. As long as a new understanding of the strategic environment is not shared between the main agents of non-strategic nuclear forces reductions – the U.S. and Russia – and their allies that benefit from the extended deterrence, it will be difficult to make any progress on the talks on non-strategic nuclear forces. In addition, should the talks take place, they may require a more comprehensive consideration that addresses not only deployed non-strategic nuclear forces, but also non-deployed nuclear forces. Changes in the strategic environment which would promote the arms control and disarmament of non-strategic nuclear forces, as envisioned in this paper, include: (1) cases in which it becomes difficult for the U.S. and Russia to maintain current levels of nuclear forces due to the worsening of their financial situation or other reasons; (2) cases in which the threats facing either the U.S. or Russia or both change qualitatively, necessitating a review of the deterrence posture; (3) cases in which there is greater pressure than before from allies to promote nuclear arms control and disarmament, and

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<sup>103</sup> Woolf, “Conventional Prompt Global Strike and Long-Range Ballistic Missiles,” pp. 28-29.

<sup>104</sup> John Hart and Vitaly Fedchenko, “WMD Inspection and Verification Regimes: Political and Technical Challenges,” Nathan E. Busch and Daniel H. Joyner, eds., *Combating Weapons of Mass Destruction: The Future of International Nonproliferation Policy*, The University of Georgia Press, 2009, p. 95.

<sup>105</sup> Robert H. Gromoll and Dunbar Lockwood, “Non-Strategic Nuclear Weapons: Defining U.S. Objectives,” Larsen and Klingenberg, eds., *Controlling Non-Strategic Nuclear Weapons*, p. 80.

the U.S. and Russia are obliged to review their current deployments and stockpiles of non-strategic nuclear forces; or (4) cases in which the U.S.-Russia relationship improves dramatically, and the priority attached to non-strategic nuclear forces falls considerably as a security policy issue.

In February 2012, the media reported that the U.S. Department of Defense was considering three concrete options for significantly reducing U.S. strategic nuclear forces from levels specified in New START – namely, cutting the number of nuclear forces after reductions to 1,000 to 1,100, 700 to 800, or 300 to 400.<sup>106</sup> In 2013, President Obama delivered his Berlin speech. The remarks demonstrated the U.S.'s clear stance that the U.S. could reduce the number of deployed strategic nuclear forces to 1,000.

With regard to the reasons for considering such reductions of strategic nuclear forces, it is undeniable that the U.S., in order to find a breakthrough for commencing the post-New START talks with Russia, may have determined there was no other choice but to take the first step towards reductions based on reciprocal steps, in a move similar to PNIs in 1991 which presupposed stability provided by deterrence. The debate concerning the pros and cons of PNIs as a policy approach is as was explained in this paper. The proposal to reduce strategic nuclear forces to less than 1,000 is noteworthy not only as an immediate challenge in the context of the U.S.-Russian arms control and disarmament of non-strategic nuclear forces, but also as a policy initiative that can be taken precisely because the Obama administration pledges to realize “a world without nuclear weapons.” This proposal may have impact of some kind on the discussion of reductions of global nuclear forces. Furthermore, based on the backdrop against which the administration has proposed “a world without nuclear weapons,” it can be said that the significant cut in strategic nuclear forces allegedly being considered by the U.S. Department of Defense falls under case (2) described earlier, i.e., changes in the strategic environment are promoting the arms control and disarmament of non-strategic nuclear forces. At the same time, the existence of NATO's European members, which are wary about the U.S.'s further reductions of its strategic nuclear forces, must be taken into consideration. Analysts have noted that all U.S. allies will not necessarily welcome U.S.'s further reductions of strategic nuclear forces, and in some cases, this could lead to a loss of credibility in the extended deterrence. It is possible that this in turn would strengthen the momentum in some European NATO member countries to retain U.S. non-strategic nuclear forces deployed in Europe.<sup>107</sup>

It is without question that in order to encourage the engagement of nuclear-weapon states and de facto nuclear powers in the effort to achieve “a world without nuclear weapons,” the reductions in U.S. and Russian non-strategic nuclear forces constitute a critical step for the arms control and disarmament talks that would address all nuclear forces. This makes it all the more imperative that regional strategic stability and deterrence system are once again reviewed, and that the U.S., Russia, and NATO continue to hold strategic dialogues and build confidence. In view of the current strategic environment facing the U.S. and Russia, it is not an exaggeration to say that non-strategic nuclear forces reductions by both countries depend significantly on the U.S. initiative. Moreover, it is an undeniable fact that U.S. non-strategic nuclear forces have fulfilled a role not the least insignificant, both politically and militarily, as a component of the extended deterrence to U.S. allies. Therefore, it

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<sup>106</sup> “U.S. Weighing Steep Nuclear Arms Cuts,” *CBS News*, February 14, 2012.

<sup>107</sup> David Yost, “Strategic Stability in Europe: Risks with Low Numbers of US and Russian Nuclear Weapons,” *Nonproliferation Review*, Vol. 20, No. 2, 2013, pp. 230-231.

can be concluded that in the process of realizing “a world without nuclear weapons,” the formation of a common understanding among the U.S. and its allies regarding strategic stability and the role of nuclear forces in overall deterrence is also essential for the promotion of the arms control and disarmament of U.S. and Russian non-strategic nuclear forces.