

## Adieu, Nuclear Security Summit, and Next...?

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### Introduction

At the urging of U.S. President Barack Obama in his speech on a “nuclear-free world” in Prague in 2009, the Nuclear Security Summit (“the Summit”) was launched in Washington, D.C. in 2010 to bring high-level attention to the global threat posed mainly by “nuclear terrorism” in the extended context of the “war on terror,” the anti-terrorism policy of the U.S. since 9/11.<sup>1</sup> Such fears were not entirely groundless. For example, it is known that in 1998, when Russia was suffering a deep economic crisis, 18.5 kilograms of Highly Enriched Uranium (“HEU”) was stolen from Russia’s largest nuclear weapons facility.<sup>2</sup> More recently, in 2007, two groups of armed men attempted to attack South Africa’s Pelindaba Nuclear Research Centre in Pretoria where weapons-grade material for 25 nuclear bombs was stored.<sup>3</sup> Of ongoing concern is intelligence indicating that Osama bin Laden and Al Qaeda may have obtained a limited amount of nuclear material in the late 2000s; if true, this could pose a significant threat to the entire international community as well as the U.S. To halt further nuclear proliferation, there was an urgent need to cultivate global norms on nuclear security to ensure that unauthorized actors are denied access to nuclear materials, in addition to building international capacity to act against any illicit attempts to access nuclear materials in the most appropriate and timely manner. By sharing common security concerns, the U.S. government and like-minded allies have sought to lay the groundwork for bringing coun-

tries up to a higher standard of nuclear security through summits in Seoul (2012), The Hague (2014), and Washington, D.C. (2016).

### Key Agendas at Previous Meetings (2010-2014)

Washington D.C. (April 12-13, 2010)

The first Summit in 2010 was held to discuss more effective ways of fighting nuclear terrorism, against the background of increasing propagation of serious warnings, such as that “the theft of only 0.01% of the world [HEU] stockpile could cause a global catastrophe.”<sup>4</sup> In fact, with weapons-usable nuclear materials stored in hundreds of buildings in dozens of countries under varying security situations, the risk of terrorist groups acquiring bomb-making materials increases. Moreover, since the end of the Cold War, there have been several reports of the

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theft of some essential elements in nuclear bomb-making. What is most concerning is that while roughly 200 cases of improperly secured nuclear materials are investigated by the International Atomic Energy Agency (“IAEA”) annually, in reality, no vigorous responses have been made in the international community prior to the first Nuclear Security Summit in Washington, D.C.<sup>5</sup> To prevent nuclear materials from falling into the hands of unauthorized actors, the Summit called for the political commitment of the participating 47 states to implement the pledges in the Washington Communiqué on a voluntary basis. These included, for example:

- Ratifying and implementing treaties on nuclear security and nuclear terrorism;
- Cooperating through the UN to implement and assist each other in connection with Security Council Resolutions;
- Working with the IAEA to update and implement security guidance and carry out advisory services;
- Reviewing national regulatory and legal requirements related to nuclear security and nuclear trafficking;
- Converting HEU used by civilian facilities to non-weapons-usable materials;
- Research on new nuclear fuels, detection methods, and forensics techniques;
- Development of corporate and institutional cultures that prioritize nuclear security;
- Education and training to ensure that countries and facilities have the people they need to protect their materials; and
- Joint exercises among law enforcement and customs officials to enhance nuclear detection approaches.<sup>6</sup>

Seoul (March 26-27, 2012)

During the Seoul Summit—“the largest gathering of world leaders since the creation of the UN in 1945”—

despite ongoing nuclear threats posed by the world’s two biggest nuclear concerns, North Korea and Iran, neither of them was actually on the official agenda at the summit and neither country was invited to attend.<sup>7</sup> Before the summit, North Korea threatened that if its “nuclear issue is placed on the agenda at the Seoul summit,” it would consider this a “provocation” of war.<sup>8</sup> Ultimately, therefore, the success of the Seoul Communiqué relied on Russia and China’s commitments to the two rogue states in private talks.

Despite these limitations, some progress was made at the summit. It was announced that the participating states would commit themselves to minimizing stockpiles of HEU and plutonium, enhancing nuclear safeguard systems, and preventing illicit trafficking of nuclear-weapon-usable material. Specifically, from 2010 to 2012, the U.S. and Russia have converted a large volume of HEU, sufficient to build 3,000 nuclear warheads, to low enriched uranium (“LEU”), and they agreed in Seoul to reduce a further 68 tons of plutonium. Moreover, eight other participant countries have successfully discarded 480kg of HEU, which could build 18 nuclear warheads. In particular, Mexico and Ukraine have eliminated all their weapons-usable material.<sup>9</sup>

In addition, the nuclear industry’s safety and security issues were emphasized with the highest gravity in a meeting held a year after the Fukushima nuclear plant disaster in 2011, which is one of the world’s worst nuclear accidents. The nuclear plant melt-down in Fukushima was a serious alert for neighboring countries to Japan, such as South Korea and China, where the nuclear energy industries are still fast-growing, contrary to those in European countries and the U.S. To restore faith in civil nuclear energy, the IAEA released its report reviewing Japan’s revised nuclear safety assessment processes shortly after the summit in Seoul.

In the Seoul Communiqué, overall, nuclear security was defined more broadly and comprehensively than in the first summit in Washington, D.C., and consensus was reached on 11 action areas, particularly



in terms of materials, governance, smuggling, and culture.<sup>10</sup> In fact, one of the biggest achievements of the Seoul Communiqué was to introduce one common platform for dealing with a variety of contemporary nuclear issues, having been separately dealt under divided sub-fields of nuclear governance such as nuclear security, safety, and safeguards (the so called 3 S's). Nevertheless, at the same time, criticism arose suggesting that the summit failed to set an official agenda on the imminent threats posed by rogue states' attempts to develop nuclear weapons; the joint statement remains vague in terms of measurable targets and the only tangible achievement was the inclusion of more extensive nuclear safety procedures after the Fukushima crisis.

#### The Hague (March 24-25, 2014)

The third Nuclear Security Summit in The Hague was overshadowed by events in the Crimea and the absence of the Russian President, who was supposed to be a central player in international efforts to secure fissile material and combat the threat of nuclear terrorism alongside the U.S. and China. In addition, the international audience was confused by news released immediately before the summit about the U.S. budget cut on non-proliferation programs for the following year, which was widely perceived as the U.S. declaring, "we are in retreat."<sup>11</sup> President Obama requested \$114 million less than anticipated for the international material protection program, aiming to secure and eliminate "vulnerable" nuclear weapons and materials, and \$108 million less for the global threat reduction initiative, bringing total cuts to existing nuclear security programs to \$222 million.<sup>12</sup> More significantly, this may have caused problems to diplomatic relations between the U.S. and Russia because, while both nations had agreed to each dispose of 34 tons of plutonium and to store it at the mixed oxide fuel (MOX) fabrication facility in South Carolina, U.S., this plan would be hampered by the U.S.'s budget cut.

Despite some clear limitations, some progress was reported at the summit. Japan announced that it would release more than 300kg of "highly-bomb-ready" plutonium and 200kg of HEU—allegedly capable of producing 40 and 50 nuclear warheads—to the U.S. for dilution and disposal.<sup>13</sup> Japan's stock of weapons-grade material has been a source of conflict with the two Koreas and China, particularly after right-wing Japanese politicians suggested that it may have value as a deterrent, even though the country unilaterally prohibited developing its own nuclear weapons in 1967. The agreement with Japan was hailed by U.S. officials as the greatest success to date of President Obama's Prague initiative.<sup>14</sup> Likewise, Belgium and Italy agreed to remove surplus fissile material as part of a continuing Washington-led effort to reduce global stockpiles and the number of sites around the world where it is stored.<sup>15</sup>

#### Washington D.C. (March 31-April 1, 2016)

With suspicion mounting that the terrorist network that hit Paris (November 2015) and Brussels (March 22, 2016) may have been in the planning stages of another terrorist operation, this time targeting a Belgian nuclear facility, the Washington 2016 Communiqué returned focus to issues of nuclear terrorism "more akin to the Washington 2010 Communiqué than the communiqués for the past two summits."<sup>16</sup> Accordingly, Belgian Prime Minister Charles Michel highlighted real nuclear terrorist dangers and urged that real steps be taken to improve nuclear security.<sup>17</sup> Reportedly, since 2014 a number of suspicious and alarming activities have been detected at the nuclear sites in Belgium, resulting in an estimated \$100-\$200 million in damage.<sup>18</sup> To reflect this development, issues of nuclear smuggling and cyber security were discussed in the joint statements (so called "gift baskets").<sup>19</sup> Calls for more vigorous efforts to combat nuclear terrorism in more realistic terms, particularly



the issues of denuclearization on the Korean Peninsula and non-proliferation of nuclear weapons in Iran and among some terrorist groups, such as the Islamic State (IS)—potentially supplied by North Korea—dominated the two day summit.<sup>20</sup>

While almost the entire first day of the summit was dedicated to nuclear threats posed by North Korea, no meaningful outcome was reached from trilateral meetings between the leaders of three nations—South Korea, the U.S., and Japan—as well as bilateral meetings between the U.S. and China. In contrast to the North Korean case, however, the summit succeeded in drawing a blue print of how to raise collective efforts to ensure Iranian compliance with the recently-concluded nuclear deal and to stop the spread of nuclear weapons to some malign groups who have targeted urban areas across the globe: that meeting was held by the leaders of the P5+1 (the U.S., the UK, France, China, and Russia (absent) + Germany) and the IAEA. In fact, the summits have built a solid track record of progress on the Iranian case. In 2009, Iran was the most concerning country in terms of continued efforts to develop nuclear weapons, just as North Korea is now. However, under the framework of the Joint Comprehensive Plan of Action (“JCPOA”) made in July 2015, Iran is supposed to reduce its number of centrifuges from almost 20,000 to 5,060 at the uranium enrichment facilities at Natanz, Iran within 10 years and its uranium stockpile by 98% to 300kg in 15 years, keeping its level of enrichment at 3.67%.<sup>21</sup> As part of its efforts towards these targets, by January 2016, Iran had shipped tons of LEU at Natanz and Fordo to Russia.<sup>22</sup> In addition, Iran has agreed to convert the heavy-water nuclear reactor near Arak, the spent fuel of which contains plutonium suitable for building nuclear bombs. To prevent Iran from covertly building any illicit nuclear programs, inspectors from the IAEA will be able to access any site they deem suspicious in Iran according to the Additional Protocol to the IAEA Safeguards Agreement that Iran signed on December 18, 2003.<sup>23</sup> Thus far, the Iranian

case can be considered the biggest achievement of the Summit over the past six years and also a model process for the international non-proliferation mission that has successfully brought a problem country back into the international community through peaceful means, unlike the Iraqi and Libyan cases. To a certain level, obviously know-how that the international community has accumulated in dealing with Iran would be able to provide some useful ideas in tackling increasing nuclear threats posed by North Korea.

### Conclusion: Prospects and Limitations

Since the first Nuclear Security Summit in 2010, the agenda and efforts have expanded in order to sustain international interest in nuclear security in a broader term: indeed, such expansion was crucial for further progress. Particularly, faced by the evolving contemporary security challenges of the new millennium, there was an urgent call for the introduction of enhanced security frameworks. In response, the Summit has succeeded over the past few years in raising national awareness of nuclear security at the highest level, leading governments to introduce necessary measures to strengthen the global nuclear security architecture. To date, within the framework of the existing international agreements, it has:

- provided a useful platform for ensuring that nuclear material is more secure by integrating sub-fields of nuclear governance such as nuclear security, safety and safeguards;
- enabled nations to draw upon each other’s expertise regarding how they are handling their material; and
- successfully facilitated and coordinated capacity-building and international cooperation among participating countries, to prevent the world’s most dangerous material from falling into the wrong hands.



In the wide spectrum of civilian and military programs, the Summit has enabled participating countries to enhance the security and safety measures that are in place to ensure that countries are handling nuclear materials more responsibly.

To be realistic, however, its fruits are not mature enough to harvest yet; accordingly, its future remains uncertain. First, while the boundary of agendas has been successfully pushed out throughout the four Summits, actually the attention was not paid evenly among the three important agendas of nuclear security, safety and safeguards: despite the significance, issues of nuclear safeguards were sidelined, rather than included in conjunction with the other aspects, in the discussions. From this, the original idea about enhancing nuclear security more comprehensively by bringing in a variety of nuclear issues was significantly undermined at the end. Moreover, despite the tremendous efforts, the visions could not grow out to be institutionalized, either. For example, even after years of discussions at the highest-level, the Summit has failed to date to introduce a system to maintain labels on radiological sources in accordance with the current international framework so that they can be tracked down to the end of the fuel cycle. Second, the international security environment is too unsettled to firmly predict possible threats and prepare appropriate pre-emptive actions due to new (or newly perceived) security challenges, such as natural disasters, cyber terrorism, bioterrorism, and threats posed by unidentified local militias in association with some religious extremists.

Regardless of the obstacles ahead for the Summit, it is obviously time to discuss how to grow this asset. Particularly when the fifth nuclear test of North Korea is forecasted to follow shortly after the fourth one in January 2016, demands for organizing international and regional efforts is higher than ever. In so doing, it is essential to sustain the influence of the Nuclear Security Summit afterwards. One of viable options would be to regularize it within the framework of the

UN (more specifically, the Non-Proliferation Treaty), thereby using it as a useful vehicle to share insight and achievements of the summits with the rest of the world. To be successful, future high-level dialogues should include specific requirements in international conventions, the adoption of a more rigorous form of universal nuclear security/safety standards, and the introduction of some room for regional autonomy that can allow regional actors to bring in their own issues and share their valuable experiences with the international community. ■

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## Notes

<sup>1</sup> Ian Traynor, “Barack Obama launches doctrine for nuclear-free world”, *The Guardian* (Sunday 5 April 2009), <http://www.theguardian.com/world/2009/apr/05/nuclear-weapons-barack-obama> [accessed on Mar 15, 2016].

<sup>2</sup> National Intelligence Council, *Annual Report to Congress on the Safety and Security of Russian Nuclear Facilities and Military Forces* (February 2002), <https://www.dni.gov/index.php/about/organization/national-intelligence-council-nic-publications> [accessed on Mar 15, 2016], p. 2.





<sup>3</sup> Micah Zenko, 'A Nuclear Site is Breached', *The Washington Post* (December 20, 2007) <http://www.washingtonpost.com/wp-dyn/content/article/2007/12/19/AR2007121901857.html> [accessed on Mar 15, 2016].

<sup>4</sup> Matthew Bunn, a professor at Harvard University's Belfer Center for Science and International Affairs cited in Peter Goodspeed, 'Full Comment: Ongoing nuclear threat looms over Seoul summit' *National Post* (March 24, 2012), <http://news.nationalpost.com/full-comment/preventing-devastating-nuclear-terrorist-attack-aim-of-world-leaders-meeting> [accessed on April 20, 2016].

<sup>5</sup> Khammar Mrabit, Head of the IAEA's Office of Nuclear Security cited in Goodspeed (March 24, 2012).

<sup>6</sup> Nuclear Security Summit 2010, <http://www.nss2016.org/past-summits/2010> [accessed on April 19, 2016].

<sup>7</sup> Goodspeed (March 24, 2012). On the summit in Seoul, North Korea has accused ROK President Lee Myung-bak of being a traitor and attempting to provoke a nuclear war via the state-run KCNA news agency. Julian Ryall, 'North Korea: any critical statement on nuclear programme 'a declaration of war,' *The Telegraph* (March 22, 2012) <http://www.telegraph.co.uk/news/worldnews/asia/northkorea/9159922/North-Korea-any-critical-statement-on-nuclear-programme-a-declaration-of-war.html> [accessed on April 20, 2016]; Kiyoshi Takenaka and Jack Kim, 'Japan goes off script at nuclear summit to slam North Korea (March 27, 2012), *Reuters* <http://www.reuters.com/article/us-nuclear-summit-idUSBRE82P01620120327> [accessed on April 20, 2016].

<sup>8</sup> Takenaka and Kim (March 27, 2012).

<sup>9</sup> Ellen Barry, 'Fears about North Korean and Iran will dominate nuclear summit meeting in Seoul' (March 24, 2012), *New York Times* [http://www.nytimes.com/2012/03/24/world/asia/north-korea-and-iran-will-dominate-nuclear-summit-in-seoul.html?\\_r=0](http://www.nytimes.com/2012/03/24/world/asia/north-korea-and-iran-will-dominate-nuclear-summit-in-seoul.html?_r=0) [accessed on April 20, 2016].

<sup>10</sup> Michelle Cann, Kelsey Davenport and Sarah Williams, 'The Nuclear Security Summit: Progress Report' (July 2013), *An Arms Control Association and Partnership for Global Security Report*, pp. 5-14.

<sup>11</sup> Peter Cluskey, 'Minimising nuclear terrorism to top agenda at Hague summit: Two-day gathering of 58 nations likely to propose security measures for military and civilian materials,' *Irish Times* (Mar 24, 2014) <http://www.irishtimes.com/news/world/europe/minimising-nuclear-terrorism-to-top-agenda-at-hague-summit-1.1735398> [accessed on April 27, 2016].

<sup>12</sup> Ibid.

<sup>13</sup> Julian Borger, "Japan, Belgium and Italy reduce their stockpiles of nuclear material" (March 24, 2014), *The Guardian*, <http://www.theguardian.com/world/2014/mar/24/japan-italy-belgium-reduce-stockpile-nuclear-material> [accessed on March 15, 2016].

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Laura Holgate, NSC Senior Director for Weapons of Mass Destruction and Arms Control cited in 'White House Press Call: Previewing the Nuclear Security Summit,' *Nuclear Security Summit 2016* (March 30, 2016) <http://www.nss2016.org/news/2016/3/30/wh-press-call> [accessed on April 28, 2016].

<sup>17</sup> Regarding some more detailed information about some suspicious activities discovered at nuclear sites in Belgium since 2014, see this report: Matthew Bunn, 'Belgium Highlights the Nuclear Terrorism Threat and Security Measures to Stop it,' *The Huffingtonpost* (March 29, 2016), [http://www.huffingtonpost.com/matthew-bunn/belgium-nuclear-terrorism\\_b\\_9559006.html](http://www.huffingtonpost.com/matthew-bunn/belgium-nuclear-terrorism_b_9559006.html) [accessed on April 28, 2016].

<sup>18</sup> Ibid.

<sup>19</sup> The joint statements dubbed 'gift baskets' are not consensus documents, however they show collective commitments of summit participants who are working on the same issue in order to make progress and actually carry out activities.

<sup>20</sup> Laura Holgate (March 30, 2016); Inside the blankets are author's own interpretation.

<sup>21</sup> 'Iran Nuclear Deal: Key Details', *BBC* (16 January 2016), <http://www.bbc.com/news/world-middle-east-33521655> [accessed on 19 April 2016].

<sup>22</sup> Ibid.

<sup>23</sup> 'Status of the Additional Protocol: Status as of 26 February 2016', IAEA, <https://www.iaea.org/safeguards/safeguards-legal-framework/additional-protocol/status-of-additional-protocol> [accessed on April 30, 2016].

