

Nuclear Security at the Seoul Summit

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I. Introduction

✖ Coming in the wake of the Fukushima nuclear accident, which starkly reminded the world of the perils posed by nuclear materials, the Seoul Nuclear Security Summit faces a host of challenges.

Sharon Squassoni lays out what is at stake, what outcomes can be expected and those that, unfortunately, cannot.

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II. Report by Sharon Squassoni

-“Nuclear Security at the Seoul Summit”

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The second-ever summit devoted to nuclear security will be held in Seoul on March 26 and 27. In the two years since the first summit in Washington, DC, South Korean officials have sought to put their own stamp on what was essentially a pillar in US President Barack Obama’s overall nuclear agenda. South Korea, which has no stockpiles of vulnerable materials - highly enriched uranium and separated plutonium - and no terrorist activities on its soil to speak of, could hardly have placed nuclear terrorism high on its list of nuclear risks. North Korean nuclear weapons and provocations, understandably, loom much larger in government policy and in public opinion. Nonetheless, Korean officials have worked hard to shape the Seoul summit to reflect an agenda they can stand behind - one that addresses not just material security, but also radiological sources, nuclear facilities, sensitive information, and security between states, for example, border controls and illicit trafficking.

Among the experts, the problem of nuclear security is not a question of what to do, but getting all states to do it. We know which materials pose the greatest security risks - weapons-usable highly enriched uranium (HEU), separated plutonium and certain radioactive sources. We also know how to secure them and how to make alternative materials available. Consensus ends, however, when it comes to spending money. It is far cheaper and easier to leave a research reactor core using HEU in place than it is to reconfigure the core to use low-enriched uranium. Efforts to reduce the use of HEU fuel in research reactors have been conducted for more than 30 years by the United States, but progress has been slow. According to the Global Fissile Material Report 2011, there are more than 100 research reactors still using HEU today. [\[1\]](#)

This is where summits come in. Bringing national leaders together on a single topic can sharpen focus and provide the necessary political will to take actions that have long been delayed or thought unnecessary. For example, although the US had been urging Ukraine to secure and/or transfer its highly enriched uranium for more than a decade, it was not until the 2010 summit that Ukraine publicly committed to taking action. There is no doubt that the 2010 summit and the process of preparing for the 2012 summit have prompted states to make additional commitments and take actions where they might have delayed for even longer. The biggest question is whether these incremental steps are enough.

The ambience of the Seoul summit is likely to be heavily influenced by the enduring consequences of the March 2011 Fukushima accident. In many ways, circumstances have conspired to promote greater co-ordination and collaboration. The Fukushima nuclear accident highlighted the obvious: that nuclear crises do not respect borders. The nuclear security implications were likewise obvious.

Fukushima demonstrated the vulnerability of nuclear reactors and their spent fuel storage ponds to a cutoff in electricity - something that terrorists could target. It also demonstrated the magnitude of disruption that could result from a nuclear incident - something that terrorists might find attractive. In the aftermath of Fukushima, there have been calls for improved transparency, collaboration and reviews in nuclear safety. The nuclear security regime, which is much less developed than the nuclear safety regime, needs more than a series of summits to ensure that nuclear security improves over time. At stake is the protection of society from large-scale releases of radiation, whether as the result of an accident or an intentional terrorist act.

South Korean leadership could make the difference here. Often, nuclear security is viewed as the problem of "other states" - those with large weapons and materials stockpiles. Politically, South Korea straddles the nuclear weapon states and the non-nuclear weapon states because it has a significant nuclear energy program but no weapons. As an Asian economic powerhouse that depends on nuclear energy, South Korea appreciates the need for nuclear security and safety to underpin the growth of nuclear energy in the region. And as a rising nuclear power plant exporter, South Korea also understands that improved nuclear governance can reduce the risks of nuclear energy use in other regions.

At a recent event in Seoul, First Vice Foreign Minister Ahn Ho-young remarked: "There is a serious gap in global governance in the nuclear security area." He added: "When we develop a working institution to deal with the nuclear security issue, then, we will make another very important achievement, which is the development of the building blocks for global governance." Privately and publicly, Korean officials have supported a more enduring approach to improving nuclear security than just summits can provide.

Seoul summit outcomes

How much can we expect from the Seoul summit? Although Korean officials have stressed that the Seoul summit will not be a "cut and paste" of the Washington summit, the summit declarations and communiqué are not likely to differ much from those of two years ago. Korean officials have focused on practical steps to improve nuclear security, which means that little "out of the box" thinking is likely to emerge. Additional countries have joined the group - Azerbaijan, Denmark, Gabon, Hungary, Lithuania and Romania - but these do not pose major nuclear security risks.

At the Helsinki sherpa meeting last October, South Korean Deputy Minister Kim Bong-hyun outlined five principles underlying the drafting of the Seoul Communiqué: (1) continued focus on nuclear security; (2) continuity with the 2010 summit, while making new progress; (3) continued voluntary nature of national commitments and participation; (4) opting against the creation of a new regime; and (5) respecting President Obama's vision to secure all vulnerable nuclear material in a four-year lockdown.

With respect to developing building blocks of global governance, Kim's five principles offer little to go on. Although Korean officials have privately expressed their desire to implement standardized reporting on nuclear security, there has been little progress in the course of two years of summit preparations. Countries have resisted all but voluntary approaches. A first step toward institutionalizing progress would be for states to agree at the Seoul summit on a standardized nuclear security report for 2013, in advance of the 2014 summit to be held in the Netherlands. At the Dutch summit and possibly beyond, the serious tasks of devising a baseline standard of security or independent monitoring to verify that standards are met could be approached.

One of the hurdles to sharing information even on a state level is the natural tendency toward restricting rather than sharing information in this area. In fact, revealing security vulnerabilities is

considered to aid nuclear terrorists. However, it is absolutely critical to develop mechanisms that allow for sharing enough information among responsible authorities to improve practices across the board while preventing sensitive information from falling into the hands of adversaries. This “best practices” approach can be done at the operator level, through industry peer reviews. The World Institute for Nuclear Security (WINS) was created in 2008 for this and other purposes and should be utilized to the fullest extent.

The dogs that aren’t barking

The 2010 Washington Nuclear Security Summit was a small step toward making progress overall. The Obama administration sought to compartmentalize nuclear security in a way that would facilitate incremental progress. It was also important to cultivate broad support for a nuclear security agenda. This multilateralization of what is arguably more of a US and Russian problem underscores a broader theme - that eventual disarmament will require actions by all states. Although the 20 tons of HEU in research reactors pales in comparison to the 1,420 tons of HEU in military stockpiles, mostly in the US and Russia, the engagement of scores of states brings additional pressure to bear and helps strengthen norms. Universal adherence to key nuclear security legal instruments (the amended Convention on the Physical Protection of Nuclear Material, and the International Convention for the Suppression of Acts of Nuclear Terrorism) will be critically important for shoring up the weakest links.

One glaring gap in the Washington and Seoul nuclear security summits is the treatment of plutonium. Although the Washington communiqué recognized “that highly enriched uranium and separated plutonium require special precautions,” it only called for minimization of HEU (where technically and economically feasible) and left plutonium alone. In 2011, there were approximately 500 tons of separated plutonium worldwide, half in weapons stockpiles and half in the civilian sector. About 98 percent of that material is in the nuclear weapon states; Japan has a stockpile of about 10 tons of plutonium.

Although the US does not engage in civilian separation of plutonium from spent nuclear fuel, its allies do. And it is likely that US officials were loathe to dilute the sharp focus on nuclear security with a contentious debate about whether reprocessing spent fuel increases proliferation or security risks. One particular conclusion after Fukushima, however, is that spent nuclear fuel may be safer and more secure in dry cask storage than in traditional spent fuel storage ponds. An approach that encourages 100-year dry cask interim storage could have positive security and non-proliferation benefits if it delays or puts off decisions by some states (China, Japan, South Korea) to reprocess spent nuclear fuel. South Korea, however, is likely at best to remain silent on this issue, since its fuel cycle plans include development of fast reactors, which would require some form of reprocessing to procure fuel.

The role of civil society

Civil society groups are unlikely to be satisfied with the narrow objectives of both the Washington and Seoul summits. Such groups have made the connection between nuclear security and nuclear weapons, disarmament, and nuclear energy, some in more pointed ways than others. On Feb. 15, the People’s Action Against the 2012 Seoul Nuclear Security Summit held a press conference in Seoul declaring that it was not nuclear weapons and material that must be secured, but rather people’s safety. This group, which will hold events around the summit, demands the reduction and elimination of nuclear weapons and nuclear power. [\[2\]](#)

Other civil society groups are perhaps more subtle. In January, the Nuclear Threat Initiative launched the publication of the Nuclear Security Index, a collaborative effort with the Economist

Intelligence Unit. [3] That index sought to assess countries' performance in nuclear security according to five measures: 1) quantities and sites; 2) security and control measures; 3) global norms; 4) domestic commitments and capacity; and 5) societal factors. States that had more than 1 kg of material were assessed according to all five factors, while an additional 144 states that had less than 1 kg or none at all were assessed according to the last three factors. The interesting outcome of the NTI index was that countries with nuclear weapons did not fare as well as one might have expected, given the conventional wisdom that nuclear weapons pose fewer risks because they are well-guarded. Of the nine nuclear weapon states, six were in the bottom third of the 32 states with nuclear material; two were in the middle third, and one was in the top third.

The publication of NTI's Nuclear Security Index suggests that it may be possible to take a sweeping review of nuclear security that will help us determine where to set priorities in the future. A few countries have been upset with their scores (for example, India and Russia) but greater transparency there may help spur improvements. It is here that civil society organizations can make their greatest contribution: to continue pushing for transparency and accountability from their governments. If the Seoul summit makes any headway towards developing the building blocks for global governance in nuclear security, this too could strengthen the ability of all stakeholders to push for reforms that ensure safety against nuclear terrorism.

III. Endnotes

[1] International Panel on Fissile Materials, Global Fissile Material Report 2011: Nuclear Weapon and Fissile Material Stockpiles and Production, available at <http://fissilematerials.org/library/gfmr11.pdf>

[2] See www.no-nss.org

[3] Available at <http://www.ntiindex.org>

IV. Nautilus invites your responses

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