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Proposing a Nuclear Dialogue with North Korea

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NEW CHALLENGES TO THE GLOBAL NUCLEAR SECURITY GOVERNANCE

In July 2020, the Washington, D.C.-based Nuclear Threat Initiative (NTI) released its biennial NTI Nuclear Security Index (NTI Index) report. First published in 2012, the NTI Index is known for its comprehensive and systematic assessment of country-level progress on nuclear security. The report evaluates the various institutional, political, and physical measures taken by a nation to protect and secure its nuclear materials and facilities, working towards detecting, preventing, and responding to nuclear and radiological terrorism on national and international scales.

Titled “Losing Focus in a Disordered World,” this year’s NTI report aims to address how and why we have lost focus on nuclear security amid an increasingly disruptive global landscape. The international community began recognizing the critical importance of nuclear security when sources revealed that the terrorists involved in the September 11 attacks had originally intended to deploy nuclear bombs, a decision that would have resulted in mass killings and environmental devastation. Since this stark revelation, world actors led by the U.S. have striven to take bolder nuclear security measures as demonstrated by UN Security Council Resolution (UNSC) 1540 and the Nuclear Security Summit. Adopted unanimously in 2004, UNSC Resolution 1540 was the first of its kind to obligate UN member states to take nuclear security measures against the acquisition of nuclear materials by non-state actors. Launched in 2010, the Nuclear Security Summit is also of great significance as it has grown to become the largest summit on any single international security issue.

ABOUT THE AUTHOR

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Former U.S. President Barack Obama's definitive leadership, coupled with the enhanced nuclear security awareness of other political leaders, has contributed to greater progress on securing nuclear materials, in turn taking one step closer towards a world safe from nuclear terrorism. In particular, the U.S. war on terror combined with global efforts against terrorism succeeded in defeating the Islamic State—the biggest root of global terrorism—as well as in removing leaders of different terrorist organizations. While the possibility of large-scale terrorism has decreased significantly with the demise of such terrorist groups, the recent weakening of the global nuclear governance has presented a range of new nuclear security challenges. The latter half of the 2010s, for instance, was marked by a series of repeated terrorist attacks in major cities including Paris, London, Brussel, Mumbai, Boston, and Istanbul. Although nuclear and radiological terrorism has yet to occur, partially owing to the development of domestic and international nuclear security systems, the world is entering a new era of geopolitics with the rise of China, the return of Russia, and the retreat of the United States. We are now living in a more complex and unstable world order where states are unwilling to maintain global nuclear governance. Some experts assert that we have entered a G-Zero world where a lack of leadership will drive the world into a power struggle of all against all.

In such an unprecedented political environment, the international nuclear non-proliferation and disarmament regime appears inadequate—it can no longer effectively constrain the security ambition of states aiming to build their arms capabilities. Nuclear-weapon states have already begun a nuclear arms race by either modernizing and expanding their nuclear arsenal or adopting a more aggressive nuclear doctrine. Even non-nuclear-weapon states are more likely to

explore nuclear options in order to respond to the worsening security climate. Such increased nuclear activities along with a weaker regulatory regime heightens the likelihood of nuclear security incidents and accidents across the world.

Moreover, the side effects of globalization, further exacerbated by the disastrous human and socio-economic consequences of the COVID-19 pandemic, have undermined social and political stability—a domestic source of nuclear security. Many countries are currently suffering from deepening socio-economic inequalities, political polarization, immigration problems, and racial conflict—much of which have been caused or aggravated by globalization. Rising social and economic grievances could result in the radicalization of individuals and groups, presenting new dangers as such social and economic dissidents could go beyond their usual displays of defiance and commit acts of radiological terrorism. Another risk is the growing possibility of 'insider threats' where entities may sabotage nuclear facilities, taking advantage of their access to these sites. Even if such nuclear security incidents prove infrequent, the potential gravity of their consequences calls for intensive preventive measures. In today's digital age, the need to address nuclear security is more urgent than ever with the advent of artificial intelligence and cyber-weapons technologies.

In addition to the effects of globalization, the recent deterioration of the nuclear security environment has been spurred by the return of great power politics, accelerated rates of military buildup, a weakening rules-based international order, and an ongoing nuclear arms race. Given these looming nuclear security challenges, the publication of the 2020 NTI Nuclear Security Index is a timely reminder to recalibrate our efforts to nuclear security before it is too late.

ASSESSMENT OF NORTH KOREA'S NUCLEAR SECURITY PERFORMANCE

The 2020 NTI report divides countries with nuclear materials and/or facilities into three categories, each of which is graded by another set of indicators. The first category consists of 22 countries with more than one kilogram of weapons-grade nuclear materials such as highly enriched uranium (HEU) or plutonium (Pu). These 22 countries include the five nuclear-weapon states in the NPT (Treaty on the Non-Proliferation of Nuclear Weapons), four nuclear-armed countries (Pakistan, India, Israel, North Korea), and 13 other countries that possess fissile materials. These states are likely to be the main targets of terrorist and criminal groups aiming to acquire nuclear weapons or other improvised nuclear devices.

The second category comprises a lower risk group of countries without or with less than one kilogram of fissile materials. This category, which includes 153 countries and Taiwan, may also be targets of nuclear security attacks and threats as nuclear materials acquired from the 22 countries above can be employed anywhere. As these countries have various radioactive materials, however, they could be targeted by groups scheming to employ “radiological terrorism” using a radiological dispersal device called a dirty bomb. Possessing no fissile materials, South Korea belongs to this second category. The third category includes 46 states with large nuclear facilities, such as nuclear power plants or research reactors. Their nuclear facilities could be targets of nuclear sabotage.

North Korea, which belongs to the first category for its large quantities of weapons-grade nuclear materials, was ranked the lowest (22nd) in the overall evaluation of the Nuclear Security Index, receiving 19 points out of 100. Other countries in the lower rank group

include China, Israel, Russia, South Africa, Pakistan, India, and Iran. Iran was ranked 21st with 33 points.

More specifically, North Korea received zero points in terms of participation in and compliance with international norms and nuclear security measures, thereby highlighting the country's nonparticipation in global nuclear security regimes and measures. In other evaluation items, North Korea was given very low scores of 34 for risk environment, 33 for the amount of nuclear material and number of storage locations, and 27 for security and control measures. North Korea was also ranked the lowest (47th among 47 countries) in the overall assessment of protection against the sabotage of nuclear power plants or other nuclear facilities, scoring 17 points. The NTI also gave North Korea zero points for protection in terms of participation in and compliance with international norms and commitment to implementing nuclear security measures.

Arguably North Korea's greatest nuclear security risk is that their nuclear materials may be diverted, stolen, traded illegally, and/or placed in the wrong hands of groups aiming to perform acts of nuclear terrorism. Some argue that North Korea has strong physical protection and border control systems, declaring that overseas transport of nuclear materials is practically impossible. Nonetheless, theft and sabotage are not uncommon in North Korea; in fact, the North Korean government is riddled with materialism and corruption, both internally and externally. Reports have disclosed the frequency of smuggling and illegal border crossings on the 1,500 km-long border between North Korea and China as well as how North Korean diplomats often engage in illegal transactions and activities to earn foreign currency. As such, it is not difficult to imagine the possibility that Pyongyang may

even attempt to sell its nuclear materials and technologies abroad in order to obtain foreign currency. To prevent this, we must explore not only ways in which to help North Korea improve its nuclear security regime but also mechanisms for monitoring and preventing the nation's illegal nuclear trade.

The reality is that no one knows exactly how many nuclear facilities the state currently owns nor how much weapons-grade nuclear material has been produced over the years. The absence of information is due to the fact that North Korea has completely blocked outside access to its nuclear capabilities since the 1990s. Nevertheless, governments and civilian experts around the world have been using various sources and calculations to make estimates of North Korea nuclear quantities.

Published in January 2019, the 2018 Republic of Korea Defense White Paper assessed that North Korea has approximately 50 kilograms of weapons-grade plutonium and a “considerable amount” of highly enriched uranium. Approximately four to eight kilograms of plutonium or 25 kilograms of highly enriched uranium are required to make a single nuclear bomb. The International Panel on Fissile Materials, an authoritative group of experts in this field, estimated that North Korea has fissile materials capable of producing up to 60 nuclear warheads. The panel detailed that 40 kilograms of plutonium were extracted by reprocessing spent nuclear fuel from the 5MW graphite-moderated reactor in Yongbyon (as of 2016), while about 180 to 850 kilograms of highly enriched uranium were obtained from Yongbyon and another unknown enrichment facility. On the other hand, Stanford University Professor Siegfried Hecker (former Director of the Los Alamos National Laboratory) said North Korea had fissile materials capable of making 30 nuclear warheads by the end of 2017 and could produce enough nuclear materials to

build six nuclear warheads per year. According to one media report, the U.S. Defense Intelligence Agency (DIA) analyzed that North Korea has secured weapons-grade nuclear materials capable of making 65 nuclear warheads by 2019 and up to 12 bombs every year.

In summary, North Korea already possesses an arsenal of nuclear materials sufficient for the creation of several nuclear warheads. The state also appears to be producing nuclear material for more than six nuclear weapons each year. Under a weak nuclear security regime, North Korea's continued stockpiling of nuclear material poses a great danger to regional and global security that necessitates urgent attention and action.

THE NEEDS FOR NUCLEAR SECURITY DIALOGUE WITH NORTH KOREA

Since the emergence of the North Korean nuclear crisis in the early 1990s, global attention has concentrated solely on the “denuclearization” of the state: the complete, verifiable, and irreversible dismantlement of all its nuclear programs. There is no question that the denuclearization of North Korea is our ultimate diplomatic and security objective. North Korea's progressive accumulation of nuclear facilities and technologies presents a number of nuclear security dangers. For instance, the illegal overseas transfer of nuclear materials may result in nuclear or radiological terrorism, not to mention the potential sabotage of North Korea's vast nuclear facilities. One also cannot neglect the ever-present risk of nuclear safety accidents, especially as North Korea is widely known for its lax safety standards. Therefore, policymakers and analysts must not only focus on the denuclearization of North Korea but also on its mounting nuclear security risks. The issue, of course, is that raising North

Korea's nuclear security problem invites criticism on multiple fronts:

First, raising the issue with the North Korean nuclear security problem may cause both North Korea and the world to falsely believe that we recognize the North Korean nuclear program in its current state, or that we are at least willing to set it aside for the time being. Second, critics argue that if we choose to raise the nuclear security issue and conduct dialogue with North Korea, North Korean nuclear diplomacy would lose its focus on denuclearization. Third, it is unnecessary to raise nuclear security as a separate issue since this problem will disappear automatically once the denuclearization of North Korea is actualized. Fourth, nuclear security talks are improbable when taking into account North Korea's consistent refusal to come to the negotiation table.

Considering North Korea's advanced nuclear weapons program their leadership is unlikely to forsake the state's nuclear programs for the foreseeable future.. Nevertheless, we still need to direct diplomatic efforts towards North Korean denuclearization while simultaneously preparing for two additional measures. First, we should aim to strengthen military deterrence against North Korean military threats amplified by its nuclear capabilities. Second, we must seek to reduce and eliminate nuclear security risks posed by North Korean nuclear programs.

How do we reduce or eliminate nuclear security dangers from North Korea? To begin with, South Korea, the U.S., and/or the international community must engage in nuclear security talks with North Korea. Whether North Korea is willing or unwilling to engage in nuclear security talks, we should not simply assume that North Korea will never consent to partaking in nuclear security dialogue. In fact, Pyongyang has previously

joined other countries in denying and criticizing nuclear terrorism. North Korean experts have also demonstrated interest in nuclear security and U.S.-led Cooperative Threat Reduction programs on numerous occasions in the past.

Second, we need to induce North Korea to participate in international nuclear security regimes such as the Convention on the Physical Protection of Nuclear Material (CPPNM), the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), and the International Atomic Energy Agency (IAEA) Nuclear Security Guidelines. North Korea's participation in these regimes will serve to strengthen the nuclear security system in North Korea and the world at large. According to North Korean analysts, Kim Jong Un appears to harbor ambitions to portray his nation as a "normal country" and himself a "normal leader." If Kim truly desires to transform his country from a rogue state to a normal country, the use of persuasive tactics and compelling incentives may galvanize him to join international nuclear security regimes.

Furthermore, if initiating these governmental talks with North Korea proves challenging in the current climate, civilian nuclear security experts and NGOs can begin informal conversation with North Korean counterparts, hence creating an environment conducive to formal dialogue. The NTI could explore a nuclear security dialogue with North Korea considering how the organization has not been previously involved in discussions with the state on nuclear security and CTR. Alternatively, institutes and expert groups with histories of engaging with North Koreans can build on existing talks, thereby advancing the nuclear security agenda.

Finally, it is important to detect and prevent the illegal transactions or cross-border transfers of North Korean nuclear materials and technologies. To this end, concerned countries may work in collaboration with such organizations as the Global Initiative to Combat Nuclear Terrorism (GICNT), the Proliferation Security Initiative (PSI), and INTERPOL.

Nuclear security is not a new consideration to our North Korean nuclear policy. The U.S.-DPRK Agreed Framework and the September 19 Joint Statement of the Six Party Talks (2005), both of which provided technical and material support for North Korea's nuclear freeze and shutdown, are examples of such efforts to improve nuclear security in North Korea. Given that North Korea already possesses an ever-expanding nuclear arsenal, we must begin take action to prevent such nuclear materials from falling into the wrong hands. We must urgently instigate multi-party nuclear security talks while pursuing in parallel direct denuclearization negotiations with North Korea.

The Asia-Pacific Leadership Network for Nuclear Non-Proliferation and Disarmament (APLN) is an advocacy group that aims to inform and energize public opinion, especially high-level policymakers, to take seriously the very real threat posed by nuclear weapons, and to do everything possible to achieve a world in which they are contained, diminished and eventually eliminated.

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