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THE PROSPECTS FOR NUCLEAR DISARMAMENT

Revisiting the Nuclear Weapon-Free World Goals: A South Korean Perspective

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NORTH KOREA'S NUCLEAR ENDGAME AS ITS DESTINY

The synopsis report prepared by the Trilateral Commission Pacific Asia Group includes ambitious goals as part of moving toward a nuclear weapon-free world. It identifies challenges in the areas of nuclear disarmament, nonproliferation, nuclear terrorism, and civil nuclear energy, and it specifies phased action plans to meet them. For the purpose of nuclear disarmament, the report suggests as main goals the illegalization of nuclear weapons and nuclear tests together with a limited notion of missile defense as a complementary measure. In the area of nonproliferation, the report suggests a complete application of the NPT [Nuclear Non-Proliferation Treaty] safeguards and verification. It also proposes strengthening of non-NPT mechanisms such as the Nuclear Suppliers Group (NSG), the Comprehensive Test Ban Treaty (CTBT), and the Proliferation Security Initiative (PSI). To meet the challenges regarding the danger of nuclear terrorism, it suggests implementation of the Convention on the Physical Protection of Nuclear Material, global watertight control of material useable for “dirty bombs,” and full utilization of the science of nuclear forensics. Pertaining to civil nuclear energy, the report recommends multilateralization of the nuclear fuel cycle and development of proliferation-resistant

technologies for spent fuel treatment. For all the goals, the synopsis report suggests a phased approach toward an eventual nuclear weapon-free world beyond 2025. If applied to the Korean Peninsula, however, these goals and roadmaps seem to be a matter of irrelevance or luxury at best, at least in the short run, given the nuclear endgame North Korea desperately holds onto and the resulting dilemmas imposed upon South Korea.

Without further ado about the particulars of what has happened during the 20-year-long history of its nuclear game, the single largest reason for the North's stubborn adherence to "nuclear deterrence" has been the dilemma involving its political system. For the ruling strata in North Korea—who have enjoyed all sorts of privileges during 60 years of feudalistic dynastic dictatorship and therefore are well aware of the danger a demise of the political system poses—top priority is given to "regime survival." This is the main objective behind the North Korean leadership's elevation of its military-first policy to a governing ideology, thus sustaining loyalty from the military. The very reason for shunning reform and openness, all the while knowing that these measures would lead to immediate betterment of the North Korean economy, is also regime sustenance. The same goes for sticking to the *juche* agricultural method instead of a market economy-based one that would quickly improve its food situation, as well as for its rejection of foreign food aid that has increasing transparency in distribution attached as a condition. Therefore, requesting the North Korean leadership to give up the nuclear leverage that they believe to be the last resort in safeguarding the regime is like requesting them to give up their lives.

The dilemma involving the political system has been the core reason behind the nonproductive nuclear dialogue too, whether bilateral or multilateral. As its destiny, North Korea has utilized time-earning tactics while continuing weapons of mass destruction (WMD) development and pursuing the status of a nuclear weapon state as an international fait accompli. North Korea surely wants a guarantee for the security of the regime before it puts down its nuclear leverage. But this is not what the international community can provide. To guarantee the safety of a regime that still remains a dictatorship as well as the worst human rights offender would be contrary to the founding principles of the United States. Trapped by these dilemmas, the nuclear talks have gone around in the vicious cycle of "tensions, to agreements and quid pro quo, to violations and muddling through." Here, the question is, will the North Korean leadership show interests in the lofty goals of a nuclear weapon-free world?

SOUTH KOREA'S NUCLEAR DILEMMAS

Naturally, the North's die-hard nuclear ambition and its desperate endgame impose a variety of dilemmas upon South Korea. First of all, South Korea finds no reason to be really impressed by the North's "appeasement offensive" since August 2009 or by the increasing visible US-DPRK contacts as a "warm up" for the resumption of the nuclear talks. This is so because even ordinary South Korean citizens know that the North's peaceful gestures are unrelated to its will to put down its bombs and that resumption of the talks without such a will would mean simply returning to the "vicious cycle." After witnessing the long nuclear game played by North Korea, now most South Koreans have no difficulties in understanding the "two-track vs. two-track confrontation"—the US two-track approach of separating the issue of dialogue from the continuation of sanctions until tangible progress is made is directly confronted by the North Korean version of a two-track approach of separating the issue of negotiations from sticking to nuclear leverage.

This situation severely narrows Seoul's options in terms of North Korea policy. For South Korea, sharing the small peninsula with the North, both extreme choices are simply unacceptable: pursuing a collapse of the North Korean regime, the root cause of the nuclear endgame, is too risky, while deciding to live with North Korean bombs is too irresponsibly dangerous. The only possible choice should be a "third way" in which South Korea keeps trying to induce gradual improvement of the North's political system and phased reforms. In this sense, both of the so-called ideas of "denuclearization-opening-3,000"—President Lee Myung-bak's election pledge—and the "Grand Bargain" recently suggested by him reflect the "third way" approach. By those pledges and suggestions, South Korea is asking the North to show a firm and comprehensive will for denuclearization and reforms in one way or another and telling North Korea that it will reopen its North-bound assistance while allowing the gradual and phased implementation of denuclearization and reforms.

This means that South Korea has to live with the bombs at least for the time being. Now North Korean ballistic missiles over the Scud-C level can reach any targets within South Korea within the timeframe of one to seven minutes, allowing no time or spatial leeway for South Korea to intercept them. Its aircrafts, like the IL-28, MIG-21, MIG-23, and MIG-29, can also serve as effective delivery vehicles. The question frequently asked by the Western media, "Has Pyongyang succeeded in making useable nuclear weapons?" is both irrelevant and annoying since the North already has a

variety of ways to threaten the South, including special operation forces infiltration and terrorist use of radiation dispersal devices or biochemical weapons, not to mention the use of missiles or aircraft. An interim conclusion may be that the North's WMD must be an object to be deterred rather than one to be defended against. Any efforts to defend against them or to minimize damage after the use of such weapons will have only limited significance, given the geographical proximity, population density, and congestion of South Korea's cities, as well as budgetary and technical limitations.

This situation requires South Korea to grope for autonomous and international measures to deter the nuclear threat. The former involves deterrence of the threat by cultivating advanced conventional weaponry and deterrence capabilities, thereby autonomously thwarting the threat. The latter entails deterrence via alliance management, such as extended deterrence and nuclear diplomacy. Since the former requires time, money, and political consensus while the latter does not, the pursuit of protection through alliance management should be an immediate task for South Korea. It is in this vein that many strategic planners in Seoul as well as in Tokyo believe that now is high time for the United States to strengthen extended deterrence involving its allies in East Asia.

Accordingly, it was a necessary and appropriate international measure to strengthen the nuclear umbrella during the June 16, 2009, ROK-US summit. The "joint vision" statement signed by both presidents includes the intent to continually provide for extended deterrence, including the nuclear umbrella.¹ By inserting the nuclear umbrella into the summit document, its legal standing did somewhat increase. By placing the nuclear umbrella as a subcomponent of extended deterrence, room was made to include protection from non-nuclear WMD in extended deterrence. In all, one could judge that the June 16 summit was successful in both elevating the legal standing of the nuclear umbrella as well as expanding the scope of protection. The US promise of extended deterrence was once again reconfirmed in October 2009 at the 41st ROK-US Security Consultative Meeting in Seoul.²

1. The Joint Vision for the Alliance of the United States of America and the Republic of Korea reads, "We will maintain a robust defense posture, backed by allied capabilities which support both nations' security interests. The continuing commitment of extended deterrence, including the US nuclear umbrella, reinforces this assurance."

2. US credibility on the provision of the nuclear umbrella for South Korea has been annually confirmed since 1978 through the joint statement at the Security Consultative Meeting.

PESSIMISTIC SHORT-TERM PROSPECTS

To begin with, the goals involved with creating a nuclear weapon-free world will have to face North Korean intransigency. The nonproliferation goals will collide with the DPRK's die-hard nuclear ambition and its continued rejection of the NPT. Any request to abide by non-NPT international norms—such as the Chemical Weapons Convention (CWC), the Missile Technology Control Regime (MTCR), and the PSI—would be like chasing a mirage to North Korea, which rejects all of them. For the present, the nation is highly unlikely to return to the NPT, which it withdrew from in 2003. The disarmament goals could be highly elusive too. Though North Korea has often said, “We want nuclear disarmament talks with the United States” and “the denuclearization of the Chosun Peninsula is the will of the departed President Kim Il-sung,” its intention is much different from what some naive listeners may believe. By suggesting disarmament talks, the North seeks political recognition of its status as a nuclear weapon state. By referencing the “denuclearization of the Chosun Peninsula,” the North is in fact demanding abolition of the US nuclear umbrella, as well as even the prohibition of passage or entry of nuclear-armed US naval vessels or aircraft into South Korea, as a precondition before talking about its return to the NPT and denuclearization. It is with the “will of the late leader” that North Korea has indefatigably clung to plutonium production. With this “will,” North Korea has thus far managed to pull off two nuclear tests and consolidated its position as a de facto nuclear weapon state despite the 12 sessions of the Six-Party Talks. It is also with this “will” that it is expanding its nuclear weapon programs into uranium enrichment. Given that historically there has not been a nuclear weapon state that has relied only on a single source of either plutonium or uranium, there is no problem with assuming that the North is also pursuing a parallel uranium bomb program alongside the plutonium program.³

Under these circumstances, South Korea's strategic calculus is very complicated. First of all, South Korea has reasons to worry about President Obama's “Nuclear Weapon-Free World” initiative and reasons to be concerned about unwanted spillover from the designation of President Obama as the 2009 Nobel Peace Prize laureate. President Obama, seemingly

3. Though North Korea did not self-reference the enrichment issue before 2009, experts including the author have been asserting for five to six years the existence of Pyongyang's enrichment program based on imports from Pakistan of enrichment components and dual-use items. See Taewoo Kim, “Implications of A. Q. Khan's Testimony,” *Weekly Defense Review* 994 (May 10, 2004).

immersed in the logic of the “zero option,” focuses on reducing the nuclear weapons stockpile as well as dependence on nuclear weapons. Under his leadership, Washington emphasizes further nuclear disarmament agreements with Russia, a drastic cut in nuclear weapons, and reinforcement of the nonproliferation regime.⁴ Aware of the fact that the second edition of the Nuclear Posture Review (NPR) under President Bush gained international criticism for its unilateral nature of nuclear strategy and pursuit of nuclear superiority, President Obama also seeks mitigation of the unilateral tint in the third edition of the NPR to be published soon. While his new stance should be welcomed globally as an important step toward nuclear peace, South Korean concerns center around the ripple effects, i.e., the possibility of US nonchalance in reassuring its East Asian allies that have nuclear insecurity.

For example, the NPR may be revised in a manner so as to dilute deterrence against the North's chemical and biological weapons. At a press conference in 2002, President Bush clearly advocated retaliation against states threatening the United States and its allies with WMD, with the second NPR also outlining three scenarios upon which nuclear weapons can be deployed: to destroy HDBT [Hard and Deeply Buried Targets], to retaliate against a preemptive attack by an opponent using nuclear, chemical, or biological weapons, and to counter a situation wherein a rogue state or terrorist organization employs an unexpected arsenal. However, the provision of extended deterrence against a non-nuclear WMD attack is increasingly questionable in the Obama administration. South Korea, and probably Japan too, wants North Korea's use of its chemical and biological weapons to be included under a category requiring extended deterrence.

The triad system may be another example. The new triad laid out by the Bush administration in the second NPR had coupled tactical nuclear weapons with conventional strategic capability in the framework of nuclear retaliatory measures. Conventional weapons are high on the usability list, which contributes to the credibility of extended deterrence. If such measures are deleted or buried in the nuclear disarmament fever, there will be a perception of a weakened US commitment to protecting

4. Currently, the Obama administration is making internal headway into publishing the new NPR by the end of 2009, but one can observe the overall trajectory of the NPT through prior research undertaken by a taskforce facilitated by the United States Institute of Peace and funded by the US Congress. See William J. Perry and James R. Schlesinger, *America's Strategic Posture* (Washington DC: United States Institute of Peace, 2009).

its allies. In order to effectively deter the North, the intent to adopt advanced conventional weapons in the overall nuclear retaliatory system as envisioned by the second NPR must continue to be in effect under the Obama administration.

Of course, many other changes that the Obama administration may attempt will not weaken the extended deterrence, at least theoretically. For example, a return to the no-first-use policy, which the 2002 NPR renounced, has nothing to do with weakening extended deterrence since it will not become operational so long as Pyongyang does not push ahead with any WMD provocation. Likewise, drastic nuclear disarmament will not undermine extended deterrence since in no case will the United States lack in nuclear weapons and delivery vehicles to be used for the purpose of extended deterrence. This is why the key question is whether or not the US government will place appropriate gravity on providing extended deterrence for its allies. As long as it does so, its allies will have to welcome a US return to the no-first-use policy and disarmament as necessary initiatives to intensify its moral position. In any case, it does not seem easy for South Korean strategic planners, preoccupied with national survival and security under the WMD threat from the North, to digress by engaging in the discussion about a nuclear weapon-free world.

In the meantime, the goals for achieving a nuclear weapon-free world related to the control of nuclear material and the peaceful use of atomic power are things that can be easily said but difficult to do. Although Professor Graham Allison suggests numerous ways in his 2004 book, including the “three No’s,” watertight control of nuclear material needs much more concerted work at the global level.⁵ Particularly, the two goals can be mutually contradictory over the central issue of proliferation of the fuel cycle, and the contradiction is becoming the source of vehement “enrichment-reprocessing politics.” For nuclear weapon states and those possessing enrichment-reprocessing capabilities, prohibition of further proliferation of critical technologies would best serve their national interests, i.e., control of sensitive material plus maintenance of their monopoly over enrichment and reprocessing. While the global effort toward nonproliferation of enrichment and reprocessing such as the US-led Global Nuclear Energy Partnership (GNEP) initiative has some legitimacy since it helps combat cheating countries, it can victimize those non-nuclear weapon states with heavy reliance on atomic energy.

5. The three No’s are “no loose nukes,” “no new nascent nukes,” and “no new nuclear weapon states.” See Graham Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (New York: Times Books, 2004).

This situation is becoming an unending frustration for countries like South Korea. South Korea has disavowed possession and operation of enrichment and reprocessing pursuant to the inter-Korean Joint Declaration of the Denuclearization of the Korean Peninsula signed on December 31, 1991, after US arm twisting.⁶ Since then, unfortunately, nuclear activities took place as had been predicted.⁷ South Korea alone complies with the Joint Declaration, whereas North Korea has ignored it until it became a nuclear weapon state with its 2006 and 2009 nuclear tests. The humiliating situation still continues.

However, the humiliation should be a matter of secondary concern when many scientists ask a more painful question: why should South Korea, a country inevitably depending on atomic energy, give up its peaceful use of enrichment and reprocessing, which is not illegal under the NPT? Their immediate concern pertains to spent fuel disposal. South Korea can survive an absence of enrichment by importing enriched uranium to fabricate fuel assemblies for its 16 light water reactors. For the four CANDU heavy water reactors, it imports natural uranium. Though there are constant demands on the part of the scientific community regarding enrichment for domestic production of nuclear fuel, the absence of enrichment capacity is not really an unforgiving situation as long as the international prices and supply of uranium remain stable. The remaining question is what South Korea—without reprocessing—can do to dispose of the spent fuel.

The 20 reactors annually spit out some 850 tons of spent fuel, totaling some 10,000 tons. South Korea temporarily stores the spent fuel in water pools in each of the four reactor sites. Given the nation's long-term plans for the atomic industry, the accumulated quantity of high-level radioactive waste will amount to 88,000 tons by 2100, while the current storage

6. Through the Joint Declaration, both Koreas agreed not to possess enrichment or reprocessing facilities. The signing was preceded by a ROK-US security meeting in Hawaii in August 1991 in which the United States requested that Seoul disavow its enrichment and reprocessing program.

7. This author predicted that South Korea's atomic industry would suffer from the disavowal of enrichment and reprocessing while the nation would be destined to face a nuclear-armed North Korea. See: Taewoo Kim, "South Korea's Nuclear Dilemmas," *Korea and World Affairs* 16, no. 2 (Summer 1992): 250–93; "Shaping the US-North Korea Nuclear Relations: A South Korean Perspective" (paper presented at the International Workshop and Conference on Nuclear Proliferation: Challenges of a New Era, Carnegie Endowment for International Study, Washington DC, November 16–18, 1993); "South Korean Patience Wearing Thin," *Bulletin of the Atomic Scientists* (September/October 1995): 3; "The US-DPRK Nuclear Rapprochement in the South Korean Dilemmas," *Third World Quarterly* 16, no. 4 (November 1995): 661–74.

facilities will approach saturation in 2016. A central question may be, did South Korea disavow the right to safely dispose of its highly radioactive waste by signing the Joint Declaration?

Now, South Korea's atomic scientists grapple with two simultaneous tasks—how to permanently dispose of the spent fuel rods and how to abide by nonproliferation norms. For them, only two ways may be conceivable: (1) direct deep geological burial of the spent fuel rods without chemical treatment and (2) pyroprocessing. While direct burial is too burdensome both environmentally and politically for a country with little territory, some scientists find pyroprocessing to be second best, as it still significantly reduces the volume, heat, and radiotoxicity of the waste while not separating plutonium from it. However, whether the international community will support this is questionable at a time when strong countries are trying to outlaw all kinds of reprocessing activities. The US opposition to this proliferation-resistant method embarrasses South Korean scientists as well as their government.

Under these circumstances, countries like South Korea will have difficulties accepting the GNEP or other similar international regimes that once again divide the world into the “haves of reprocessing” and “have-nots,” following the NPT that divided the world into nuclear weapon “haves” and “have-nots.” A multilateralization of the nuclear fuel cycle, recommended by the synopsis report, may be the right answer but is not likely to be feasible. For example, if all enrichment and reprocessing facilities in countries other than those nuclear-weapons-state members of the NPT are multinationalized in possession, operation, and safeguards, it would help countries like South Korea get rid of a sense of deprivation and discrimination and would ensure a stabilized supply of enriched uranium and reliable international disposal of the spent fuel. However, whether nuclear realpolitik will allow this is highly questionable. This can be easily said but will be hard to conduct in the real world.

LONG-TERM PROSPECTS

The long-term prospects for a nuclear weapon-free Korean Peninsula seem less pessimistic than the short-term ones. Above all, the leadership in Pyongyang has only two choices in the end: give up its nuclear weapons and pursue reform and openness, or retain its nuclear arsenal and isolate its regime and people. The first will essentially lead to the improvement of the living standards of ordinary North Koreans, but the vested strata reject it as

they worry about “capitalistic contamination” and thereby the possibility of regime collapse. This is why the second option is the inevitable alternative for the time being, since it prevents any imminent demise of the regime despite the destitution and isolation its people suffer from. However, the second option will not last permanently given all of the contradictions being accumulated both internally and externally. The nuclear drama directed by the totalitarian regime in Pyongyang may end at any time via voluntary decision, implosion, collapse of the regime, or other causes. The problem is that no one knows when and how it will take place.

Fortunately, South Korea, or a unified Korea, will have no reason to pursue nuclear weapons. For South Korea, the DPRK nuclear threat, the single largest factor that could encourage a South Korean response in kind, is well offset by the robust ROK-US alliance and extended deterrence. The military potential of Japan's atomic industry will also not function as an encouraging factor as long as the US-Japan alliance and ROK-US-Japan trilateral collaboration remain strong. In addition, South Korea has many other factors that discourage this. For South Korea, the external dependency of its economy and its maturity in democracy overwhelm the role of the two groups of mythmakers: the extreme rightists, including some of the Korean War warriors, who demand that South Korea respond in kind to deal with the North's bombs; and some extreme reformists as well as some pro-North Korean activists and young people, who believe that South Korea should not oppose North Korean bombs because they will become Korean property when the Korean Peninsula is unified. With the 13th largest GDP in the world, South Korea's economy has grown too much to risk isolation. Likewise, its democracy teaches the South Koreans how nuclear weapons undermine their prosperity and dampen their unification dream.

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