

ON STRENGTHENING EXTENDED DETERRENCE FOR THE ROK-U.S. ALLIANCE

By **CHANG KWOUN PARK** and
VICTOR A. UTGOFF

The Democratic People's Republic of Korea is well on its way to establishing nuclear forces that can strike targets throughout the Republic of Korea (ROK) and Japan, and beyond. It has deployed medium-range ballistic missiles. It tested nuclear weapons in 2006 and 2009. It is likely to be developing nuclear warheads deliverable by ballistic missiles. While international efforts might get North Korea to eliminate its nuclear weapons program, this seems most unlikely. Thus, the ROK-U.S. alliance must respond to this evolving threat.

The alliance has been strengthening its extended deterrence arrangements. In the many high-level meetings of alliance leaders since the first North Korean nuclear test, a variety of steps have been taken. In June of 2009, the presidents of the two allies signed the Joint Vision for the ROK-U.S. Alliance, pledging to build a comprehensive strategic alliance of bilateral, regional, and global



U.S. Navy (Adam K. Thomas)

USS *Tucson* transits seas east of the Korean Peninsula during combined alliance maritime and air readiness exercise *Invincible Spirit*

scope. More specific changes are apparent if we compare the statements made at the end of the yearly Alliance Security Consultative Meetings (SCMs) in 2006, held just after North Korea's first nuclear test, and those held in 2011 and 2012.

In the 2006 SCM, "Secretary of Defense [Donald] Rumsfeld offered assurances of *firm* U.S. commitment and *immediate support* to the ROK, including *continuation of the extended deterrence offered by the U.S. nuclear umbrella*, consistent with the Mutual Defense Treaty."¹ In the 2011 SCM:

*Secretary of Defense [Leon] Panetta reaffirmed the continued U.S. commitment to provide and strengthen extended deterrence for the ROK, using the full range of capabilities, including the U.S. nuclear umbrella, conventional strike, and missile defense capabilities. Moreover, the Minister and the Secretary decided to further develop the Extended Deterrence Policy Committee (EDPC), already held twice this year, which serves as a cooperation mechanism to enhance the effectiveness of extended deterrence. To this end, the Minister and the Secretary endorsed the "EDPC Multi-year Work Plan," and decided to develop a tailored bilateral deterrence strategy including future activities, such as the ROK-U.S. Extended Deterrence Table Top Exercise (TTX), to enhance effective deterrence options against the nuclear and WMD threats from North Korea.*²

Then in the 2012 SCM:

*the Secretary and the Minister decided to develop a tailored bilateral deterrence strategy through the Extended Deterrence Policy Committee . . . particularly against North Korean nuclear and WMD threats. To this end, the Secretary and the Minister approved the joint concepts and principles of tailored deterrence, upon which the bilateral deterrence strategy is to be based.*³

The increasing breadth of the U.S. extended deterrence commitments reflects the ROK's need for assurance that it can continue to rely on these commitments. It demonstrates U.S. willingness to provide such assurance. Moreover, it highlights the need to take further concrete and timely steps to strengthen extended deterrence as the North Korean nuclear threat evolves. But what steps should be taken and under what circumstances?

This article summarizes the more important arguments for why and how the extended deterrence arrangements for the alliance might be strengthened. It considers both the technical steps already identified in SCM communiqués and further steps that might be needed. The purpose is to illustrate how the more important interests of the two allies might be expected to shape further strengthening of the alliance's extended nuclear deterrence. The article then describes how a small nuclear force might enable North Korea to challenge the alliance with intense crises or perhaps even by initiating the use of nuclear weapons. Next, the article argues that there is already a strong basis for confidence in the alliance's extended nuclear deterrence arrangements, but nonetheless that further strengthening would be needed as North Korean nuclear capabilities evolve. The article then discusses the more desirable features that the allies should want to see in strengthened arrangements for extended deterrence. After presenting an example plan for how alliance arrangements for extended nuclear deterrence might be prepared to adapt over the next decade and beyond, the final section provides some conclusions. The article thus presents a picture of how extended nuclear deterrence arrangements for the alliance would have to evolve given the continued evolution of the North Korean nuclear threat.

Potential Scenarios for DPRK Nuclear Challenges

How might North Korea make use of nuclear forces? We see three plausible scenarios for nuclear-backed aggression that North Korea might think it could profit from.⁴ First, North Korea might gamble that nuclear strikes that destroyed the most important alliance command and control centers would enable quick victory. Such attacks would presumably leave the ROK armed forces without high-level leadership and essential intelligence. DPRK military forces might then break through weakened alliance defenses and paralyze South Korea by capturing Seoul and by making deep penetrations to neutralize key military targets.

Success in decapitating alliance leadership with nuclear strikes would require better nuclear and missile technology than North Korea apparently has. But we can expect further improvements. North Korea would require sufficient nuclear forces to survive potential attacks by alliance precision strike

capabilities and then penetrate its missile defenses as well. Alliance efforts to strengthen these capabilities should help guard against and thus deter this potential scenario. The alliance should also ensure the survivability and connectivity of its high-level command and control capabilities despite nuclear attacks.

In the second scenario, North Korea would optimistically presume that its willingness and capacity to endure the pain of a few nuclear strikes and keep fighting is greater than that of the alliance. It would further assume that (a) the alliance cannot destroy a substantial portion of its nuclear forces or defend effectively against those it succeeds in launching, (b) fear of further nuclear strikes would greatly limit the alliance's retaliation, and (c) the alliance would quickly offer a settlement of the conflict that would be a major improvement over DPRK prewar circumstances, even taking into account the damage it had suffered.

In this scenario, too, strong precision strike capabilities and defenses for the alliance would make a big difference as they would negate presumption (a) above. Furthermore, to the extent that the alliance could make clear that it would not concede anything that North Korea could possibly value enough to outweigh the damage it would suffer, this scenario might be deterred. The United States has a fundamental interest in demonstrating to all its allies and potential adversaries worldwide that it will—at a minimum—not allow a state to profit by attacking it or its allies with nuclear weapons.⁵

In the third type of scenario, North Korea would not commit to nuclear war but would instead test the alliance with intense crises, conventional military provocations, and frightening nuclear threats to see if such brinkmanship can shatter alliance resolve. Single initiatives of this kind might be aimed at winning some specific concession. Alternatively, a series of such initiatives might aim at gradually weakening the allies' resolve and loosening the ties between them.

In confronting any highly stressful DPRK nuclear-backed provocation, the allies

Dr. Chang Kwoun Park is a Senior Research Fellow in the Center for Security and Strategic Studies at the Korean Institute for Defense Analyses. Dr. Victor A. Utgoff is a Senior Division Fellow in the Strategy, Forces, and Resources Division at the Institute for Defense Analyses.

would need to agree on and implement effective and timely steps to convince the North that its provocation will at best not do it any good and could lead to disaster. The confrontation will have to be carefully managed by the alliance and teach the right lesson: that such brinkmanship is not worth its costs and risks. For at least three reasons, this kind of scenario seems much more likely than the first two, though they could evolve from it.

First, North Korea would expect to control the pressure it puts on the alliance, escalating only so long as the alliance has not found an effective counterstrategy, does

tests of alliance resolve as the DPRK nuclear threat continues to emerge.⁹

Our third reason for believing that nuclear-backed provocations are the most likely of nuclear scenarios is that intense provocations serve the interests of the Kim dynasty that has ruled North Korea. Military provocations allow the dynasty to portray itself as once again bravely defending the nation against aggression by the United States and its ROK “puppet” government—thus suggesting that the Kim dynasty’s leadership is essential to its citizens’ security. Military provocations can also cause reactions from

circumstances from which the scenario seems to offer escape. Thus, the alliance and other regional powers must keep an eye on conditions in North Korea and consider providing humanitarian aid if dire circumstances threaten, so long as it is not provided in response to threats.

Alliance Confidence in Extended Deterrence

The current basis for the allies’ confidence in extended deterrence is sound. History counts for a great deal in both cultures. The ROK-U.S. alliance was established during a war where some 30,000 U.S. military personnel died, and the allies have been reliable partners in facing security challenges on and off the Korean Peninsula ever since. While relations between the allies have their ups and downs, ties of such consistent strength and duration can be expected to survive whatever challenges North Korea might attempt.

The credibility of the alliance’s extended deterrence is backed up by continuing U.S. contributions to ROK defense, by the U.S.-ROK defense treaty, and by the U.S.-ROK combined defense system. The United States is committed to maintaining more than 28,000 U.S. military personnel in South Korea and providing much larger forces in the event of war. As expected of a strong alliance, its military forces carry out a regular schedule of exercises with each other.

The nuclear component of the alliance’s extended deterrent is vastly superior to any nuclear forces North Korea could ever hope to have. Alert U.S. nuclear forces are always within range and more than sufficient to derive the maximum deterrence of North Korea that can be had from such forces. U.S. nuclear forces could be deployed in South Korea within a few days whenever the alliance’s concerns might dictate.

Finally, the ROK-U.S. alliance is a key component of the global system of alliances maintained by the United States for its own security. Failure by the United States to meet its most important security obligations would risk the collapse of the entire system.

While the basis for confidence in the alliance’s extended deterrence seems sufficient now, as the DPRK nuclear threat continues to evolve, the alliance’s extended deterrence will have to evolve, too. Improved defenses and conventional strike forces will need to become a reality. The nuclear deterrence arrangements

various motivations for North Korea to continue military provocations seem unlikely to recede any time soon

not appear likely to escalate excessively, and shows signs it might make substantial concessions. Second, North Korea has a long history of initiating provocations against the allies stretching back to its invasion of South Korea in 1950. Its more serious provocations since then include several attempts to assassinate presidents of South Korea; the capture of a number of ships including the USS *Pueblo*; the highjacking, attacks on, and bombings of several ROK and U.S. aircraft; and the abduction of South Korean citizens.⁶ These provocations took place mostly in the decades immediately following the Korean War. In recent years, most of them have been associated with DPRK nuclear proliferation, especially its nuclear weapon and missile tests. North Korea has on occasion threatened to turn Seoul into a “sea of fire.”

More troubling at this point are two severe DPRK provocations in 2010. The first was the sinking by North Korea in April 2010 of the ROKS *Cheonan*, a South Korean naval ship. This attack caused greater loss of life than North Korea had inflicted on the South in more than 20 years. The second was a DPRK artillery attack in November 2010 on Yeonpyeong Island, which is near the Northern Limit Line of the Yellow Sea (West Sea). This attack was seen as particularly significant because two of the four people killed on the island were civilians, and because this was an attack on South Korea’s sovereign territory.⁷ The ROK government has since promised strong retaliation for any future military attacks by the North.⁸ These especially intense provocations may foretell even more intense

the alliance that can unify the North while the new leadership is consolidating its control. Provoking the alliance can impress the military by demonstrating its new leader’s willingness to act boldly against powerful adversaries, as well as demonstrating the military’s willingness to follow his leadership.¹⁰

Finally, these various motivations for North Korea to continue to mount military provocations against the alliance seem unlikely to recede any time soon. We might hope that the extra dangers that North Korea would face as a result of its having become a nuclear-armed adversary would induce new caution, but the alliance should not count on that.

It seems clear that the extended deterrence capability of the alliance—including strategic strike capabilities, missile defenses, and nuclear deterrence arrangements—would help to deter and, if need be, defend against the first two types of scenarios. It could also help the alliance to deter the third type of scenario. Strong extended deterrence arrangements of these kinds should make it easier for the allies to discount the nuclear threats that North Korea makes. We note that while the allies surely do not look forward to the intense provocations that seem likely to come, the experience of successfully weathering them should draw the allies closer together. In general, better anticipation and advance preparations to respond firmly to DPRK provocations should help to deter provocations.

Note that any of the three scenarios would be more plausible to the extent that North Korea finds itself in desperate cir-

will need to be strengthened on a timely basis. To do otherwise would risk a crisis of confidence in the ROK-U.S. alliance—and among other U.S. allies as well. It could encourage North Korea to believe that it could establish a meaningful advantage in coercive power. DPRK efforts to pose an increased threat to the alliance should be answered with increased costs and concerns for them.

Desirable Features for the Extended Deterrent

The following six observations are interpretations of points made in the four defense policy papers released by the United States in 2010, especially the Nuclear Posture Review (NPR), or were drawn from two papers written separately by the authors,¹¹ or in several cases from our discussions.

Broaden Extended Deterrence to Include Missile Defenses and Conventional Strategic Strike. These two steps were agreed to and reaffirmed in the last three SCM communiqués. The 2010 NPR calls for “work[ing] with allies and partners to respond to regional threats by deploying effective missile defenses, including in Europe, Northeast Asia, the Middle East, and Southwest Asia.”¹² The United States is also pursuing enhanced long-range strike forces that can help protect U.S. forward forces and allies.¹³ They would be able to strike a limited number of targets from intercontinental distances in tens of minutes. Of course, conventional forces within the theater may be similarly capable and quicker. We discuss this possibility later.

Some observers are concerned that this broadening of the alliance’s extended deterrence implies a weakening of its nuclear component. Their concerns may be based on President Obama’s commitment “to seek the peace and security of a world without nuclear weapons.”¹⁴ The 2010 NPR connected this commitment to changes in extended deterrence arrangements by stating that “Strengthening the non-nuclear elements of regional security architectures is vital to moving toward a world free of nuclear weapons.”¹⁵ At the same time, the President and high-level U.S. officials have continued to state, “so long as [nuclear] weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary and guarantee that defense to our allies.”¹⁶

Missile defenses and strategic strike forces should give the alliance substantial advantages in the event of war with North

Korea. It is at least conceivable that as defense and strike technologies improve, these forces could greatly limit the number of targets North Korea could expect to destroy. If the alliance were able to suppress DPRK nuclear forces to this degree, its dependence on nuclear weapons to deter North Korea would be much reduced. Of course, such effective protection may not be possible. And even if it is, the alliance may be substantially uncertain of how effective it is. North Korea might succeed in building effective countermeasures, perhaps with help from outside. It might also plan other means for transporting nuclear weapons to alliance targets.

Despite the uncertainties and the substantial costs, even considerably less than perfect protection against North Korean nuclear attack could be valuable. Every DPRK nuclear-armed missile that does not reach its target would reduce the potential damage to the alliance and could justify limiting the damage the alliance imposes in retaliation. Finally, missile defenses and strategic strike capabilities could help allied citizens maintain their confidence when North Korea threatens to turn Seoul into a “sea of fire.” Nonetheless, given the high likelihood that the missile defenses and strike capabilities deployed by the alliance would prove substantially less than perfect, the Alliance must continue to

arrangements could be established—perhaps similar to the North Atlantic Treaty Organization’s Nuclear Planning Group—to enable both allies to work out nuclear strategies—and to plan specific nuclear options for possible choice by the two presidents.

Consultation by the two presidents would be needed to decide on the nature and timing of any nuclear use, and even threats of use. Both would want to remain within their homelands. Their consultations with each other and essential subordinates would have to be supported by reliable, secure, high-bandwidth communications.

Finally, both allies’ military forces should participate in carrying out the necessary nuclear missions.

Establish Jointly Controlled Conventional Strategic Strike Capabilities. Former ROK Defense Minister Kim Tae-young stated in his confirmation hearing that the locations of DPRK nuclear facilities are known and that if there is a concern that North Korea is going to make a nuclear attack, the United States and South Korea would then make the final decision on whether or not to strike these facilities.¹⁷

While nuclear attacks on these facilities might offer the best chance to destroy them, unless low-yield precision delivery weapons can be made available, nuclear preemption

despite uncertainties and substantial costs, even considerably less than perfect protection against North Korean nuclear attack could be valuable

maintain a strong nuclear deterrent.

Enable the ROK to Share Alliance Nuclear Responsibilities More Fully. There are at least two strong arguments in favor of ensuring that the two allies share the responsibility for any nuclear use. First, both presidents would be held responsible by their citizens for whatever strategic actions are taken and the outcomes. Thus, both their views must be taken into account if nuclear weapons are to be used, or not used, in circumstances where they seemed warranted. Second, whatever happens when nuclear weapons are used to defend the alliance, it should be clear that both allies are fully responsible.

Enabling the ROK to share fully in the responsibilities for any alliance nuclear use could be done in many ways. Institutional

could cause great collateral damage on the Korean Peninsula and beyond. Thus, if practical conventional weapons could be essentially as effective in carrying out attacks against these facilities, they would be preferable.

The ability to attack quickly once the decision has been made is important. Minimizing the time to reach these targets can increase the time available to the presidents to decide whether to attack. Anticipating quick attacks, North Korea can be expected to minimize the time from the first detectable signs it is preparing to attack until its forces are launched. Thus, the alliance should want conventional strike capabilities that can reach DPRK nuclear targets as quickly as possible. This suggests that conventional ballistic missile strike forces should be deployed on or near the Korean Peninsula.

South Korea has been interested in creating a ballistic missile strike force that can attack North Korean nuclear facilities, but until early October 2012 had been restricted by the New Missile Guidelines—agreed to with its U.S. ally in 2001—to ballistic missiles that can carry no more than a 500-kilogram payload, at a range no more than 300 kilometers. As some DPRK nuclear facilities and longer range missile bases are more than 500 kilometers from plausible missile launch locations in South Korea, the alliance would have to agree to increase these limits.¹⁸

In addition, the United States is bound by the Intermediate-range Nuclear Forces Treaty not to have ground-launched missiles with ranges between 500 and 5,500 kilometers. While South Korea is not a party to the treaty, the United States could be seen as subverting the treaty if it were to support ROK deployment of such missiles. Deploying air-to-surface missiles or sea-based missiles could be one way around this problem, but either of these options would be a wholly new program for South Korea while deploying longer range surface-to-surface missiles would not.

Instead, after long negotiations, and two direct discussions between Presidents Barack Obama and Lee Myung-bak, the allies reached an agreement to revise the Missile Guidelines: “Under the revised guidelines South Korea can deploy ballistic missiles with a range of up to 800 kilometers . . . enough to reach any target in North Korea but not enough to be considered a threat to China or

Japan, as long as the payload does not exceed 500 kilograms, about half a ton.”¹⁹

The ROK’s prospective deployment of such forces is not without risk. North Korea might have alerted its missiles to pose a heightened threat to the alliance but with no intent to launch. A conventional preemptive attack could be substantially less than perfect, and even though collateral damage would be low, it could leave the North Korean leadership sufficiently angry or panicked to launch the surviving missiles—which might not all be intercepted by allied missile defenses.

In sum then, the deployment of a conventional ballistic missile force by the ROK should make the DPRK more cautious about readying its own missile forces as a ploy to frighten South Korea and its U.S. ally. In other words, it should help to deter this kind of provocative action. At the same time, given the risks to the alliance of striking at the DPRK, both allies should agree to any such use of the ROK ballistic missile force.

Deploy U.S. Nuclear Weapons on or Near South Korea as Needed. Deployment of nuclear weapons on or near South Korea could have both military and political advantages. While we would not expect the alliance to need to make quick strikes with nuclear weapons, air-to-surface ballistic missiles or sea-based missiles located over or near the peninsula could strike within minutes—significantly less than the few tens of minutes required for ballistic missiles to fly intercontinental distances.

The political values of having U.S. nuclear weapons on or near South Korea reside in the extra measures of assurance and deterrence they would provide. The ROK and its citizens are likely to be more confident that they are protected by nuclear weapons deployed forward for that purpose. Similarly, North Korea should have little trouble understanding that deterrence of attacks on South Korea would be the primary purpose of nuclear weapons located there. It should see U.S. willingness to forward deploy nuclear weapons as a particularly credible indication of alliance intent to use them should that prove necessary.

On the other hand, stationing nuclear weapons on or near South Korea would seem a serious setback for nuclear nonproliferation. Some would call this nuclear proliferation. Many would see it as inconsistent with the goal of eliminating nuclear weapons, with the Joint Declaration on the Denuclearization of the Korean Peninsula signed by North and South Korea, or with U.S. and allied efforts to reduce their dependence on nuclear weapons. Some would see this step difficult to reverse. Some would lament the precedent that might be set for other states wanting the strongest possible nuclear assurances from the United States.

Nonetheless, the continuing statements and decisions made by U.S. leaders and senior officials that South Korea is protected by U.S. extended deterrence including nuclear weapons have not been qualified in any way.



USS Carl Vinson (center), deployed with the U.S. Seventh Fleet, steams with ROK destroyers Kwanggaeto and Dae Jo Yeong

U.S. Navy (Christopher K. Hwang)

They imply that the U.S. leadership sees its obligation to defend the alliance as a higher priority than even nuclear nonproliferation. The United States also expects that by meeting the assurance and deterrence needs of its allies, it will maintain their confidence that they need not establish nuclear deterrent forces of their own.

A decision by the two presidents to deploy nuclear weapons in Korea—even temporarily—would be momentous. Given the current embryonic state of DPRK nuclear forces, there is little reason to make this decision anytime soon. To do so would provide North Korea with an argument that it needs nuclear weapons to defend itself.

Nonetheless, the continued emergence of the North Korean nuclear threat will provide strong arguments for nuclear weapons to be deployed in or near South Korea—especially when any serious security crisis arises.

Structure Extended Deterrence to Minimize North Korean Peacetime Threats and Provocations. North Korea's periodic peacetime threats and provocations have been a substantial political, psychological, and material burden for the alliance. As noted, the most likely way for North Korea to attempt to capitalize on operational nuclear forces when it gets them is to engage in intensely hostile conventional provocations and nuclear brinksmanship, and count on its nuclear forces to deter military escalation by the alliance.

Strengthened extended deterrence may help to reduce hostile peacetime acts by North Korea. If the alliance deploys effective conventional strategic strike forces (as the ROK can now do) and missile defenses, it could become capable of destroying much of North Korea's nuclear forces and defending against many of those that survive. If North Korea were to credit the alliance with such a capability, it should be especially leery of making realistic threats of nuclear war, as it would then have to worry more about the possibility of preemptive attack by the alliance. Strengthening extended deterrence in this way should also help allied civilians discount DPRK nuclear threats.

Develop an Adaptive Plan for Strengthening Extended Deterrence. The alliance should have a flexible plan for well-coordinated and timely adaptation to the evolving North Korean nuclear threat as it reaches specific milestones.²⁰ Such a plan can bolster

the alliance's will to make necessary changes in a timely manner. Knowledge of its existence and general features could help convey to North Korea that its efforts to increase its nuclear threat will be countered, which might slow—or less likely halt—its pursuit of nuclear forces.

The plan should facilitate steps to strengthen extended nuclear deterrence arrangements when needed and scale them back if the nuclear threat were reduced. Desirable changes either way are more prudent if they can be reversed in a timely manner. To the extent possible, changes should be designed and managed to avoid providing excuses for increases in the North Korean nuclear threat, or for resisting steps toward elimination of that threat.

targets. The third organization would be responsible for activating and sustaining survivable, reliable, and secure command, control, and high-bandwidth communications support to enable the two presidents to consult and implement their decisions.

Group 2. On a schedule suitably synchronized with DPRK efforts to deploy its first operational nuclear-armed ballistic missiles, the alliance would take the following specific steps. The U.S. Air Force would provide, or the ROK would build, long-range precision conventional air-to-ground missiles that could be quickly launched from ROK aircraft patrolling in suitable launch areas during crisis and conflict. The ROK air force would plan, purchase, deploy, train pilots for, and exercise a small force of stealthy dual-

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An Example Adaptive Plan for the Alliance's Extended Nuclear Deterrent

The following example adaptive plan specifies three groups of steps to strengthen the alliance's extended nuclear deterrent, each keyed to a different phase of North Korea's efforts to establish substantial operational nuclear forces.

Group 1. On a schedule suitably synchronized with North Korean development of an initial technical capability to deliver nuclear weapons with ballistic missiles, the alliance would organize, equip, and task three combined organizations. The first would be a combined, political-strategic advisory group that would examine and recommend high-level policies for deterring DPRK use and threats to use its nuclear forces. It would develop strategies and operational approaches for alliance employment of nuclear weapons. It would also look for strategies for bringing nuclear use to a halt quickly while achieving a reasonable political outcome to the war. The second organization would be a combined intelligence and target-planning group. Combined intelligence would provide the best basis for planning strikes in support of approved strategies and operational approaches, or otherwise of interest to the two presidents. This group would also plan conventional strategic strikes on key North Korean targets, especially nuclear-related

capable aircraft such as the F-35. These ROK pilots would periodically train at air exercise ranges in the western United States. Training would include delivery of nuclear missiles and bombs. Weapons delivery would be practiced against mockups of planned targets. The Air Force and ROK air force would arrange for timely covert forward delivery and safe storage of nuclear bombs and/or nuclear warheads for the ROK air-to-ground missiles. These weapons would be equipped with use-control systems requiring separate codes from the two presidents. Regular peacetime exercises of the delivery, storage, and arming of the dual-capable aircraft would be carried out with mockup nuclear bombs and warheads.

Group 3. On a schedule suitably synchronized with the deployment by North Korea of enough nuclear capability to attack the majority of the bases across which the ROK dual-capable strategic strike force might be deployed, one or both of the following steps might be taken. The ROK air force would develop and exercise the capability to disperse its strategic strike aircraft on sections of hard roads. Ground crews would practice minor maintenance and refueling at dispersal sites. Air Force personnel would practice transporting mockup nuclear weapons to exercise sites and arming ROK dual-capable aircraft.

Many variants of this example adaptive plan are conceivable. Perhaps arrangements could be made to disperse the ROK strategic strike force to airbases outside South Korea. This could make them less vulnerable to DPRK special forces expected to attempt to penetrate deep into South Korea in crisis or war. Alternatively, the alliance might choose to deploy sea-based ballistic missile forces capable of striking targets throughout North Korea with conventional or nuclear weapons.

We believe that adaptive plans of this kind could have all the desirable features discussed in the previous section. Though our descriptions focus only on strike forces, stronger missile defenses would presumably also be deployed.

Conclusion

The possible need to strengthen extended nuclear deterrence arrangements has been a frequent topic of discussion among U.S. and allied experts and officials for at least the last 6 years. In the discussions we have been part of, it is commonly argued that nothing need be done just yet. This is not surprising. Many experts and officials hope that somehow nuclear proliferation can be halted and that nuclear weapons can eventually be safely eliminated. We hope so, too.

In view of these hopes, the notion that the United States and South Korea might have to make nuclear weapons a more salient part of their defense is not easy to accept. To say “not yet” is appealing. Despite the hopeful appeal, we see a need to commit soon to establishing an adaptive plan for implementing concrete measures to strengthen the alliance’s extended nuclear deterrence—measures that are tied to defined thresholds in the evolution of North Korea’s nuclear forces.

A failure to adopt suitable measures as North Korea continues to develop its nuclear forces risks encouraging it to think it could gain a meaningful advantage over the alliance. It risks shaking the confidence of South Korea that the alliance remains adequate to its security needs. Other states will be watching how the United States reacts to the continued evolution of North Korea’s nuclear capabilities and to the increased concerns of the U.S. South Korean ally.

South Koreans should continue to have no basis for doubt that the United States is committed and prepared to defend them by all means that might prove necessary. **JFQ**

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NOTES

¹ “The 38th Security Consultative Meeting Joint Communiqué,” October 20, 2006, available at <www.cfr.org/proliferation/38th-security-consultative-meeting-joint-communicu-us-south-korea/p11820>. Emphasis added.

² “Joint Communiqué of The 43rd U.S.-ROK Security Consultative Meeting,” October 28, 2011, Seoul, available at <www.usfk.mil/usfk/news.joint-communicu.of.the.43rd.us.rok.security.consultative.meeting.920>.

³ “Joint Communiqué of the 44th U.S.-ROK Security Consultative Meeting,” Washington, DC, October 24, 2012, 5, available at <www.defense.gov/news/44thSCMJointCommunique.pdf>.

⁴ In the opinions of the authors, these three scenarios provide a suitable basis for assessing the potential uses North Korea might make of its emerging nuclear forces. The first and third are described and commented on in Chang Kwoun Park, “U.S.-ROK Cooperation in Preparation for Hostile Actions by a North Korea in Possession of Nuclear Weapons,” *The Korean Journal of Defense Analysis* 22, no. 4 (December 2010), 499–513. The second scenario is a subject of continuing study at the Institute for Defense Analyses (IDA) by Victor A. Utgoff and his colleague Andrew Coe, an adjunct staff member at IDA.

⁵ The 2010 Nuclear Posture Review Report makes a parallel but different statement: “The United States will continue to ensure that, in the calculations of any potential opponent, the perceived gains of attacking the United States or its allies and partners would be far outweighed by the unacceptable costs of the response.” *Nuclear Posture Review Report* (Washington, DC: Department of Defense, April 2010), xi.

⁶ Hannah Fischer, *North Korean Provocative Actions, 1950–2007*, RL30004 (Washington, DC: Congressional Research Service, April 20, 2007).

⁷ Seo Yoonjung and Keith B. Richburg, “2 civilians killed in North Korean artillery attack,” *The Washington Post*, November 24, 2010, available at <www.washingtonpost.com/wp-dyn/content/article/2010/11/23/AR2010112300880.html>.

⁸ “Seoul Threatens Further Retaliation in the Event of Further Attacks,” Reuters, November 25, 2010; “Obama, S. Korea leader agree to hold joint military exercise,” *Msnbc.com*, updated November 24, 2010, available at <www.msnbc.msn.com/id/40329269/ns/world_news-asia-pacific/>.

⁹ See Kongdan Oh Hassig, *Military Confrontation on the Korean Peninsula*, IDA Document NS D-4259 (Alexandria, VA: IDA, January 2011).

¹⁰ Dr. Kongdan Oh Hassig of IDA sees military provocations by North Korea as particularly important for the leader’s efforts to maintain control over the citizens and the military officer corps, especially the most senior officers. See also “North Korean leader may use dispute to rally support,” *Denver Post*, May 26, 2010, available at <www.denverpost.com/breakingnews/ci_15161588?source=pkg>; and Kongdan Oh and Ralph Hassig, “Putting Together the North Korea Puzzle,” E-Note, Foreign Policy Research Institute, June 2009, available at <www.fpri.org/enotes/200906.ohhassig.northkoreapuzzle.html>.

¹¹ Park; Victor A. Utgoff and David A. Adesnik, *On Strengthening and Expanding the US Nuclear Umbrella to Dissuade Nuclear Proliferation*, IDA Paper P-4356 (Alexandria, VA: IDA, July 2008).

¹² *Nuclear Posture Review Report*, 34.

¹³ *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, February 2010), 33; John Reed, “U.S. Targets Precision Arms for 21st-Century Wars,” *Defense News*, March 22, 2010, available at <www.defensenews.com/story.php?i=4547989>; John T. Bennett, “DoD’s ‘11 Budget: \$10.7B for F-35, \$4B for Long-Range Strike, More for SpecOps,” *Defense News*, January 28, 2010, available at <www.defensenews.com/story.php?i=4475754>; Department of Defense, Office of the Under Secretary of Defense (Comptroller), RDT&E Programs (R-1), Department of Defense Budget, Fiscal Year 2013, February 2012.

¹⁴ White House, Office of the Press Secretary, “Remarks by President Barack Obama, Hradcany Square, Prague, Czech Republic,” April 5, 2009, available at <www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/>.

¹⁵ *Nuclear Posture Review Report*, 33.

¹⁶ White House, “Remarks by President Obama.”

¹⁷ “SKorea could swiftly hit NKorea nuke bases: general,” *Defense Talk*, September 25, 2009, available at <www.defencetalk.com/skorea-could-swiftly-hit-nkorea-nuke-bases-general-22186/>.

¹⁸ “South Korea seeks longer-range missiles: report,” Reuters, January 19, 2011.

¹⁹ Choe Sang-hun, “U.S. Agrees to Let South Korea Extend Range of Ballistic Missiles,” *The New York Times*, October 7, 2012.

²⁰ The concept of adaptive regional security architectures is discussed primarily in Department of Defense, *Ballistic Missile Defense Review Report* (Washington, DC: Department of Defense, February 2010). It is also mentioned in the *Nuclear Posture Review Report* and the *National Security Strategy* (Washington, DC: The White House, May 2010). In all three documents, the concept is applied only to ballistic missile defense.