

New Developments in North Korea's Nuclear Weapons Programme: Implications for European Security

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by *Mason Richey*

Introduction

After modest signs of détente on the Korean peninsula in 2014 and early 2015, the Democratic People's Republic of Korea (DPRK) has reverted to form in 2016, erupting with a spasm of nuclear and missile tests. Consequently tension on the peninsula has ratcheted back up to extremely elevated levels, and the international community has scrambled to respond with sanctions. Moreover, the recent cycle of tension is not finished as the Pyongyang regime has promised more provocations and retaliation for perceived threats.

As the DPRK is celebrating a rare Worker's Party Congress, it is worthwhile to consider how its recent nuclear weapon developments are influencing regional and global security. Indeed the most recent round of DPRK provocations—and the international community's response—has an impact on European security. In this policy brief I examine the current state-of-play of the DPRK's nuclear and missile programmes, and then discuss how it affects the European security equation and demands reflection by strategic thinkers throughout Europe.

The DPRK's nuclear programme

Analysis of the DPRK's nuclear weapon and ballistic missile arsenals must start from the fact that the country's post-2000 development of these capabilities represents a signal failure of international non-proliferation efforts. Under Kim Jong Il the Pyongyang regime made slow but steady progress on nuclear warhead design and production derived from reprocessed plutonium removed from an experimental reactor at the country's Yongbyon facility. Parallel to this programme, DPRK scientists pursued an enrichment system (acquired from Pakistan in exchange for missile technology) to produce weapons-grade uranium (WGU), a worrisome development given the country's uranium mines. Over the same period, Pyongyang made advances to the country's strategic and tactical missile and rocket programmes, including accelerated testing of specific systems and improvements in facilities, launch capabilities, and command-and-control.

The plutonium programme resulted in increasingly successful nuclear bomb test detonations in 2006 and 2009, while uncertainty remains about the type of nuclear fuel in the test detonations carried out in 2013 (plutonium or WGU) and 2016 (plutonium, WGU, or hydrogen isotopes). Independent experts currently estimate the DPRK's plutonium-based arsenal at 6–8 weapons; beyond this, the DPRK has plutonium stockpiles sufficient to construct additional warheads (Albright 2015;

North Korea's recent bellicosity and inflammatory rhetoric have reminded the international community that the Kim Jong Un regime is a unique threat to stability in a region that is at the intersection of global economics, security, and power politics. The country's development of nuclear weapons and missile programmes over the last fifteen years has not only been a signal failure of international diplomacy, but now also represents a danger to the global nonproliferation regime. This policy brief begins with an overview of the status of North Korea's nuclear and missile programmes, and then examines how their proliferation possibilities and effect on Northeast Asian regional geopolitics radiate consequences for European security. The conclusion outlines a number of modest steps that the EU and its member states might consider taking in order to respond to some of these challenges.

ACA 2016). The warhead output of the uranium-based fissile material production programme is opaque—given uncertainty about the number and operation of requisite gas centrifuges—but estimates are 4–8 devices (Wit and Ahn 2015). Thus the current state of the DPRK's nuclear arsenal is likely 10–16 working devices, with an additional capacity for producing “nuclear weapons equivalents” based on fissile material from continued plutonium reprocessing and/or the advanced uranium enrichment programme.

Two other DPRK nuclear weapons developments are noteworthy. First, the Kim Jong Un regime asserts that the 2016 test detonation was a thermonuclear (hydrogen) bomb, which, if true, would represent a qualitative advance in DPRK nuclear bomb technology (as measured in blast yield and sophistication). However, the absence of measured radionuclides undermines this claim, especially as

seismic measurements of the 2016 test equaled 5.1MMS, corresponding to the 6-9Kt yield of the 2013 atomic test explosion. These data are inconsistent with a thermonuclear test, even given uncertainty about the test's geological factors. The reigning hypothesis is that the DPRK tested a "boosted fission" device, which would nonetheless mean the country's nuclear scientists are continuing to improve warhead design.

Second, the Kim Jong Un leadership states that it has successfully miniaturized nuclear warheads to fit on short-range (SRBM), medium-range (MRBM), intermediate-range (IRBM), and long-range/intercontinental ballistic missiles (LRBM/ICBM). If true, this would be a crucial step in building a useable nuclear capability. In March 2016 Kim released a photograph of himself standing next to a small, spherical warhead mock-up. The DPRK's advance in miniaturization cannot be confirmed, and device reliability would be compromised, as the regime has presumably not live-tested a miniaturized bomb. Still, independent analysts, US generals, and the ROK government argue that a working miniaturized warhead—fitted to intermediate-range Nodong-class missiles, and possibly onto ICBMs—is feasible for the DPRK (Bender 2015; Choe 2016).

Accompanying nuclear bomb development, the DPRK has conducted a series of missile and rocket tests. These range from reliable single-stage SRBMs, MRBMs, and IRBMs (notably the Nodong-series missiles) to more unreliable but powerful multi-stage LRBMs/ICBMs and space launch vehicles. In addition, the DPRK is developing road-mobile ICBMs (KN-08/KN-14) and IRBMs (BM25-Musudan). There is widespread agreement that the DPRK's Strategic Rocket Forces control approximately one thousand deployed SRBMs, MRBMs, and IRBMs with ranges covering the Korean peninsula, Japan, and Western Pacific targets; and its small quantity of ICBMs can likely strike the US mainland, although there is skepticism regarding these missiles' reliability and accuracy (Bender 2015; NTI 2016; Schilling 2016). The reliability and accuracy issues are especially significant regarding the ability of the intercontinental projectiles to convey a miniaturized nuclear warhead through the rigours of atmospheric re-entry.

The combination of a functional, miniaturized nuclear warhead and a ballistic missile delivery system gives the DPRK a crude but credible nuclear deterrent. Still, questions remain regarding the arsenal's strategic sophistication: e.g., the capability/quantity of road-mobile systems, quality and location of hardened silos, progress on SLBMs (submerged-/submarine launch ballistic missiles), and ability to deploy solid-fuel projectiles. Finally, there is uncertainty in the projection of the size and capability of the DPRK's future arsenal. The best-known estimates for 2020 predict a lower-end of 20 weapons and marginally improved delivery systems; a median of 50 weapons and emergency operational KN-08 and Musudan missiles; and a high-end of 100 weapons and normally operational KN-08/KN-14 and Musudan missiles (Wit and Ahn 2015).

The main reaction to these developments has been new sanctions by the international community, including China; they are the stiffest ever, targeting industries (coal, shipping, etc.), institutions, and individuals. Yet there remains a gap between the gravity of DPRK nuclear development and the countervailing actions of global society. The DPRK's capability threat is aggravated by uncertainty about Pyongyang's nuclear strategy and doctrine. Regime officials say they understand the country's nuclear deterrent as modeled on the logic of mu-

tually assured destruction. This is troubling—the symmetry underlying MAD is absent with the DPRK vis-à-vis the US. Among other factors, this is because the DPRK will not have a credible second-strike capability. At such a primitive stage of nuclear arsenal development, the regime would have an incentive to use its weapons before losing them to a strike. Moreover the regime has avowed a "defensive-use-only" policy, yet also bombastically asserted a right to "use-it-or-lose-it" pre-emptive nuclear attack, if it considered either regime survival or its deterrent capability threatened.

The DPRK has developed nuclear weapons for numerous reasons: (a) maximizing coercive diplomatic leverage and thus output from international negotiations, as well as framing potential DPRK-ROK reunification in a favorable way; (b) provoking international tensions on the Korean peninsula in order to drive wedges between the US, China, and the ROK; (c) possessing a deterrent against conventional attack; (d) escalating to a limited nuclear conflict in the case of imminent regime collapse due to conventional military inferiority (an "escalate to de-escalate" strategy)(Smith 2015). This would entail use of theatre SRBMs, MRBMs, and IRBMs, rather than strategic missiles. This implies a distinction in Pyongyang's regard toward strategic and operational nuclear missiles, the possibility of making first-use of the weapons for tactical or deterrence ("escalation to de-escalate") reasons, and thus a higher chance of the weapons' use. This is obviously worrisome.

Implications for European Security

All these developments carry security consequences for Europe. Four scenarios in particular are worth highlighting. (a) the possibility, in the short-term, of increased arms (especially NBCR) proliferation from the DPRK to other parts of the world, such as the MENA; (b) in the medium-term US focus on the DPRK will further the reality that "rebalancing" to East Asia distracts it from attending well enough to European security concerns; (c) also in the medium-term, US reassurance of the ROK and Japan may be insufficient to preclude them from developing indigenous nuclear deterrents, which would damage global non-proliferation; (d) continued, sharpened criticism of human rights abuses in the DPRK can and should be treated by the EU and its member states as low-hanging fruit in the fight to improve the DPRK's human and hard security situations.

To be more precise:

(a) The DPRK is a proliferator of both conventional and nonconventional arms—as well as technical expertise and fissionable material—to states throughout Europe's border areas (especially the MENA). DPRK scientists helped Syria build (and supplied nuclear material for) its Al-Kibar nuclear reactor. Other clients have included Libya, Yemen, Hezbollah, and Iran. These countries have ready contact to DPRK regime elements connected with various conventional and non-conventional arms sales. With the MENA in disarray, leaders of fragile states and violent extremist groups in Europe's neighborhood are attractive markets for a DPRK regime with limited opportunities for earning foreign exchange.

This will likely continue despite—even because of—the 2016 promulgation of UNSCR 2270, which tightened and added sanctions. DPRK arms flowing into the MENA will destabilise the region even further, which means greater conflict risk on Europe's southern edge and greater possibilities for violent extremist devel-

opment coupled to greater access to arms (even potentially NBCR weapons). To counteract this, the EU and its member states should (a) enhance intelligence on (and interdiction of) DPRK-MENA proliferation networks, and (b) insist on tying aid/development for MENA countries to their enforcement of UNSCR 2270, especially concerning mandatory inspections of DPRK cargo ships.

(b) The US foreign/security policy community and military are stretched thin, as they are dealing with the aforementioned MENA chaos and a rising China with revisionist designs in the Indo-Pacific and Central Asia. A belligerent, doctrinally opaque, nuclear-weapon capable DPRK adds a new dimension of security threat in Northeast Asia, complicates the already difficult US-China relationship, and obliges Washington to spend resources managing alliances with the ROK and Japan.

There is little reason to think this situation will change in the near-/mid-term. Consequently the US will have less bandwidth to provide security in Europe's neighborhood. Diplomatically the EU and member states are capable of meeting the challenge posed by less US security engagement in/around Europe. The situation is less sanguine in terms of power projection, even in its own neighbourhood. Both the EU and member states face deficits in deployment levels, materiel, airlift/air-support/air-refueling, and electronic warfare. Without the US it would be difficult for European forces to counter- in a non-NATO country like Sweden, for example – the kind of aggression that Russia exacted against Ukraine or Georgia. Such a scenario seems fanciful, but Russia's revanchisme has resurrected European geopolitics. Thus, at the least, EU member states need to prioritize (a) budgetary commitments to hard security, while (b) the EU should improve the ability to pool/share resources, make decisions efficiently about where/when to use them, and have them readily prepared for operations.

(c) There is no guarantee that future US leaders will succeed in reassuring the ROK and Japanese governments that they do not need their own nuclear deterrent in the face of DPRK threats. The key in this regard is, obviously, whether US extended deterrence is sufficiently credible to persuade its Northeast Asian allies not to withdraw from their obligations under the Non-Proliferation Treaty (NPT). Indeed the US is struggling to accomplish this essential task of alliance management (Jackson 2016). To wit: (a) B-52 flyovers (an extended deterrence index) after DPRK nuclear and missile tests are assurance measures increasingly discounted by the ROK and Japan; (b) US extended deterrence does not affect the low-end provocations threatening these two countries; and (c) the DPRK has committed more than 1,000 small-scale attacks against the ROK since the 1960s, most of which were not met with a response in kind (ibid.). At some point there is a significant probability that the ROK and Japan say "enough" and develop their own nuclear weapons. ROK President Park Geun Hye has already evoked this possibility, saying in 2014 that another DPRK nuclear test would be "crossing a Rubicon..., [making it] difficult for us to prevent a nuclear domino from occurring in this area."

With the 2016 nuclear test, the Rubicon is forded. The nuclearisation scenario would likely unfold through either Japan or the ROK invoking NPT Article X, followed almost inexorably by the neighbouring state. Weaponisation would be rapid. Japan is a threshold nuclear state, and the ROK's civilian nuclear, engineering, and military-industrial sectors also give it status as a latent nuclear

state. The EU and its member states – as good international citizens, supporters of international institutions/regimes, and polities with vital economic and security interests in a stable, peaceful world – should work to obviate this possibility. Indeed the described nuclearisation scenario could entail the development and proliferation of nuclear weapons in states in Europe's neighbourhood (e.g., Turkey, Saudi Arabia, Iran, Egypt, Ukraine, etc.). In practice, the EU and its nuclear-club member states can make several – admittedly marginal – contributions: (a) promoting Northeast Asian regional integration (e.g., the Northeast Asian Peace and Cooperation Initiative) and confidence-building measures; (b) using diplomatic channels to reinforce the global non-proliferation regime; (c) accepting an increase in the amount of reprocessed plutonium that Japan and the ROK can send for storage to France and Great Britain (thus limiting the theoretical amount of fissile material that would be quickly available for nuclear warhead construction).

(d) A small but meaningful European security policy response to the DPRK nuclear conundrum would be to increase pressure on the country for its human rights abuses. Indeed there is a direct link between human security abuses in and hard security threats emanating from the DPRK. Most infamously, various types of prisoners (including political prisoners) labour as slaves in horrific camps for the benefit of the DPRK military, including its missile/rocket forces. It is less well known that thousands of DPRK citizens toil as near-slaves overseas to earn and remit foreign exchange, some of which is diverted to military use. This source of hard currency – roughly US \$ 2 billion annually – may become more important to Pyongyang's leaders as sanctions begin to hit harder. Currently most of these "workers" are in the mining, logging, construction, and textile sectors in countries like China and Russia, but both Poland and Malta have received a small number of such labourers.

Recently the EU has played a role in the international condemnation of DPRK human rights abuses, including UN resolutions co-sponsored with Japan. As a practical matter this forces the DPRK's leadership to either expend resources defending itself (which also distracts it from other mischief) or tacitly accept opprobrium that makes it even less likely to bring in FDI or secure other international support. Additionally, however, the EU and its member states should (within their competences) consider (a) policies such as the refusal of imported goods/commodities produced with DPRK seconded-labour, (b) penalties for European companies that use such labour either within or outside the EU, and (c) a tailored ban on seconded-worker permits fitting the profile of DPRK slave-labourers (i.e., permits allowing payments into escrow funds controlled by the state).

The DPRK nuclear weapons programme has many facets to which Europe is ill-equipped to respond. But it does not follow that Europe cannot do anything. It is also true that the EU and its member states face extraordinary, acute challenges both domestically and from the European neighbourhood. But it does not follow that the EU and its member states cannot examine other regions of the world, or think now about contributions to solving chronic problems that might become acute later. Indeed this is one component of strategy. Europe should embrace it with respect to the DPRK. Not doing so is both a failure to meet its own standards of international engagement, and a foolhardy oversight that will become more erroneous over time.

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About the author



Mason Richey is Associate Professor of Politics in the Graduate School of International and Area Studies, Hankuk University of Foreign Studies, Seoul, South Korea. His research areas are East Asian security dynamics, great power politics, and European foreign and security policy as applied to Asia. He has recently published articles in *Foreign Policy Analysis*, *Asian Studies Review*, the *Korean Journal of Defence Analysis*, the *Wiley-Blackwell Encyclopedia of Political Thought*, and *Global Governance* (forthcoming). He is also an occasional editorialist for the *Korea Herald* and *Korea Joongang Daily*, and an invited guest on *KBS News* and *Arirang News*.

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Pleinlaan 5

B-1050 Brussels

T +32 2 614 80 01

ies@vub.ac.be