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Session V: Global Zero: Asian Responses

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GLOBAL ZERO: THE SIGNIFICANCE OF NORTH KOREA

The concept of global nuclear disarmament has enjoyed a significant revival in recent years. This renewed support has derived not only from those non-governmental groups or non-aligned states traditionally associated with the disarmament cause, but also from current and former statesmen from around the world, many of whom would typically be classed as politically conservative. This revitalisation of the disarmament because is typified by initiatives such as the ‘Global Zero’ movement, launched in December 2008, and was boosted by President Obama’s Prague speech of April 2009. Obama underscored ‘America’s commitment to seek the peace and security of a world without nuclear weapons’, although he qualified this by recognizing that such a goal might not be achieved in his lifetime.¹

The IISS is proud to have contributed to the reinvigorated disarmament debate with a range of publications that have sought to give disarmament the sober and serious examination that it deserves, consciously striving to avoid what the late Sir Michael Quinlan termed the ‘polarised extremes...[of the] righteous abolitionists [and] the dismissive realists’.² These studies have attempted to evaluate the practical political and technical steps that would have to be taken to produce a world free of nuclear weapons that was at least as secure as the one in which we currently live.³

Unfortunately, recent trends in Asia provide little in the way of encouragement for advocates of nuclear disarmament. Neither India nor Pakistan appear inclined to relinquish their nuclear weapons, and Pakistan in particular is making efforts to expand its arsenal. China maintains the least transparent nuclear arsenal of all the NPT’s nuclear-weapon states and is modernizing its nuclear forces.⁴ The recent nuclear cooperation agreement between the US and Vietnam missed an opportunity to reinforce the United Arab Emirates’ decision to forgo enrichment and reprocessing technologies as a global ‘gold standard’, and South Korea is lobbying for the right to utilise pyroprocessing in its civilian nuclear sector. Although neither of these latter two developments have direct proliferation consequences – there are no indications that Vietnam intends to enrich uranium, or that South Korea would attempt ultimately to use pyroprocessing for military

¹ See ‘Remarks of President Barack Obama’, Embassy of the United States in the Czech Republic, 5 April 2009, <http://prague.usembassy.gov/obama.html>

² See Michael Quinlan, ‘Abolishing Nuclear Armouries: Policy or Pipedream?’, *Survival*, Vol 49, No 4, Winter 2007-8.

³ See George Perkovich and James M. Acton, *Abolishing Nuclear Weapons*, Adelphi Paper 396, (Abingdon : Routledge for the International Institute for Strategic Studies, 2008); and David Cortright and Raimo Vayrynen, *Towards Nuclear Zero*, (Abingdon : Routledge, for International Institute for Strategic Studies, 2010).

⁴ Bates Gill, ‘China and nuclear arms control: current and future policies’, *SIPRI Insights on Peace and Security*, No. 2010/4, April 2010, p.4.

purposes if the US consented to a revision in their bilateral nuclear agreement – the possible spread of enrichment and reprocessing technologies (ENR) across Asia is a trend that has negative implications for disarmament in the long-term.

However, alarming as these general trends are, in this paper I will focus primarily on the activities of the Democratic People’s Republic of Korea (henceforth referred to as North Korea, or the DPRK). From the perspective of someone in London at least, these appear to be the most pressing challenge in Asia to eventual nuclear disarmament.

North Korean disarmament diplomacy

It is beyond the scope of this paper to give a comprehensive account of North Korea’s nuclear activities and the painstaking diplomacy intended to contain and reverse it. But it is useful to have an awareness of this long saga of abortive and half-successful attempts to coax and coerce the DPRK into denuclearisation when evaluating the current threat and its implications.

The Soviet Union provided North Korea with basic nuclear facilities and training from the 1950s onwards. In 1980 the US detected the construction of a new indigenous research reactor at Yongbyon that was suitable for producing plutonium. The US led efforts to convince North Korea to join the NPT and accept IAEA inspections. In 1985 North Korea acceded to the NPT and, after significant prevarication, accepted international inspections in April 1992 (the Yongbyon reactor had begun operations in 1986). But the implementation of the inspection agreement collapsed when North Korea refused to cooperate with the IAEA in verifying its plutonium production prior to 1992. Pyongyang threatened to withdraw from the NPT in March 1993. Following a year-long crisis, during which the Clinton administration seriously considered a pre-emptive strike against the Yongbyon complex, the US and the DPRK concluded the bilateral Agreed Framework in October 1994. This entailed an ambitious plan to freeze and eventually dismantle North Korea’s plutonium production facilities and account for its plutonium stocks in exchange for interim supplies of heavy fuel oil and an alternative nuclear energy project, as well as improved bilateral relations with Washington. While the Agreed Framework froze North Korea’s production of additional plutonium, it did not end Pyongyang’s attempts to obtain nuclear weapons. The Agreed Framework collapsed in late 2002 following revelations of the North’s secret programme to produce weapon-grade uranium. North Korea revived its plutonium production facilities in December 2002 and withdrew from the NPT in January 2003. The Yongbyon reactor restarted in February 2003.⁵

⁵ For more detail on North Korea and disarmament diplomacy up to 2003, see *North Korea’s Weapons Programmes: A Net Assessment*, International Institute for Strategic Studies, (Basingstoke: Palgrave MacMillan, 2004), pp. 5-26.

Since 2003, we have witnessed several cycles of failed disarmament diplomacy, usually following a pattern established over several decades:⁶ North Korea is persuaded to return to negotiations, apparent progress is made, and a new declaration or agreement is announced in return for fresh political and economic concessions to Pyongyang, before procedural difficulties emerge and/or the DPRK reneges on earlier agreements. Renewed North Korean provocations lead to heightened tensions on the Korean Peninsula, before Pyongyang once again demands further inducements in order to be coaxed back to negotiations after the crisis it has itself generated.

Thus the North Korean withdrawal from the NPT and reprocessing campaign of 2003 was followed by the Six-Party Talks and the Joint Statement of September 2005, in which North Korea committed to abandon all nuclear weapons and existing nuclear programmes and return to the NPT, and the US stated that it had no intentions to attack the DPRK. In return for relinquishing its nuclear weapons ambitions, Pyongyang would receive aid and normalisation of its relations with the US. The Joint Statement also called for the implementation of the 1992 Joint Declaration. This had forbidden both Koreas from possessing ENR technologies, but was never implemented due to disagreements over verification. Yet wrangling over frozen North Korean assets led to the stagnation of negotiations. North Korea's first nuclear test in October 2006 may not have been technically impressive (with a yield of probably less than a kilotonne) and sufficiently angered China to ensure the passage of UN Security Council Resolution 1718, but it ultimately succeeded in bringing the US back to negotiations and unfreezing its bank accounts.

The February 2007 agreement appeared to get the denuclearisation process back on track, with North Korea once again being promised economic and political concessions in return for freezing and disabling its nuclear facilities. The next eighteen months or so, during which North Korea gave a declaration of its plutonium holdings, shut down the Yongbyon reactor, handed over its operating records and destroyed its cooling tower, and was removed from the US list of state sponsors of terrorism, generated some cautious optimism that North Korea might be willing to trade away its nuclear capabilities. But although an October 2007 plan had laid out the implementation of the agreement in further detail (and also reaffirmed North Korea's commitment not to transfer its nuclear technology or know-how) disagreements over verification issues continued. Moreover, the agreement did not entail Pyongyang's relinquishing of its actual weapons, nor did it cover its suspected uranium enrichment activities.

⁶ See Sung-Yoon Lee, 'The Pyongyang Playbook', *Foreign Affairs*, 26 August 2010, <http://www.foreignaffairs.com/articles/66581/sung-yoon-lee/the-pyongyang-playbook?page=show>

Since late 2008 we have found ourselves back in one of the periodic troughs of disarmament diplomacy, with the Six-Party Talks ostensibly stagnating over a failure to agree on verification measures, although North Korea's renewed belligerence may well have been related to its internal regime dynamics following Kim Jong-il's stroke in August 2008. North Korea has responded to Obama's election and outreach campaign with hostility and inflexible negotiating policies. On the very morning of Obama's Prague speech on 5 April 2009, North Korea tested a modified version of its Taepodong-2 ballistic missile. After the Security Council issued a presidential statement condemning the test, Pyongyang responded by withdrawing from the Six-Party Talks, declaring that it was no longer bound by any of its agreements, and threatened to reverse the disablement of its nuclear facilities and embark on a new reprocessing campaign. US and international inspectors were ejected. The DPRK claimed to have reprocessed an additional 8,000 spent fuel rods by the end of August 2009, enough to produce around 8 kg of plutonium (sufficient for about one nuclear weapon), in addition to its pre-existing stockpile. In May 2009 North Korea conducted its second nuclear test, this time achieving an estimated yield of about 4 kilotonnes.⁷

The current status of North Korea's nuclear programme

It is difficult to assess accurately the size of North Korea's plutonium stockpile. After taking its two nuclear tests and most recent reprocessing campaign into account, it is likely that North Korea possesses sufficient plutonium for between five and nine nuclear weapons.⁸ In January 2009 the DPRK claimed that it had 'weaponised' its declared stock of plutonium, and in June of that year announced that it would do the same to its remaining stockpile.

In order to add further to its plutonium stockpile, North Korea would have to reverse previous disablement measures and restart the 5 MWe Yongbyon reactor. This would take approximately six months to achieve and, once operational, the reactor would be able to produce about 6 kg of plutonium a year, roughly sufficient for one nuclear weapon. However, so far there have been no indications of any rebuilding having taken place at the reactor site. In addition, no construction has occurred at North Korea's two larger, incomplete reactors since 2002.

In June 2009 the DPRK repeated a claim it had first made that April that it would begin enriching uranium, notionally to fuel a future light-water reactor. Despite previous denials, it is highly likely that the DPRK has pursued some level

⁷ Mark Fitzpatrick, 'Stopping Nuclear North Korea', *Survival*, Vol 51, No 4, August-September 2009, p.8.

⁸ International Institute for Strategic Studies, 'North Korea's dangerous game', *Strategic Comments*, Vol 15, Issue 5, June 2009.

of uranium enrichment for many years (indeed, suspicions that a clandestine enrichment programme existed precipitated the collapse of the Agreed Framework in 2002), although the US intelligence community has expressed less certainty about the actual progress Pyongyang has made in this area. The technical implications of its September 2009 announcement that its 'experimental uranium enrichment has successfully been conducted to enter into completion phase' are unknown. While it is possible that the North could receive technical assistance with an enrichment programme from Iran, it would be significantly easier for it to add to its nuclear arsenal through the established plutonium route.

It is possible that North Korea is already able to produce nuclear warheads that can fit on its medium- and long-range ballistic missiles, although it is less likely that it is capable of producing a weapon that is capable of surviving re-entry into the atmosphere.⁹ In September 2010 a senior Pentagon official stated in Congressional testimony that North Korea did not yet, to the knowledge of the US Department of Defence, have the capability to deliver a nuclear weapon.¹⁰ It is possible that the small size of the DPRK's nuclear tests was less a reflection of technical ineptitude than an indication that Pyongyang is experimenting with miniaturisation of its warheads for use on a ballistic missile.¹¹

Onward proliferation from North Korea

In recent years numerous reports have emerged suggesting North Korean nuclear cooperation with various countries. During Six-Party Talks in 2003 North Korean official apparently threatened in private that it might transfer its nuclear weapons.¹² There are unconfirmed suspicions that North Korea was the source of uranium hexafluoride given to Libya by the A.Q. Khan network.¹³ North Korean collaboration with the junta in Myanmar on its unconventional weapons programmes has been alleged for several years, with varying degrees of credibility. In 2010 a Burmese defector produced evidence that he claimed revealed the existence of a nascent nuclear weapon programme. It does seem likely that North Korea is collaborating with Myanmar on ballistic missile issues

⁹ Mark Fitzpatrick, 'Stopping Nuclear North Korea', p.8.

¹⁰ Anna Muirine, 'North Korea: McCain presses for answers on its nuclear capability', *Christian Science Monitor*, 16 September 2010.

¹¹ Mary Beth Nikitin, *North Korea's Nuclear Weapons: Technical Issues*, CRS Report for Congress, RL34256, 16 December 2009, p.10.

¹² *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July Through 31 December 2003*, Central Intelligence Agency, https://www.cia.gov/library/reports/archived-reports-1/july_dec2003.htm

¹³ *Nuclear black markets : Pakistan, A.Q. Khan and the rise of proliferation networks : a net assessment*, International Institute for Strategic Studies, (London : International Institute for Strategic Studies, 2007), pp.78-79.

but it remains unclear whether this cooperation extends to nuclear technology. Future revelations may elucidate the extent of Myanmar's nuclear ambitions and Pyongyang's role in them.

What is clear is that North Korea was heavily involved in what appears to have been an attempt by Syria to develop a nuclear weapons capability. Before its destruction by Israeli jets in September 2007, Syria seems to have been building a gas-cooled graphite-moderated reactor at al-Kibar, very similar to the 5MWe reactor at Yongbyon, which was most likely intended to produce plutonium.¹⁴ It is probable that North Korea directly supplied or helped to procure the majority of the equipment required for the reactor. The US Treasury recently identified a Chinese office of the North Korean Namchongang Trading Corporation as having been involved in procurement of material for the construction of the Syrian reactor.¹⁵ Syria has denied building a reactor and, apart from allowing a brief IAEA inspection in 2008, has refused to answer many of the Agency's questions.

This episode has two unfortunate implications for longer-term disarmament efforts. Firstly, neither Syria nor North Korea has allowed sufficient verification of the charges that they breached their NPT obligations, and since the revelation of their activities the international community has made few efforts to enforce these. Indeed, the Bush administration seemed keen to avoid pressing the issue with the North Koreans during 2008, when it still hoped for a positive outcome to disablement process. Secondly, Syria-North Korea collaboration began before the reactor construction started in 2001, during a period of relatively good relations between Washington and Pyongyang. This fact highlights the willingness of North Korea to flout the rules of non-proliferation regime and take what most other states would consider to be extremely risky decisions, even when it did not have its 'back to the wall'.

The threat of North Korean proliferation to other states therefore remains a real one and poses a serious challenge to the long-term goal of disarmament. The Panel of Experts on North Korea concluded in two reports to the UN Security Council in 2010 that 112 states had failed to submit reports on their implementation of UNSCR 1718 and UNSCR 1874 (passed in 2006 and 2009 respectively after the North Korean nuclear tests), and that various assessments indicated continuing North Korean involvement in nuclear and missile-related activities in countries such as Syria, Iran, and Myanmar.¹⁶

¹⁴ See 'Syria, Jordan, Lebanon, Iraq' in *Nuclear programmes in the Middle East: In the shadow of Iran*, International Institute for Strategic Studies, (London : International Institute for Strategic Studies, 2008)

¹⁵ David Albright and Paul Brannan, 'If Not Now, When? Time for an IAEA Special Inspection in Syria', Institute for Science and International Security, 6 September 2010, <http://isis-online.org/isis-reports/detail/if-not-now-when-time-for-an-iaea-special-inspection-in-syria/>

¹⁶ *Report to the Security Council from the Panel of Experts established Pursuant to Resolution 1874 (2009)*, <http://www.armscontrolwonk.com/files/SCR1874.pdf> .

It is much less likely that North Korea would be prepared to supply non-state actors with nuclear technology or nuclear weapons as, if a nuclear terrorist attack were traced back to the DPRK, the survival of the regime would be in severe jeopardy. No evidence of any such activity has emerged. However, given North Korea's history of risk-taking and its shortage of hard currency, the possibility of such a scenario in the future cannot be dismissed entirely.

Current prospects for denuclearisation

The record of the past eight years is discouraging: the initial hostility of the Bush administration to negotiations and its challenging of North Korea's secret uranium enrichment activities contributed to the collapse of the Agreed Framework, and allowed North Korea to expand its plutonium stockpile. Yet despite the efforts made during the latter part of the administration to move forward denuclearisation through several years of multilateral talks, their main result has been continued missile launches, two nuclear tests, and a diplomatic impasse.

During the past two years, over approximately the same timeframe that the 'Global Zero' campaign has increased in prominence, North Korea appears to have pocketed the economic aid and political concessions made to it since 2003 and resumed its bellicose behaviour, although now adopting even more inflexible negotiating positions. Pyongyang's insistence in 2009 on a peace treaty being concluded with the US before the Six-Party Talks resumed – only months after it had insisted that it was indifferent to the prospect of normalising relations – could be reasonably interpreted as evidence that it was not serious about reviving the diplomatic process, and did not seek to trade its nuclear capabilities in return for improved relations and economic aid. In September 2009, Pyongyang rejected a public offer from South Korean President Lee Myung-bak of a 'grand bargain' in which the DPRK would receive economic assistance and security guarantees in return for denuclearisation. North Korea now insists on being recognized as a nuclear weapon state. Doing so would be an unacceptable legitimisation of violation of its NPT obligations.

Washington has instead opted for 'strategic patience', emphasising that it would not lift sanctions or sign a peace treaty until Pyongyang returned to the Six-Party Talks, and that it would in no way recognise North Korea as a nuclear weapon state. While the US has said it is prepared to engage in dialogue on other issues if North Korea were to demonstrate its willingness to move ahead with denuclearization, US Secretary of Defense Robert Gates made clear in May 2009 that it was 'tired of buying the same horse twice'. Moreover, it is unlikely that the US would be content for negotiations to return merely to discussions of the disablement of Yongbyon, and would most likely want them to cover issues such as Pyongyang's arsenal, uranium enrichment activities, the verification

mechanism, and proliferation to other states, the resolutions of which the Bush administration decided to push into the future.¹⁷ Yet China continues to press for a resumption of the Six-Party Talks and, despite the statements of the US and South Korea earlier this year that such a resumption would be impossible until the *Cheonan* incident had been resolved, it is probable that both the US and the ROK will eventually relax the policy of ‘strategic patience’ and return to the talks, simply in order to diminish the probability of sanctions and isolation leading the DPRK to initiate further military provocations that could escalate into a major conflict.

While it is essential for channels of communication between North Korea and the US to be kept open, there is no indication whatsoever that the Kim regime has any intention of ever relinquishing its nuclear weapons, particularly in the context of what may be an unstable leadership transition. North Korea has expanded its list of preconditions for denuclearisation to take place. In addition to demanding a peace treaty with the US, the DPRK has stipulated that the US ‘nuclear threat’ must first be removed. This threat has been defined as US military forces in and around South Korea and the American nuclear umbrella, thus implying that denuclearisation will only follow the termination of the US-ROK military alliance.¹⁸ The DPRK has gone even further, declaring in a letter to the UN Security Council in October 2009 that it would be ‘unthinkable even in a dream’ for it to give up its nuclear weapons, and that these could never be relinquished until the United States did likewise.¹⁹ In his Prague speech, President Obama made clear that ‘as long as [nuclear] weapons exist, [the United States] will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defence to [its] allies’. Given this fact, it appears that, while most analysts would argue that global nuclear disarmament will first require North Korea to denuclearise,²⁰ Pyongyang may believe it is the other way around.

At the time of writing, it appears the US and South Korea may be becoming more amenable towards restarting the Six-Party Talks. While it is possible that North Korea may revert to more docile rhetoric of future denuclearisation in return for political, economic and security benefits, it would be unwise to place too much emphasis on such language, given its previous policy reversals. It is possible that in the aftermath of Kim Jong-il’s death, likely within the next few years, the new

¹⁷ Larry A. Niksch, *North Korea’s Nuclear Weapons Development and Diplomacy*, CRS report for Congress, RL33590, 5 January 2010, p.14-5.

¹⁸ Niksch, *North Korea’s Nuclear Weapons Development and Diplomacy*, p.14.

¹⁹ Bill Varner, North Korea Says Dismantling Its Nuclear Weapons ‘Unthinkable’, Bloomberg, 6 October 2009,

<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aJS46gmAKirs>

²⁰ Perkovich and Acton are typical in arguing that ‘North Korea must cease to pose a nuclear-weapons threat if the legitimate possessors of nuclear weapons are to look over today’s horizon and imagine that the elimination of all nuclear arsenals could be feasible.’ Perkovich and Acton, *Abolishing Nuclear Weapons*, p.36.

North Korean leadership will re-evaluate its strategic position and be genuinely prepared to trade away its nuclear assets. However, it is also possible that it will continue to see them as vital to its security and prestige, and feel emboldened to adopt an even more inflexible approach, especially given the tepid international response to the sinking of the *Cheonan*.

Implications for ‘Global Zero’

In terms of furthering the goal of ‘Global Zero’, the immediate objective of the international community must be to strengthen containment measures against North Korea and prevent onward proliferation of its nuclear technology, materials and know-how to new states or non-state actors through enhanced international enforcement of sanctions and export controls.

Ultimately, a precondition of global nuclear disarmament will be North Korea’s permanent and verifiable denuclearisation. As long as it retains a nuclear weapons capability, the US will need to maintain nuclear weapons and provide extended deterrence for its allies. The prospect of either Japan or South Korea feeling obliged to seek their own deterrent seems remote, at least for the near future, but cannot be excluded entirely if North Korea is eventually accepted as a *de facto* nuclear state. Other states, including those in Europe, will find it unacceptable to relinquish nuclear weapons as long as North Korea continues to possess them.²¹ This is not so much because they perceive the DPRK to be a direct security threat, but rather because North Korea’s ongoing nuclear defiance demonstrates that some states remain willing to make immense sacrifices to obtain and preserve a nuclear weapons capability, and is a stark indictment of the international community’s ability to enforce its own rules, even in the face of the most blatant infringements and provocations.

For the concept of ‘Global Zero’ to be credible, states would need to be confident that the international community possessed an effective mechanism to detect and verify potentially ambiguous infringements of the prohibition on nuclear weapons and, crucially, to enforce that prohibition, even if the violating

²¹ The UK Defence Secretary Liam Fox argued in July 2010 that ‘we continue to have [a nuclear deterrent]... Because we look at a world where North Korea has just developed nuclear weapons, where Iran seems to be trying to develop nuclear weapons, where we may be threatened by other countries’, BBC, 18 July 2010, http://news.bbc.co.uk/1/hi/programmes/andrew_marr_show/8832224.stm; see also an article by Dr Fox when still in opposition in which he argued that ‘to abandon our deterrent in a world where countries such as North Korea and Iran are developing nuclear weapons would be utter madness’, in ‘There’s a war on - someone tell Labour’, 8 July 2009, Conservative Party website, http://www.conservatives.com/News/Articles/2009/07/Liam_Fox_Theres_a_war_on_-_someone_tell_Labour.aspx.

state were a powerful one.²² The difficulties experienced thus far in establishing a verification mechanism for North Korea give an indication of the challenge that this aspect would pose when applied more broadly.

More generally, at present the only institution with the legitimacy to act as an enforcement mechanism remains the UN Security Council. One need only recall its recent failure even to reach consensus on the cause of the sinking of the *Cheonan*, let alone to mandate measures against the culprit despite overwhelming physical evidence, to doubt the prospect of its playing an effective role in hypothetical cases of attempted cheating once nuclear weapons had been abolished. In this sense, the ‘hard case’ of North Korean proliferation can also be seen as a preliminary test case of the much-improved international cooperation that will be required to achieve the goal of a world without nuclear weapons.

²² In his Prague speech President Obama clearly acknowledged the difficulties entailed in nuclear disarmament and the need to improve international enforcement. He argued that ‘we go forward with no illusions. Some will break the rules, but that is why we need a structure in place that ensures that when any nation does, they will face consequences...Rules must be binding. Violations must be punished. Words must mean something. The world must stand together to prevent the spread of these weapons. Now is the time for a strong international response. North Korea must know that the path to security and respect will never come through threats and illegal weapons. And all nations must come together to build a stronger, global regime.’