

North Korea: A 'Dwarf' WMD State

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Abstract

North Korea proved its nuclear capabilities to the entire world on October 9, 2006. Along with nuclear weapons, North Korea has also acquired other types of weapons of mass destruction (WMD). The North Korean acquisition of WMDs stems not from an indifference to deterrence, but rather a keenly developed understanding of the uses of deterrence. In the years to come, North Korea is going to use these weapons as bargaining tools with increasing vigor because of their success (albeit limited) in the nuclear arena. This article argues that North Korea may overcome the limitations of its nuclear capabilities by investing more in other forms of WMDs, mainly chemical and biological weapons and there is a need to take a fresh look at these threats.

Key Words: nuclear, biological, chemical, North Korea, disarmament

In August 2006, the reclassification of the solar system took place at Prague during the International Astronomical Union (IAU) conference. This conference took one of the most important landmark decisions by downgrading the status of Pluto to that of a “dwarf planet.” Now, officially only eight planets exist in our solar system.

The same analogy could be extended to the current nuclear regime too, where besides the major players, there is also one which has pretensions to being a nuclear power.

We have only eight ‘recognized’ nuclear weapon states (the original five who incidentally are also the permanent members of United Nations Security Council and India, Pakistan, and Israel¹ till date). North Korea carried out a nuclear test on October 9, 2006. However, as per the technical assessments, North Koreans must have exploded half a kiloton device - compared to the more than 12 kilotons used for the Hiroshima bomb. In fact, a few assess this test as a partial failure.² Moreover, all the other nuclear states are major powers to reckon with and have developed comparably powerful economies probably with the sole exception of Pakistan. North Korea has acquired nuclear weapons for the same reason that the other states retain theirs—deterrence against perceived external threats, regime security, and to exploit the enhanced power and influence that comes with being a nuclear power. However, in all likelihood, North Korea will be unable to really exploit the ‘power and influence’ aspect because it lacks all the other essential elements—a functioning and stable economy, an ability to meaningfully engage with the international community, including something worthwhile to offer the international system.³ Under these circumstances, North Korea could only be referred to as a “dwarf nuclear power.”

Following the recent nuclear test, it is predicted that even if North Korea works steadily to advance its nuclear weapons

¹ Israeli Prime Minister Ehud Olmert has broken with Israel’s decades-old tradition of “strategic ambiguity” about its nuclear weapons and had indirectly accepted its presence with Israel while giving an interview with a German TV station on December 11, 2006.

² Federation of American Scientists suggested that the first test had been a partial failure.

³ Harsh V. Pant, *What Have Nukes Got To Do With It?* Oct 18, 2006, <http://outlookindia.com/full.asp?fodname=20061018&fname=harshpant&sid=1&pn=2>.

production capabilities and transform them from products of scientific research into armaments with military significance it could reach a stage when it could produce 30 nuclear weapons.⁴ This quantity still could be much less than the projected strength of relatively new entrants in the nuclear club namely India and Pakistan.⁵ Additionally, it needs to be taken into account that this half-kiloton explosion was the product of an effort spanning a half-century or more.⁶ This is indirectly indicative of the status of technology and 'raw material' available with them for the production of nuclear weapons.

Nevertheless, North Korea has found strength in its 'dwarfness' too. Today, the world just cannot ignore this degree of brazenness. It is rapidly becoming clear that this "dwarf nuclear power" is fast gaining a degree of regime security that cannot be disregarded. There could be various reasons for this. First, it may be a dwarf but it is still a nuclear capable state. Second, military intervention by the US is almost impossible because particularly after the *Iraq fiasco*, the US is unlikely to invade any other country in the near future. Additionally, a military action may start an all-out war in the region. Third, the efficacy of sanctions is debatable. This is because universally it has been observed that any sanctions regime has limited utility. Already, North Korea has been under a sanctions regime for many years but instead of buckling under the pressure and agreeing to follow the global order it has dared to go nuclear. Fourth, allies of North Korea like China and Russia are unsure of their position. This nuclear bravado has hurt China the most. On one hand it has brought upon it

⁴Zhang Liangui, "Coping with a Nuclear North Korea," *China Security*, Autumn 2006, p. 17; "North Korea's Nuclear Weapons Program," *Congressional Research Service Issue Brief* (IB91161), <http://www.fas.org/sgp/crs/nuke/IB91141.pdf>.

⁵As per Carnegie Endowment India and Pakistan are capable of producing around 100 weapons.

⁶Michael Hirsh, et al., "We are a Nuclear Power," *Newsweek*, October 23, 2006, p. 24.

international embarrassment and, on the other, the country is worried about the influx of refugees to its own country if any change in status quo in the region takes place. Fifth, North Korea is unlikely to give up its nuclear capabilities through a route of any political negotiations and the world may be forced to live with nuclear North Korea in the years to come.

It appears that even the supporters of North Korea were not totally convinced about the country's capabilities. This became evident when shortly before North Korea announced in April 2003 that it possessed a nuclear arsenal, Russian Atomic Energy Minister Alexander Rumyantsev had stated, "It will take Pyongyang another 50 years to develop its own nuclear weapons."⁷ However, North Koreans proved everybody wrong. It is likely that incorrect decisions were made over the Korean Peninsula crisis for many years because limited data was available to various policymakers or because policymakers rushed to hasty conclusions.⁸

The North Korean acquisition of weapons of mass destruction (WMD) stems not from an indifference to deterrence, but rather a keenly developed understanding of the uses of deterrence.⁹ Now, with North Korea overtly going nuclear, it becomes essential to critically analyze its investments in other arenas of WMD too. This article examines the North Korean missile program and its investments in the arena of the least discussed WMD threats, namely, chemical and biological weapons (CB weapons).

⁷ Mikhail Pogorely, "Prospects For Russian-US Cooperation in Preventing WMD Proliferation," 2004, p. 83.

⁸ Konstantin Asmolov, "North Korea: Stalinism, Stagnation, or Creeping Reform?" *Far Eastern Affairs*, Vol. 33, No. 3, 2005, p. 22.

⁹ <http://www.fas.org/nuke/guide/dprk/doctrine/index.html>.

CB Weapons

North Korea went for nuclear weapons presumably because of the psychological effect these weapons carry and the ‘power stature’ they have achieved over the years in international geopolitics because of their visible and devastating power. Yet, in reality, biological and chemical weapons may be just as dangerous, especially when used against civilians in heavily populated areas. In this regard, the psychological impact even surpasses the combat effect of these weapons. Tiny quantities of anthrax, many times less than that used in a single warhead, almost paralyzed the US in the autumn of 2001 and caused serious psychological trauma to thousands of Americans.

It goes without saying that chemical agents are much easier to produce or acquire than nuclear devices and weapons. It is believed that 16 countries today have access to chemical weapons know-how. The attractiveness these weapons hold for states and terrorists far exceeds the attention they receive both in the disarmament process and in attempts to prevent proliferation of the technologies and production base.¹⁰

North Korea fully understands the limitations of international laws to protect against the global threat of proliferation. It has exploited the situation and has made substantial investments towards developing its chemical and biological arsenal.

North Korea has operated an extensive chemical weapons programme for many years and is also involved in developing biological weapons. Unfortunately, in recent times, the country’s nuclear adventurism has gained so much prominence that an important account on its chemical and biological weapons ambitions has been found missing from the recent global strategic discourses on

¹⁰ Mikhail Pogorely, “Prospects For Russian-US Cooperation in Preventing WMD Proliferation,” *The Journal of Slavic Military Studies*, Vol. VII, No. 1, March 2004, p. 85.

its WMD ambitions.

The most interesting aspect of the North Korean nuclear test had been its blatant acceptance of its nuclear ambitions. The country first informed the world that it has nuclear weapons and then declared its intention to test them and finally it kept its boast by testing one on October 9, 2006. Recent history indicates that the global community had taken all these claims very seriously. However, North Korea conceding that it possessed bio-weapons has not caused any turmoil within the strategic community. The North Korean Vice Foreign Minister, Kang Sok Ju, had declared a year back to Japanese sources, "Other than nuclear, we also have many other things. We also have bio-weapons."¹¹ It may be because there have been no bi-chemical equivalents to Hiroshima or Nagasaki that global opinion doesn't seem to take these weapons as seriously.

North Korea has a long history of investment in the arena of biological weapons. It has reportedly pursued biological warfare capabilities since the 1960s, and continued research with possible production of anthrax, plague, yellow fever, typhoid, cholera, tuberculosis, typhus, smallpox, and botulinum toxin. Recent admissions of possessing biological weapons make it evident that for the last forty years, it has been pursuing an active biological weapons program. A Russian source has also revealed that North Korea is performing applied military biological research in many universities, medical institutes, and specialized research institutes. Work is being conducted in these centers with inducers of malignant anthrax, cholera, bubonic plague, and smallpox. Additionally, it has been mentioned that North Korea tests its biological weapons on its own island territories.¹² The North Korean chemical weapon arsenal

¹¹"N. Korea Admitted to US It Has Bio-Weapons, too," <http://www.rense.com/general31/nk.htm>., and http://www.sspconline.org/article_details.asp?artid=art27.

¹²Bruce Bennett, "Weapons of Mass Destruction: The North Korean Threat," *Korean Journal of Defense Analysis*, Vol. XIV, No. 2, Fall 2004, pp. 84-85.

probably includes mustard gas, hydrogen cyanide, cyanogen chloride, phosgene, sarin, soman, tabun, and VX. North Korea is not a party to the CWC but has acceded to the BWC.¹³

The existing chemical weapon capabilities of North Korea are symptomatic of its doctrinal considerations for usage of such weapons. Learning from the Soviet military doctrine, North Korea has traditionally viewed chemical weapons as an integral part of its military offensive capabilities. There are no signs suggesting that this view has altered since the end of the Cold War. The most obvious tactical use of chemical weapons by North Korea could be to terrorize South Korean civilians. Seoul lies within easy striking distance of North Korea's artillery and rocket systems and, today, the South Korean civilian population has no protection against chemical weapons attack.¹⁴ North Korea is said to have conducted lethal gas experiments on political prisoners in the 1970s, which reportedly continued till as recently as 2002.¹⁵ These accounts were given by a few of the scientists involved in these experiments who subsequently moved to South Korea. They claim that during these experiments, prisoners were placed in glass chambers and exposed to chemicals that killed them within hours.¹⁶ This also gives an indication of North Korea's will to use such type of weapons. One of the highest-ranking North Korean government officials to defect to the South, Hwang Jang Yop, had said in April 1997 that the North Korean military was capable of turning Seoul into a "sea of fire" by using a combination of chemical and nuclear weapons delivered by missiles.¹⁷

¹³For a detailed description "Chemical and Biological Weapons: Possession and Programs Past and Present," <http://cns.miis.edu/research/cbw/possess.htm>.

¹⁴North Korea Advisory Group, Report to the Speaker, US House of Representatives, November 1999.

¹⁵*The Hindu*, New Delhi, November 25, 2004.

¹⁶Jeremy Kirk, "N. Koreans detail deadly experiments on prisoners," *The Washington Times*, November 24, 2004.

¹⁷http://www.nti.org/e_research/profiles/NK/index_1549.html.

It is likely that chemical weapons could even be used against the civilian population. Finally, because much of the North's success relies on preventing US assets in the region coming to the aid of the South, especially those forces deployed in Okinawa and Guam, Okinawa could be targeted by Rodong I, Rodong II and Taepodong missiles, possibly armed with chemical warheads, while Guam could be reached by Taepodongs.

The role of biological warfare agents in North Korean military planning is, however, not clear. While a number of delivery systems mentioned above could be employed to use biological agents against South Korean and US forces, it is not known what validated weapons systems are currently in the North Korean arsenal. As part of an overall offensive, northern infiltrators into the South could conduct sabotage operations using germ agents; North Korean specialized units could also carry out biological assaults. Whether by sophisticated aerosolized agents (anthrax) or crude contamination of food or beverages, such operations may be set in motion if the North decides to conduct full-scale military operations against South Korea.¹⁸ Moreover, it is predicted by some analysts, based on the simulated chemical warfare exercise pictures available from North Korea (conducted during 1999), that aircraft-mounted sprayers, used for delivering deadly chemicals on the target, could also be used as delivery platforms for the biological weapons too.¹⁹

It has also been reported that North Korea could possibly use "toxic industrial chemicals (TIC)," easily obtained by any nation, as a military weapon, and it would be impossible to detect such weaponry with the existing military equipment. According to Bruce Bennett of

¹⁸ Amy Sands, "Deconstructing the Chem-Bio Threat," Testimony at the Senate Foreign Relations Committee, March 19, 2002, <http://cns.miis.edu/pubs/reports/asands.htm>.

¹⁹ Nicholas J. Beeching, "Biological warfare and bio-terrorism," <http://bmj.bmjournals.com/cgi/content/full/324/7333/336?ck=nck>.

the US RAND research center, “TIC chemicals such as chlorine, phosgene, and ammonia can be used for chemical weaponry, and these chemicals are not detectable by the military’s chemical-biological-radiological (CBR) equipment. Additionally, gas masks or protective clothing will not be able to protect soldiers.”²⁰

North Korea’s chemical weapons arsenal is expected to be built around a doctrinal thought that it should remain prepared to quickly produce the ‘weapons’ when the need arises. Eight different facilities in North Korea have produced lethal chemicals, such as nerve gas, blister, blood, vomiting agents, as well as tear gas and are stored at different facilities. Their quantity is estimated to be somewhere between 2,500 to 5,000 tons. North Korea is capable of producing an additional five thousand tons each year during peace time or 12,000 tons per year during war. As per some estimates, 1,000 tons of these agents would be sufficient to kill 40 million people. Even after assuming that these estimates are on the higher side, the threat of a substantial nature (capable of killing at least few millions of people),²¹ nevertheless, remains.

A possibility exists that since CB weapons are most usable and useful in guerrilla warfare, North Korea may pursue this option by employing its 80,000-strong Special Operations Forces against South Korea. They could create a state of pandemonium especially in metropolitan cities and their large population with these weapons. These are all the more usable since, unlike nuclear weapons and missiles, CB weapons are easy for a small military unit to carry, hide, and use in the course of a local war. In the final analysis, it is highly likely that CB weapons would be the last type of WMD that North Korea would give up unless its leadership has confidence that it can

²⁰ Bruce Bennett, op.cit, p. 96.

²¹ Ibid, p. 82 and Robert D. Kaplan, “When North Korea Falls,” *The Atomic Monthly*, October 2006, p. 65.

offset its conventional inferiority vis-à-vis the South by refurbishing its armed forces with a modern conventional arsenal.²²

Missile Program

Missiles have both military utility and deterrence value. Having a missile is more about the possession of a particular capability. Missile technology is an integral part of any WMD setup. Over the years, North Korea has wisely invested in missile technology for its potential as the most useful delivery system for its WMD arsenal. It understands that such a potential has a great value both at the exterior of war as well as within it.

It is estimated that North Korea can produce about 100 missiles a year. Since the mid 1970s, North Korea has pursued the development of ballistic missiles with increasing range, which it had deployed with its armed forces. By the mid 1980s, it had deployed short-range Hwasong V/VI missiles, capable of reaching targets throughout South Korea. The production rate of these missiles is believed to be seven to nine a month. In fact, North Korea began to make ballistic missiles around 1981, with copies of Russian scuds purchased originally from Egypt. These became operational as the Hwasong V in 1984. By the mid 1990s, it had deployed Rodong missiles, capable of reaching all of Japan. The size and disposition of North Korea's Hwasong and Rodong missile forces are uncertain, but probably include a few hundred deployed missiles, with additional missiles in reserve. As per some estimates, the current holdings with North Koreans are to the tune of 900-1,000 Hwasong V/VI and Rodong I (improved scud) and more than 100 medium-range Taepodong I /Rodong II ballistic missiles, deployed in underground silos or hidden

²² Kyoung-Soo Kim, "North Korea's CB Weapons: Threat and Capability," *Korean Journal of Defense Analysis*, Vol. XIV, No. 1, Spring 2002, pp. 94-95.

in caves.²³

If considered necessary, North Korea can expand the size of its missile forces. Pyongyang probably views these forces as both military and political assets. Militarily, the missiles can serve the function of long-range artillery, seeking to disrupt enemy communications and logistics in rear areas and interdicting reinforcements. To some degree, the military effectiveness of North Korea's missile forces would be reduced by poor accuracy, limited survivability, and missile defences, but could make a significant contribution to overall military operations, especially in the early stages of a conflict. As a political tool, North Korea's missiles give it more ability to threaten cities in South Korea and Japan with conventional or unconventional warheads. It is not known whether unconventional warheads have been deployed, but the possibility contributes to deterrence and intimidation. In addition to their perceived political and military utility for North Korean defense, the sale of missile and missile technology has been an important incentive for North Korean missile development and production.²⁴

On July 5, 2006 North Korea conducted one of its largest ballistic missile exercises till date. A total of seven systems were launched over a 14-hour period. These included one Taepodong II (which failed) and six shorter-range 'scud' and Rodong missiles. Prior to this exercise, the largest previous one, which involved the launch of three 'scud B/Cs' and one Rodong, took place in May 1993.

North Koreans provided no prior notice of this exercise to international air or maritime traffic control, although apparently they warned their own fishing fleets. The tests, conducted primarily at

²³ Richard M. Bennett, "Missiles and madness," <http://www.atimes.com/atimes/Korea/HH18Dg02.html>; R. Ramachandran, "Missile matters," *Frontline*, November 3, 2006, p. 14.

²⁴ North Korea's Weapons Programs A Net Assessment, *An IISS Strategic Dossier*, 2004, pp. 82-83.

night, would have both restricted foreign intelligence-gathering capabilities and achieved some element of surprise.

One of the major features of this exercise was the launch of the Taepodong II intermediate range/intercontinental range (IRBM/ICBM) ballistic missile. This test ended Pyongyang's self-imposed September 1999 moratorium on testing long-range missiles and could herald a full-scale resumption of its missile development program.

There are conflicting reports available about the success of this test. Some claim that following a successful lift-off; there was a catastrophic failure of its first stage that resulted in the destruction of the system. The possible areas of failure are identified as guidance, structure or engines. As such, North Koreans had considerable problems with the engines in the past, as indicated by the April 2004 catastrophic failure of a Taepodong II engine test.²⁵ However, some other reports claim that, despite media speculation that the flight was aborted after just 42 seconds, it now seems likely that it flew for seven minutes and was a significant technical success. It is also expected that within the next couple of years, development of the Taepodong II/RodongIII intercontinental ballistic missiles will be completed and North Korea will gain a genuine strategic deterrent with a range of at least 8,000 km, though some observers have suggested as much as 12,000 km.²⁶ Some analysts are of the opinion that North Korea's current investments in the missile arena are likely to succeed because they are essentially working on Russian decommissioned R-27 systems which is a proven design. This implies that North Korea may be able to develop and deploy its missiles without having to conduct extensive ground and flight tests. This new missile is known as Taepodong X and has a range of 2,500-4,000 km (not yet been tested) and about 50 of them may have already been

²⁵ *Jane's Defence Weekly*, July 12, 2006.

²⁶ Richard M. Bennett, *op.cit.*

deployed.²⁷

To prove its prowess in the arena of tactical ballistic missiles North Korea conducted tests during May 2005 and March 2006 of KN-2, a new solid fueled missile based on the Soviet SS-21 Scarab with an improved range of 100-120 km intended specifically to strike US military installations in South Korea. Probably over 100 of these may have been already deployed. The North Korean missile program caters for chemical and perhaps even for biological warheads.²⁸

Space Technologies

The space program of any country is generally perceived as an offshoot of its missile program. Space issues and missile technology are intricately related. However, most of the policy analysts treat them as separate domains. Sometimes it is prudent to do so particularly when the country's space programs cover a wider spectrum of issues. However, in case of North Korea, its space program has got a very limited scope and is mainly focused on enhancing the capabilities of medium-range missile fire. Hence, it could be argued that North Korea's space program is indirectly relevant to its WMD capabilities.

On September 4, 1998, the Korean Central News Agency broadcast a report claiming the successful launch of the first North Korean artificial satellite, Kwangmyongsong I (Brightstar I). This very small satellite was launched into the orbit on August 31, 1998. One stage of the North Korean rocket fell in the Sea of Japan and the second stage fell into the Pacific Ocean to Japan's west.

The initial reports by Russian military space forces about the

²⁷ Steven A. Hildreth, "North Korean Ballistic Missile Threat to the United States," *CRS report for Congress*, updated as of September 20, 2006, www.fas.org/sgp/crs/nuke/RS21473.pdf.

²⁸ R. Ramachandran, "Missile matters," *Frontline*, November 3, 2006, p. 15.

success of the launch were very encouraging. On September 6, 1998, they confirmed that the satellite was in orbit²⁹ but these claims were subsequently withdrawn. Apparently, the satellite failed to reach its orbit as it could not be found in space by US military and other trackers. Even on September 9, 1998, US space command was not able to confirm North Korean assertions. As of now, the speculation about the success of this launch has been laid to rest and most literature on the subject confirm the view that the satellite was a North Korean launch of its first medium-range Taepodong I ballistic missile from the north eastern part of the country, shortly after noon of August 31, 1998. The rocket landed in the high seas off Sanriku coast of Japan, after flying over the Japanese island of Honshu before plunging into the Pacific Ocean, triggering off Japan's and a similar South Korean space militarization program.³⁰

Subsequent to this attempt, no significant enthusiasm has been noticed on the part of North Koreans to invest more in this field. However, even this launch was viewed by Tokyo and Washington as a military danger. They express a view that there is little difference between space exploration and missile launchings.

Relevance of WMD Capabilities for the Future

Now with North Korea being a nuclear capable state, it is important to articulate freshly the significance of other class of weapons of mass destruction for the country. There is a necessity to undertake such analysis afresh because, by and large, a WMD capability in case of North Korea (or for that matter with many others

²⁹ John Catalinotto, "DPRK launches first satellite for National Day," *Workers World*, September 17, 1998, available at <http://www.hartford-hwp.com/archives/55a/156.html>.

³⁰ Kiran Nair, "Space: The Frontiers of Modern Defence" (New Delhi: Knowledge World, 2006), pp. 194-195.

too) is usually discussed as a single category of weapons. Habitually, and by default, many debates on WMDs, relating to North Korea, are found to be associated with nuclear weapons and their delivery platforms. However, there is a need to factor in CB weapons separately because they have very diverse potential for causing fatalities.

At this juncture, the major questions that arise are: First, with nuclear weapons in hand, will North Korea continue with its interests in other class of WMDs? Second, if so, what could be the benefits of doing so? Third, what could be the fate of its clandestine WMD program post-October 9, 2006? Lastly, is it correct to have a myopic view of comparing the significance of one type of WMDs with other types of WMDs or is it prudent to contextualize the relevance of WMDs for North Korea against the backdrop of the central issue of its isolation?

History has shown that all the five stakeholder countries, possessing of nuclear weapons, have not shown much interest in total disarmament and, in fact, some of these countries have got plans of conceiving and undertaking strategic nuclear-modernization programs³¹ and some are interested in developing war fighting tactical nuclear arms.³² Naturally, North Korea is likely to take such ground reality into consideration before taking any further step towards deciding anything about its nuclear weapons and also for that matter other types of WMDs.

Much will depend in future about how North Korea perceives its possession of various types of WMDs. If it perceives a possession of WMDs as an adoption of new weaponry and not a final destination, it would try to continuously upgrade its existing arsenal. In respect to the

³¹ Jeffrey Lewis, "The ambiguous arsenal," *Bulletin of the Atomic Scientists*, May/June 2005, Vol. LXI, No. 3, pp. 52-59.

³² Wu Sha, "A Tentative Analysis of US Development of New-type Tactical Nuclear Weapons," *International Strategic Studies*, 1st Issue, 2004, p. 55.

nuclear aspects of WMD, it appears that it will find it extremely difficult to conduct more tests. This may have a serious handicap for its assembly-line production of nuclear weapons. This is going to hamper its ability to factor nuclear weapons into its military planning. On the weapon-deliverable platform front, there are numerous technical hurdles for Pyongyang to overcome before it can deploy a nuclear-armed long-range ballistic missile.³³ Hence, in short, North Korea is likely to remain a dwarf nuclear power with no ability to deploy functional nuclear weapons, at least in the near future. In view of this, it may like to keep other WMD options open.

However, keeping these options open is not an easy task. Various chemical and biological weapons decay over a period of time and require timely maintenance. Additionally, their potency and virulence decrease rapidly, reducing their 'mass destructive' capability. Hence, to maintain a minimum level of preparedness, North Korea needs to continuously upgrade its chemical and biological weapons program. Interestingly, North Korea is a signatory to the biological weapons convention (BWC) but not to the chemical weapons convention (CWC). Unfortunately, the BWC is the only treaty without any provision for a verification protocol and challenge inspections. Therefore, clandestinely, North Korea can continue with its CB programs without much of a fear of detection.

Reflecting the Soviet military doctrine, North Korea has traditionally viewed chemical weapons as an integral part of any military offensive. There are no indications that this view has altered since the end of the Cold War.³⁴ To date, North Korea has never been put under serious pressure by other states with respect to its CB weapons potential. Because of the clandestine nature of its CB

³³ Bryan Dorn, "North Korea: A threat to regional stability?" *New Zealand International Review*, November/December 2005, p. 21.

³⁴ <http://www.fas.org/nuke/guide/dprk/doctrine/index.html>.

program, the rest of the world knows very little about the CB aspects of North Korea's WMD programs and also it appears that the world has really not bothered to find more about its CB ambitions. North Korea is likely to exploit this situation and may reinforce its CB arsenal.

Since the 1950s, North Korea has carried out a series of limited attacks against South Korea and South Korean citizens abroad.³⁵ In the near future, North Korea could include CB weapons in such type of threats and attacks, especially if the North Korean leaders feel desperate. With the likelihood of heavy economic sanctions, North Korea may opt for biological weapons. It may be difficult to prove that North Korea's complicity in the event of such an attack, yet most would recognize the country's hand in such an act. In the recent past, the SARS epidemic has proved that even a limited outbreak of a disease could cause billions of dollars of damage to the South Korean economy. Therefore, knowing the potential and utility of such weapons and knowing fully well that nuclear weapons are unusable, North Korea is unlikely to give up its biological weapons program.

For many years, chemical weapons have been assigned a major role in North Korean strategic thinking. The country expects its chemical weapons to compliment its conventional military power. In the event of a surprise attack, North Korean forces are expected to use chemical weapons to demoralize the defending forces, reduce their effectiveness, and deny them the use of mobilization centers, storage areas, and military bases, without physically destroying facilities and equipment. It is likely that chemical weapons would be used early in the conflict, rather than held in strategic reserve. By doing this, virtually every stage of US military operations would be made more complicated by the requirement to operate after the use of chemical weapons, beginning with deployment through vulnerable ports and

³⁵ Bruce Bennett, *op.cit*, p. 93.

staging facilities. From the North Korean point of view, far from being weapons of last resort, chemical weapons may be weapons of first resort.³⁶

North Korea understands that it would become very difficult for the US to retaliate by using nuclear weapons if North Korea uses chemical weapons against US troops. This is because a nuclear response could be seen as less credible against the use of chemical weapons on the battlefield, it being a totally disproportionate response. Additionally, with South Korea being an ally, not to mention a physical neighbor, US forces will have to factor in the problems of spillage of radiation into their territory under unfavorable weather conditions. Under these circumstances of limited options against itself, North Korea is expected to feel more confident with the various options that non-nuclear WMDs offer.

Over the years, it has been observed that the utility of WMDs have been twofold for North Korea. One, as a deterrence and two, clandestine proliferation of these weapons has an economic dimension to it. North Korea is not looking at the relevance of WMDs only in the context of their capability towards forcing maximum number of casualties but, in reality, they are the real political as well as economic weapons for North Korea. Particularly after the nuclear test, North Korea may opt for a wait and watch policy for some time and is unlikely to give up its overall WMD capability.

In the early 1990s, a shift was seen in the way major regional powers dealt with North Korea - from deterrence to multilateral engagements. On the bilateral front, by 1998, South Korea had progressed even to a level of unconditionally engaging North Korea in the hope that it would open up to such an extent that even a reunification was possible. However, this engagement policy at various levels started breaking down since 2001 when the US

³⁶<http://www.fas.org/nuke/guide/dprk/doctrine/index.html>.

government's policy shifted from engagement to isolation or containment. Post-9/11, the US declared North Korea as an *axis of evil* and shifted its strategy toward a policy of preemption.³⁷ Since then, the Bush Administration has mostly implemented neo-conservative recipes for a hawkish, aggressive containment policy toward North Korea. This all started soon after North Korean officials revealed to James Kelly about their uranium enrichment program in October 2002. Subsequently, the Bush Administration stopped providing heavy fuel oil to North Korea. The US also captured a North Korean ship carrying shipment of scud missiles to Yemen and redeployed its forces in South Korea. Congressional neo-conservatives raised concerns about the worsening human rights situation in North Korea and passed a bill to support North Korean refugees in inducing a spontaneous regime collapse by massive exodus of North Korean people.³⁸

In hindsight, it could be argued that this hard-line stance did nothing to solve the North Korean problem. In fact, this Bush Doctrine of preemption probably gave a strong incentive to North Korea to go nuclear for its own protection.³⁹ North Korea must have become alarmed with the US invasion of Iraq in 2003. Under these circumstances, North Korea is fully aware of the fact that in case of a military conflict (which is most unlikely at least in near future) to keep the forces of the US and its allies away from North Korea, asymmetric capabilities are needed and CB weapons could be most useful for that purpose.

North Korea is also a producer and exporter of rudimentary but operational intermediate range ballistic missiles, which are based on shorter range scud missiles developed by the Soviet Union. North

³⁷ Chandwick I. Smith, "North Korea: The Case of Strategic Entanglement," *Orbis*, Vol. L, No. 2, Spring 2006, p. 350.

³⁸ Hung Baeg Im, "The US role in Korean democracy and security since cold war era," *International Relations of the Asia-Pacific*, Vol. VI, No. 2, 2006, pp. 176-177.

³⁹ Peter Katona, et al., *Countering Terrorism & WMD* (London: Routledge, 2006), p. 23.

Korea has officially claimed that to safeguard its sovereignty and right to exist, it is entitled to have powerful military countermeasures, including nuclear weapons.⁴⁰ Under the present circumstances, it would become very difficult for North Korea to engage in the business of missiles and nuclear technology when the entire world is looking at it. Therefore, it may look for alternative options and particularly biological weapons may come in handy, with very little chances of being detected. Additionally, the attractiveness these weapons hold for states (rogue) and terrorists far exceeds the attention they receive both in the disarmament process and in attempts to prevent proliferation of the technologies and production base.⁴¹ North Korea may exploit this situation of dormancy in the arena of CB weapons to its own advantage by building a robust CB munitions store.

North Korea is not known to have a strong industrial base for chemical or biotechnology industry. However, they have succeeded in acquiring dual-use chemicals that could potentially be used to support their longstanding CW program. Moreover, it is feared that Pyongyang has acquired dual-use biotechnical equipment, supplies, and agents that could be used to support North Korea's BW program. North Korea is believed to possess a munitions production infrastructure that would have allowed it to weaponize BW agents and may have some such weapons available for use.⁴²

Interestingly, North Korean nuclear deterrence, particularly against South Korea, should be seen in the context of certain 'physical geography' realities.⁴³ This is because nuclear weapons do not

⁴⁰ *The New York Times*, November 19, 2002.

⁴¹ Mikhail Pogorely, "Prospects For Russian-US Cooperation in Preventing WMD Proliferation," 2004, p. 85.

⁴² Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, available at https://www.cia.gov/cia/reports/721_reports/july_dec2003.htm#5.

⁴³ Col. John Collins, "North Korea: The Case Against Preemption," *Proceedings*, November 2006, pp. 27-28.

recognize national boundaries and hence have limited utility in respect of 'proximity warfare.' These weapons, being 'area' weapons, impact very large geographical regions. The effects of radiation spread are dependent on prevalent atmospheric conditions and largely governed by local temperature and wind patterns. In case of any likely nuclear conflict between India and Pakistan it is generally perceived that the short-term and long-term changes could affect both the warring nations.⁴⁴ This analogy could also be extended to any nuclear conflict on the Korean Peninsula. Under such circumstances, North Koreans may depend on CB weapons both as a weapon of deterrence as well as a 'usable' weapon.

Conclusion

History has shown that North Korea is a state like no other. As a result, there are no textbook solutions to deal with it. Moreover, there is no single approach available to deal with the situation. Today, by going nuclear, North Korea has changed the strategic calculus of the region. This perceived value of nuclear weapons for North Korea is reflected in the often-cited statement attributed to the former Indian Chief of the Army Staff, General Sundarji, "One principal lesson of the Gulf War is that, if a state intends to fight the United States, it should avoid doing so until and unless it possesses nuclear weapons."

However, it appears that North Korea may not have fully developed *weapon, delivery platform and command & control structure* for its nuclear assets to deter its enemy. Under these circumstances, it may depend upon the asymmetric usage of nuclear know-how. However, this being an untested field, it may look toward strengthening other options like investing more in the already developed programs on chemical and biological weapons and

⁴⁴ Ajey Lele, *Weather and Warfare* (New Delhi: Lancer, 2006), pp. 97-98.

strengthening its missile capabilities.

It is sad that the North Korean government fails to understand that it has crippled its semi-industrial economy and about the 70% of its population lives in urban settings and investments in WMDs are not going to help them to prosper and that they should look for options like economic reforms. However, North Korea feels that if it begins reforms, the US imperialists and their South Korean accomplices would cut them short by striking at a time when the country is least prepared for contingencies.⁴⁵ Looking at the US record of trying to establish its hegemony globally, one cannot fault North Korea entirely.

Pyongyang has developed nuclear weapons to hedge against the possibility that the US is too aggressive to be restrained by the high costs of a conventional attritional campaign. North Korea may want to possess nuclear weapons as a supplemental deterrence. Such hedging against an enemy's worst intent is not rare in defense planning, especially amongst militaristic states.⁴⁶ Additionally, as a militaristic state, North Korea may like to keep other WMD options open because they have got dual utility: first, they have deterrence value and second, their utility factor to actually deploy these is exceptionally higher than that of nuclear weapons.

Today, it appears that North Korea has played its last card to offset the loss of the Soviet strategic counterweight, the infinitely greater economic dynamism of South Korea and a perceptible diminution of Chinese enthusiasm for its erstwhile ally.⁴⁷

Naturally, for the sake of ending their *isolation*, North Koreans are unlikely give up any type of WMDs because they fully understand

⁴⁵ Konstantin Asmolov, "North Korea: Stalinism, Stagnation, or Creeping Reform?" *Far Eastern Affairs*, Vol. XXXIII, No. 3, 2005, pp. 22, 25.

⁴⁶ Dong Sun Lee, "US Preventive War Against North Korea," *Asian Security*, Vol. II, No. 1, 2006, p. 18.

⁴⁷ Ramesh Thakur, "North Korea Test as Spur to Nuclear Disarmament," *Economic and Political Weekly*, October 21, 2006, p. 4403.

that the possession of these weapons (in whatever dwarf form they may be) gives them the requisite bargaining tools. They also understand that to keep the US away from their own territory it is essential to possess even chemical and biological weapons and they would go to any extent to possess/retain them.