North Korea's Nuclear Programme and Its Impacts on Regional Security

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Introduction

On 1st January 2017, in a televised New Year's Day speech, North Korea's President Kim Jong Un stressed that his country was emerging as a nuclear power, thanks to the two successful nuclear tests, a series of ballistic missile launches in 2016, as well as the entering of the last stage of intercontinential ballistic missile manufacture.[1] His speech immediately attracted attention from international community. US Department of State spokewoman Anna Richey-Allen said, "Kim's speech was a provocative action and a threat to international peace and stability".[2] The newest missile test of the medium long-range ballistic missile *Pukguksong-2* was launched on 12 Feb 2017. This was the follow-on action of the fifth nuclear test on 09 Sep 2016, in Punggye-ri area, causing an "artificial earthquake" of 5.3 Richter, equivalent to a yield of 20 to 30 kilotons, or similiar to the two nuclear bombs that the US dropped on Japanese cities of Hiroshima and Nagasaki in 1945.

North Korea's Nuclear Weapon Program

North Korea started its initial research on development of plutonium nuclear weapon in the 1960s. According to military experts, up to this moment, North Korea possessed about 20 nuclear warheads and 10 to 16 nuclear units.[3] In the 1980s, North Korea turned to the second stage of uranium nuclear weapons. According to the US Central Intelligence Agency (CIA), in 1997 Pakistan started the transfer of technologies related to the enrichment of uranium, nuclear explosive simulation, and undertook camouflage measures to hide nuclear development facilities from satellites for North Korea.[4] In 2010, North Korea revealed its uranium enrichment programme by inviting an American expert to visit one of its facilities which contained 2,000 centrifuges. However, according to analysts, North Korea owns a nuclear enrichment facility with 10,000 centrifuges.[5]

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Since 2006, North Korea has conducted five underground nuclear tests at the testing area at Punggye-ri. The first test was on 10 Oct 2006; the second on 25 May 2009; the third on 12 Feb 2013; the fourth on 06 Jan 2016 and the fifth on 09 Sep 2016. The yield of the first test was about one kiloton, the second about 2-7 kilotons, the third about 15 kilotons, and the fourth about 20 kilotons. According to military experts, in the 2013 test, North Korea used uranium. It was a breakthrough in nuclear techonology of Pyongyang. This information was then confirmed by then South Korea's Minister of Defence Kim Kwan-jin, in November 2013.[6]

In addition, on 24 Aug 2016, North Korea tested a submarine-launched ballistic missile (SLBM). The test was successful. The missile flew 500 km before it dropped in Japan's Air Defence Identification Zone (ADIZ).[7]

Up to now, the United Nations Security Council has adopted six resolutions to sanction North Korea regarding its nuclear and missile programmes, i.e. Resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and 2270 (2016); the newest being the Resolution 2321 on 30 Nov 2016, prohibiting North Korea from exporting coal, one of the biggest foreign currency resources of the country, aiming at decreasing 60 per cent of its annual coal export volume.[8]

Since the 1970s, North Korea started the research and development of missile technology by applying reverse manufacturing technology of the Soviet Union Scud-B missile, which it acquired from Egypt. From the design of Scud-B missile, North Korea has produced modifications with extended range, namely No Dong and Taepo Dong Intercontinental Ballistic Missile (ICBM). Then, North Korea sold No Dong to Iran and Pakistan. Based on the North Korean design of No Dong, the two countries produced Shehab and Ghauri, respectively. In 1992, North Korea signed a USD 500 million contract with Iran for cooperation to produce nuclear weapon and No Dong missiles.[9]

At the moment, North Korea has a large amount of functional ballistic missiles. It has deployed a total of 800 Scud short range, tactical ballistic missiles, 300 No Dong medium range and 50 Musudan intermediate range missiles. While the Scud can attack targets in South Korea, the Musudan can attack targets in Japanese Okinawa Islands and Guam Islands of the US.[10]

According to military experts, North Korea has full nuclear attack capability. In June 2016, North Korea's President Kim Jong Un said that his country's missile force was capable of attacking the US military bases in South Korea, Japan and Guam, as well as in the US mainland.[11] North Korea also announced that it had tested smaller and lighter nuclear warheads which could be carried on its missiles. According to the Korean Central News Agency (KCNA) Television, Korean Nuclear Research Center has officially confirmed that the nuclear explosion on 09 Sep 2016 was to test the yield of miniaturised nuclear warhead being mounted on long-range missile that could reach the US mainland.[12] North Korea even threatened to use hydrogen bomb to turn Seoul into a massive inferno after the confirmation of the South Korean Ministry of Defence's plan to assassinate Kim Jong Un.

Why does North Korea Need Nuclear Weapons?

First, North Korea needs an effective weapon to cope with foreign invasion. North Korean leader believes that nuclear weapon is the most effective weapon of deterrence. Possessing nuclear weapons means holding the political, psychological and diplomatic power against the enemy. With nuclear weapons, no other country would take risks launching an preemptive attack on North Korea. It explains why in the last several decades, North Korea has focused all its potential on the nuclear weapon programme, despite its economic difficulties. Through its nuclear weapon program, North Korea expects to improve its national defence potential and gradually become a military power in the region.

Second, North Korea wants to reaffirm its position as a "nuclear weapon country". Despite economic difficulties due to the sanctions and protest from the international community, North Korea has shown no intention of giving up its nuclear program. Its target is to become a "nuclear weapon state" and improve its negotiating power with the US (from negotiation on denuclearisation of Korea peninsula to negotiation on a peace agreement). Though, North Korea acknowledges that the US would never recognise it as a "nuclear weapon state"; only two days after the fifth nuclear tests (09 Sep 2016), North Korea still urged the US to do so and officially announced that "it would continue to develop its nuclear force" to cope with the US.

Third, North Korea needs nuclear weapon to assist in the solving of internal issues. The success of nuclear weapon programme is the biggest victory that is easily observed. It is also the "answer" for economic difficulties, the "encouragement" for millions of people to overcome their economic difficulties, the encitement of national pride and the consolidation of power for the government. Particularly, after the transition of power to a new generation, North Korea is still embeded with the political crisis. President Kim Jong Un got power at a very young age, when his country was prepared to open door and there were interferences from outside. In its international relations and relations with neighbouring contries, North Korea has been isolated and under coercion.

Fourth, use nuclear weapon to bargain for direct negotiation with the US and gradually get out of China's influence. In 1953, North Korea and the US signed Armistice Agreement, but since then, the North Korea and South Korea have enjoyed no peace. As a result, it is necessary to negotiate again to replace the Armistice Agreement by another peace agreement. After the success of the third nuclear test and a series of missile tests, North Korea stated that it has mastered techonology to produce nuclear weapons, so it should be treated as equal to other nuclear weapon states. It also asked the US to hold direct negotiation. Through opportunities like this one, North Korea would gradually get out of its dependence on China.

Fifth, deter the US, South Korea, and China. Recently, the US and South Korea reached an agreement on the deployment of Terminal High Altitude Area Defence (THAAD) missile system on South Korean territory. When this system comes into operation, it can closely observe North Korea's nuclear facilities. Through its nuclear test, North Korea intended to send a message to the US and South Korea that it does not want its nuclear facilities to be observed by the US and South Korea's modern surveillance systems. It is intended to be a deterrence to the US and South Korea.

Since China's President Xi Jinping took over power in 2013, China has adjusted its foreign policy in the direction that it fosters relations with South Korea while neglecting the relations with North Korea. At the UN Security Council, China voted for sanctions

against North Korea. North Korea acknowledges that due to the importance of security and stability in the North Korea-China border region, China would not totally side with the West to impose sanctions on North Korea, it would use the 'game-card' to cause disagreements among international community on North Korea's nuclear profile. Security analysts think that it is time North Korea bypassed China and used nuclear weapons to bargain with international community.

Likely Scenario Ahead

In the times to come, the Korean peninsular situation will witness complicated developments. Though they are unlikely to escalate to wars, however, the risk exists. It is anticipated that the situation could go in the following directions :-

(a) North Korea clearly knows its real military power, particularly the consequences of a nuclear war. At this moment, the military balance is not to North Korea's advantage. Though North Korea has more than double military strength in comparison to South Korea (1,290,000 to 655,000),[13] its capability in modern combined operations is limited; most of its ground and air force weapons are outdated; only some have been upgraded. Meanwhile, South Korea's armed forces are equipped with more modern weapons. In addition, it has the support from 28,500 US military personnel stationed in South Korea and another 36,000 US military personnel stationed in Japan.

(b) The focus of North Korea's policy in the years to come will be to develop its economy and nuclear capability. Therefore, it will gather all potentials for economic development. North Korea Supreme People's Assembly passed the programme for economic and nuclear capability developments. These are long-term goals that North Korea will continue to give priority to.

(c) North Korea is faced with a number of difficulties. Politically, it is isolated from the international community due to the United Nations sanctions. There are only a few countries that have officially established relations with North Korea. Economically, North Korea is faced with sanctions of the United Nations, and is struggling with natural disasters.

Meanwhile, it has to gather all potentials to prepare for conflicts and war. Therefore, it is stumbling upon economic crisis and faced with a serious starvation threat (about 6.5 million people are short of food).

In general, none of the involved parties expects a war to break out since it would affect their interests and change the regional situation that could lead to the possibility of a nuclear war.

Strategic Implications for Regional Security

Though paying a high price, North Korea is bent upon developing a strategic nuclear deterrent against present and potential adversaries, which have serious impacts on regional security. The realisation of North Korea's right to own nuclear weapons would create a bad precedent in the regional security.

If North Korea succeeds in realising its right to possess nuclear weapons, it would ignite a new arms race, with some countries seeking to possess nuclear weapons, undermining peace, security and prosperity. Specifically, Iran and Pakistan, often dubbed as the nuclear flashpoints, may be among the list. Iran embarked on its programme of ballistic missiles in 1980, enabling it to have the largest number of missiles being deployed in the Middle East and may become the eighth nuclear weapon state in Asia and the tenth member of the world nuclear club. Pakistan claimed official possession of nuclear bombs in 1987, but its first successful nuclear test was conducted in 1998. Today, Pakistan is capable of launching a nuclear attack through its land-based and airborne missile systems.

North Korea's nuclear weapons could lead to an arms race in the region. Today, both Japan and South Korea are within the reach of North Korean short and medium-range missiles. Whether these missiles are equipped with nuclear warheads or not, they will still pose a serious threat to the security of the two countries. Against this backdrop, Japan and South Korea are compelled to increase their military arsenal to deal with North Korea's nuclear threat. Consequently, Northeast Asia will be locked into an arms race, which may turn into a real war.

In addition, North Korea's nuclear weapons programme may be used as a pretext by other countries to raise their military spending and acquisition of defence systems, undermining the

economy-centric policy of countries in East Asia. Perhaps more alarmingly, there could be groups of non-state actors taking advantage of North Korea's nuclear programme to get hold of nuclear weapons. Northeast Asia, therefore, could become home to a number of nuclear powers. In the absence of timely preventive measures, complex political regimes and international relations in East Asia could drive this region into the first major nuclear war in human history.

There is a possibility of North Korea's nuclear weapons falling into the hands of terrorist groups. North Korea is an underdeveloped economy. It has almost no industrial or agricultural products for export. Thus, nuclear technology and missiles could be its most important goods to sell for hard currency. During such technology transfers, nuclear and missile technologies would risk falling into the hands of terrorist and extremist groups. Thus, terrorist attacks would be no longer "suicide bombings," but "dirty bomb" terror attacks.

There is also a possibility of nuclear disaster. At the moment, North Korea is positioning its nuclear facilities around Yongbyon area, thus in case of a fire or an environmental incident, the disaster would be more serious than the Ukraine's Chernobyl, in 1986. While the Chernobyl nuclear incident was caused by technical glitch and the carelessness of the operators; in the future the nuclear disaster would be caused by intention, particularly, the attacks by terrorists and criminals. As a result, its consequences would be unprecedented and have a long-term impact.

Endnotes

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