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DPRK and the CTBT: What Could Come Next after the Moratorium?

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ABSTRACT

At the 25th anniversary of the opening for signature of the Comprehensive Nuclear-Test-Ban Treaty (CTBT), this paper seizes the opportunity of a self-imposed nuclear test moratorium by the Democratic People's Republic of Korea (DPRK), analyzes Kazakhstan's experience in dismantling its nuclear test site, and proposes three policy recommendations as potential solutions to stir the DPRK to join the CTBT: First, the international community should count DPRK's potential signing of the CTBT as a reason to consider relaxing sanctions against DPRK in the future; second, the international community should encourage the DPRK to vote in favor of UNGA resolutions on the CTBT as a first step forward towards the final signing; third, the international community and the CTBTO Preparatory Commission (CTBTO) should consider inviting the DPRK for CTBTO training and workshops to build trust. Together, these actions could not only push forward the CTBT with its coming into force but also melt the current stalemate of engaging with the DPRK positively.

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Introduction

The DPRK is one of the eight remaining countries whose signatures and ratifications are necessary for the CTBT to enter into force. This paper aims to present the following in three parts: DPRK's current state on nuclear disarmament and the recent diplomatic incidents that led to its nuclear test moratorium today; how and why Kazakhstan's gradual and staged closure of the Semipalatinsk site could lend lessons to the DPRK; and finally, how to take the opportunity of the moratorium to induce the DPRK to come back to the negotiating table and move forward on issues around the CTBT.

DPRK's Nuclear Negotiations since 2018

Since the successful hosting of the PyeongChang Winter Olympic Games in early 2018, then newly installed President of the Republic of Korea (ROK), Moon Jae-in, pushed for a foreign policy initiative to improve Seoul's relations with Pyongyang. This unique diplomatic opportunity was triggered by the New Year's address delivered on the first day

of 2018 by the DPRK leader, Kim Jong Un, that his delegation will be participating in the ROK-hosted Winter Olympics, and politically advocated by the International Olympic Committee President, Thomas Bach, under the name of promoting peace.

A series of summit meetings between President Moon and Chairman Kim followed in 2018; the first-ever meeting between the two leaders in April produced the Panmunjom Declaration, promising to realize the common goal of a nuclear-free Korean peninsula “through complete denuclearization”; it also yielded President Moon a job approval rating of over 80% at the time (KBS World 2018). Fueled by such public support, the second summit in May and the third summit in September came about.

While the Moon-Kim reconciliation was at play, Chairman Kim met with the Chinese President, Xi Jinping, twice—in March and May of 2018—prior to his historic summit meeting with then US President Donald Trump. Most noticeably, amid such rapid developments on and around the Korean peninsula, DPRK released a statement in April 2018 announcing a moratorium on nuclear and intercontinental ballistic missile (ICBM) tests, and efforts towards the dismantlement of its Punggye-ri nuclear test site, where all six of its nuclear tests were conducted since 2006 (Fitzpatrick 2018). DPRK also in May 2018—at the presence of foreign journalists visiting Pyongyang—demolished the Punggye-ri test facilities, and disclosed a video of the demolition to be broadcasted internationally.

Against this backdrop, the first meeting between President Trump and Chairman Kim took place in June 2018 in Singapore. Pledges listed in the joint statement echoed the commitment “to work toward complete denuclearization of the Korean Peninsula” (White House 2018). But many American hawks in Washington were against the idea of giving DPRK the legitimacy it has long craved through a summit meeting, and questioned Trump’s top-down approach to tackle North Korea’s nuclear program.

Almost immediately after the Singapore summit, Kim met with Xi of China—the third meeting between the two leaders in 2018 alone—which demonstrated Beijing’s strong political leverage over Pyongyang. South Korean government, eager to take the “driver’s seat” in the ongoing nuclear talks between the United States and DPRK, as well sought a third summit in Pyongyang, and produced the Pyongyang Joint Declaration; in the declaration, the two leaders, once again, reaffirmed their commitment to “pursuing complete denuclearization of the Korean Peninsula” (National Committee on North Korea 2018).

President Moon, during his visit to New York for the 73rd session of the United Nations General Assembly, echoed Seoul’s achievements vis-à-vis Pyongyang, and called for the second Trump-Kim meeting. Chairman Kim—only about a month ahead of the second US-DPRK meeting—visited Beijing again for the fourth Sino-DPRK meeting in early 2019, where Xi publicly supported the upcoming meeting and called for concessions from both Washington and Pyongyang (Al Jazeera 2019).

Yet, the much anticipated second summit between President Trump and Chairman Kim in February 2019 ended without a deal; at the Hanoi summit—according to the book written by then US national security advisor, John Bolton—Trump asked for more than giving up the Yongbyon nuclear facility in exchange for a partial lifting of the sanctions against DPRK, but Kim rejected the deal (Bolton 2020, 327–331). Concerning whether the US-offered deal was too big or too small for Kim, opinion varies. But the joint assessment by the Center for Energy and Security Studies and the International Institute

for Strategic Studies in July 2021 wrote that dismantling all Yongbyon facilities “would significantly reduce Pyongyang’s capability to make weapons-usable fissile materials”. It also wrote, “If only one other enrichment plant is operational, then eliminating the Yongbyon facilities would reduce North Korea’s weapons-production capacity by up to 80%” (International Institute for Strategic Studies and Center for Energy and Security Studies 2021, 6).

The two sides sat down face-to-face seven months later in Sweden to resume working-level negotiations, but again, failed to come to an agreement. DPRK ended up announcing that it will no longer be bound by the self-imposed moratorium on nuclear and long-range missile testing in December 2019 (Kuhn 2019). Since January 2022, Pyongyang has intermittently fired a flurry of missiles, and in March, it finally conducted an ICBM test—first one ever fired in the last four years—in the same month the ROK’s presidential election was held.

It is evident that since the Hanoi summit collapse, no significant progress has been made in nuclear negotiations with DPRK, and now, the geopolitical situation around the Korean peninsula has become more complex. The global COVID-19 pandemic, which spurred the DPRK’s border closure, has made it much harder for the stakeholders to negotiate with Pyongyang. South Korea’s new administration, soon to be led by President-elect, Yoon Seok-yeol, from the main opposition party—whose foreign policy puts the US-ROK alliance at its forefront—will unlikely pursue a softer policy on Pyongyang. Adding fuel to the fire, the current US President, Joe Biden, who has been fully occupied with the war happening in Ukraine, already has too much on his plate to deal with North Korea, and so is the rest of the world.

Yet under such circumstances, DPRK has not conducted another nuclear test. Although the talks have stalled, and tests of missiles, including of ICBMs, are back, the nuclear test moratorium presents a window of opportunity for the key stakeholders to bring DPRK back to the negotiating table for potential talks.

Nuclear Test Site Dismantlement: Lessons to Learn

With the stall of the US-DPRK denuclearization talks and the resumption of North Korea’s missile tests, tensions are escalating on the Korean Peninsula. Chairman Kim’s unilateral nuclear test moratorium and alleged closure of the Punggye-ri test site, which signaled his willingness to negotiate, seems to be unconvincing for the United States to offer desired economic benefits. The reasons are manifold, including the absence of independent inspectors to witness the process of the nuclear test site’s dismantlement and the recent deviation from the missile test moratorium, especially given the DPRK’s history of departing from such agreements. In mid-2008, for example, North Korea destroyed the cooling tower of its plutonium-production reactor in Yongbyon but when the negotiations collapsed after they refused verification, the DPRK recovered the reactor with a new cooling system (Fitzpatrick 2013). As a result, the international community’s skepticism regarding the DPRK’s intentions might be reasonable. Yet, ironically, the recent missile tests might be a favorable sign in terms of diplomacy. Although the main rationale behind the missile fires was military modernization and Kim’s strengthened position on the domestic scene, the side-effect was the return of international attention that was recently preoccupied with the crisis in Ukraine. This side-effect reminds the

international community that the door to diplomacy is still open and interested parties should promptly take advantage of this opportunity.

Although an immediate and complete North Korean denuclearization is highly unlikely to result from negotiations, the starting step for Pyongyang might be the sealing of the nuclear test site. Even so, it is a two-sided road, meaning the parties interested in dismantlement would need to undertake cooperative actions according to a conceptual framework taxonomy of required steps and stages. One such framework is derived from Kazakhstan's successful sealing of the Semipalatinsk nuclear test site, also known as "Polygon".

As the only state which has voluntarily dismantled its nuclear test sites and cleared its territory from all nuclear warheads and weapons-grade nuclear material, Kazakhstan's unique experience and progress in dismantling one of the world's most-used nuclear test sites in Semipalatinsk can be used as a framework for the DPRK. This case demonstrates the comprehensive actions taken to dismantle the test site in a way that is both verifiable to the international system and beneficial for the country. The features of the Kazakh experience and their applicability to North Korea are outlined below.

The closure of the Semipalatinsk was a gradual and staged process with periodic remediation activities, including economic and humanitarian aid, to deal with the consequences of testing. The dismantlement of the "Polygon" can be generalized into three main stages. The first stage is a cessation of all testing and production of nuclear weapons. Upon becoming an independent state, Kazakhstan immediately declared the termination of all nuclear activities on its territory and the dismantlement of the test site. In the same vein, Chairman Kim's self-imposed moratorium on nuclear testing, though theoretically subjected to reversion, coupled with the collapse of three existing tunnels at the Punggye-ri site, can be interpreted as a freeze on nuclear testing. The DPRK, thus, is currently at this stage, and in the short run, no radical actions are required.

The second stage is halting the uranium enrichment, in other words, verifiably terminating the weapons-grade material production. In 1992, Kazakhstan stopped its uranium enrichment and opened all nuclear facilities and nuclear materials to regular inspections and observation by the International Atomic Energy Agency (IAEA) (Oxford Analytica 2017). Subsequently, the 57th session of the UN General Assembly adopted Resolution 101 on international cooperation for the humanitarian, ecological, and economic rehabilitation of Semipalatinsk and launched more than 30 socio-economic projects to recover the region from the consequences of nuclear tests (Nuclear Threat Initiative n.d.). Theoretically, at this stage, the DPRK is expected to terminate all nuclear activities, allow international inspections at its test sites for verification, and give access to databases of production sites. But the interested parties should signal that they will offer *quid pro quo* such as relaxing some of the sanctions and providing aid to induce North Korea to undertake these steps. Since this stage does not require the permanent dismantlement of the plants, the incentives offered should also be either temporary or reversible, that is, sanctions should not be eliminated but rather suspended, and instead of comprehensive economic aid, humanitarian assistance, similar to Kazakhstan's, should be provided.

The last stage is dismantling infrastructure. Along with Kazakhstan's decommissioning of its nuclear facilities in four locations and sealing of underground testing tunnels at

the Degelen Mountain Complex, Kazakhstan received extensive financial and technical assistance from the United States and Russia. Under the Cooperative Threat Reduction Program, Kazakhstan achieved the destruction of 148 silos, sealed 13 boreholes and 181 tunnels, among others (Oxford Analytica 2017). For North Korea, the assumption at this stage is that the country would still own its nuclear warheads, however, the international experts would either need to verify that the DPRK's explosions indeed demolished the deep tunnels and infrastructure, or take additional steps to make the complex unusable. In other words, the dismantlement of the Punggye-ri must be executed and verified under the international nonproliferation regime. North Korea could prove its full commitment by inviting the CTBTO, which has scientific methods and technologies for monitoring nuclear explosions to verify the closure of the Punggye-ri site. Similar to Kazakhstan's case, the interested parties, presumably other nuclear-weapon states, should assist the DPRK at this stage. Along with the aid, after the dismantlement of the Punggye-ri site, some economic sanctions imposed by the UN, especially those that target degel commercial sources of revenue, should be eased to facilitate remediation.

DPRK Moratorium and Ways to Push Forward the CTBT

So long as the DPRK still maintains its self-imposed moratorium on nuclear tests, it presents a window of opportunity for the international community to incentivize the DPRK for signing—if not ratifying, since after all the United States and China have not ratified—the CTBT. The tricky question is how to activate the interactive dynamics between the DPRK and the international community.

Existing analyses and proposals tend to focus primarily on the role of the CTBT in denuclearizing the DPRK. They suggest that the CTBT can prevent the DPRK from qualitatively improving its nuclear weapons, verify the destruction of the Punggye-ri test site, and raise the pressure on the DPRK should it fail to comply or withdraw from the treaty (Herzog 2018; Zerbo 2018; Wolfsthal 2018). However, regarding the gains for the DPRK to sign the CTBT, apart from arguing that there is “no down side” for Chairman Kim Jong-un and that he can show “bona fides”, hardly anything is mentioned (Herzog 2018; Zerbo 2018). These “perks” are insufficient. The DPRK needs to see what there is to gain before agreeing to anything, just like when Pyongyang announced the moratorium, its calculation, as many believe, was to use it as leverage for potential negotiations with the United States. In other words, the DPRK obtained political gains from announcing the moratorium.

Bearing this in mind, how to incentivize the DPRK to move forward with the CTBT process becomes the key question. This paper proposes the following policy recommendations as potential answers to the question:

- (1) The international community should make it clear that the DPRK's potential signing of the CTBT counts as one of the reasons for the international stakeholders to consider relaxing DPRK-related sanctions in the future.
- (2) The international community should encourage the DPRK to vote in favor of United Nations General Assembly (UNGA) resolutions on the CTBT.
- (3) The international community, specifically the CTBTO, should consider inviting the DPRK for CTBTO training and workshops.

With appropriate efforts and coordination, these actions could not only push forward the CTBT with its coming into force, but also melt the current stalemate for the international community in engaging with the DPRK. The reasoning and feasibility of these recommendations are explained in the following paragraphs.

Based on the recent episodes of US-DPRK talks outlined in the first section of this paper, the signals sent during the 8th Congress of the Workers' Party, as well as the DPRK's rejection of President Moon Jae-in's offer to sign an end-of-war declaration, it is clear that Pyongyang is, as it has traditionally been, most interested in sanctions relaxation that can bring economic improvement to the country. Given the substantive nature of the CTBT—banning nuclear tests—the signing of this treaty alone can hardly bring the DPRK such economic benefits. Furthermore, the DPRK's signing of the CTBT is probably a concession too small in exchange for any sanctions relaxation since the DPRK is still violating many of the United Nations Security Council (UNSC) resolutions—it is not rolling back its nuclear and missile programs and may still be producing more fissile materials as well as making other advancements in its Weapons of Mass Destruction and missile programs.

However, packaging the signing of the CTBT as part of future sanctions relaxation can serve as a possible mid-way solution for the DPRK and the international community: It could incentivize the DPRK while demonstrating that the international stakeholders still hold firm standards. Here, engaging the United States to negotiate an acceptable package or roadmap of sanctions relaxation is perhaps the most challenging task, for which the CTBTO, Russia, and China can coordinate the efforts to achieve the best effect. Such coordination may have already had a basis: In September 2021, both the resolution in the General Conference of the IAEA¹ and the declarations issued at the 12th Conference on Facilitating the Entry into Force of the CTBT² included the content of the rollback terms of the DPRK-related UNSC resolutions—an idea which China and Russia have been proposing for years. Specifically, the IAEA resolution states that the General Conference “stresses the importance of all Member States implementing their obligations . . . including . . . the United Nations Security Council's affirmation that it will keep the DPRK's actions under continuous review and is prepared to strengthen, modify, suspend or lift the measures as may be needed in light of the DPRK's compliance”. The CTBT declaration states “We reiterate the importance of the full implementation of all relevant United Nations Security Council Resolutions . . . while . . . being ‘prepared to strengthen, modify, suspend or lift the measures as may be needed in light of the DPRK's compliance’”. The inclusion of such terms also signals greater international support for considering room for sanctions relaxation. After all, many accompanying processes of denuclearization, including the dismantlement, remediation, and rehabilitation of test sites, cannot be achieved without certain foreign aid—therefore a certain degree of sanctions relaxations—as the second section of this paper demonstrates when analyzing the Kazakh experience.

¹International Atomic Energy Agency, General Conference, *Implementation of the NPT safeguards agreement between the Agency and the Democratic People's Republic of Korea*, GC(65)/RES/13, sixty-fifth regular session, 24 September 2021, https://www.iaea.org/sites/default/files/gc/res-13_-_dprk.pdf.

²Comprehensive Nuclear-Test-Ban Treaty, Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty, *Draft Final Declaration and Measures to Promote the Entry into Force of the CTBT*, CTBT-Art.XIV/2021/WP.1, 23 September 2021, https://www.ctbto.org/fileadmin/user_upload/Art_14_2021/CTBT-Art.XIV-2021-WP.1.pdf.

On encouraging the DPRK to vote in favor of CTBT-related UNGA resolutions, there are also reasons to believe that it could be attractive to the DPRK and that it is implementable. First, fundamentally, signing the CTBT is in line with the DPRK's current policy. As many have observed, for the DPRK, there is no down side to signing the CTBT since the country is already in a moratorium, and Chairman Kim himself has said that further nuclear tests were no longer needed (Kim and Kim 2018). In early 2018, North Korea's permanent representative to the Conference on Disarmament even announced that the North will "join international disarmament efforts for a total ban on nuclear tests", which logically means joining the CTBT (Zerbo 2018).

Second, the legal nature of UNGA resolutions is conducive to this moderate progress, and the DPRK has very likely noticed it. Except for decisions regarding payments to the regular and peacekeeping budgets of the United Nations, UNGA resolutions are not binding for Member States (Permanent Mission of Switzerland to the United Nations 2017, 52). This non-legally binding feature allows a greater likelihood for the DPRK to vote in favor of the resolution on the CTBT, which is constantly on UNGA agenda. According to diplomats familiar with the matter on grounds of anonymity, in 2018, the DPRK attempted to provide input for the draft text of the UNGA resolution on the CTBT. Although the attempt did not go through, it implies that the DPRK is interested in engaging in UNGA resolutions on the CTBT. Moreover, such a case would not be unprecedented. Pakistan, despite being a non-signatory to the CTBT, has been voting in favor of the UNGA resolutions on the CTBT for years, which demonstrates that voting in favor would not force the DPRK to sign the treaty immediately.

Another gentle gain for the DPRK is that by voting in favor, the DPRK would be politically elevated to a comparably better position in UNGA sessions, whereas its "biggest enemy", the United States, has been shifting between voting against and abstaining in CTBT-related resolutions.

Regarding CTBTO offering training and workshops to the DPRK, the non-political nature of such activities and the need for improved capacity in disaster relief of the DPRK present a natural opportunity. Each year, the CTBTO runs training and workshops across a wide range of topics including seismic data analysis, infrasound, and waveform processing. Several of these technologies can be used to detect natural events. Pyongyang, eager to address the insufficient capacity of natural disaster prevention and relief, is likely to be attracted to certain CTBTO training topics (Bondaz and Ballbach 2021). Surely, any training or workshops offered to the DPRK have to be thoroughly reviewed to prevent them from advancing Pyongyang's military capability, but the pros of the CTBTO directly and positively engaging with the DPRK through such a confidence-building measure would be significant as the DPRK's faith in the CTBT can be enhanced.

Conclusion

Based on the reasons above, coupling the DPRK's signing of CTBT with future sanctions relaxation, encouraging the DPRK to vote in favor of CTBT-related UNGA resolutions, and encouraging the CTBTO to offer proper training and workshops would be practical ways to break the current stalemate on pushing forward CTBT's coming into force and help defreeze the relations between the DPRK and the international community.

Meanwhile, it should be noted that the possibility of the DPRK abandoning the moratorium and restarting its nuclear tests looms large. Taking the self-imposed moratorium as leverage for future talks, the DPRK has threatened to end it in late 2019 and early 2020 (Choe 2019; Davenport and Masterson 2020). In early April 2022, US Special Envoy for North Korea Sung Kim warned that the DPRK may conduct an underground nuclear test on April 15 to celebrate the 110th anniversary of the birth of the country's founder, Kim Il-sung (McCurry 2022). Even though this speculation did not become a reality, commercial satellite imagery did show that the DPRK is tunneling again at its underground nuclear test site in a way that could potentially shorten the time it needs for its next test (Starr, Cohen, and Herb 2022). With international security being shaken by an ongoing war in Europe, geopolitical tensions in the Asia-Pacific region intensifying in recent years, and emerging alliances such as the Quadrilateral Security Dialogue and the AUKUS security pact (between Australia, the United Kingdom, and the United States) potentially incentivizing new rounds of arms race, the end of the current moratorium could be triggered anytime. The international community needs to act fast to push forward the DPRK's progress with the CTBT before the opportunity is lost.

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