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Pyongyang's Showcase of UAVs During the Victory Day Military Parade and Its Implications

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Abstract

On July 27, North Korea unveiled its newly developed "strategic reconnaissance drones" and "multi-purpose attack drones" during the so-called “Victory Day” military parade celebrating the 70th anniversary of the Korean War armistice agreement. The unmanned aerial vehicles (UAVs) showcased during the parade displayed Pyongyang’s rapidly growing drone development capabilities. Thus, South Korea should accelerate its drone technology and strategy development while improving its response capabilities for detecting and neutralizing North Korean UAVs. Pyongyang has significantly enhanced its UAV capabilities after closely monitoring the Russia-Ukraine war and the game-changing effect of drones in warfare. Russian Defense Minister Sergei Shoigu accompanying Kim Jong Un to the “Weaponry Exhibition” where the new UAVs first debuted raises concerns about strengthened cooperation between Pyongyang and Moscow. On the other hand, considering that North Korea flew drones across the border over Paju, Baeknyeong Island, and Samcheok in 2014 after unveiling its UAVs at the 2013 Victory Day military parade, it is highly likely that Pyongyang will use its new drones in its future provocations against Seoul. By flaunting its latest reconnaissance and attack drones, North Korea has demonstrated its unrelenting will to continue developing advanced conventional forces in addition to nuclear weapons.

Keywords

Unmanned Air Vehicle (UAV), Military Parade, Weaponry Exhibition, Saetbyul-4 (Morning Star-4), Saetbyul-9 (Morning Star-9)

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North Korea's Showcase of UAVs at the Military Parade

North Korea released flight footage of its "strategic reconnaissance drones" and "multipurpose attack drones" during the so-called "Victory Day" military parade on July 27, marking the 70th anniversary of the end of the Korean War. The unmanned aerial vehicles (UAVs) were first unveiled at the "2023 Weaponry Exhibition," visited by Russian Defense Minister Sergei Shoigu and Kim Jong Un on July 26. The drones resemble the U.S. high-altitude surveillance aircraft RQ-4 Global Hawk and the U.S. strike-capable UAV MQ-9 Reaper. Pyongyang named the new aircraft as "Saetbyul-4 (Morning Star-4)" strategic reconnaissance drone and "Saetbyul-9 (Morning Star-9)" multi-purpose attack drone. Four Morning Star-9 drones towed on trailers in addition

to the flight demonstration during the military parade suggests that North Korea has manufactured and tested at least five striker drones. Alongside the procession of UAVs carried on trucks, Pyongyang also introduced its "multi-purpose drone squadron," which seems to be a unit dedicated to the Saetbyul-9 striker drone.

Meanwhile, some analyze the resemblance of North Korean UAVs to the U.S. Global Hawk and U.S. Reaper as the result of hacking and stealing related technology from American drone manufacturers. Given the publicly available information on U.S. drone airframes, it is not surprising North Korea could produce UAVs similar to U.S. models in appearance. However, as the material and interior of U.S. drones are highly classified information, it is unlikely that Pyongyang gained access to the technology determining drone capability. Some even suspect that the new drones are likely mock-ups.

North Korea's UAV Technology and Border-Trespassing Cases

Pyongyang began acquiring UAVs from China between 1988 and 1990 for intelligence gathering and seems to have started developing drones around the end of 1993. In April 2012, North Korea unveiled an indigenously produced drone during a military parade commemorating the 100th anniversary of Kim Il Sung's birth. In March 2013, North Korean state media disclosed Kim Jong Un observing the test launch of an indigenous drone. Also, during an on-site military inspection, he ordered the "utilization of various UAVs to strengthen deep surveillance operations in the

enemy area." In addition, Pyongyang showcased UAVs alongside missiles in July 2013 during the 60th anniversary of the so-called Victory Day parade.

North Korean UAV provocations have increased with the development of its drone capabilities. In 2014, crashed drones were discovered in Paju, Baeknyeong Island, and Samcheok, and investigations revealed that the UAVs were programmed and flown in from North Korea. The drones were similar in size and shape to those manufactured by Chinese companies, with the components manufactured in China, the Czech Republic, Japan, and the United States.

At the Eighth Party Congress of the Workers' Party of Korea held in January 2021, Pyongyang declared its "Five-Year Plan for the Development of National Defense Science and Weapon Systems," in which it pledged to develop military reconnaissance satellites and drones in addition to nuclear weapons. On December 26, 2022, five North Korean UAVs crossed the Military Demarcation Line. The five drones that penetrated South Korea's air defenses were small in size, less than 3 meters wide and 2 meters long. The UAVs flew for several hours at an altitude of 3km at 100km/hr over Seoul, Gimpo, and Paju in the Gyeonggi Province, and the Ganghwa region in Incheon. It was later confirmed that one drone had breached a special no-fly zone surrounding the South Korean presidential office. Planet Labs, a U.S. satellite imagery company, released an image taken on June 14, 2023, showing a drone with a wingspan of approximately 35 meters on the Banghyon Airbase runway in Hwanghae-do, North Korea.

North Korea's Obsession with UAV Development

In continuing its showcase and threats of UAVs, North Korea seems to have considered the cost-effectiveness of drones as a method for provocations; increased military leverage due to the difficulty of detection and interception, thus confusing South Korean operations; and the political benefits of provoking internal conflicts within the South Korean society. Not to mention Pyongyang's aim to enhance its surveillance and reconnaissance capabilities, which are inferior to those of the ROK-U.S. Combined Forces while also improving the efficiency of its military operations using strategic weapons.

UAVs offer various advantages compared to manned fighters in that they are inexpensive and incur almost no casualties. For example, Russia and Ukraine both currently use China's DJI Mavic 3 with reconnaissance and bombing capabilities, which reportedly cost around $2,000 per unit. Drones are an attractive option for North Korea, as it lacks the capabilities to build fighter jets and the resources for aircraft maintenance and pilot training.

UAVs can continuously fly over potential targets and enable efficient operations. In addition, identification and detection of targets and situational awareness intelligence gained through drones enhance combat capabilities such as reconnaissance and engagement while providing more accurate information for the surveillance and monitoring of peacetime targets. Pyongyang may have also considered the advantages of drone attacks in avoiding diplomatic frictions or denying responsibility.

Recent trends in warfare, particularly in the use of drones, appear to have accelerated North Korea's technological advancement. The 2020 war between Armenia and Azerbaijan was the first example of the mass use of drones in a large-scale conventional war between states. Drone strikes provided a huge advantage for Azerbaijan in overwhelming Armenian armored forces. In the recent Russia-Ukraine war, Ukraine has employed a variety of UAVs to maximize military effectiveness, and Russia, which has the military advantage, is also actively utilizing drones.

Implications of the New UAVs Unveiled by North Korea

Most importantly, the drones recently unveiled by North Korea demonstrate its rapidly growing UAV development capabilities. Compared to the crude North Korean drones that crashed in Paju in 2014, the Saetbyul-4 and Saetbyul-9 drones bear a striking resemblance, at least in appearance, to advanced U.S. drones. While North Korea's drone capabilities are unknown, the new models seem to be an upgraded version of the UAVs that infiltrated the Seoul-Gyeonggi region in late 2022. For example, North Korean TV has shown footage of a UAV firing an anti-tank missile. Thus, Seoul needs to not only improve its ability to detect and neutralize UAVs but also accelerate UAV technology and strategy development.

Second, North Korea appears to be learning many lessons from the war in Ukraine. Drones have emerged as the game-changer in the Russia-Ukraine war, and accordingly, Pyongyang has focused on improving its UAV capabilities. In addition, after witnessing the effective attacks of infantry missiles against armed forces,

Pyongyang seems to have ramped up its armored forces with its showcase of tanks equipped with a new type of reactive armor and TV footage introducing its armored forces enhanced with an active defense system.

Third, Russian Defense Minister Sergei Shoigu accompanying Kim Jong Un to the "Weaponry Exhibition" and the July 27 military parade is worth noting. Since the outbreak of the war in Ukraine, concerns about military cooperation between North Korea and Russia have continued to grow, as it is likely to be more than a shell trade. Despite a recent failed launch, North Korea has professed to develop military reconnaissance satellites, which, when coupled with UAVs would dramatically increase its surveillance and reconnaissance capabilities. Moreover, Russia as one of the countries that possesses the key technologies for the weapons systems that North Korea has pledged to develop is of particular concern.

Fourth, Pyongyang's enhanced drone capabilities could lead to a diversification of provocations. The Russia-Ukraine war demonstrated that even a country with relatively inferior conventional forces can achieve significant military effectiveness with the adequate use of UAVs. In addition, considering that North Korea flew drones across the border over Paju, Baeknyeong Island, and Samcheok in 2014 after unveiling its UAVs at the 2013 Victory Day military parade, Pyongyang will likely use its new drones to carry out threats against Seoul.

Fifth, by flaunting its latest reconnaissance and attack drones at

the recent Victory Day military parade, Pyongyang has demonstrated its determination to continue developing advanced conventional forces in addition to nuclear weapons. North Korea also displayed its advanced conventional weaponry, including the Haeil underwater nuclear attack drone, the new hypersonic missile Hwasong-12B, and tanks equipped with reactive armor. Such a lineup likely reflects Pyongyang's efforts to strengthen its conventional forces alongside its nuclear weapons. On the other hand, North Korea's military buildup and prowess present a rising threat to South Korea, raising the need for more thorough preparations against future provocations.