



**DPRK: Missile Impact Likely Occurred Near International Air Routes;
Test Launches Pose Continued Aviation Risk**

On 18 February 2023, the Democratic People's Republic of Korea (DPRK) conducted an unannounced test launch of a Hwasong-15 intercontinental ballistic missile (ICBM) near **Pyongyang International Airport (ICAO code: ZKPY)**. According to open source reporting, the missile flew 989 km (534 NM), reached an altitude of roughly 5700 km (3076 NM) miles on a highly lofted trajectory, and traveled beyond the boundaries of the Pyongyang (ZKKP) Flight Information Region (FIR). The missile likely followed a similar flight path to that of the last DPRK ICBM launch on 18 November 2022 (a Hwasong-17). ***Both the 18 February 2023 and 18 November 2022 launches impacted in the Sea of Japan within the Fukuoka (RJJJ) FIR and likely in close proximity to several international air routes. The DPRK's unannounced launches of ICBMs and other missiles during 2022-2023 and in prior years demonstrated trajectories sometimes impacting in adjacent FIRs, resulting in an inadvertent risk to civil aircraft and maritime vessels operating in the region.***

Additionally, on 20 February, the DPRK launched two short-range ballistic missile (SRBMs), with the longest traveling approximately 400 km (215 NM) and reaching a maximum altitude of 100 km (54 NM), according to DPRK state media. Both SRBMs impacted in the Sea of Japan, likely within the Pyongyang FIR. This was followed by a 23 February launch of four Hwasal-2 cruise missiles near Kim Chaek City in the DPRK's northern province that flew several elliptical orbits and 2000km (1080 NM). These missiles probably landed off the DPRK coastline in the Sea of Japan in the ZKKP FIR and west of Japan's exclusive economic zone, according to DPRK state media. These 2023 missile launches continue the high volume of activity from 2022. In 2022, the DPRK fired over 90 missiles, more missiles than any previous year, and at one point launched 23 missiles in a single day. ***Additional unannounced DPRK missile launches are likely in the near term.***

The DPRK's increasingly provocative military activities, including previous air exercises in proximity to the ROK and continued missile tests into adjacent FIRs, have escalated regional tensions. The DPRK's continued failure to provide advance warning of missile launches and the growing number of missile launches, particularly into the Sea of Japan, presents potential safety risks to civil aviation and maritime operations, particularly when the trajectories and impact areas extend beyond the boundaries of the Pyongyang FIR. These activities pose de-confliction challenges and expose civil aircraft to risk from inadvertent missile impact or from falling missile debris, in the event of an in-flight missile failure.

Additionally, the DPRK has conducted other provocative activity that could pose a risk to civil aviation. On 26 December 2022, the DPRK flew at least five unmanned aircraft systems (UAS) across the border into the ROK's territorial airspace, ***generating risk concerns for civil aviation in and around Incheon (ICAO code: RKSI) and Gimpo (ICAO code: RKSS) International Airports.*** As a precaution, ROK authorities suspended flight operations at Incheon and Gimpo International Airports for approximately one hour, while military aircraft and helicopters reacted to the UAS intrusion.

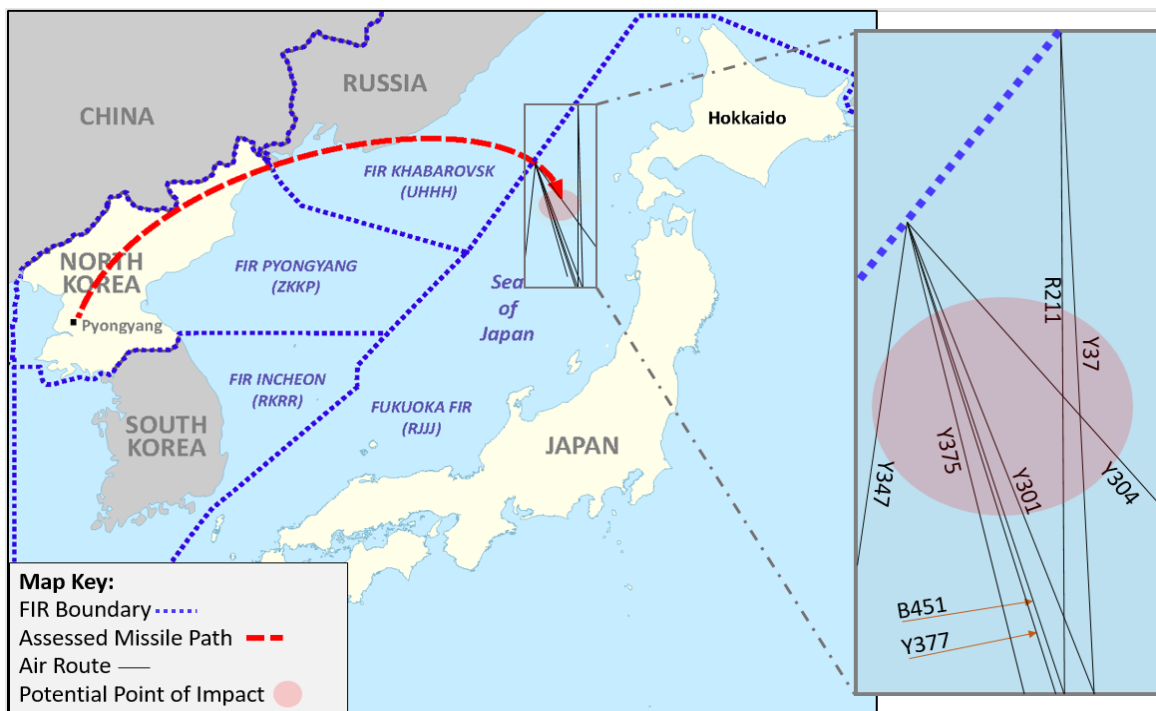
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Outlook:

Additional DPRK missile tests are likely to occur in the near term. Weapon testing activities confined within the Pyongyang FIR should not affect U.S. civil aviation, but foreign civil aircraft operating in the Pyongyang FIR may be exposed to inadvertent risks from DPRK missile tests. As previously described, some DPRK missiles or their debris may have trajectories that extend beyond the Pyongyang FIR, posing potential risks to civil aircraft in adjacent airspace. In the event of an in-flight missile failure, depending on the circumstances, altitude, and location of the failure, an elliptical debris field of varying size could result, which would expand the geographic area of potential risk to civil aircraft and/or maritime vessels transiting the region. If the DPRK conducts further cross-border UAS operations into ROK's territorial airspace, such operations would likely pose a low altitude flight safety concern for civil aviation.

The Federal Aviation Administration's Special Federal Aviation Regulation (SFAR) No. 79, 14 C.F.R. § 91.1615, prohibits U.S. civil aviation from operating in the entirety of the Pyongyang FIR due to the risk to U.S. civil flight operations posed by the DPRK's military capabilities and activities, including, but not limited to, unannounced missile launches. Copies of all FAA-issued flight prohibition SFARs, flight prohibition NOTAMs, and advisory NOTAMs are available on FAA's Prohibitions, Restrictions, and Notices website at: http://www.faa.gov/air_traffic/publications/us_restrictions/.

U.S. civil aviation operators should monitor regional NOTAMs, maintain communications with appropriate air traffic control (ATC) authorities, and follow ATC instructions.



Graphic: Approximate trajectory and impact area of the DPRK's 18 February 2023 ICBM missile test launch, in relation to international air routes transiting the Sea of Japan. This graphic is solely for situational awareness and should not be used for navigational purposes.

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