Ministry of Land, Infrastructure and Transport

Earthquake in Japan Has No Impact on Korean Peninsula

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Maintaining current speed within 1 cm according to the analyzed amount of changes in tectonic shifts using GNSS satellite control points

The National Geographic Information Institute (NGII, Director General CHO Woo-seok) under the MOLIT stated that no tectonic shifts were observed in Korea caused by the 7.6-magnitude earthquake that occurred in Ishikawa Prefecture, Japan on 1 January,

As a result of analyzing the daily positioning changes of 12 Satellite Control Points* in the southeastern part of Korea through the Tectonic Shifts Monitoring System**,

* A survey reference point that receives navigation satellite signals such as GPS and GLONASS at all times to confirm precise geodetic coordinates

** A system that calculates the amount of tectonic fluctuations by analyzing the position changes of satellite control points that are firmly fixed to the ground

Korea has been moving to the southeastward at a constant rate of about 3 cm per year, and the amount of crustal fluctuation was found to be similar to that before and after the earthquake, between December 31st and January 2nd, within an error range of 1 cm.

The results of this analysis were estimated before the precise satellite orbits* were announced, and there is a possibility that the amount of tectonic shifts would be different when calculated with a precision of *mm* reflecting the precise orbits in the future.

* It takes about 20 days for the precise orbits of navigation satellites such as GPS to be announced

Even though the Geospatial Information Authority of Japan announced that the Ishikawa Prefecture in Noto Peninsula moved westward by about 1.3 meters in the aftermath of the earthquake, the impact on tectonic fluctuations in Korea is likely to be minimal due to the distance from the epicenter.

The Head of Geodesy Division of the NGII SONG Si-hwa expressed, "We will keep closely monitoring changes in the position of the national territory in the aftermath of earthquakes, etc., while establishing accurate geodetic standards so that there would be no difficulties in building spatial information and planning various national development plans".