

## **Applying InSAR technology to analyze land subsidence in the area of Kaohsiung railway undergrounding.**

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Since 2006, the Kaohsiung railway undergrounding project has caused damage to 278 residential units, with incidents reported along almost the entire line. The Cut & Cover method was used in the project, requiring foundation pit drainage, which has become a main cause of land subsidence in urban areas. This study used ESA's Sentinel-1 satellite to analyze the spatiotemporal distribution of land subsidence caused by the project, finding more significant subsidence during the construction period than after completion. The maximum subsidence of 15mm occurred between Kaohsiung Station and Minzu Station from December 2015 to December 2016, with an impact radius of 1.5km.

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