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## Monitoring on land subsidence in reclaimed land with space-based synthetic aperture radar observations.

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Land subsidence is often occurred by compaction of alluvial sediments due to groundwater extraction and threatens invaluable lives and properties. Space-based interferometric Synthetic Aperture Radar (SAR) observation has been widely used to estimate surface displacement precisely. Especially, Small Baseline Subset (SBAS) technique with SAR Interferometry (InSAR) could serve to monitor a time-series of the land subsidence. In this study, the SBAS with L-band ALOS PALSAR and C-band Sentinel-1 observations have been applied to investigate the land subsidence in Noksan reclaimed land, Busan, South Korea. The average velocity showing the largest displacement is -3.40 cm/year from ALOS PALSAR and -2.17 cm/year with Sentinel-1 dataset at the line of sight (LOS) direction. An annual subsidence rate of -2.77 cm/year was estimated assuming that the surface has been deformed linearly for the data acquisition period.