

# ***Interactive comment on* “Detection of Land Subsidence due to Excessive Groundwater Use Varying with Different Land Cover Types in Quetta valley, Pakistan Using ESA-Sentinel Satellite Data” by Waqas Ahmad et al.**

## **Anonymous Referee #1**

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As InSAR method has been widely and maturely applied in land subsidence monitoring and high precision time-series can be easily achieved for different regions. Numerous publications show good performance of this kind of application.

For this specific test study, the precision of InSAR results is not high enough to show the spatial distribution and temporal evolution characteristics, as compared with GPS in Figure 9. Besides, the quantitative correlation between surface subsidence and the underground water fluctuation is missed, i.e. the well data should be involved to show the inner correlation between land subsidence and the ground water changes.

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Some detailed techniques such as atmospheric effect, noise filter and external DEM (SRTM 3 arc-sec. rather than 1 arc- sec) are lack or not updated, which makes the InSAR results be not good.

Which strategy (InSAR processing method) is applied in this study, as the description of the InSAR technique is not consistent.

Some typo and spelling error should corrected.

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