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Title:	Investigating Surface Deformation and Groundwater Dynamics using InSAR Observation over Southern Part of Punjab, India
Authors:	Chawla, Shivam (/jspui/browse?type=author&value=Chawla%2C+Shivam) Ojha, Chandrakanta (/jspui/browse?type=author&value=Ojha%2C+Chandrakanta)
Keywords:	Surface Deformation Groundwater Dynamics InSAR Observation
Issue Date:	2022
Publisher:	IEEE Xplore
Citation:	International Geoscience and Remote Sensing Symposium (IGARSS), 2022(1), 369-372.
Abstract:	This research is aimed at analyzing surface deformation and groundwater change over the Sangrur district of Punjab, India, using a satellite remote sensing technique. To this end, ALOS-PALSAR SAR sensor data are investigated using an advanced Wavelet-based multi-temporal (WabInSAR) technique. Here we analyzed and compared the InSAR-derived surface deformation, precipitation and groundwater level data for understanding freshwater depletion in the study area. The result exhibits faster rates of land subsidence on the northwest part of the Sangrur district with a maximum of ~ 7 cm/yr. Further, the InSAR-derived deformation region shows a good correlation with the groundwater head level change. This study will provide valuable information about the potential groundwater depletion zone and the risks associated with the infrastructure damage over the region.
Description:	Only IISER Mohali authors are available in the record.
URI:	https://doi.org/10.1109/IGARSS46834.2022.9883672 (https://doi.org/10.1109/IGARSS46834.2022.9883672) http://hdl.handle.net/123456789/5001 (http://hdl.handle.net/123456789/5001)
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