OpenTopography

Metadata Report

Project Name *Xinmo Valley pre and post landslide, Szechuan, China, 2012/13 and 2017, SETSM DEM derived from WV imagery*

Summary
This dataset contains raster DEMs from Xinmo Valley, *Szechuan, China* pre and post landslide. produced from WorldView-02 stereo and crosstrack imagery. Pre landslide imagery was acquired on 12-Sep-2013 and 06-Dec-2012 and post-landslide stero imagery was acquired on 17-Jul-2017. DEMs were produced using the Surface Extraction from TIN Space-search Minimization (SETSM) algorithm. The raw imagery has 0.5m resolution and the SETSM algorithm was employed using a 2m output resolution. Both pre and post landslide have two associated DEMs, one of which is unfiltered and one filtered with a local surfacing filter (LSF), each are named as such. Both pre landslide DEMs were then co-registered to the post landslide imagery following the geolocation procedure of Nuth and Kaab 2011. A complete description of the generation of this dataset, the images that were used to construct the raster and how the co-registration was performed can be found in the associated manuscript. Please cite this publication if you use this dataset: Atwood, Abra, and A. Joshua West. "Evaluation of high-resolution DEMs from satellite imagery for geomorphic applications: A case study using the SETSM algorithm." *Earth Surface Processes and Landforms*. 2021. This work has been supported by the NSF Grant EAR-1640894 to AJW.

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Products
Date of dataset collection: 12/06/2012- 07/17/2017
Coordinate system of datasets WGS 84 / UTM zone 46N
Spatial resolution: 2m