Technical Workshop SedInOut ITA

19.03.2021

Keywords: Radar Remote Sensing, Interferometry, InSAR processing

Radar Remote Sensing in mountain environment of the Veneto Region: present issues and future solutions

- Matteo Mantovani, CNR Irpi Padova

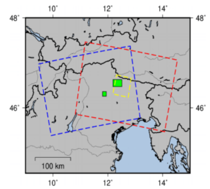
Ground displacement monitoring (A-DInSAR or TS-InSAR)

- **SBAS** (Short BAselines Subsets)
- **PSI** (Persistent Scatter Interferometry)

Change detection and mapping

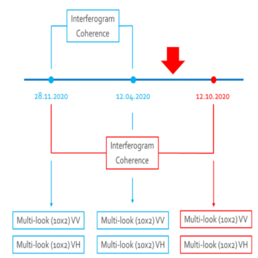
- -Amplitude based methods
- Phase and coherence based techniques
- -Polarimetric techniques

SAR analysis

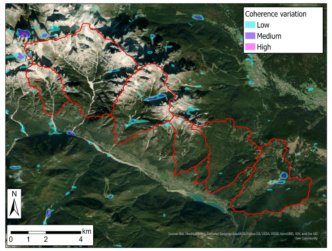


COLOR	MISSION	ORBIT	NUMBER	PERIOD
Blue	S-1	A	276	2015-2020
Red	S-1	D	215	2014-2020
Yellow	CSKM	D	54	2012-2014

Change detection strategy



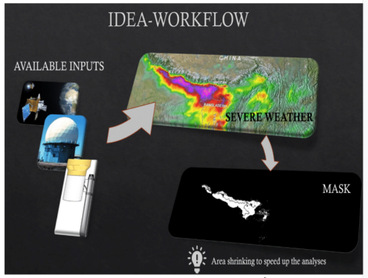
Coherence variation map

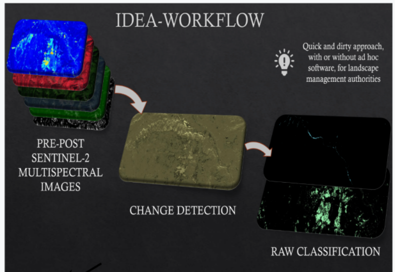


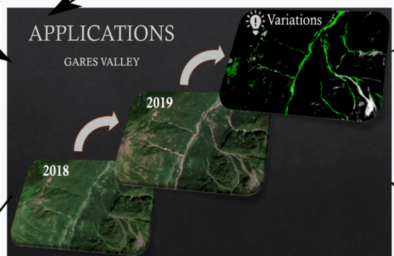
ThunderSlide

A framework for preliminary change detection and classification of severe weather effects

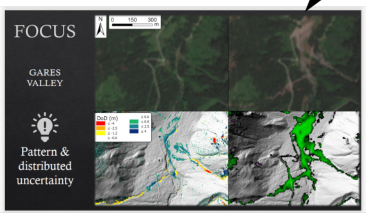
- Stefano Crema, Lorenzo Marchi, Marco Borga, Marco Cavalli

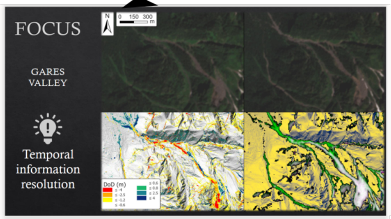


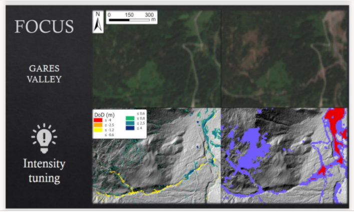




Key points:
- simple effective approach
-flexibility
-scalability/portability
-improvability

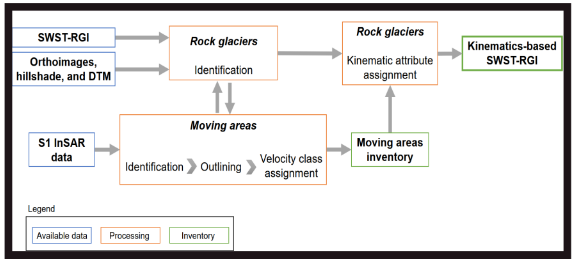






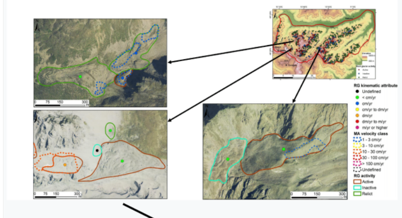
Rockglacier inventory in South-Western South Tyrol (Italy) investigated with a complemenatry kinematic approach

- Aldo Bertone - Università di Bologna

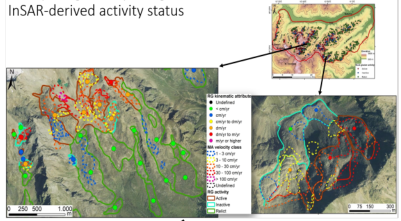


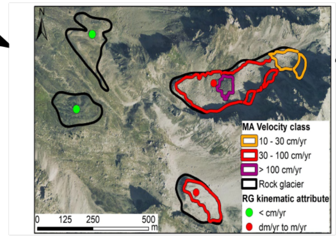
- consolidated method
- defined standards (e.g. classes)
- comparability of inventories

Examples: geomorphological- VS InSAR-derived activity status



Examples: geomorphological- VS InSAR-derived activity status





- ✓ The method allowed to map and classify moving areas, describing surface kinematics with InSAR data
- ✓ Kinematic attributes on the rock glacier activity have been successfully assigned
- ✓ Geomorphological- and InSAR- derived inventories can now be combined, filling the gap of the large variability and subjectivity related to the assignment of the rock glacier activity status based on geomorphological interpretations only
- ✓ The inventoried moving areas can now be compared with other data sources (e.g. geology??)