6th Global Summit of GADRI Networking Institutes Slide Template

Advanced Technologies for LandSlides (ATLaS)

Department of Earth Sciences – UNESCO Chair on Prevention and Sustainable Management of Geo-Hydrological Hazards, University of Florence

Background

Geo-hydrological hazards are a major threat to human life, property, cultural heritage, the natural and built environments. The UNESCO Chair on Prevention and Sustainable Managment of Geo-hydrological Hazards, established in 2016 at the University of Florence, aims at the implementation of the Sendai Framework for Disaster Risk Reduction.

Objectives

Develop new methodologies and advanced technologies for the prevention and management of geo-hydrological hazards, to support policies and actions of risk reduction. In particular i) landslide monitoring and early warning, by exploiting EO data to detect, map, monitor ground deformations; ii) development of regional forecasting and risk assessment models.

Expectation from a future partner

1. Development of meteorological models for the refinement of multi-scale landslide triggering thresholds
2. Creation of climate change scenarios in the framework of landslide prevention activities
3. Collection of regional and continental landslides database for risk assessment

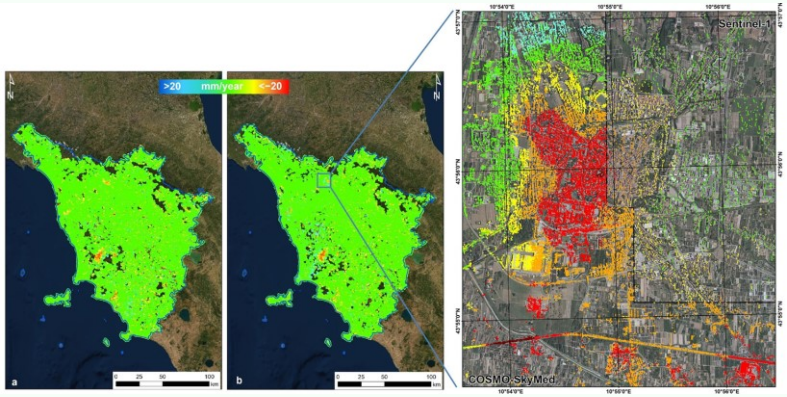
Seeds and Needs

Monitoring unstable slopes for the set-up of early warning systems (EWS)

Seeds!

Advanced technologies can provide effective early warning systems for the monitoring of slope instabilities.

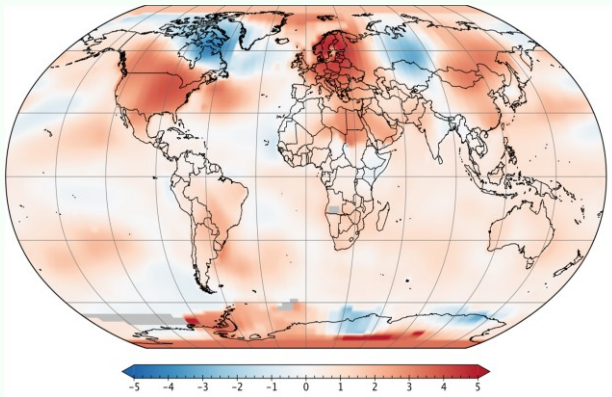
EO data for mapping, characterization and monitoring of landslides



New generation of satellites are capable of measuring deformations with millimiter accuracy in real time at a regional scale

Seeds!

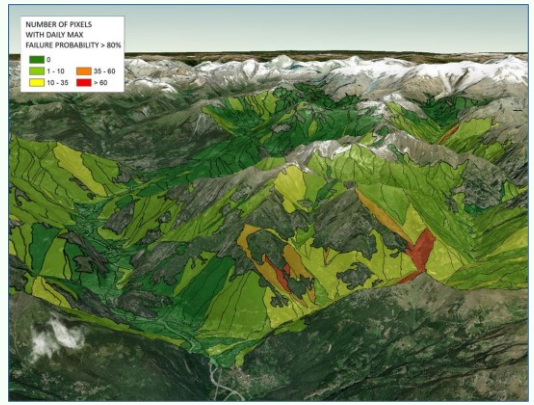
Development of Climate Change Scenarios



Climate Change Scenarios are needed to set-up reliable forecasting models

Needs!

Risk assessment and regional landslide forecasting models



Physically based models can provide landslide triggering forecasts

Seeds!