Satellite Imaging for Landscape Monitoring

Resilience to intense run-offs

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DATUM ACADEMY

Introductory VIDEO

https://www.youtube.com/watch?v=3zfoojhbknc

Objectives and Goals

- **Challenge:** To contribute to the development of territorial resilience to intense runoff in current and future climate by leveraging satellite imagery

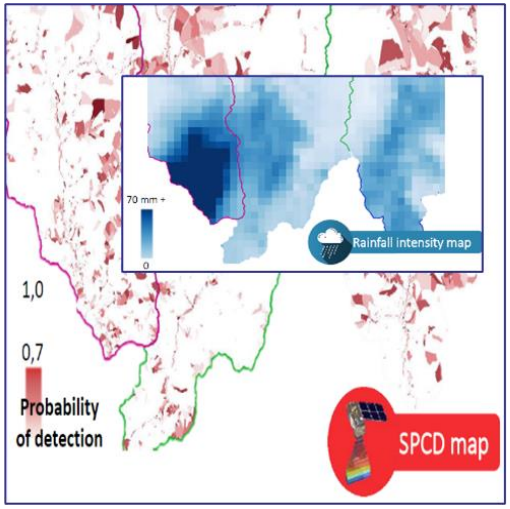
- **Objectives:** To provide local decision-makers in rural areas with ready-to-use tools for reducing the impact targeted hazard:
  - Production of a verified diagnosis of a territory's behavior in dissipating intense runoff energy and the evolution of its resilience
  - Prioritization of areas where preventive development projects should be undertaken
  - Selection of preventive adaptation measures

Illustration of a mudslide triggered by Storm Alex (2020) in the Alpes-Maritimes. Attenuating effect of agricultural terraces. Source: Géoportail © IGN

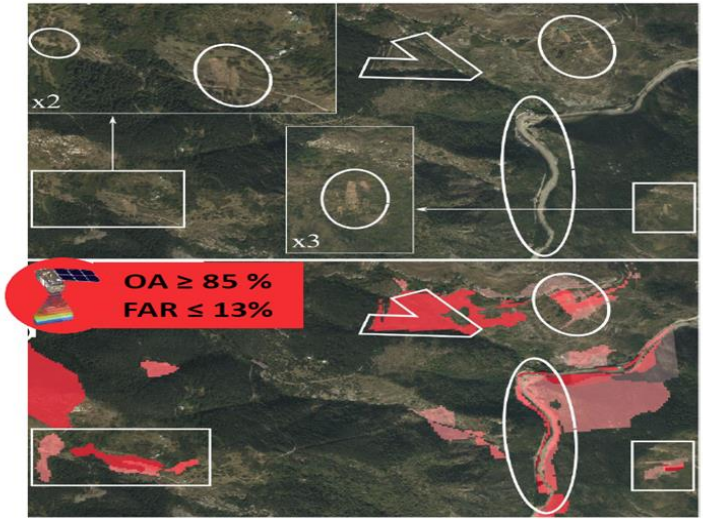
Verification process of effectiveness

1. Where are the changes in my watershed?
2. What damage has been observed compared to what the models predict?
3. What adaptation/adjustment solutions are in place?
4. Consistency with forecasting models?

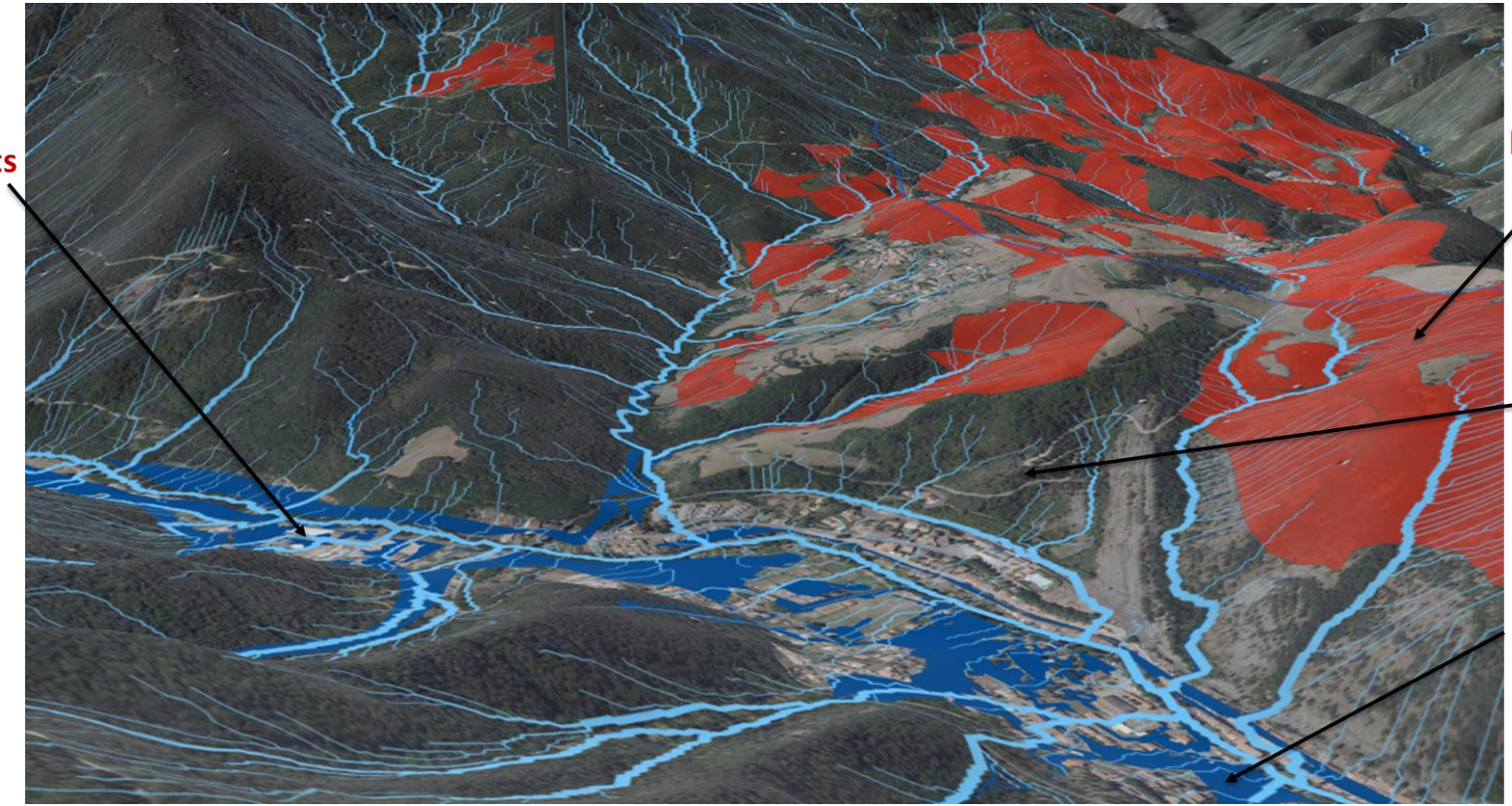
SENTINEL 2 pré/post



Images THR (PLEIADES,…)



Staging watershed for cooperation



Collective intelligence

Please put your University/Company LOGO here

AI Agent

for contextualized selection of adaptation solutions

- Territorial planning and programming documents
- International sources and NGOs
- Academic and sectoral research
- Lessons learned and operational documentation
- Post-disaster reports and commissions of inquiry
- Operational resources and digital tools