A GIS framework for applied remote sensing: possibilities and limitations

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Orthofotos (multitemporal inventory)

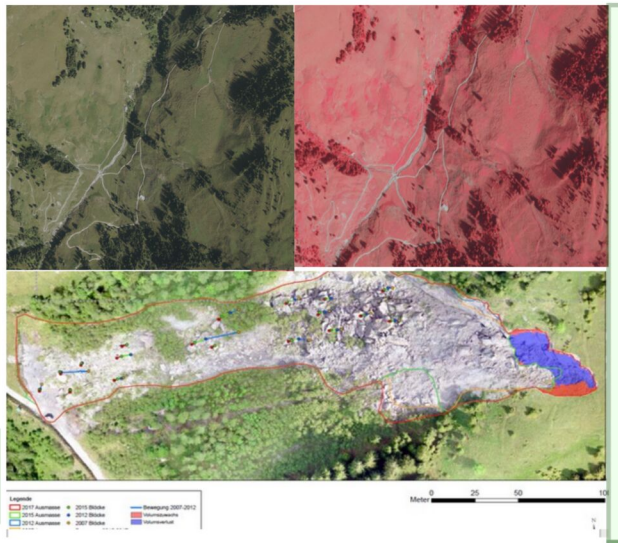
→ visualisation of slope activity (cracks, scars, drainage network rerouting)

\+ **CIR-images**

→ sophisticated visualisation approach based on brighter contrast (details detectable even in shadowed areas)

\+ **Historical aerial photographs**

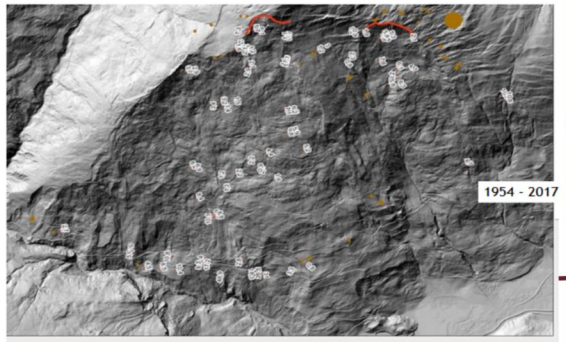
→ detection of substantial deformation rates within crucial areas



- Respect potential degree of distortion after conducting orthorectification
- Suitable method for detecting large-scale deformations characterized by high flow velocites

\+ **Digital catastral inventory**

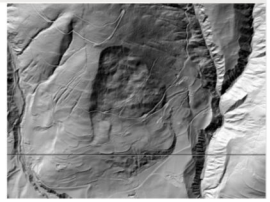
→ specifically suitable in combination with historical orhotofotos

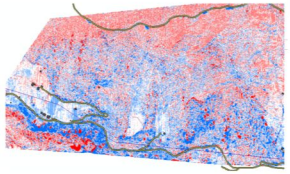


Laserscan- imaginery

→ morphology detection, evolution of cracks, erosional development of landforms

- potential high degree of uncertainty due to variable spatial resolutions and conflicting reference systems
- not suitable for comparison of altitude and reference coordinates





Possibilities

→ optical visualisation of activity and process regime

→ detection of large-scale, high velocity displacement rates

Limitations

→ approach not trivial

→ high degree of uncertainty

→ Detailed analysis requires specific data processing by technical experts

combination of methods enhances reliability!