

Target

Detect conservation criticalities and slope instabilities in rock carved sites part of the UNESCO tentative/World Heritage List in Georgia and Jordan

Methodology

Combine IRT, UAV-DP, 3D kinematic analysis with traditional methods (field surveys, lab data)

Products

High-resolution 3D models, surface temperature maps, drainage pattern network, structural data, 3D landslide susceptibility maps

Outputs

- Detection of conservation criticalities (moisture sectors, open fractures, unstable ledge-niche systems) and of the main acting instability phenomena (plane/wedge failures and topples)
- Sustainable preservation of rupestrian cultural heritage sites carved in weak rocks (tuffs and soft sandstones) depends on avoiding surface runoff, ground water infiltration, sealing open cracks, and reinforcing unstable sectors

Application of close-range remote sensing techniques for assessing landslide hazard in rock-carved cultural heritage sites

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