

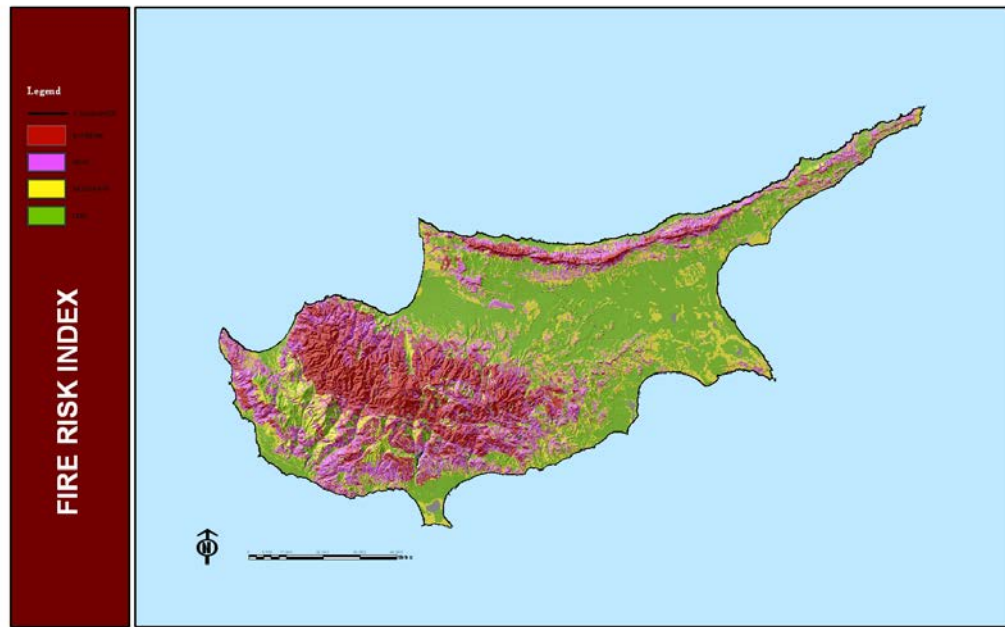
# Strengthening Cultural Heritage Resilience against the impacts of Climate Change: the case of Cyprus



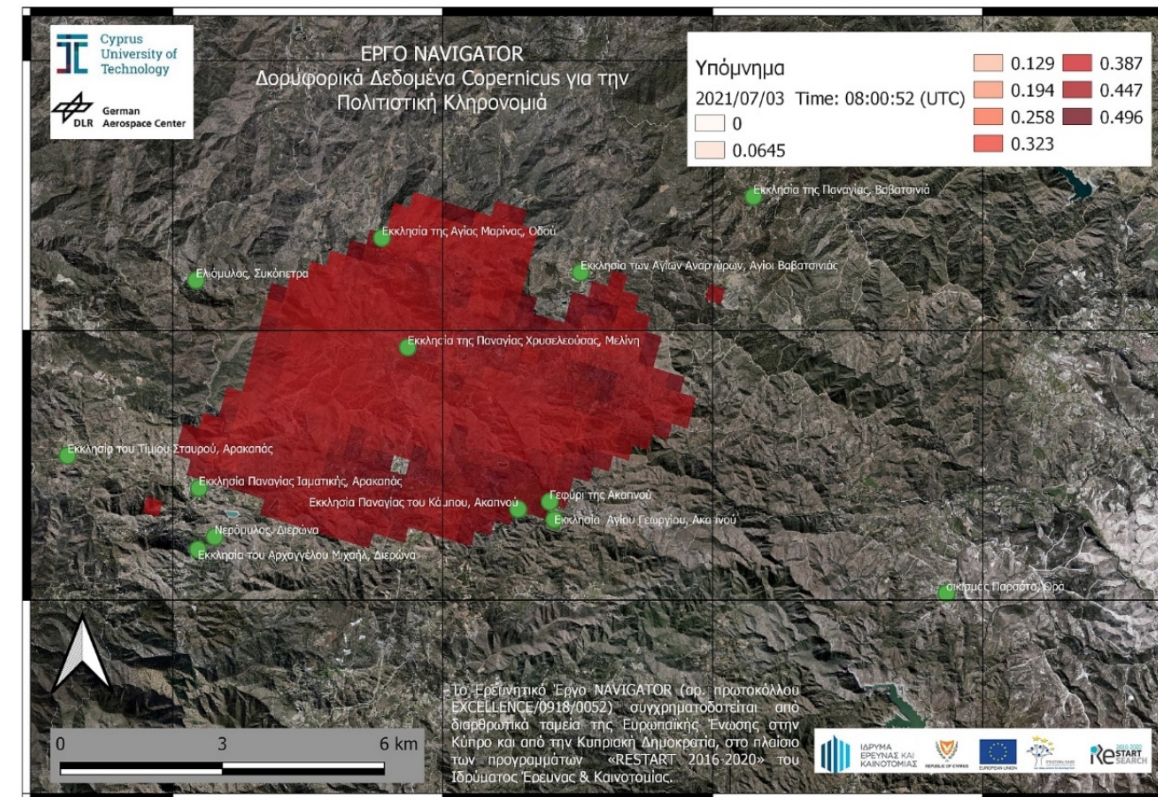
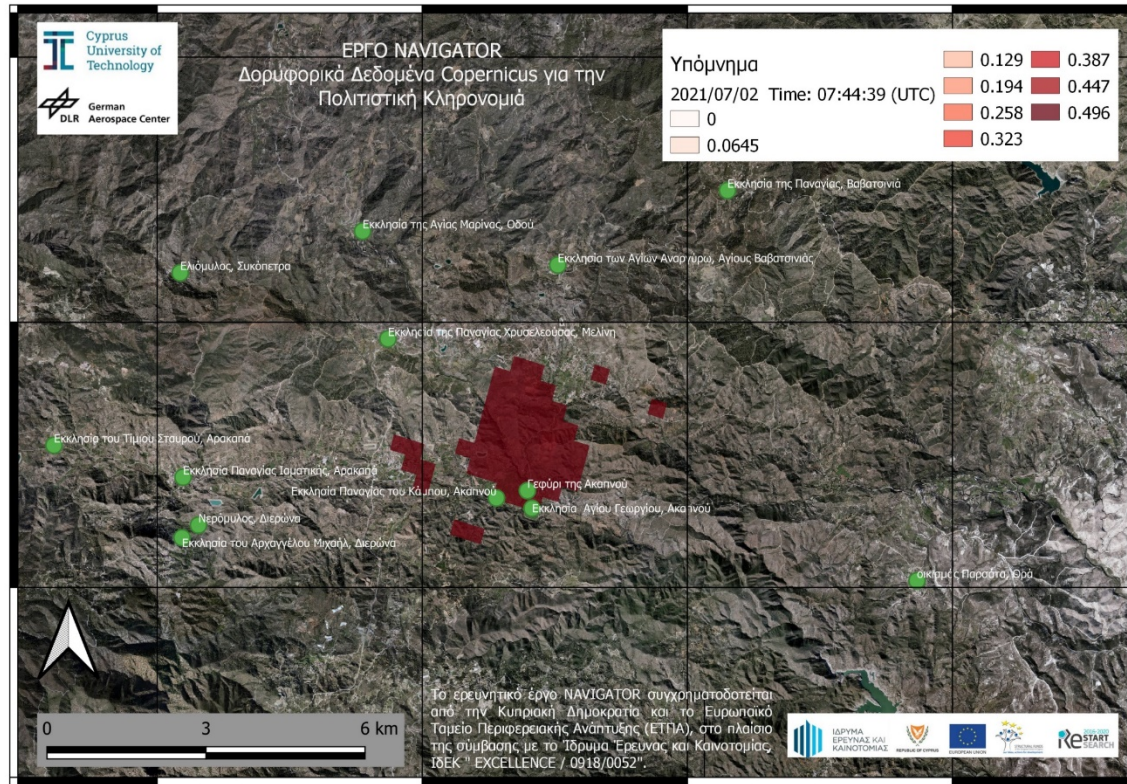
**Dr Anthi Kaldeli**

Archaeological Officer, Department of Antiquities,  
Deputy Ministry of Culture, Republic of Cyprus  
ICCROM Council Member

# Fire hazards

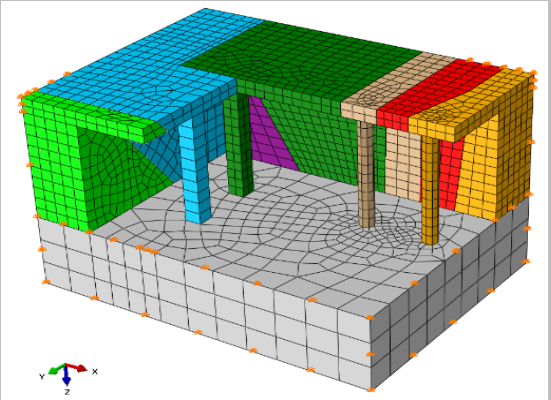
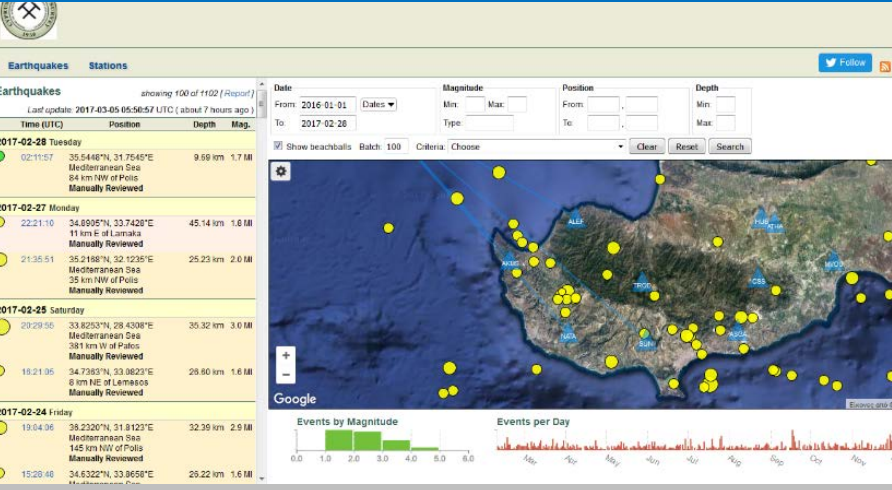


# Fire hazards

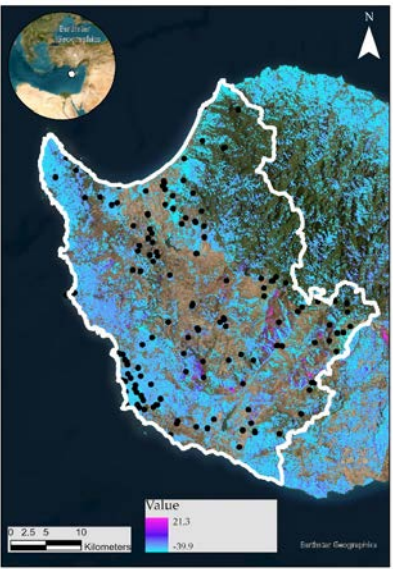
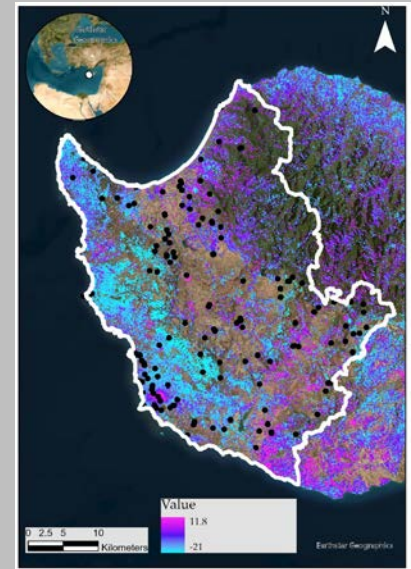


# Earthquake monitoring by the Department of Geological Survey

Kyriakides N., Lysandrou V., Agapiou A., Illampas R., Charalambous E. (2016)

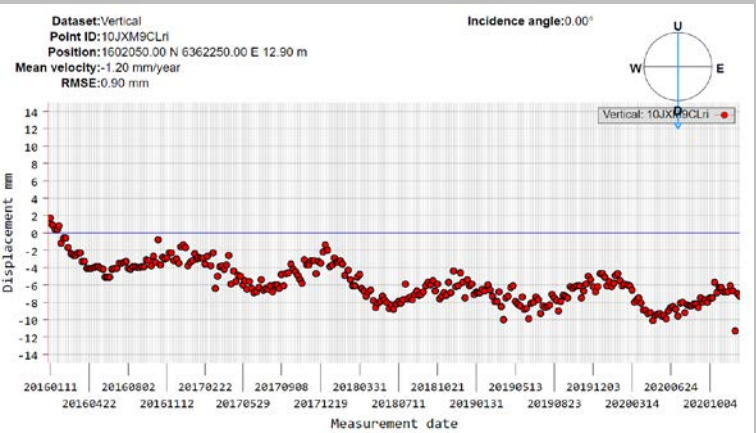


# European Ground Motion Service



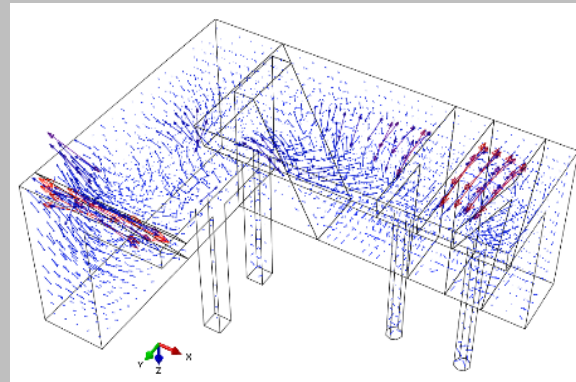
Horizontal (E - W, left) and Vertical (Up, right) ground displacements over the Paphos district as obtained from the EGM platform. Archaeological sites and monuments are depicted as black dots.

# Damaging conditions



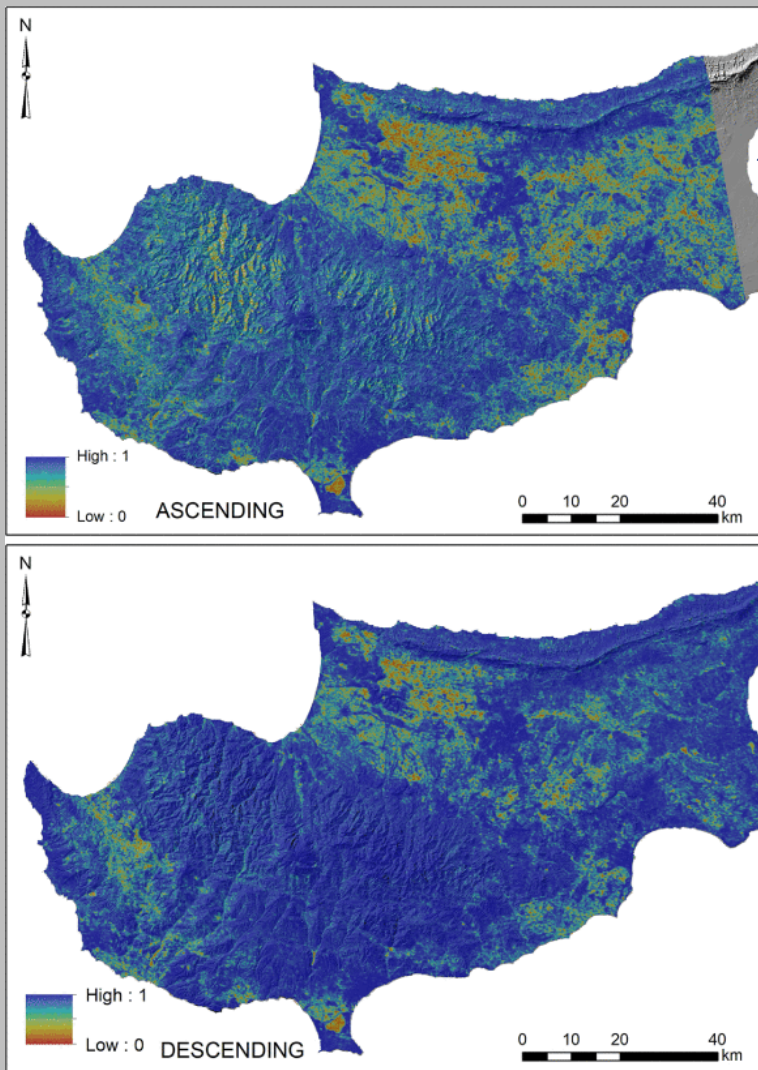
Time-series interferometric results over the archaeological site of "Tombs of the Kings", an UNESCO world heritage site. A mean velocity of - 1.20 mm/year is reported.

3D FE model developed for examining the seismic behaviour of the T4 tomb. Interacting stone blocks separated by cracks are shown in different colors.

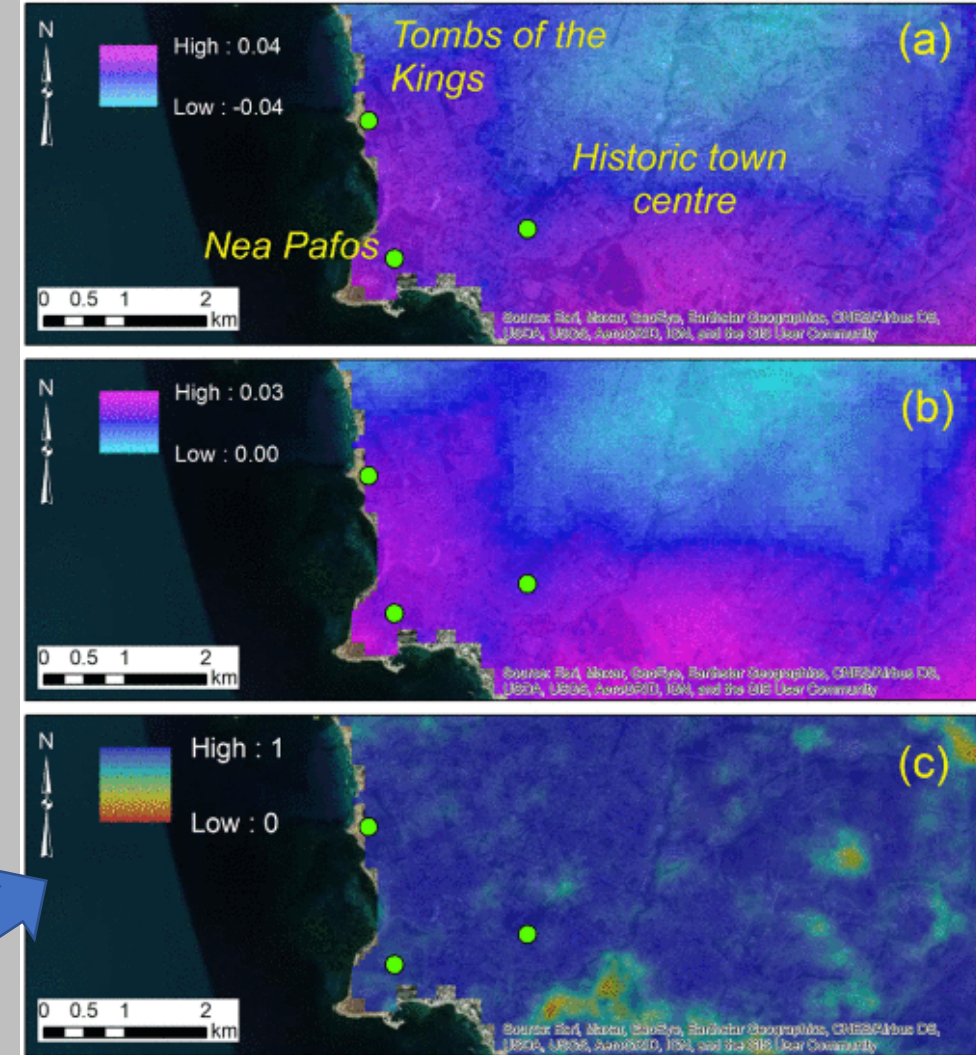


Tensor diagram showing the computed distribution of the maximum principal stresses when the peak ground acceleration is imposed.

# Earthquakes



Coherence map as derived from the Sentinel-1 SAR images in ascending orbit (top) and descending orbit (bottom).

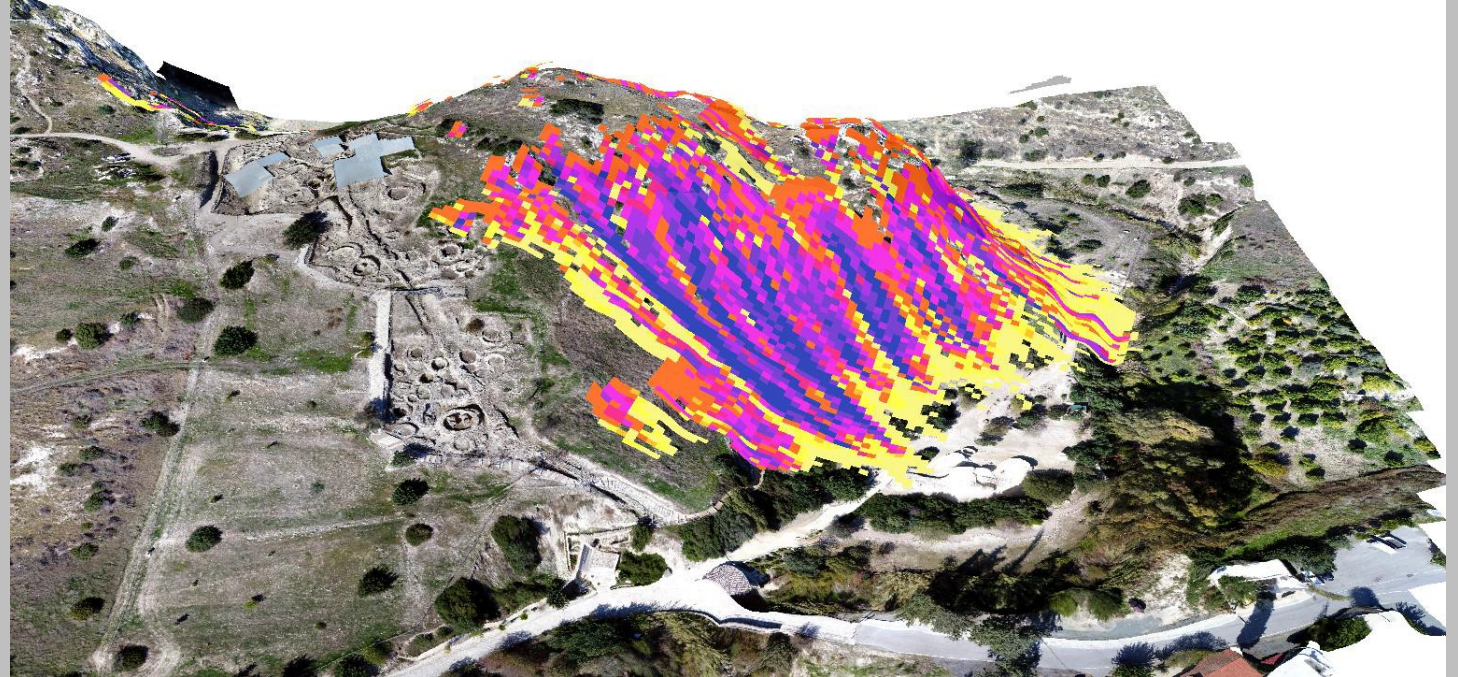


(a) Unwrapped interferogram.  
(b) Vertical displacements.  
(c) Coherence map, enveloping important archaeological sites of the area.

**Detecting Displacements Within Archaeological Sites in Cyprus After a 5.6 Magnitude Scale Earthquake Event Through the Hybrid Pluggable Processing Pipeline (HyP3) Cloud-Based System and Sentinel-1 Interferometric Synthetic Aperture Radar (InSAR) Analysis**



One (1) GNSS Seismic Mobile Station has been installed to the highest point of the site, in order to achieve maximum accuracy during measurements provided by the International GNSS Service (IGS) and EUREF's Permanent Network (EPN).



### Preliminary HY- STONE Rockfall Analysis of Chirokoitia

The rockfall runout simulation was performed by using the 3D model Hy-STONE (Agliardi and Crosta, 2003; Crosta et al., 2004). 3D models are able to simulate block motion along a slope by including lateral dispersion of trajectories due to large and small scale morphological complexity (Descoedres and Zimmermann, 1987; Guzzetti et al., 2002; Agliardi and Crosta, 2003; Crosta et al., 2004; Dorren et al., 2006).

# Flooding and soil erosion due to water

Water Development Department Geoportal

## Όριο Πλημμύρας 2080 (κλιματικής αλλαγής)

Part of flood\_plains

Private Member  
Private Organization

### Summary

Flood plains (Floods Directive)

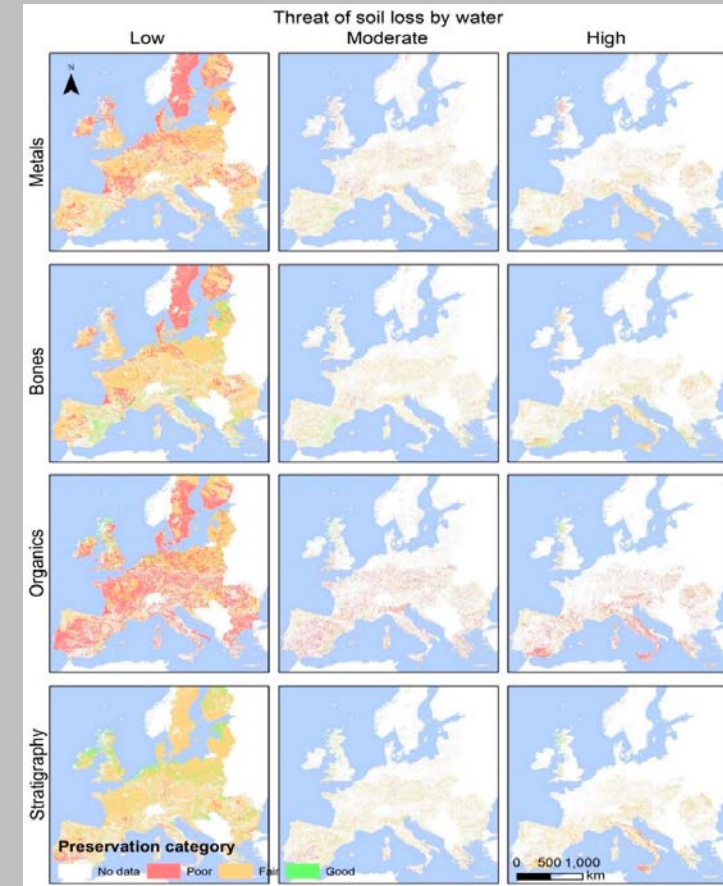
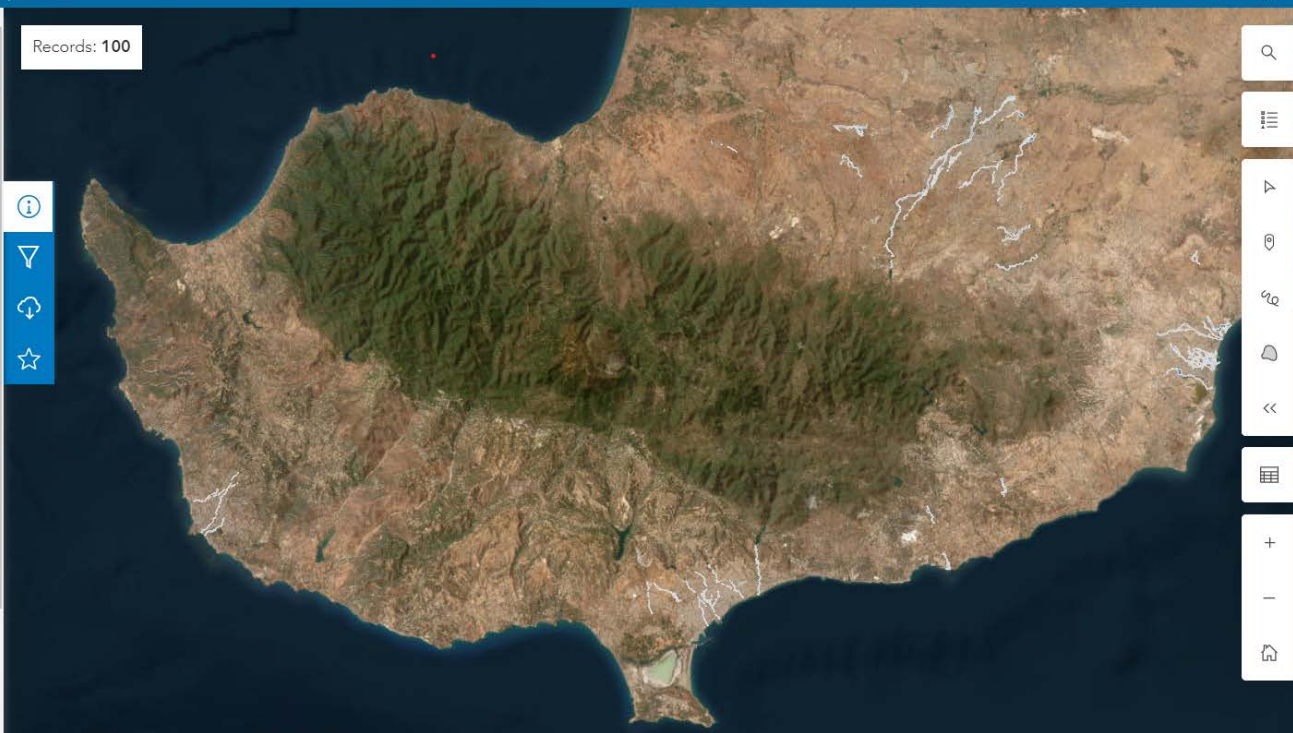
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### Details

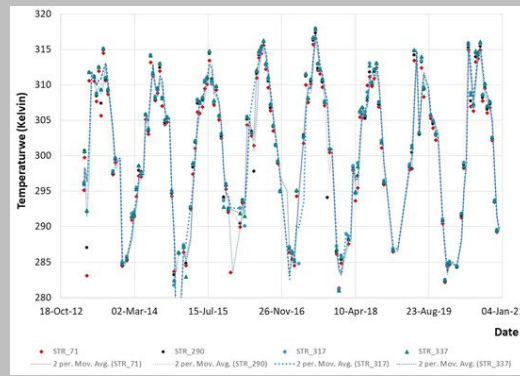
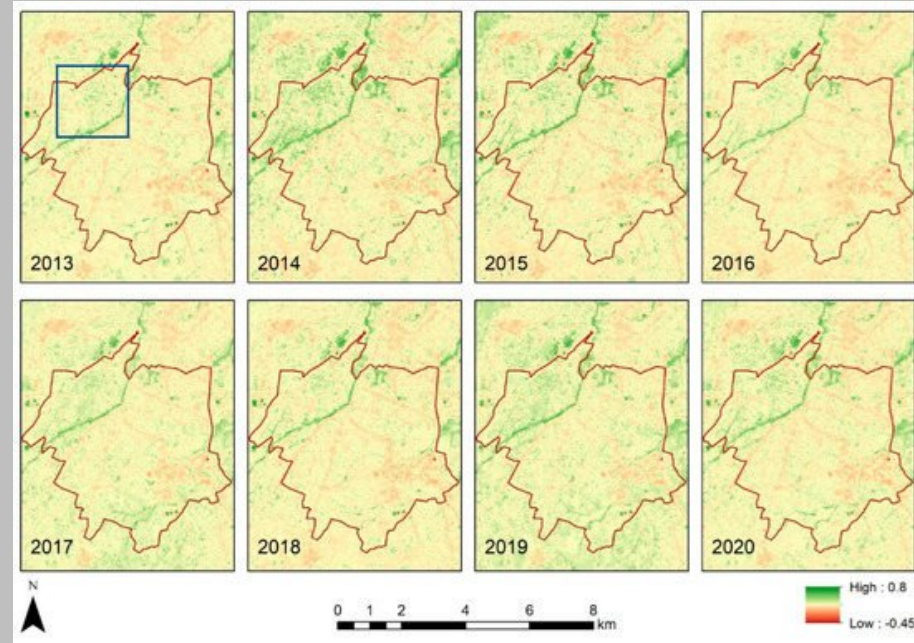
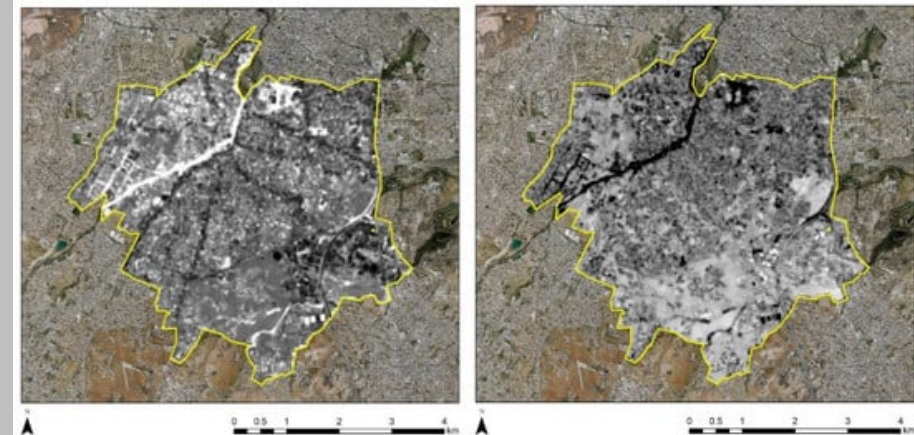
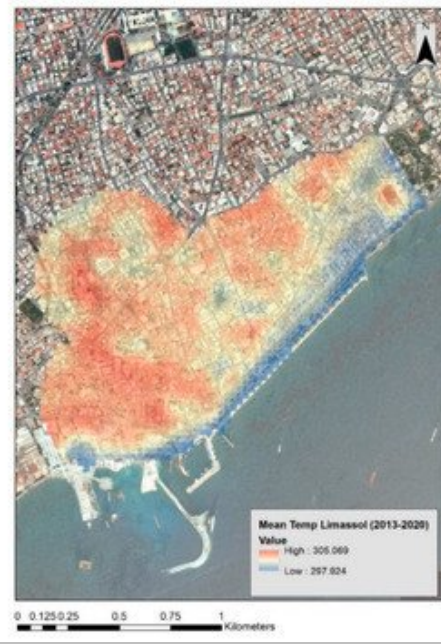
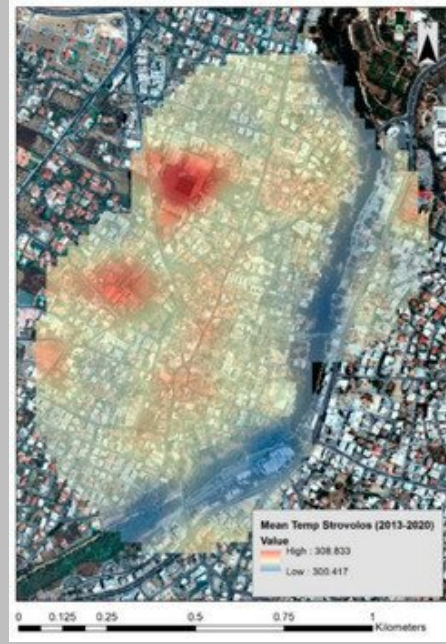
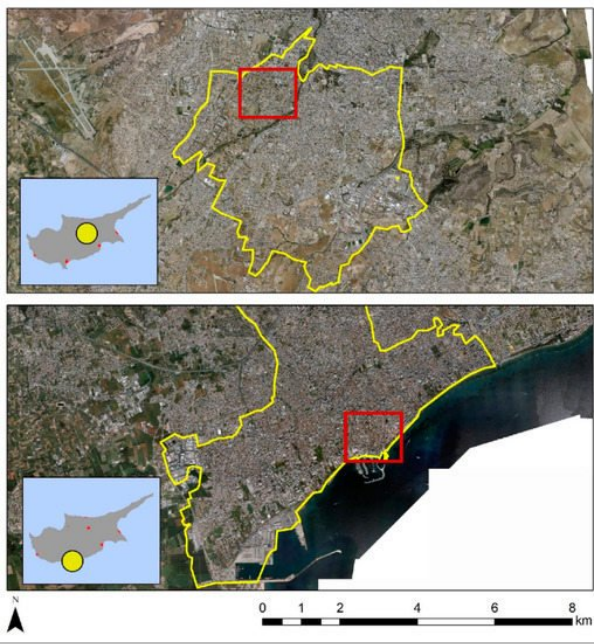
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Feature Layer
- November 6, 2023  
Info Updated
- November 6, 2023  
Data Updated
- November 6, 2023  
Published Date

Records: 100



©Agapiou, A.

# Land Surface Temperature at Historic City Centres

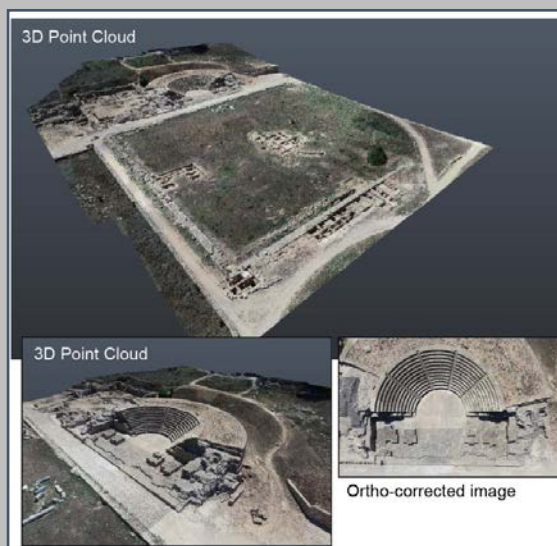
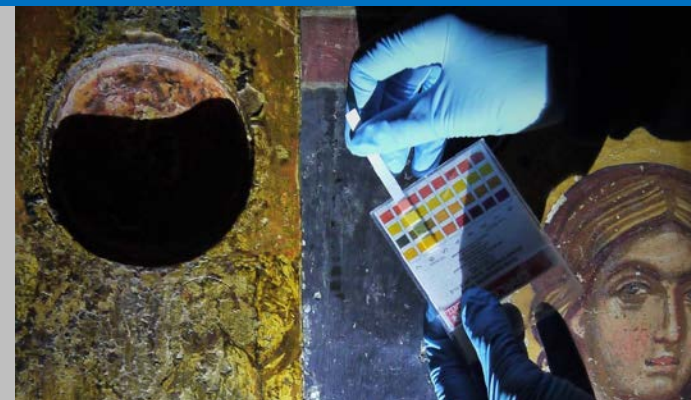




# Systematic condition assessments, conservation, reburial and documentation



Condition recorded on GIS and established priorities; UNESCO site of Nea Pafos



Carleton Immersive Media Studio, Carleton University, Canada- GIS geodatabase

# Capacity building activities



Masonry conservation training workshop; archaeological site of Nea Pafos, in collaboration with the GCI



CUT training workshop for heritage practitioners; Tombs of the Kings, Pafos



**COP 28**  
GREECE



*Thank you!*

