Session A4b
The scientific value of 3D archaeology

Archaeology and coastal erosion: Monitoring change through 3D digital techniques

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Presentation overview

**Erosion.** Research context

**Action.** The eSCOPES Project

‘Public Archaeology’. *GuidoiroDixital*: a new research initiative

**Conclusion**
Understanding coastal landscapes and coastal erosion on the European Atlantic façade

Quick erosion of known archaeological sites

Exposure & quick erosion of new sites

Urgent situation. How do we monitor & preserve scientific information?
Erosion
Research context

The main AGENTS responsible for erosion

Climatic agents

Anthropic agents

Biological agents
Some research initiatives

- SCAPE/Sch@rp
- Rapid Coastal Zone Assessment
- Arfordir
- Arch-Manche
- ALERT, Arvor & Bregantia
- Noe Cartodata
- Archi-Med

And now eSCOPES...
1. International / inter-regional perspectives

2. « Preservation by record »

3. Site monitoring & understanding erosion

4. Testing a cost-effective methodology
Pénestin (Morbihan, Brittany)

Image M.-Y. Daire

Coalen (C-d’A, Brittany)

Guidoiro Areoso (Galicia)

Action
The eSCOPES Project

Scilly (SW Britain)
An entire cultural landscape under risk!

Images X.I. Vilaseco Vázquez
Preserving by record & site monitoring

6-month interval

Photogrammetry SfM
Action
The eSCOPES Project
Pénestin (Morbihan, Brittany)

SEPT. 2013

MARCH 2014
This perspective is however LIMITED by the starting date of the project:
We cannot record previously lost information

Solutions?

Dialogue

Researchers

Image archives

Local communities

Interest in Heritage research & preservation

Projects and initiatives

Unable to be permanently in the area of interest

Permanently in the area of interest

Concern about climate change consequences

Interest in Heritage preservation

We cannot record previously lost information
‘Public Archaeology’

Guidoirodixital

- To obtain images from private collections, dating prior to 2013
- To provide answers to the public interest on the heritage of the isle
- In doing so, to integrate the public into the research process and research outcomes

What tools do we use?

Forms

Social Networks

Websites

guidoirodixital@gmail.com
For what results?

Database

Image archive

Erosion:
long term analysis

Higher visibility
of
the problem of
erosion

3D modelling from
ancient images?

Integration of these
models into eSCOPES

Participant-based
science

‘Public Archaeology’
Guidoiredixital
Some preliminary results
(as of 31/05/2014)


A Bronze Age cist: destroyed

X.I. Vilaseco Vázquez
Dolmen 5: destroyed
Dolmen 5: 3D Model (from images taken in 2011)
Conclusion

- Different European research approaches to **risk**, **vulnerability** and **resilience**

- **eSCOPES**: international perspective, several sites, a single methodology

- **SfM Photogrammetry**: cost-effective for preservation & monitoring

- Surface loss & quantitative analysis (in progress)

- ‘Public archaeology’ initiative: high potentiality for recovering/rediscovering sci. information
Thank you!

http://antiquity.ac.uk/projgall/lopez-romero339/

https://www.dur.ac.uk/archaeology/research/projects/?mode=project&id=701

With the collaboration of

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