

April 2022



## PROTECTION OF EUROPEAN CULTURAL HERITAGE FROM GEOHAZARDS

### >>> A few years later

In the past few years, the use of Earth Observation for Cultural heritage monitoring, protection and conservation was incorporated at national level in law, rules, standard and financial programs.

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BENEFICIARIES	Italian National Institute for Environmental Protection and Research (ISPRA)	Local Authority; Derwent Valley Mills (DVM) Partnership	DVM Partnership	Society and Citizens
	<b>TIER 1: SERVICE PROVIDER</b>	<b>TIER 2 PRIMARY USER</b>	<b>TIER 3 SECONDARY USER</b>	<b>TIER 4 END USER BENEFICIARIES</b>
SERVICES	Sentinel-1	Maps on Persistent Scatterers ground motion data; Satellite-derived information on threats such as fluvial and groundwater flooding and landslides	Improved monitoring of geo-hazards activities threatening cultural heritage sites	Improved public awareness on threats regarding Cultural Heritage, especially World Heritage Sites

Value chain definition following SeBS Methodology - <https://earsc.org/sebs>

### The space-based solution

This Copernicus-based solution was produced by a scientific entity for other users. In terms of technical advancements, the solution is now more accurate and reliable.

### The Usage Maturity Level

In the past few years, the solution has consolidated at UML=3. The main reason for this was recognised in the fact that new funds outside the space program were allocated by an external entity.

Thematic Area



Region of Application



Sentinel mission used



Copernicus Service used



Usage Maturity Level



## Overall benefits

### ECONOMIC



- Reduction of risk has been registered

### ENVIRONMENTAL



No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

### REGULATORY



- The solution has helped to inform the design and review of policy parameters
- There were improvements in the policy monitoring capabilities of the PA in charge
- The solution has facilitated or improved the compilation of institutional reports by the PA

### INNOVATION



- The solution has helped to create some new business
- There were positive market externalities

### SCIENCE



- The solution has helped to improve understanding about a specific topic of interest traditionally not related to Earth Observation (EO)
- The solution has enabled some technological advancement
- There was an increase in technical/scientific expertise related to Copernicus/EO within the PA

### SOCIETAL



- Sense of trust/community for the involved actors has increased;
- There has been an increased access to public utility;
- There have been improvements in public awareness.

Benefits classification following SeBS Methodology - <https://earsc.org/sebs>

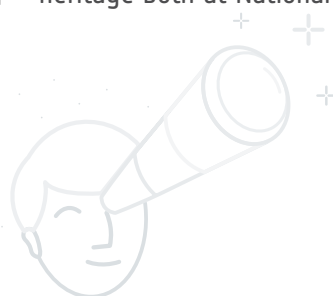
## Interesting facts...

Monitoring, protection and conservation of cultural heritage has been identified as a topic of interest and it has been included in initiatives such as National Mirror Copernicus in Italy.



## Outlook to the future

In the future, the plan would be to implement a downstream service fully dedicated to Natural Hazards and Cultural heritage both at National (Italian) and European Level.



## Acknowledgements

The PROTHEGO project is part of the Joint Programming Initiative on Cultural Heritage and Global Change (JPI-CH). The authors acknowledge the support from each of the case study sites and the projects associated partner.

## Contacts

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