

SATCULT Project: Good Practice Documentation Template

The application of satellite data in cultural heritage (CH) protection is still in its early stages, predominantly utilised by archaeologists. However, the SATCULT consortium has begun exploring its potential future uses in the wider CH area.

As part of an upcoming vocational training programme for CH practitioners, the SATCULT initiative gathers examples of Good Practices which show how satellite data can be used for the protection of CH including the benefits of accessing and utilising this data, and required skills for effective use. We are specifically interested in Good Practices from CH beyond archaeology.

The primary focus will be on desk research, collecting examples from European and international contexts with the assistance of Geoinformation and CH protection experts and practitioners. These examples will be analysed to determine the training needs of professionals and practitioners in CH protection and compiled into a compendium.

Please note filling this template requires knowledge to address properly the fields described throughout the survey. Although it is not long, it might take around 15 – 20 minutes to complete it thoroughly and properly.

A selected number of Good Practices, representing the working areas in cultural heritage, will be published in a European brochure and all Good Practices will be published on the [SATCULT homepage](#) and presented in the [SATCULT LinkedIn group](#).



SATCULT:

Closing a knowledge gap by vocational training about satellite-based services in cultural heritage preservation



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Project number 2024-1-DE02-KA210-VET-000244931

Name/Title of the Good Practice *

INnovative strategies for the Adoption of risk management plans to enhance the resilience of sensitive Cultural and natural heritage Objectives against climate hazards in river basin districts - INACO Interreg CE Project

Name of the organisation *

CNR-ISAC

Type of organisation in charge of the Good Practice *

- ☐ Cultural Heritage organisation
- ☐ Cultural Heritage site
- ☐ Cultural Heritage -related public entity (Ministry, Prefecture, Municipality)
- ☐ University
- ☒ Research Institute
- ☐ Earth Observation -related organisation
- ☐ Geo-Informatics (Geomatics) organisation/company
- ☐ Private Company
- ☐ Άλλο:

Domain of organisation's activities/expertise *

- ☐ Cultural Heritage
- ☐ Archaeology
- ☐ Earth Observation
- ☐ Geo-Informatics
- ☒ Άλλο: Climate Change impact on Cultural and Natural Heritage

Contact Information and Organisation's Logistics**Respondent's contact details**

Full name of the contact person *

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Organisation's details

Country *

Italy

City *

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Information about the Good Practice

Please name below the *Country*, *City* and *District* where the Good Practice took place *

European and Mediterranean Basin

Please provide below a *Google Maps link* or *GPS coordinates* to the Good Practice's location *

<https://www.protecht2save-wgt.eu/>

Is this considered a sensitive* area ? *

*(protected, fragile, has restricted access, or located within a conflict zone, etc.).

Please elaborate further.

Mediterranean Basin: Climate hot spot. Central EU Regions are at risk due to extreme climate induced events

Who owns the cultural asset (ministry, other public body, private institution, none), on which the Good Practice was applied ? *

Municipalities, Public Authorities, Ministry of Culture

Date(s) or period the Good Practice took place *

Please insert below the period when the good practice held. (eg. 2019-2020, March 2020 – June 2021, etc.)

2018-on going

Description of the Good Practice *

Please describe how the satellite data were collected (please mention the repositories or services where you acquired them); how they were used in your project; which were the aims of your study; and why these data were useful towards your research goals. (character limit: 1500)

Data and products from Copernicus services (CsS and CAMS) and IMERG are utilized for the development of maps and time series. Extremes variations of Temperature and Precipitation are elaborated in specific climate risk indices in order to support policy and decision makers to identify hazard prone areas in Europe and Mediterranean exposed to hydrometeorological risks. All data are available to users in the Risk Mapping Tool for Cultural Heritage Protection web GIS platform (<https://www.protecht2save-wgt.eu/>)

Why is this considered a Good Practice for making satellite data beneficial for Cultural Heritage ? (character limit: 1500) *

it has been designed and developed for supporting policy and decision makers in setting up preparedness strategies and planning actions for safeguarding cultural heritage to climate change impacts

Required skills section

Skills required to conduct the Good Practice *

Please reflect here which skills – e.g. technical, technological, social, heritage-related – are/were needed for the successful implementation of this Good Practice.

No specific skills by the technological point of view is required. Tutorials and training courses purposely dedicated are available.

Are/were there any technical skills required for this Good Practice that were not initially available within your organisation and had to be acquired or outsourced? *

☐ Yes

☒ No

Please list the specific skills acquired or outsourced and describe their purpose (e.g. “I learned Python to automate the downloading and preprocessing of collected satellite data.”) *

Evidence of success *

Please describe the benefits they provide to the cultural heritage asset (e.g. a site can be protected from a hailstorm, looters can be deterred from illegal excavation, damage can be recorded online through international cooperation, etc.). (character limit: 1500)

Improvement of resilience to the impact of climate change

Available references for the Good Practice *

Please mention below if there are any derived publications, media reports or any other content that refers to the described Good Practice. Please include also a web link if available.

(character limit: 1500)

Cacciotti R., Sardella A., Drdácý M., Bonazza A., 2024. A Methodology for Vulnerability Assessment of Cultural Heritage in Extreme Climate Changes. Int J Disaster Risk Sci 15, 404–420.

<https://doi.org/10.1007/s13753-024-00564-8>

Bonazza A., Sardella A., 2023. Climate Change and Cultural Heritage: Methods and Approaches for Damage and Risk Assessment Addressed to a Practical Application . Heritage 6(4), 3578-3589.

<https://doi.org/10.3390/heritage6040190>

Bonazza A., Sardella A., Kaiser A., Cacciotti R., De Nuntiis P., Hanus C., Maxwell I., Drdácý T., Drdácý M., 2021. Safeguarding cultural heritage from climate change related hydrometeorological hazards in Central Europe. International Journal of Disaster Risk reduction, 63, 102455, ISSN 2212-4209,

<https://doi.org/10.1016/j.ijdr.2021.102455>.

Cacciotti R., Kaiser A., Sardella A., De Nuntiis O., Drdacky M., Hanus, C., Bonazza, A. 2021. Climate change-induced disasters and cultural heritage: Optimizing management strategies in Central Europe. Climate Risk Management. Vol. 32, 100301. ISSN 2212-0963. DOI:

<https://doi.org/10.1016/j.crm.2021.100301>.

Sardella A., Palazzi E., von Hardenberg J, Del Grande C., De Nuntiis P., Sabbioni C., Bonazza A. 2020. Risk mapping for the sustainable protection of cultural heritage in extreme changing environments. Special Issue Assessing the Impact of Climate Change on Urban Cultural Heritage. Atmosphere 10(15), 5106.

DOI: <https://doi.org/10.3390/atmos11070700>

Please upload 2-3 images that concern the Good Practice. *

(each image cannot exceed the size limit of the 100 MB)



WGT_Bonazza_I...



Προσθήκη αρχείου

Do you own the copyrights for these images ? *

☒ Yes☐ No

Should any form of media or outreach material will be created in the future, can we use them *
to advertise your organization and the CH asset with proper acknowledgement?

☒ Yes☐ No

Please provide below the credits for the picture(s): *

INACO Interreg CE Project

Did you encounter any technical and/or technological challenges or issues associated with the implementation of this Good Practice? E.g. missing knowledge, doubts of colleagues, financial issues. *

No

Is there any potential for transferring this Good Practice to other cultural heritage organisations ? If so, please share more details. *

Yes, the Risk Mapping Tool for Cultural Heritage Protection could integrate other cultural and natural heritage sites.

Additional Information. Please include below any other information or experience you wish to share.

The information provided will be used exclusively for the activities of the SATCULT project and within the rules and obligations defined by the GDPR rules. The EU General Data Protection Regulation (GDPR) regulates how personal data of individuals in the EU may be processed and transferred. *



I have taken note of this information and agree to the use of my responses within the SATCULT project.

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