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

Erasmus+

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Name/Title of the Good Practice *

Using Satellite Imagery and Geospatial Information Technologies (GIT) to Support Cultural Property Protection (CPP) in Ukraine

Name of the organisation *

UNOSAT in partnership with UNESCO

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: International Organisation

Domain of organisation's activities/expertise *

- ○ Cultural Heritage
- ○ Archaeology
- ○ Earth Observation
- ○ Geo-Informatics
- ◉ Άλλο: satellite imagery analysis, training and capacity development

Contact Information and Organisation's Logistics

Respondent's contact details

Full name of the contact person *

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Email address *

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Organisation's details

Country *

Switzerland

City *

Geneva

Address *

7 bis, Avenue de la Paix

Information about the Good Practice

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

Ukraine, Lviv

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

3 Locations - Nov 2023, America House: 49.8414 N, 24.0257 E // Jan 2025, Mediathek: 49.8468 N, 24.0275 E // Feb 2025, Lviv Culture Hub: 49.8387 N, 24.0323 E

Is this considered a sensitive* area ? *
*(protected, fragile, has restricted access, or located within a conflict zone, etc.).

Please elaborate further.

Located within a conflict zone.

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

Not applicable - the training took place in facilities (America House, Mediathek, Lviv Culture Hub) that could accommodate 20+ participants doing practical training in Geographic Information Technology.

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.)

Part 1: 27-30 November 2023, Part 1 (again with additional participants): 13-16 January 2025, Part 2: 25-28 February 2025

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)

The training made participants aware of the full range of spatial and aerial/satellite imagery data available and where to find these data (various repositories, providers, etc.), as well as how to collect or create these data. The training itself focused on the use of open-source satellite imagery data and software (Google Earth Pro, Google Earth Engine, QGIS, PRISMA Toolbox) and freely available data to ensure they walked away with sustainable skills, regardless of their workplace's budget.

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

I was contacted by SATCULT, because our training is one of very few examples of satellite-based training for cultural heritage professionals relevant to climate change and conflict. The EAMENA project training could be considered a second example: https://eamena.org/cpf-training

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.

Expertise in Geographic Information Technology applied to cultural and natural heritage, as it is relevant for Ukraine and Ukraine's heritage.

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)

In country cultural heritage experts have increased literacy in geographic information technology and are able to conduct GIS and satellite imagery analyses to map, analyse, and monitor cultural and natural heritage sites.

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)

https://unitar.org/about/news-stories/news/unesco-and-un-satellite-centre-join-forces-safeguard-ukraines-cultural-heritage-geospatial

Please upload 2-3 images that concern the Good Practice. *
(each image cannot exceed the size limit of the 100 MB)

workshop-Lviv-c… workshop-Lviv-c… workshop-Lviv-c… workshop-Lviv-c…

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): *

(C) UNESCO/Vitaliy Hrabar

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. We carefully planned in advance to hold the training in locations with sufficient facilities to accommodate the various technology required from many laptops charging at once to the equipment associated with live translation. Additionally, we considered and mitigated for risks such as loss of electricity or the sudden need to shelter for an hour or longer due to an air alarm.

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

Yes. Our goal is capacity building and our aim is that the people we train will be able to pass on their knowledge to others. In this Good Practice, we provided all participants with 2 sets of 20 booklets in Ukrainian covering the training material to both (1) support their individual learning once they return home and (2) help them pass on their knowledge to others. With 2 sets of booklets, they could keep one copy for themselves as reference for their own use (direct or to refer to when teaching others) and share one copy with an interested colleague or their institution's library.

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

Capacity building in a subject area as large as satellite imagery analysis and GIS requires commitment over time. Following the training, UNOSAT remains available to the participants if they have any questions or require technical assistance while they implement their new knowledge.

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.