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# DMP du projet "The Cosmopolitan Approach as a New Paradigm for Rock Art Heritage Management in Southern Africa"

Plan de gestion de données créé à l'aide de DMP OPIDoR, basé sur le modèle "Horizon 2020 FAIR DMP (anglais)" fourni par Commission européenne.

## Plan Details

**Plan title** DMP du projet "The Cosmopolitan Approach as a New Paradigm for Rock Art Heritage Management in Southern Africa"

**Version** Mid term version

**Plan purpose/scope** The purpose of the Data Management Plan is to provide a synthetic document that helps to organise the various stages of the life cycle of the data produced during the COSMO-ART project. It explains each data set and describes how the data collected will be managed during the project and shared and stored after the end of it.

**Fields of science and technology (from OECD classification)** History and archaeology, Social and economic geography, Art (arts, history of arts, performing arts, music)

**Language** eng

**Creation date** 2019-03-13

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**Identifier type** Local identifier

<b>License</b>	<b>Name</b>	Creative Commons Attribution Non Commercial No Derivatives 4.0 International
	<b>URL</b>	<a href="http://spdx.org/licenses/CC-BY-NC-ND-4.0.json">http://spdx.org/licenses/CC-BY-NC-ND-4.0.json</a>

## Project Details

**Project title** The Cosmopolitan Approach as a New Paradigm for Rock Art Heritage Management in Southern Africa

**Acronym** COSMO-ART

**Abstract** COSMO-ART proposes a new methodology based on a Cosmopolitan Approach that actively seeks out cross-cultural common interest points in the use and perception of rock art sites that are recognised as relevant to a broad range of users (local populations, scientists, institutional stakeholders). The goal is to reconcile perceptions and development policies to better fulfil requirements of sustainability.

The proposed approach will be applied to rock art sites developed for tourism but with different research histories and socio-economic contexts in 1/ the Kimberley region (South Africa) and 2/ the Erongo massif (Namibia). Such an approach requires a methodology that is systemic, diachronic and interdisciplinary, combining contributions from archaeology, history, museology, human geography, environmental and cultural anthropology, geomorphology and materials science. The project is organised into 3 work packages: 1/ Uses and values; 2/ Tourism and mediation; 3/ Vulnerabilities and management strategies.

**Funding**

- soumission ANR CE27 :
- Agence Nationale de la Recherche : ANR-21-CE27-0011

**Start date** 2022-01-31

**End date** 2026-01-30

**Partners**

- Wits University / African Rock Art Digital Archive
- National Heritage Council of Namibia / Archaeology and Heritage Research Department
- University of Namibia / History and Environmental Studies
- National Museum of Namibia / National Museum of Namibia
- University of Western Australia / The Centre for Rock Art Research + Management
- The Sol Plaatje University / School of Humanities
- University of Pretoria / Department of Anthropology and Archaeology
- DE LA PREHISTOIRE A L'ACTUEL : CULTURE, ENVIRONNEMENT ET ANTHROPOLOGIE
- Origins Centre Museum - Wits University / Archaeology Division
- Wits University / Rock Art Research Institute
- Eco-Anthropologie
- Afrique au Sud du Sahara
- Travaux de Recherches Archéologiques sur les Cultures, les Espaces et les Sociétés

**Research outputs :**

1. All the data collected during the project and managed through the COSMO-ART GIS (Jeu de données)

## Contributors

Name	Affiliation	Roles
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### Droits d'auteur :

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# DMP du projet "The Cosmopolitan Approach as a New Paradigm for Rock Art Heritage Management in Southern Africa"

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## 1. Data summary

Provide a summary of the data addressing the following issues:

- State the purpose of the data collection/generation
- Explain the relation to the objectives of the project
- Specify the types and formats of data generated/collected
- Specify if existing data is being re-used (if any)
- Specify the origin of the data
- State the expected size of the data (if known)
- Outline the data utility: to whom will it be useful

### Purpose of data collection/generation

- Document field (interview, site analysis, sample collection) and lab work (sample analysis).
- Provide material for various types of inter-disciplinary analyses.
- Generate an integrated GIS for heritage values.

### Relation to objectives

- Collect data to answer questions about the various (local communities, visitors, institutions, scientific community) perception and discourses on rock art, about the uses and condition of sites and about their presentation.
- Generate an integrated GIS to provide local communities and stakeholders with maps and other documents to help them better assess and use heritage values attributed to the studied rock art sites.

### Types and formats

- Photos (digital).
- Films (digital).
- Sound records (digital).
- Graphic documents (digital - native or scanned - and hard copy).
- Text documents (digital - native or scanned - and hard copy).
- Forms (digital - native or scanned - and hard copy).
- Geological samples (object).
- Measurements and chemical analyses (digital).

### Existing data re-used

- Archival documents.
- Data from previous work of consortium members.
- Publications.

### Origin

- Field and lab work.
- Archives (including those of consortium members).
- Publications.

### Size (estimations)

- Photos: 2.5M x (weeks of fieldwork x 1000 + weeks of lab work x 20 + scanned photos)
- Sound records: 20M x (weeks of fieldwork x 500)
- Films: 500M x (weeks of fieldwork x 500)
- Scanned texts and graphic documents: 1000M x 48
- Material sample: about 40 rock samples, stored in a 30x25x10 cm box
- Measurements: 300M x 40 samples
- In situ monitoring: 10M x 48 months

### Utility

- Collected data: members of the research consortium. Other researchers working in the fields of the consortium (heritage, archaeology, geography, social sciences, geosciences, materials sciences...)
- Generated data: local communities, institutional heritage managers (site management and development, mediation),

public and private developers (tourism), rock art researchers

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## 2. FAIR data

### 2.1 Making data findable, including provisions for metadata:

- **Outline the discoverability of data (metadata provision)**
- **Outline the identifiability of data and refer to standard identification mechanism. Do you make use of persistent and unique identifiers such as Digital Object Identifiers?**
- **Outline naming conventions used**
- **Outline the approach towards search keyword**
- **Outline the approach for clear versioning**
- **Specify standards for metadata creation (if any). If there are no standards in your discipline describe what metadata will be created and how**

Metadata will be attached to digital (native and digitised) data using house standards base on a combination of various existing standards because of the interdisciplinary nature of the project. Possible useful standards are: Midas-Heritage (archeology and heritage), ISO 19115 (geography) or the OGC Sensor Observation Service (SOS) Interface Standard (chemical analyses and sampling).

A naming convention for all files and samples as well as an index of relevant keywords (based on standards) shall be agreed upon by the consortium during the kick off workshop.

Hard data (hard copies of graphic or text documents, geological samples...) will be listed, following a standardized naming convention, and tracked during the study and after handling in the final storage facility. It will be made sure that digital data generated from these hard data (for instance chemical analyses from geological samples) are linked.

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### 2.2 Making data openly accessible:

- **Specify which data will be made openly available? If some data is kept closed provide rationale for doing so**
- **Specify how the data will be made available**
- **Specify what methods or software tools are needed to access the data? Is documentation about the software needed to access the data included? Is it possible to include the relevant software (e.g. in open source code)?**
- **Specify where the data and associated metadata, documentation and code are deposited**
- **Specify how access will be provided in case there are any restrictions**

During the project, access to data will be restricted to the members of the consortium. Digital data will be stored on the servers of EDYTEM laboratory, with a backup at Nakala platform (HumaNum). Data stored on the EDYTEM servers will be accessible to all members of the consortium and direct collaborators through a password protected Internet connection. A Sharedoc will be created on HumaNum to ease access to data during and after the project.

After the end of the project, digital data will be indefinitely stored on the EDYTEM servers and Nakala platform. They will then be openly available, provided ethic clearance for interviews and photos of people (people's name).

Hard copies of documents will be stored in the archives of EDYTEM.

Collected geological samples will be sent back to the countries of origin and stored by the relevant heritage authorities, as integral parts of rock art sites. They will be accompanied with a digital copy of all data generated from them.

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### 2.3 Making data interoperable:

- **Assess the interoperability of your data. Specify what data and metadata vocabularies, standards or methodologies you will follow to facilitate interoperability.**
- **Specify whether you will be using standard vocabulary for all data types present in your data set, to allow inter-disciplinary interoperability? If not, will you provide mapping to more commonly used ontologies?**

Interoperability will be kept as high as possible by use of common formats and software, open source as often as possible, according to availability and performance and quality requirement for the research. The interoperability be greatly improved by the integration of most data within a project GIS.

It is anticipated that data resulting from measurements and chemical analyses will show a relatively low interoperability as the raw data are produced by proprietary software linked to analytical tools. As often as possible, these raw data will be converted from proprietary to open source formats to increase interoperability.

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#### 2.4 Increase data re-use (through clarifying licenses):

- **Specify how the data will be licenced to permit the widest reuse possible**
- **Specify when the data will be made available for re-use. If applicable, specify why and for what period a data embargo is needed**
- **Specify whether the data produced and/or used in the project is useable by third parties, in particular after the end of the project? If the re-use of some data is restricted, explain why**
- **Describe data quality assurance processes**
- **Specify the length of time for which the data will remain re-usable**

Data will be licensed under a Creative Commons license.

Generated data aimed at local communities and heritage managers will be made available quickly, possibly before the end of the project, with the restriction that they are not re-used for research before an embargo period of 10 years after the end of the project.

Other data will be available after an embargo period of 10 years after the end of the project, to allow final publication of the project results.

The quality of the data will be checked through a moderating process, to make sure that the data provided by the members of the consortium agree with the specification agreed upon. The use of an GIS integrating most of the data will ease the process as most of the moderation will be performed during the inclusion of the data into the GIS.

Re-usable data will be released for an indefinite length of time.

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### 3. Allocation of resources

**Explain the allocation of resources, addressing the following issues:**

- **Estimate the costs for making your data FAIR. Describe how you intend to cover these costs**
- **Clearly identify responsibilities for data management in your project**
- **Describe costs and potential value of long term preservation**

Data management will be primarily under the responsibility of a development engineer hired for the project and who will work in tandem with the research engineer hired to develop a GIS integrating most of the collected and generated data.

Costs (incl. structure fees):

- DMP development engineer: €63 000
- GIS contractor: €47 040
- DMP computer: €1 350
- Data storage (hard drives connected to EDYTEM servers): €1 200
- Data storage backup (Nakala HumaNum): free

Costs will be covered through funding requested for the project.

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### 4. Data security

## **Address data recovery as well as secure storage and transfer of sensitive data**

The servers at EDYTEM and the HumaNum platform are dedicated to the storage scientific data storage and provide controlled and secure conditions. The Nakala platform is an institutional facility provided by HumaNum for the research projects in social and human sciences with all required expertise.

The storage in two different physical locations also provide good guarantee against accidental loss.

The project doesn't deal with data that can be considered as sensitive and that require advanced protection measures.

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## **5. Ethical aspects**

**To be covered in the context of the ethics review, ethics section of DoA and ethics deliverables. Include references and related technical aspects if not covered by the former**

The collection of personal data during the project (interviews, photos) will be done according to usual ethical procedures and kept anonymous. Metadata will be accessible through the DMP, but the content of the interviews will be kept confidential in order to follow directives of the European Union General Data Protection Regulation (2016/679).

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## **6. Other**

**Refer to other national/funder/sectorial/departmental procedures for data management that you are using (if any)**

Question sans réponse.