
DMP du projet "MONACORALE - MONAsteriorum CORpus Adriaticorum et Locorum Ecclesiasticorum v1(june2021)"

Plan de gestion de données créé à l'aide de DMP OPIDoR, basé sur le modèle "ANR - DMP template (english)" fourni par Agence nationale de la recherche (ANR).

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Project Details

Project title MONACORALE - MONAsteriorum CORpus Adriaticorum et Locorum Ecclesiasticorum v1(june2021)

Abstract The research project "MONACORALE – *History and Archaeology of Monasteries and Ecclesiastical sites in the Eastern Adriatic (4th-12th c.)*", is born from the collaboration of French, Croatian and Italian researchers working on archives, texts and ecclesial, and notably monastic sites of the Istrian and Dalmatian Adriatic coast between the 4th and the 12th century. It aims to constitute a reasoned corpus of these sites synthesizing all available sources and to study a "workshop area" (island of Cres, Croatia) including several major sites.

Through a resolutely multidisciplinary approach combining the sources of archeology, history, history of art, literature, epigraphy, paleo-environmental study and landscape archeology, the objective will be to study:

1. the topographical aspects and the historical conditions of their foundation (relations with the natural environment, human context, reuse of ancient sites, etc.);
2. their territorial and social organization in the eastern Adriatic context (expansion of Benedictine monasticism and Romanesque architecture, recruitment and mobility of monks, cultural exchanges with Italy, etc.);
3. their functions in spreading reformist ideas and, more broadly, pontifical authority in a period of confrontation between the powers present in the Adriatic (Franks, Byzantines, Normans, Venetians, Slavs).

Funding

- ANR : ANR-20-CE27-0003

Produits de recherche :

1. Default research output (Jeu de données)

Contributeurs

Nom	Affiliation	Rôles
Sébastien Bully		<ul style="list-style-type: none">• Coordinateur du projet• Personne contact pour les données• Responsable du plan

Droits d'auteur :

Le(s) créateur(s) de ce plan accepte(nt) que tout ou partie de texte de ce plan soit réutilisé et personnalisé si nécessaire pour un autre plan. Vous n'avez pas besoin de citer le(s) créateur(s) en tant que source. L'utilisation de toute partie de texte de ce plan n'implique pas que le(s) créateur(s) soutien(nen)t ou aient une quelconque relation avec votre projet ou votre soumission.

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1. Data description and collection or re-use of existing data

The data produced within MONACORALE project (table 1) is divided into 4 WPs covering its different disciplines:

WP	Dataset names	Characterization of data	Format /standard	Stotage and backup	Online dissemination	Sharing and archiving properties	Sharing terms	License
1	Atlas	Maps, notices, description texts	N/A	Hosted by Huma-Num	Yes	N/A	Open	OdBL
1	Proceedings of the closing conference	Papers given during the conference	EFR collection publication	Sharedocs during the reviewing and editorial phase	In HAL	N/A	After a 1-year embargo (according to Loi Numérique?)	According to the editor contract
1	Blog Hypotheses	Methodological, scientific and dissemination blog posts	Word Press Hypotheses	Hypotheses platform	URL link of the web post	No	Open	CC BY 4.0
1	Zotero bibliography	Primary and secondary bibliography + grey literature	Zotero RDF	Bibliography managed in an online Zotero group, backups made from its administrator	links / API	General deposit into Nakala at the end of the project	Searchable and accessible	OdBL
2	Corpus: sites descriptions	Notices of archaeological sites	Data structured according to the database format and derived from the recording sheets	Hosted by Huma-Num	No	No	Only accessible by the team during the project	N/A
2	Database of the corpus	GIS database	N/A	Hosted by Huma-Num	In year 4	Zenodo general export at the end of the project	Open at the end of year 4	OdBL
2	IATEKA – data	Paleoenvironmental data, datings ; isotopic, palynologic analyses; DNA	.xls, .csv mostly	In Sharedocs	N/A	N/A	N/A	N/A
2	IATEKA - images	graphs and pictures linked to paleoenvironmental data, isotopic, palynologic analyses and DNA	.jpg; .tif	In Sharedocs	N/A	N/A	N/A	N/A
2	ANR CARE-thesaurus	Architectural ontology (materials, construction techniques, sculpture and decoration related)	.owl	In Sharedocs	N/A	N/A	N/A	N/A
2	Spatial data	Coordinates of archaeological sites	.csv	In Sharedocs	N/A	N/A	N/A	N/A
2	Archaeological data - images	Images taken during field season	.jpf; .tif	In Sharedocs	No	No	No	No

2	Archaeological data - vector data	Vector data made during field season (pottery drawings, architectural drawings, maps...)	.ai; .svg	In Sharedocs	No	No	No	No
2	Archaeological data - recording data	Recording sheets of data (SU inventories, material inventories...)	.xls, .txt	In Sharedocs	No	No	No	No
2	Final LIDAR data	GeoTIF (georeferenced Raster Image)	.geotif	In Sharedocs	Yes	Via Nakala	After 5-years embargo when stored in Nakala (3 months after acquisition)	N/A
2	Raw data LIDAR	Raw images before mosaic composition and georeferencing	.jpg, .tif	In Sharedocs	No	In Zenodo 3 months after acquisition	N/A	N/A
2	DEM final data	Final photogrammetries	.jpg, .geotif	In Sharedocs	Yes	Via Nakala	After 5-years embargo when stored in Nakala (3 months after acquisition)	N/A
2	Raw DEM images	Raw images before mosaic composition	.jpf; .tif	In Sharedocs	No	In Zenodo 3 months after acquisition	N/A	N/A
2	OSL data	OSL datings	.xls, .csv mostly	In Sharedocs	N/A	N/A	N/A	N/A
2	Excavation and activity reports published to Hortus Artium Medievalium	Excavation report/scientific article	Editorial line of Brepols	Sharedocs during the writing phase	Link1	Stable URL link	Embargoed according to the publisher	According to Brepols' contract
2	Excavation and activity reports published to BUCEMA	Excavation report/scientific article	Editorial line of the BUCEMA	Sharedocs during the writing phase	Link2	Stable URL link	Open	CC BY (according to BUCEMA's contract)
3	Excavation and activity reports published to EFR' editions (Chroniques de l'EFR, Bulletin archéologique des Écoles françaises à l'étranger)	Excavation report/scientific article	Editorial line of the EFR	Sharedocs during the writing phase	Link3 OR Link4	Stable URL link	Open	CC BY (according to EFR's contract)
3	Excavation and activity reports submitted to French ministry MEAE	Excavation and activity report	.pdf	Sharedocs during the writing and editing phases	No	No	For Institution and team only	Authors' intellectual property
3	Excavation and activity reports submitted to the Croatian Ministry of Culture	Excavation and activity report	.pdf	Sharedocs during the writing and editing phases	No	No	For Institution and team only	Authors' intellectual property

3	Final excavations monograph	Scientific texts		Editorial line of the EFR archaeological monograph collection	Sharedocs during the writing and editing phases	N/A	N/A	N/A	According to the editor contract
3	Split museum exhibition catalogue	Scientific texts		Editorial line of the collection (not decided yet)	Sharedocs during the writing and editing phases	N/A	N/A	N/A	According to the editor contract
4	Proceedings of the written acts of practice	Papers given during the round table		MEFREM collection of the EFR	Sharedocs during the reviewing and editorial phase	In HAL	N/A	Open after a one-year embargo? (according to Loi Numérique)	According to the editor contract
4	French translation of the Historia Salonitana	N/A		N/A	Sharedocs during the reviewing and editorial phases	In HAL	No	Printed document	According to the editor contract
4	Publication of hagiographical texts	Commented translation		N/A	Sharedocs during the reviewing and editorial phases	In HAL	N/A	Printed document	N/A
4	Intermediary working papers on textual documents	N/A		N/A	Sharedocs during the reviewing and editorial phases	In HAL	N/A	Printed document	N/A

Table 1: Detailed list of datasets by WP

WP 1: Within the framework of task 1.4, spatial data will be collected, controlled and mapped in a single reference frame. Associated with the site corpus (WP 2), the whole will constitute a geo-database that will gather and articulate all the data produced in the other WPs (dating, images, paleo-environmental data, archives, bibliography...). The nature of the geo-base is to be defined by the geomatician (XML or noSQL for instance; recruitment is planned for Fall 2021). The architecture-related ontology of ANR CARE[1] site corpus and (https://care.huma-num.fr/hr/index.php?title=Main_Page&oldid=103; <https://anr.fr/Projet-ANR-07-CORP-0011>; co-I Pascale Chevalier was involved) will be reused.

WP 2: Thanks to a rigorous methodology, a systematic and critical analysis of the bibliography, archives and archaeological data, an exhaustive list of archaeological sites will be established. The synthesis will be presented in tabular and text form, especially within an Excel sheet template describing each sites. Its analysis will allow, in a second time, the selection of some of the sites where additional field investigations will took place, i.e. surveys, the production of spatial imagery or charcoal/ceramics/mortar samplings. These will be supplemented by automatic datasets (date of photo shooting, format, photo creator), archaeometric analyses (absolute dating) and field observation data.

WP 3: It is mainly in this archaeological section, devoted to the study of the "workshop area", that the newly acquired archaeological data[3] will be produced (raw Lidar coverage and exports, DTMs, documentary records, architectural drawings, photogrammetries, stratigraphic data; in images, vector, textual and tabular data). This will be done in addition to the old excavation data collected by the team already working there. Data from the IATEKA (I-SITE project from Besançon Franche-Comté Univ., PI Morana Čaušević-Bully ; <https://chrono-environnement.univ-fcomte.fr/recherche/themes-actions-et-projets/article/iateka-interdisciplinary-approach-to-the-territorial-evolution-of-the-kvarner>; see also for palynological data: <https://dataosu.obs-besancon.fr/search.php?s=project%3A%22IATEKA+-+Interdisciplinary+approach+to+the+territorial+evolution+of+the+Kvarner+archipelago%22>) project will be integrated; they are presented in the table below (table 2). The details and conditions for taking over the IATEKA data collection will be discussed in July 2021 during a quarterly meeting; the results will be summarised and explained in a table (available in version 2 of the DMP).

Textual data	Datings; isotopic, palynological and DNA analyses
Tabular data	Datings; isotopic, palynological and DNA analyses
Images	Photographs

Table 2: Summary table of pre-existing IATEKA project data that will be reused in MONACORALE

WP 4: In this WP, after consultation of archival documents, mainly textual, tabular and photographic data will be produced.

[1] P. Chevalier and Chr. Sapin, « ANR Corpus architecturae religiosae europaeae [CARE], saec. iv-x », *Bulletin du centre d'études médiévales d'Auxerre / BUCEMA*, 15, 2011, last consulted 30/04/2021. URL : <http://journals.openedition.org/cem/11944> ; DOI : <https://doi.org/10.4000/cem.11944> . See also P. Chevalier, L. Granjon, E. Leclercq, A. Millereux, M. Savonnet and Chr. Sapin, « Base de données annotées et wiki pour la constitution du corpus numérique CARE », *Hortus Artium Medievalium* 18/1, 2012, p. 27-35. DOI : <https://doi.org/10.1484/j.ham.1.102782> (last consulted 04/06/2021).

[2] More generally for the dissemination the CARE ANR and for the informatics and geomatics' aspects of the project, see <https://care.huma-num.fr/be/index.php?title=Accueil&action=edit>

[3] For a definition of the sets: <http://www.archaeologyexpert.co.uk/typesofarchaeologicaldata.html> (last consulted 22/04/2021).

The multidisciplinary nature of MONACORALE means that a certain number of document formats will be used by the different teams. They are summarized in theory in the table below (table 3); the list will be clarified for some particular types (photogrammetry, geophysics) when acquired:

Data types	Daily-use extensions	Final format stored	WP
Textual	.doc, .docx, .txt, .odt, .pdf	.txt, .pdf	WP 1, 2, 4
Tabular	.xls, .xlsx, .csv, .txt, .odf	.csv	WP 1, 2, 3, 4
Data base	.fmp, .csv, .xml		WP 1, 2, 3, 4
Vector	.ai, .svg, .dwg	.svg, .pdf	WP 1, 2, 3
Images	.jpg, .tif, .pdf, .png	.jpeg, .tif	WP 1, 2, 3, 4
Photogrammetry	.pdf3D, .dae, .ply (for final modelling) et .gif, .jpeg, .tiff, .png, .svg, .obj, .mtl, (for textures)	.jpg, .geotif	WP 2, 3
Spatial	.shape, .json, .geojson	.geotif	WP 1, 2, 3
Geophysics	.las (for the plot); .csv, .pgw, .shape, .png (for the final format)		WP 3
Ontology	.owl	.xml	WP 1

Table 3: Theoretical data types used by WP into MONACORALE project (to be completed in the coming versions)

The majority of the formats used are standard, open and documented formats. For those who are not, regular backups in the usual standards of the scientific archaeological community will be made. Thus, Adobe Illustrator documents in .ai format will also be saved in .svg format.

Although it is difficult to estimate the total data volume of the project, we estimate it annually per WP:

- WP 1 should produce about 5 GB (the database should not exceed 200 Mo, considering that it will not contain any images, only URI to images stored in Nakala),
- WP 2 should produce about 20 GB annually,
- the archaeological operations of WP 3 produce up to 12 GB per campaign [1],
- finally WP 4 will produce a few GB,

The total project should not exceed 100 GB of data (before strict selection and deposit in the permanent archive).

In order to limit the amount and weight and to add value to the datasets, usable and used photographs will be selected and renamed, making then the sets more reusable. The selection will be manual, concerted and carried out by the WP and operations managers. Occasionally, the FreeFileSync software (free, Mac and PC compatible) will help to isolate duplicates by comparing photographs.

[1] For WP 2 and 3, the number is estimated on the average weight produced by the archaeological missions to Mirine- *Fulfinum* over the last 4 years.

2. Documentation and data quality

The data deposited within Nakala will be described with Dublin Core metadata as explained in the following table (see https://multimedia-ext.bnf.fr/pdf/guide_dublin_core_bnf_2008.pdf; see also table 4):

Dublin Core element	Definition	Example
Title	Name of the document	See naming rules below
Subject	Content topic, keywords	Some archaeological sites (site + occupation period) are taken from the Adriatlas corpus (http://adriaticummare.org/Map_Adriatlas/) while waiting for the full corpus, its definition and description according to MONACORALE standards
Description	Content of the file, summary	Free text
Source	Refers to a resource from which the file derived	IATEKA project, ANR CARE, MONACORALE, bibliographic references (in Zotero)
Language	Language as referenced by the ISO 639-2b list	fra (french) ita (italian) eng (english) hrv (croatian)
Relation	Refers to a related resource	https://colemo.huma-num.fr/ http://care.huma-num.fr/hr/ http://adriaticummare.org/fr/bdd
Coverage	Spatial and temporal coverage of the content of the file	See table 5; according to European conceptual, chronological and spatial references
Creator	Creator1 to creatorX	See table 6
Publisher	École Française De Rome ; Chronono-Cnvironnement UMR 6249 CNRS-UFC	For respectively documents published by MONACORALE or IATEKA
Contributor	Collaborators names when applicable	
Rights	Information repeated systematically and not modifiable	The rights of the different documents are summarised in table 9
Date	Last updated version	YYYY-MM-DD, according to the ISO 8601 standard
Format		see table 3
Identifier	Unique file reference	DOI given by Nakala when deposited

Table 4: Description of metadata used in MONACORALE

Concept

Mittelalterarchäologie	http://archwort.dainst.org/de/term/10750
Christliche Archäologie	http://archwort.dainst.org/de/term/10757
Archéologie médiévale	https://catalogue.bnf.fr/ark:/12148/cb11940958g

Spatial coverage

Dalmatia	http://nomisma.org/id/dalmatia
Kvarner	https://catalogue.bnf.fr/ark:/12148/cb16254669z
Krk (île de)	https://catalogue.bnf.fr/ark:/12148/cb12078598r
Cres (île de)	https://catalogue.bnf.fr/ark:/12148/cb119734782
Istrie	https://ark.frantiq.fr/ark:/26678/pctLYUsvEapqA

Chronological coverage

haut Moyen Age	Ve-Xe siècle	http://n2t.net/ark:/99152/p0rrjd959j7
haut Moyen Age		http://data.culture.fr/thesaurus/page/ark:/67717/T93-691
Proto-byzantin	324-610	http://n2t.net/ark:/99152/p0gtzvdbgd4
Epoque byzantine	330-1453	http://n2t.net/ark:/99152/p08m57h9nf5
Middle Byzantine	843-1204	http://n2t.net/ark:/99152/p08vvjkcft

Table 5: Spatial and temporal coverage of the data

Members and collaborators	Code name (for pictures)	Metadata format
J. Baraka Perica (Univ. Zadar)	JBP	Baraka Perica, Josipa
S. Bully (CNRS/École française de Rome)	SBU	Bully, Sebastien
D. Calaon (Univ. Ca'Foscari, Venice)	DCA	Calaon, Diego
M. Čaušević-Bully (Chrono-environnement)	MCB	Čaušević-Bully, Morana
P. Chevalier (UMR Arthehis)	PCH	Chevalier, Pascale
J. Crochat (Archeodunom)	JCR	Crochat, Jessy
D. Ciković (Univ. Rijeka)	DCI	Ciković, Danijel
L. Dugoperec (aIPAK)	LDU	Dugoperec, Lucija
S. Gioanni (HiSoMA)	SGI	Gioanni, Stephane
L. Granjon (MSH Dijon)	LGR	Granjon, Ludovic
N. Jakšić (Univ. Zadar)	NJA	Jakšić, Nikola
M. Jurković (International research centre for late antiquity and Middle Ages, Zagreb)	MJU	Jurković, Miljenko
J. Marchand (HiSoMA)	JMA	Marchand, Julie
A. Marinković (Univ. Zagreb)	AMA	Marinković, Ana

D. Martinez (CIHAM)	DMA	Martinez, Damien
A. Milošević (Museum of Croatian Archaeological Monuments, Split - <i>emeritus</i>)	AMI	Milošević, Ante
E. Morlock (HiSoMA)	EMO	Morlock, Emmanuelle
L. Pillot (MSH Dijon)	LPI	Pillot, Lucile
S. Riccioni (Univ. Ca'Foscari, Venice)	SRI	Riccioni, Stephano
A. Stock (Chrono-environnement)	AST	Stock Agnes
M. Thivet (Chrono-environnement)	MTH	Thivet, Matthieu
N. Uroda (Museum of Croatian Archaeological Monuments, Split)	NUR	Uroda, Nikolina
P. Urbanova (Univ. Padua)	PUR	Urbanova, Petra
Scientific committee		
E. Destefanis (Univ. Turin)	EDE	Destefanis, Eleonora
M. Doneus (Univ. Vienna)	MDO	Doneus, Mickael
A. Dubreucq (Univ.Lyon 3)	ADU	Dubreucq, Alain
J. Neralić (Croatian Institute of History, Zagreb)	JNE	Neralić, Jadranka
T. O'Carragain (Cork Univ.)	TOC	O'Carragain, Tomas
V. Prigent (Orient & Méditerranée)	VPR	Prigent, Vivien
J. Terrier (Univ. Genève)	JTE	Terrier, Jean
C. Sapin (Artehis - <i>emeritus</i>)	CSA	Sapin, Christian

Table 6: Names of creators (state May 2021), MONACORALE project

Metadata models and tables gathering these reference data will be created and compiled in an indexing aid guide and by automated processes (which are still to be defined): these will be used to limit the risk of error when recording series. The data input engineer when recruited will carry out most of the description operation.

The internal project tree structure (Sharedocs and NAS) is divided as follows:

- 0_Drop_box
- 1_Administration
 - 1_1_Administration
 - ANR_2020-completefile
 - 1_2_Activity_reports
 - 1_3_DMP
 - DMP-v1_20210601
 - 1_4_Communications&Dissemination
 - Articles
 - Communications
 - Field_schools
 - Study-sessions
- 2_Sites
 - 2_1_GIS
 - 2_2_Catalogue_of_sites
- 3_Textual_resources
 - 3_1_Documentary_archives
 - 3_2_Litterary_archives
 - 3_2_1_Public_collection
 - 3_2_2_Private_collection

A naming convention for photographs (WP 3 and task 2.2) has being established. All levels of information are separated by “_” (underscore symbol). It develops as follows:

- a 3-letter code defines the name of the site, followed by a 2-letters code of the site locality. In case of same names, the second site will use the 4th letter of its name in place of the 3rd. This to avoid exact same place-names. (e.g. MAR-CR for Martinšćica in Cres)

- year of acquisition of the photo

then, for site photos :

- o sector (S01 to S99)
- o increment 0001 to 9999

or, for finds and site facts:

- o IND (burial) or PO (small object) or LAP (lapidary) or MON (coin)
- o Increment 0001 to 9999

Ex.: MAR_2019_S03_0001 (photo du secteur 3)
MAR_2019_S03_0002 (mosaïque LIDAR ou photogrammétrie)
MAR_2019_PO_0001 (objet 1 de l'année 2019)
MAR_2019_IND_0002 (2e sépulture de l'année 2019)

This simple nomenclature allows the association of old archive photos. Geographical (Istria, Dalmatia, "workshop area"...; see table 5 for coverage concepts and links) and epigraphic information will be added as metadata.

The summary sites describing Excel sheets will be registered in files bearing its same name and called: SITE_FICHE_version. Once implemented in the database, the later will be updated, the sheets will be considered as archives.

Administrative documents that require such information (meeting, agenda, minutes, budget) will be timestamped (YYYYMMDD), according to recommended good practice (<https://doranum.fr/stockage-archivage/comment-nommer-fichiers/>). They will also bare the creator's name.

Ex: 20210426_Kick-off_programme_SBU

20210601_DMP-v1_JMA

Mass renaming of the documentation will be carried out during validation meetings held every three months with the WP directors and some collaborators. As the multiplication of the partners, their geographical dispersion and their specialities would inevitably lead to different versions within the groups; the aim of these meetings will be to validate the final versions with the scientific team consensus, to rename properly the datasets and to save them.

The validation committee is composed of the following members (table 7):

Name	Quality
J. Baraka Perica	Head of workgroup on North Dalmatia (zone 3)
N. Uroda	Head of workgroup on Central Dalmatia (zone 4a)
A. Marinković	Head of workgroup on South Dalmatia (zone 4b)
P. Chevalier and M. Jurković	Heads of workgroup on Istria (zone 1)
St. Gioanni	Head of WP 4
P. Chevalier	Head of WP 2
M. Čaušević-Bully	Head of WP 3 and head of workgroup on Kvarner (zone 2)
S. Bully	Head of WP 1

+ GIS engineer or data input engineer when recruited

Table 7: Members of the validation committee

The files shared and long-term stored will be converted into standard formats supported by the CINES archiving platform (control via the Facile platform: <https://facile.cines.fr/>) by the validation committee.

Ant Renamer (PC), Renamer (Mac) or Bridge software will be used to rename sets. The versions (v1, v2...) will be kept until the final version is compiled, when it loses its suffix. Metadata will then be added, using MetaData++ (free) or Adobe Bridge. The protocol proposed by A. Rabot (Univ. Lyon2) for excavation data will be followed^[1]; they may be adapted as needed as soon as the first tests will be carried out on the data sets.

[1] A. Rabot, « Missions et archives de fouille. Entre la production et la conservation », in S. Zanella, J.-P. Brun, M. Denoyelle, P. Rouillard and St. Verger (ed.), *Les archives de fouilles : modes d'emploi*, OpenEdition Books, Collège de France, 2017 (<https://books.openedition.org/cdf/4909?lang=fr>); Fourier, A. Rabot, B. Morandière, N. Clion. *La fouille de Kition-Pervolia : de l'enregistrement à l'archivage (en passant par l'exposition des données et la publication)*. 2019, pp. 14-16. ([hal-01995138](https://hal.archives-ouvertes.fr/hal-01995138))

The quality of the data will be monitored during quarterly meetings. The status of the data will be regularly updated according to the

following table (table 8). The later will be developed in July 2021, during the first quarterly meeting.

Full acquisition	Quality	Quality definition	Justification
no work in progress yes+date	1	Very good quality	Data confirmed both by archaeology and texts
	2	Good quality	Data confirmed by either archaeology or texts
	3	Unreliable data / uncertain data	It concerns unstratified archaeological material as well as apocryphs documents
	4	Poor-quality data	Data not available; unknown by archaeology or texts

Table 8: Qualification of datasets and justification

3. Storage and backup during the research process

The data will be stored throughout the project at different scales:

- first of all on the researchers' computers. These include the 4 computers of the co-I (each one responsible of a WP), the one of the GIS-engineer and the one of the data input engineer. In addition to these, the project has a laptop provided by Artheis (with a calculator used for WP 2 and 3 photogrammetries), as well as a HiSoMA computer, used mainly by the collaborators of WP 4;
- on 4 external hard disks (1 TB) – one for each WP;
- in a Sharedocs storage space provided by TGIR Huma-Num (MONACORALE account opened on 13/04/2021);
- in a Network Attached Storage (NAS), which can be consulted at long distance from Europe (access with password).

The *External* Hard Drives are used for daily backups. The Sharedocs is regularly fed by sets. The server and the NAS are mirrors of the Sharedocs. During the data validation meetings, backups of homogeneous and compiled data batches are stored, after renaming. Nakala services, via Huma-Num, will be used for dissemination, sharing according to FAIR principles and digital preservation after the end of ANR funding (account opened on 06/04/2021).

The procedure for keeping old backups and the number of recoverable back-ups will be decided later in the project, when the work is launched. One co-I is been offering a real-time backup system for data stored on computers (ATempo Live Navigator), as member of Chrono-Environment research unit of CNRS; backups are automatically generated in real time and kept several weeks. The 4 co-Is work within a Mac OS environment: they use Time Machine software for workstation backups. The free versioning software Git will be installed on the PCs: it could be used to restore an old step that is lost.

The data will be secured insofar as access to the server, the NAS and to Sharedocs will be done with authentication. Instances on the GitLab platform, offered by Huma-Num, will be created for some collaborators. The development of the database/GIS at the heart of the project will be managed on this platform. The source codes will be deposited there (the account will be opened at the time of the recruitment of the geomatician/GIS engineer).

The PI, the co-Is and the collaborators will all have access to the Sharedocs with specific rights (detailed in table 9).

Members and collaborators	Read	Download	Share	Copy/Move	Rename	Delete
J. Baraka Perica	x					
S. Bully	x	x	x	x	x	x
D. Calaon	x					
M. Čaušević-Bully	x	x	x	x	x	x
P. Chevalier	x	x	x	x	x	x
J. Crochat	x					
D. Ciković	x					
L. Dugoperec	x					
S. Gioanni	x	x	x	x	x	x
L. Granjon	x					
N. Jakšić	x					
M. Jurković	x					
J. Marchand	x					
A. Marinković	x					
D. Martinez	x					
A. Milošević	x					
E. Morlock	x					
L. Pillot	x					
S. Riccioni	x					
A. Stock	x					
M. Thivet	x					
N. Uroda	x					
P. Urbanova	x					
Scientific committee						
E. Destefanis	x					
M. Doneus	x					
A. Dubreucq	x					
J. Neralić	x					
T. O'Carragain	x					
V. Prigent	x					
J. Terrier	x					
C. Sapin	x					

Table 9: Rights attributed in Sharedocs (status May 2021; some not yet given)

4. Legal and ethical requirements, code of conduct

The files produced will have the mention of collaborators' names who have the intellectual property (as creator, contributor or editor): these data will be the only personal data that will be handled in the project. The use of this data is therefore subject to credit, depending on the rights requested.

Depending on the different publications and deliverables of the project, several credits, rights and exploitation licenses will be used (table 10):

Data type	Credits and rights
Images (single or mosaic)	The reproduction must be credited with the author and the name of the project (e.g.: author/MONACORALE)
Data paper or working paper	CC BY
Open Access monography	OpenEdition Freemium for Books ; according the published EFR
Database	Open Database License (ODbL)

Table 10: Rights and licenses

N/A

Sites names and localities will be given in Croatian (see the code in file names procedures) to avoid historical territory occupation issues.

5. Data sharing and long-term preservation

Published (articles, books) and grey literature (excavation reports) will be compiled in a collaborative, public Zotero bibliography open to project members (ANR-MONACORALE bibliography, open 08/04/2021). An export of the database will be carried out (in zotero .rdf) every month at the beginning of the project, during its implementation; the pace may slow down at the end of the project, once the bibliography has been collected.

WP 2 and 3 data will be embargoed for 5 years after their acquisition date to allow the exclusivity of the first publication by the team in charge.

The vocabulary used is defined by the several indexing records of recognized authorities (such as Rameau of the Bibliothèque nationale de France, the managing service PACTOL of the semantic evolution of the thesaurus of Huma-Num, the Vocabulary cards via the GINCO platform of the French Ministry of Culture or the Getty Art&Archaeology Thesaurus) and the thesaurus inherited from the ANR CARE.

Homogeneous batches of data or compiled batches will be deposited in the repositories on a regular basis by WP. More specifically, excavation (WP 3) or archive (WP 4) photographs, raw data and final Lidar images (WP 3) or photogrammetries (WP 2) will be deposited as soon as they are produced, within a reasonable period of 3 months after the end of the missions (table 1), under the supervision of the WP investigators.

The project will inform about its regular activities and will post scientific and methodological short articles on his *Hypotheses* blog (<https://monacorale.hypotheses.org/>). The posts, as well as the main events, will be relayed by the Twitter ([@anr_monacorale](#)) and Facebook ([Programme ANR Monacorale 2020-2024](#)) accounts.

The schedules publications and deliverables are:

- WP 1: online publication of the geo-referenced database by year 4, associated with an historical and archaeological Atlas; the proceedings of the project's closing conference will be published at the end of the project;
- WP 2: annual activity reports will be published both in the *Bulletin du Centre d'Études médiévales d'Auxerre* (BUCEMA; the online medieval period journal of ARTEHIS research unit) and in the printed *Hortus Artium medievalium* (published in Zagreb and distributed by Brepols);
- WP 3: excavation reports published in the *École Française de Rome Chronicles* (online, see for example Morana Čaušević-Bully, Sébastien Bully, Adrien Saggese and Jessy Crochat, "The ecclesiastical and monastic sites of the Kvarner archipelago (Croatia), campaign 2018: Mirine-Fulfinum (Omišalj, island of Krk)", *Chronique des activités archéologiques de l'École française de Rome* [Online], Balkans, online 12 September 2019, accessed 12 April 2021. URL: <http://journals.openedition.org/cefr/3654> ; DOI: <https://doi.org/10.4000/cefr.3654>) or in the archaeological reports of the Écoles françaises à l'étranger network (also online: Morana Čaušević-Bully, Sébastien Bully, Anaïs Delliste, Sabine Lefebvre and Cyprien Mureau, "Les sites ecclésiastiques et monastiques de l'archipel du Kvarner (Croatie), campagne 2019 : Martinšćica (island of Cres)" [archaeological note], *Bulletin archéologique des Écoles françaises à l'étranger* [Online], Balkans, online 26 February 2021, accessed 12 April 2021. URL: <http://journals.openedition.org/baefe/1971> ; DOI: <https://doi.org/10.4000/baefe.1971>); excavation and activity reports (in French) submitted to the French Ministry of Europe and Foreign Affairs (MEAE); excavation and activity reports (in Croatian) submitted to the Croatian Ministry of Culture (one report/year for these three institutions); a catalogue in the framework of an exhibition to be held at the National Museum in Split (year 4 of the project) The final monograph of the archaeological excavations will be offered to the EFR publications.
- WP 4: following a meeting (round table type) to be held in early 2023 on the written acts of practice, the proceedings will be published within 3 years in the *Mélanges de l'École française de Rome (MEFRM)* collection; a translation of the *Historia Salonitana* (chapters 1 to 23) will be presented in the form of a follow-up seminar; commented translations of at least 4 hagiographical texts (related to ecclesiastical foundations) will also be made; 2-3 intermediate working paper should be submitted.

Beyond the funding date of the project, the data will be accessible in the Sharedocs

By its end, a strict selection of data will be made: photographs will be sorted (manually and via FreeFileSync) and intermediated versions will be eliminated and, unless there is a justified reason to the contrary, only the final versions of the syntheses will be long-term stored. Selected batches of raw, perennial data will be archived. Table 1 will be resumed with datasets archiving dates when completed.

The synthesis data will be reusable for a new implementation of the database or for a new project. Complete sharing arrangements will be given for the several datasets when decided.

The majority of the formats used being compatible with or directly native to open source software; the data produced can be reused. Documentation from other standards will be saved in a readable format (see above table 3).

After publication of the data in the database and the Atlas (end of year 4), many of the documentation will be accessible on request.

The documents and files to be shared will have a unique Nakala identifier given at the time of the deposit.

6. Data management responsibilities and resources

The DMP will be updated continuously and especially after the quarterly meetings with the PI, the co-Is and the two engineers recruited. The PI is the main referent and coordinates the whole data management.

One may foresee that 20% of the time of the GIS-engineer or the data input is allocated to the implementation of the DMP (preparation, metadata descriptions, sharing and long-term conservation).