

## Data Management Plan 2 Deliverable 1.4 WP1: Project Management

Authors: Eleni Toli, Panagiota Koltsida (ATHENA RC) Date: 31/03/2023



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Author(s)	Panagiota Koltsida & Eleni Toli (ATHENA RC)
Primary Contact and Email	Panagiota Koltsida (p.koltsida@athenarc.gr)
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## TABLE OF CONTENTS

EXECUTIVE SUMMARY
LIST OF ACRONYMS
1.0 INTRODUCTION $\epsilon$
2.0 DATA SUMMARY6
2.1 What types and formats of data does the project generate/collect? 6
3.0 FAIR DATA IN ARSINOE
3.1 ARSINOE Data Catalogue
4.0 CONCLUSIONS - NEXT STEPS
REFERENCES



## EXECUTIVE SUMMARY

Deliverable D1.4 is the second version of the Data Management Plan (DMP) of the ARSINOE project. ARSINOE is an H2020 project that will shape the pathways to resilience by bringing together Systems Innovation Approach (SIA) and Climate Innovation Window (CIW) with the purpose to build an ecosystem for climate change adaptation solutions. Within the ARSINOE ecosystem, pathways to solutions are co-created and co-designed by stakeholders. Nine (9) Case Studies (CSs) will demonstrate the ARSINOE three-tier approach as a proof-of-concept regarding its applicability, replicability, potential and efficacy and will co-develop sustainable solutions.

The Data Management Plan is a living document and describes the lifecycle of all datasets that will be used, processed, and generated throughout the project lifetime. The first version of the DMP was released on M6, providing information on how ARSINOE is managing the data produced and collected through its lifetime. This second version of the DMP provides information about the additional datasets used by the CSs, which are part of the machine actionable DMP, available through the Argos tool.

Related Deliverable: Deliverable 1.3 (M6): Data Management Plan 1.

#### **Relevant EU policies**:

- Guidelines on FAIR Data Management in Horizon 2020, v3.0 2016 [1]
- European Data Act: https://ec.europa.eu/commission/presscorner/detail/en/ip\_22\_1113
- General Data Protection Regulation (GDPR) (EU) 2016/679





## LIST OF ACRONYMS

DMP	Data Management Plan
FAIR	Findable Accessible Interoperable Reusable
GA	Grant Agreement
ORDP	Open Research Data Pilot
WP	Work Package

## **1.0 INTRODUCTION**

ARSINOE Project participates in the EU Open Research Data Pilot (ORDP) [2] and as such it undertakes all activities needed to enable open access and reuse of research data generated by the project.

Open access to research data refers to the right to access and re-use digital research data under the terms and conditions set out in the Grant Agreement. Openly accessible research data can typically be accessed, mined, exploited, reproduced, and disseminated under defined and clearly specified terms and conditions (either free of charge or at a cost for the user).

The Data Management Plan (DMP) is not a fixed document; it evolves and gains more precision and substance during the lifespan of the project. The first version of the DMP, delivered in month 6, functions as a guiding document for the proper data management during the project, whereas the DMP versions delivered towards the end of the project will also be a good preparation activity for the exploitation of ARSINOE's digital assets. This second version of the DMP, contains the additional datasets identified by the project partners, especially from the Case Studies and which are going to be exploited for building solutions towards the different climate hazards each area is facing and focusing on paving the way towards towards a green, digital, inclusive, resilient, and sustainable future.

## 2.0 DATA SUMMARY

# 2.1 What types and formats of data does the project generate/collect?

Due to the different objectives of the case studies and the work performed in WP3 and WP4 various formats and types of data are exploited by the project. In Table 2-1, a summary of the different types and formats are shown. Detailed information, for each dataset, is available through the actionable DMP, in Argos [3].

Category	Туре	Format	Origin	Expected Size
Case studies datasets	text, images, numeric, statistical, geospatial, tabular, scripts	csv, tsv, jpeg, tiff, geotiff, grib, shapefile, xlsx, NetCDF, sql	primary and secondary (Open datasets)	from Kb to Gb
WP2 (VR experiences and choice experiments)	spatiotemporal, tabular, text	csv, json	primary and secondary	some Kb
WP3	models, scripts	various formats	primary and secondary	from Kb to Mb
WP4	software	various formats	-	unknown yet
WP7	text, textual reports	pdf	primary	few Mb
WP8	text, images, videos,	pdf, various formats	primary	Mb

### Table 2.1 Datasets Summary Information



## 3.0 FAIR Data in ARSINOE

ARSINOE follows the ORDP principle: "as open as possible, as closed as necessary" and focuses on encouraging sound data management as an essential part of research best practice. Every dataset that will be generated will clearly state if it is open, restricted, or closed and will define a specific license for accessing it as part of its metadata. For existing datasets, the license and accessing conditions are already defined.

The datasets produced during the project will be stored to the project's Data catalogue and accompanied by a set of metadata providing information about the author, the maintainer, their format and type and their license. For each dataset, different visibility options are available.

The catalogue provides unique identifiers and offers advanced search and filtering functionality, facilitating the identification of useful datasets. Specific domain metadata that may exist, can be also stored into the catalogue as part of the dataset. The catalogue can be visited at: <a href="https://catalogue.arsinoe-project.eu/">https://catalogue.arsinoe-project.eu/</a>.

Publications and other open datasets are foreseen to be uploaded to Zenodo [4], a general-purpose openaccess repository developed under the European OpenAIRE program [5] and operated by CERN, which promotes Open Science and the collaboration among researchers and other communities. A dedicated Zenodo community will be created to serve and promote ARSINOE's work and outputs.

Finally, an interoperable web service will be developed to allow exchange of information among the catalogue and other external repositories. The service will be built using a widely accepted interoperable standard, the OAI-PMH [6] interoperability standard. This work is currently under implementation.

The DMP recommends the adoption of structured solutions for the clarification of licenses of generated datasets and makes available related license clearance tools.

## 3.1 ARSINOE Data Catalogue

The ARSINOE Data Catalogue is a web application which allows its users with specific role to upload datasets under a specific Case Study. It is also accessible to guest users, who can search and view the available public datasets.

The catalogue can be accessed at: <u>https://catalogue.arsinoe-project.eu/</u>

All project's produced datasets are expected to be hosted by the catalogue, facilitating the data management lifecycle as described in the first version of the DMP, the D1.3 deliverable report.



V Dataset / Create Dataset				
What are datasets?				
A Dataset is a collection of data	1 Create dataset	2 Ad	d data	
esources (such as files), together with a description and other metadata at a fixed	* Title:			
searching for data. Datasets can be	eq. A descriptive title			
always belong to a specific Case Study.	* URL: catalogue.arsinoe-project.eu/dataset	<dataset> Edit</dataset>		
	* Description:			
	eg. come assial notes about the data			
	You can use Markdown formatting here			
	* License:			
	License not specified			¥
	$oldsymbol{\Theta}$ License definitions and additional information can be f	ound at <u>https://lct.ni4os.eu/</u>		
	Publication Date:			
	dd/mm/yyyy			
	* Author:			
	Joe Bloggs			
	Author Email:			
	joe@example.com			
	Maintainer:			
	Joe Bloggs			
	Maintainer Email:			
	joe@example.com			
	DOI:			
	* Origin:			
	Unknown			~
	* Deservices Times			
	Unknown			~
	* Dataset Type:			
	Unknown			~
	Tags:			 
	eg. economy, mental health, government			
	* Case Study:			
	CS1: Greening the Athens metropolitan area			v
	Visibility:			
	Private			~

Figure 3.1 ARSINOE Data Catalogue – Adding a new dataset



## 4.0 CONCLUSIONS - NEXT STEPS

This deliverable is the second version of the DMP and contains updates on the instruments deployed by the project for storing and managing the different datasets and it also provides information about the new datasets used by the Case Studies since the delivery of its first version.

The detailed list of datasets is available through Argos and the list with the new datasets is attached to the appendix of this document.

The next version of this document is due in month 36.



## REFERENCES

- 1. Guidelines on FAIR Data Management in Horizon 2020, v3.0 2016: <u>https://ec.europa.eu/research/participants/data/ref/h2020/grants\_manual/hi/oa\_pilot/h2020-hi-oa-data-mgt\_en.pdf</u>
- 2. Open Research Data Pilot in H2020: <u>https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/data-management\_en.htm</u>
- 3. Argos Application: https://argos.openaire.eu
- 4. Zenodo: https://zenodo.org/
- 5. OpenAIRE: <u>https://www.openaire.eu/about</u>
- 6. OAI-PMH: Open Archives Initiative Protocol for Metadata harvesting: https://www.openarchives.org/pmh/





ANNEX: Datasets Information

ARSINOE Data Management Plan V2.0

Version 1

Funder European Commission || EC

Grant

CLIMATE RESILIENT-REGIONS THROUGH SYSTEMIC SOLUTIONS AND INNOVATIONS (101037424)

Researchers

Nefta Eleftheria Votsi (orcid:0000-0003-0765-5352), Conrad Felix Michel Landis (orcid:0000-0002-1519-1407), Georgios Alexandros Chatzistefanou (orcid:0000-0002-9953-5341), Orfeas Roussos (orcid:0000-0002-4362-4513), Iphigenia Keramitsoglou (orcid:0000-0002-9040-8653), Mehdi Khoury (orcid:0000-0002-2997-8948), Dimitra Frysali (orcid:0000-0002-8785-9832)

Organizations

Athena Research and Innovation Center In Information Communication & Knowledge Technologies,<br/>National Observatory of Athens, Athens University of Economics and Business - Research Center,<br/>PANEPISTIMIOTHESSALIASUNIVERSITYOFTHESSALY

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Grant

CLIMATE RESILIENT-REGIONS THROUGH SYSTEMIC SOLUTIONS AND INNOVATIONS (101037424)

Organisations

Athena Research and Innovation Center In Information Communication & Knowledge Technologies, PANEPISTIMIO THESSALIAS (UNIVERSITY OF THESSALY)

Researchers

Datasets





#### Title: GHSL - Global Human Settlement Layer

Template: Horizon 2020

The Global Human Settlement Layer (GHSL) project produces global spatial information, evidence-based analytics, and knowledge describing the human presence on the planet.

**Dataset Description** 

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Other

1.1.4 What is the origin of the described data?

Secondary data

1.1.6 To whom might it be useful ('data utility')?

Researchers

- 2.1 Reused Data
- 2.1.1 Are you re-using the described data and how?

No

- 3.1.1 Making data findable, including provisions for metadata
- 3.1.1.1 Will you use metadata to describe the data?

No

3.1.1.3 Will your metadata use standardised vocabularies?

No

3.1.1.6 Will your metadata be harvestable?

Yes, through the project's data catalogue

3.1.1.10 Will you provide persistent identifiers for the described data?

Yes

3.1.1.11 Persistent identifiers

DOI



3.1.1.12 Will you provide searchable metadata for the described data?
Yes
Through the project's data catalogue
3.1.1.13 What services will you use to provide searchable metadata?
Registry/Catalogue
3.1.1.15 Will you use standardised formats for the described data?
Yes
Tagged Image File Format
3.1.1.18 Are the file formats you will use open?
Yes
3.1.1.20 Do supported open-source tools exist for accessing the data?
Yes
3.1.2 Making data openly accessible
3.1.2.1 Are there ethical or legal issues that can impact sharing the described data?
No
3.1.2.2 Will the described data be openly accessible?
Yes
3.1.2.3 How will the data be made available?
Repository of Archive
3.1.2.5 Is the storage sufficiently secure for the data and does the storage provide backup and recovery procedures?
secure with backup and recovery
3.1.3 Making data interoperable
3.1.3.1 Will you use a controlled vocabulary for the described data?
No
3.1.3.2 Will you provide a mapping to more commonly used ontologies?
No
3.1.4 Increase data reuse
3.1.4.1 When do you plan to make thedescribed data available for reuse?
immediately
6.1 Ethical aspects
6.1.1 Are there any ethical or legal issues that can have an impact on data sharing?
No
6.1.2 Are the described data sensitive?
ARSINOE Deliverable 1.4



No 6.1.3 Are the described data personal? No 7.1 Other 7.1.1 Do you make use of other procedures for data management? Yes

Title: Panorama

Template: Horizon 2020

Geo-referenced mapping at municipality level of three censuses (1991-2001-2011) per municipality of Greece.

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

1.1.2 What are the types of the described generated/collected data?

- observational (e.g.
- sensor data
- data from surveys)

1.1.3 What are the formats of the described generated/collected data?

Discipline specific formats

1.1.4 What is the origin of the described data?

Secondary data

1.1.6 To whom might it be useful ('data utility')?

Researchers

3.1.1 Making data findable, including provisions for metadata

3.1.1.1 Will you use metadata to describe the data?

No

3.1.1.3 Will your metadata use standardised vocabularies?

No

3.1.1.12 Will you provide searchable metadata for the described data?

Yes



3.1.1.13 What services will you use to provide searchable metadata?
Registry/Catalogue
3.1.1.18 Are the file formats you will use open?
Yes
3.1.1.20 Do supported open-source tools exist for accessing the data?
Yes
3.1.2 Making data openly accessible
3.1.2.1 Are there ethical or legal issues that can impact sharing the described data?
No
3.1.2.2 Will the described data be openly accessible?
Yes
3.1.2.6 Are there any methods or tools required to access the described data?
Yes
3.1.3 Making data interoperable
3.1.3.1 Will you use a controlled vocabulary for the described data?
No
3.1.3.2 Will you provide a mapping to more commonly used ontologies?
No
3.1.4 Increase data reuse
3.1.4.1 When do you plan to make thedescribed data available for reuse?
immediately
6.1 Ethical aspects
6.1.1 Are there any ethical or legal issues that can have an impact on data sharing?
No
6.1.2 Are the described data sensitive?
No
6.1.3 Are the described data personal?
No
7.1 Other
7.1.1 Do you make use of other procedures for data management?
No





#### Title: ERA5

#### Template: Horizon 2020

Climate reanalysis produced by ECMWF, providing hourly data on many atmospheric, land-surface and sea-state parameters.

### **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?
- Models
- Other
- 1.1.4 What is the origin of the described data?

Secondary data

1.1.6 To whom might it be useful ('data utility')?

Researchers

- 3.1.1 Making data findable, including provisions for metadata
- 3.1.1.1 Will you use metadata to describe the data?

Yes

3.1.1.3 Will your metadata use standardised vocabularies?

No

3.1.1.5 Will you make the metadata available free-of-charge?

Yes

3.1.1.6 Will your metadata be harvestable?

Yes

3.1.1.7 Will you use naming conventions for your data?

No

3.1.1.10 Will you provide persistent identifiers for the described data?

Yes

3.1.1.11 Persistent identifiers



DOI
3.1.1.12 Will you provide searchable metadata for the described data?
Yes
3.1.1.13 What services will you use to provide searchable metadata?
Registry/Catalogue
3.1.1.18 Are the file formats you will use open?
Yes
3.1.1.20 Do supported open-source tools exist for accessing the data?
Yes
3.1.2 Making data openly accessible
3.1.2.1 Are there ethical or legal issues that can impact sharing the described data?
No
3.1.2.2 Will the described data be openly accessible?
Yes
3.1.2.3 How will the data be made available?
Repository of Archive
3.1.2.6 Are there any methods or tools required to access the described data?
No
3.1.3 Making data interoperable
3.1.3.1 Will you use a controlled vocabulary for the described data?
No
3.1.3.2 Will you provide a mapping to more commonly used ontologies?
No
6.1 Ethical aspects
6.1.1 Are there any ethical or legal issues that can have an impact on data sharing?
No
6.1.2 Are the described data sensitive?
No
6.1.3 Are the described data personal?
No



#### Title: Urban Atlas 2018

#### Template: Horizon 2020

Urban Atlas 2018 provides reliable, inter-comparable, high-resolution land use and land cover data with integrated population estimates for 788 Functional Urban Areas (FUA) with more than 50,000 inhabitants for the 2018 reference year in EEA38 countries (EU, EFTA, Western Balkans countries, as well as Turkey) and the United Kingdom.

Urban Atlas is a joint initiative of the Commission Directorate-General for Regional and Urban Policy and the Directorate-General for Defence Industry and Space (DEFIS) in the frame of the EU Copernicus programme, with the support of the European Space Agency and the European Environment Agency."

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Other

1.1.4 What is the origin of the described data?

Secondary data

1.1.6 To whom might it be useful ('data utility')?

Researchers

3.1.1 Making data findable, including provisions for metadata

3.1.1.1 Will you use metadata to describe the data?

No

3.1.1.7 Will you use naming conventions for your data?

No

3.1.1.9 Will you provide clear version numbers for your data?

No

3.1.1.12 Will you provide searchable metadata for the described data?

Yes

3.1.1.13 What services will you use to provide searchable metadata?



Registry/Catalogue 3.1.1.15 Will you use standardised formats for the described data? Yes 3.1.1.18 Are the file formats you will use open? Yes 3.1.1.20 Do supported open-source tools exist for accessing the data? Yes 3.1.2 Making data openly accessible 3.1.2.3 How will the data be made available? Repository of Archive 7.1 Other 7.1.1 Do you make use of other procedures for data management? No

Title: ERA5, WOA 2018, PERSEUS Project, GEBCO

Template: Horizon 2020

The 3-D Nucleus for European Modeling of the Ocean (NEMO) model version 3.6 (Madec, 2015) has been applied to the Black Sea. The model solves the three-dimensional finite difference primitive equations, i.e. the Navier-Stokes equations along with nonlinear equation of state. The model employs Arakawa-C grid of a resolution of  $\Delta x=\Delta y= [0.027] ^{\circ} (3\times 3 \text{ km} - [1/36.1] ^{\circ})$  and 61 geopotential vertical levels (partial-step z-coordinates) with finer spacing near surface (5 m) to reasonably resolve the vertical structure at the top layers.

The newly developed Turkish Regional Seas Ecosystem Model is a model that combines variable cellular stoichiometry with redox processes. In the model, organisms are grouped as Functional Types (FT) and Organisms in the model are classified as primary producers (phytoplankton), consumers (zooplankton) and decomposers (bacteria), and organic matter is categorized as Particulate Organic Matter (POM) and Dissolved Organic Matter (DOM). In addition to these, there are aerobic and anaerobic bacteria modules, which are not directly represented in the model, but are indirectly represented through the chemical reactions they perform. The model possesses a stoichiometry that is fully dynamic in all of its types (only exceptions are the mesozooplankton and gelatinous predators that have a constant stoichiometric ratio). In the model, the dynamics of living organisms are determined in terms of primary production and uptake, which increase the elemental concentrations, and respiration, excretion, release, predation, and non-predatory mortality, which decrease the concentrations in them.

From ERA5 wind, radiation, temperature, humidity, precipitation, snowfall; from WOA 2018 initial temperature, salinity; from PERSEUS Project rivers; and from GEBCO bathymetry data are obtained.



## **Dataset Description**

#### 1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Models

- 1.1.4 What is the origin of the described data?
- Primary data
- Secondary data
- 1.1.6 To whom might it be useful ('data utility')?

Researchers

- 2.1 Reused Data
- 2.1.1 Are you re-using the described data and how?

No

- 3.1.1 Making data findable, including provisions for metadata
- 3.1.1.10 Will you provide persistent identifiers for the described data?

Yes

3.1.1.11 Persistent identifiers

DOI

3.1.1.12 Will you provide searchable metadata for the described data?

Yes

3.1.1.13 What services will you use to provide searchable metadata?

Registry/Catalogue

3.1.1.15 Will you use standardised formats for the described data?

Yes

Tab-separated values

3.1.1.18 Are the file formats you will use open?

Yes



3.1.1.20 Do supported open-source tools exist for accessing the data?
Yes
3.1.2 Making data openly accessible
3.1.2.6 Are there any methods or tools required to access the described data?
No
3.1.3 Making data interoperable
3.1.3.1 Will you use a controlled vocabulary for the described data?
No
6.1 Ethical aspects
6.1.1 Are there any ethical or legal issues that can have an impact on data sharing?
No
6.1.2 Are the described data sensitive?
No
6.1.3 Are the described data personal?
No
7.1 Other
7.1.1 Do you make use of other procedures for data management?
No

Title: Attica Social Deprivation Index

Template: Horizon 2020

Spatial and temporal dynamics of deprivation in Attica

### **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

1.1.2 What are the types of the described generated/collected data?

- observational (e.g.
- sensor data
- data from surveys)

1.1.3 What are the formats of the described generated/collected data?



Other
1.1.4 What is the origin of the described data?
Secondary data
1.1.6 To whom might it be useful ('data utility')?
Researchers
2.1 Reused Data
2.1.1 Are you re-using the described data and how?
Yes
To compare and combine with other data
3.1.1 Making data findable, including provisions for metadata
3.1.1.15 Will you use standardised formats for the described data?
Yes
Microsoft Excel for Windows
3.1.1.20 Do supported open-source tools exist for accessing the data?
Yes
3.1.2 Making data openly accessible
3.1.2.1 Are there ethical or legal issues that can impact sharing the described data?
No
3.1.2.2 Will the described data be openly accessible?
Yes
Reference to the owner is required
3.1.2.3 How will the data be made available?
Repository of Archive
3.1.2.6 Are there any methods or tools required to access the described data?
No
3.1.3 Making data interoperable
3.1.3.1 Will you use a controlled vocabulary for the described data?
No
3.1.3.2 Will you provide a mapping to more commonly used ontologies?
No
3.1.4 Increase data reuse
3.1.4.1 When do you plan to make thedescribed data available for reuse?
end of project



6.1 Ethical aspects
6.1.1 Are there any ethical or legal issues that can have an impact on data sharing?
No
6.1.2 Are the described data sensitive?
No
6.1.3 Are the described data personal?
No
7.1 Other
7.1.1 Do you make use of other procedures for data management?
No

Title: Age groups in Attica Template: Horizon 2020

Population distribution in Attica region by age group and region of residence (2011)

### **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

1.1.2 What are the types of the described generated/collected data?

• observational (e.g.

sensor data

• data from surveys)

1.1.3 What are the formats of the described generated/collected data?

Numerical

1.1.4 What is the origin of the described data?

Secondary data

1.1.5 What is the expected size of the described data?

KB (kilobyte)

640

- 2.1 Reused Data
- 2.1.1 Are you re-using the described data and how?



Yes
To compare and combine with other data
3.1.1 Making data findable, including provisions for metadata
3.1.1.1 Will you use metadata to describe the data?
Yes
3.1.1.3 Will your metadata use standardised vocabularies?
No
3.1.1.5 Will you make the metadata available free-of-charge?
Yes
3.1.1.6 Will your metadata be harvestable?
Yes
3.1.1.7 Will you use naming conventions for your data?
No
3.1.1.12 Will you provide searchable metadata for the described data?
Yes
3.1.1.13 What services will you use to provide searchable metadata?
Registry/Catalogue
3.1.1.15 Will you use standardised formats for the described data?
Yes
3.1.1.20 Do supported open-source tools exist for accessing the data?
Yes
3.1.2 Making data openly accessible
3.1.2.1 Are there ethical or legal issues that can impact sharing the described data?
No
3.1.2.2 Will the described data be openly accessible?
Yes
A reference to the Greek National Center for Social Research (EKKE) and the Hellenic Statistical Authority (ELSTAT) should be made when used publicly.
3.1.2.3 How will the data be made available?
Repository of Archive
3.1.2.6 Are there any methods or tools required to access the described data?
No
3.1.3 Making data interoperable
3.1.3.1 Will you use a controlled vocabulary for the described data?



## No 3.1.3.2 Will you provide a mapping to more commonly used ontologies? No 3.1.4 Increase data reuse 3.1.4.1 When do you plan to make the described data available for reuse? after article publication 6.1 Ethical aspects 6.1.1 Are there any ethical or legal issues that can have an impact on data sharing? No 6.1.2 Are the described data sensitive? No 6.1.3 Are the described data personal? No 7.1 Other 7.1.1 Do you make use of other procedures for data management? No

Title: Main life resource sources

Template: Horizon 2020

Population distribution in Attica region by main source of livelihood and by region of residence (2011)

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Text files

1.1.4 What is the origin of the described data?



Secondary data 1.1.5 What is the expected size of the described data? KB (kilobyte) 670 2.1 Reused Data 2.1.1 Are you re-using the described data and how? Yes To compare and combine with other data 3.1.1 Making data findable, including provisions for metadata 3.1.1.1 Will you use metadata to describe the data? Yes 3.1.1.3 Will your metadata use standardised vocabularies? No 3.1.1.5 Will you make the metadata available free-of-charge? Yes 3.1.1.7 Will you use naming conventions for your data? No 3.1.1.12 Will you provide searchable metadata for the described data? Yes 3.1.1.13 What services will you use to provide searchable metadata? Registry/Catalogue 3.1.1.15 Will you use standardised formats for the described data? Yes Microsoft Excel for Windows 3.1.1.20 Do supported open-source tools exist for accessing the data? Yes 3.1.2 Making data openly accessible 3.1.2.1 Are there ethical or legal issues that can impact sharing the described data? No 3.1.2.2 Will the described data be openly accessible? No A reference to the Greek National Center for Social Research (EKKE) and the Hellenic Statistical Authority (ELSTAT) should be made when used publicly.

3.1.2.3 How will the data be made available?



Repository of Archive
3.1.2.6 Are there any methods or tools required to access the described data?
No
6.1 Ethical aspects
6.1.1 Are there any ethical or legal issues that can have an impact on data sharing?
No
6.1.2 Are the described data sensitive?
No
6.1.3 Are the described data personal?
No
7.1 Other
7.1.1 Do you make use of other procedures for data management?
No

Title: Attica Rental status

Template: Horizon 2020

Population distribution in Attica region by tenancy status and by region of residence (2011)

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

1.1.2 What are the types of the described generated/collected data?

- observational (e.g.
- sensor data
- data from surveys)

1.1.3 What are the formats of the described generated/collected data?

Numerical

1.1.4 What is the origin of the described data?

Secondary data

1.1.5 What is the expected size of the described data?

KB (kilobyte)

587



1.1.6 To whom might it be useful ('data utility')? Researchers 2.1 Reused Data 2.1.1 Are you re-using the described data and how? Yes To compare and combine with other data 3.1.1 Making data findable, including provisions for metadata 3.1.1.1 Will you use metadata to describe the data? Yes 3.1.1.3 Will your metadata use standardised vocabularies? No 3.1.1.5 Will you make the metadata available free-of-charge? Yes 3.1.1.6 Will your metadata be harvestable? Yes 3.1.1.7 Will you use naming conventions for your data? No 3.1.1.12 Will you provide searchable metadata for the described data? Yes 3.1.1.13 What services will you use to provide searchable metadata? Registry/Catalogue 3.1.1.15 Will you use standardised formats for the described data? Yes Microsoft Excel for Windows 3.1.1.20 Do supported open-source tools exist for accessing the data? Yes 3.1.2 Making data openly accessible 3.1.2.1 Are there ethical or legal issues that can impact sharing the described data? No 3.1.2.2 Will the described data be openly accessible? Yes A reference to the Greek National Center for Social Research (EKKE) and the Hellenic Statistical Authority (ELSTAT) should be made when used publicly.

3.1.2.3 How will the data be made available?





Repository of Archive 3.1.2.6 Are there any methods or tools required to access the described data? No 6.1 Ethical aspects 6.1.1 Are there any ethical or legal issues that can have an impact on data sharing? No 6.1.2 Are the described data sensitive? No 6.1.3 Are the described data personal? No 7.1 Other 7.1.1 Do you make use of other procedures for data management? No

Title: Size of residential units in Attica region

Template: Horizon 2020

Population distribution in Attica region by size of residence and region of residence (2011)

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

1.1.2 What are the types of the described generated/collected data?

- observational (e.g.
- sensor data
- data from surveys)

1.1.3 What are the formats of the described generated/collected data?

Numerical

1.1.4 What is the origin of the described data?

Secondary data

1.1.5 What is the expected size of the described data?

KB (kilobyte)



#### 678

- 1.1.6 To whom might it be useful ('data utility')?
- Researchers
- Decision makers
- 2.1 Reused Data
- 2.1.1 Are you re-using the described data and how?

Yes

To compare and combine with other data

- 3.1.1 Making data findable, including provisions for metadata
- 3.1.1.1 Will you use metadata to describe the data?

Yes

3.1.1.3 Will your metadata use standardised vocabularies?

No

3.1.1.5 Will you make the metadata available free-of-charge?

Yes

3.1.1.6 Will your metadata be harvestable?

Yes

3.1.1.12 Will you provide searchable metadata for the described data?

Yes

3.1.1.13 What services will you use to provide searchable metadata?

Registry/Catalogue

3.1.1.15 Will you use standardised formats for the described data?

Yes

Microsoft Excel for Windows

3.1.1.20 Do supported open-source tools exist for accessing the data?

Yes

3.1.2 Making data openly accessible

3.1.2.1 Are there ethical or legal issues that can impact sharing the described data?

No

3.1.2.2 Will the described data be openly accessible?

Yes

A reference to the Greek National Center for Social Research (EKKE) and the Hellenic Statistical Authority (ELSTAT) should be made when used publicly.

3.1.2.3 How will the data be made available?





Repository of Archive 3.1.2.6 Are there any methods or tools required to access the described data? No 3.1.4 Increase data reuse 3.1.4.1 When do you plan to make the described data available for reuse? immediately 6.1 Ethical aspects 6.1.1 Are there any ethical or legal issues that can have an impact on data sharing? No 6.1.2 Are the described data sensitive? No 6.1.3 Are the described data personal? No

Title: Age of residential buildings in Attica

Template: Horizon 2020

Distribution of the population in Attica region by age of residence and by region of residence (2011)

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

1.1.2 What are the types of the described generated/collected data?

- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?
- Text files
- Numerical
- 1.1.4 What is the origin of the described data?

Secondary data

1.1.5 What is the expected size of the described data?



KB (kilobyte) 696 2.1 Reused Data 2.1.1 Are you re-using the described data and how? Yes To compare and combine with other data 7.1 Other 7.1.1 Do you make use of other procedures for data management? No

Title: Social typology of residential areas in Attica

Template: Horizon 2020

Socio-vocational typology of residential areas in Attica region (2011)

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?
- Text files
- Numerical
- 1.1.5 What is the expected size of the described data?
- KB (kilobyte)

786

Title: Unemployment rate in Attica region (2011) Template: Horizon 2020



Spatial distribution of unemployment rate in Attica region (2011)

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?
- Text files
- Numerical
- 1.1.4 What is the origin of the described data?

Secondary data

1.1.5 What is the expected size of the described data?

KB (kilobyte)

642

Title: Ethnic groups in Attica Template: Horizon 2020

Population distribution in Attica region by citizenship and region of residence (2011)

### Dataset Description

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To combine with other data

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Numerical



1.1.5 What is the expected size of the described data?

KB (kilobyte)

678

Title: Lakes\_Water Levels\_Temperatures\_2008-2022\_Big\_Small\_Prespa\_lakes Template: Horizon 2020

Water levels and temperatures for Big and Small Prespa lakes 2008-2022

## Dataset Description

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Numerical

1.1.4 What is the origin of the described data?

Primary data

1.1.5 What is the expected size of the described data?

KB (kilobyte)

135

Title: Ag Germanos\_River Flow\_GDY Template: Horizon 2020

Flow rate in Agios Germanor River 2013-2015, 2018-2021

## Dataset Description

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information



- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?
- Numerical
- Discipline specific formats
- 1.1.4 What is the origin of the described data?

Primary data

1.1.5 What is the expected size of the described data?

KB (kilobyte)

30

1.1.6 To whom might it be useful ('data utility')?

Researchers

Title: GWB\_Water Level\_GDY\_25.11.2022

Template: Horizon 2020

Water levels and pumping rates of groundwater bodies in Prespa watershed, 2014-2020

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?
- Numerical
- Discipline specific formats
- 1.1.4 What is the origin of the described data?

Primary data



1.1.5 What is the expected size of the described data?

KB (kilobyte)

16

1.1.6 To whom might it be useful ('data utility')?

Researchers

Title: Urban Heat Island

Template: Horizon 2020

UHI - Distribution of temperatures and associated factors

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

- To make informed decisions
- To combine with other data
- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Discipline specific formats

1.1.4 What is the origin of the described data?

Secondary data

1.1.5 What is the expected size of the described data?

MB (megabyte)

Title: Corine Land Cover (CLC) 2018, Version 2020\_20u1

Template: Horizon 2020

CLC2018 is one of the Corine Land Cover (CLC) datasets produced within the frame the Copernicus Land Monitoring Service referring to land cover / land use status of year 2018. CLC service has a long-time heritage (formerly known as ""CORINE Land Cover Programme""), coordinated by the European Environment Agency (EEA). It provides consistent and thematically detailed information on land cover and land cover changes across Europe.



CLC datasets are based on the classification of satellite images produced by the national teams of the participating countries - the EEA members and cooperating countries (EEA39). National CLC inventories are then further integrated into a seamless land cover map of Europe. The resulting European database relies on standard methodology and nomenclature with following base parameters: 44 classes in the hierarchical 3-level CLC nomenclature; minimum mapping unit (MMU) for status layers is 25 hectares; minimum width of linear elements is 100 metres. Change layers have higher resolution, i.e. minimum mapping unit (MMU) is 5 hectares for Land Cover Changes (LCC), and the minimum width of linear elements is 100 metres. The CLC service delivers important data sets supporting the implementation of key priority areas of the Environment Action Programmes of the European Union as e.g. protecting ecosystems, halting the loss of biological diversity, tracking the impacts of climate change, monitoring urban land take, assessing developments in agriculture or dealing with water resources directives. CLC belongs to the Pan-European component of the Copernicus Land Monitoring Service (https://land.copernicus.eu/), part of the European Copernicus Programme coordinated by the European Environment Agency, providing environmental information from a combination of air- and space-based observation systems and in-situ monitoring. Additional information about CLC product description including mapping guides can be found at https://land.copernicus.eu/user-corner/technicallibrary/clc2018technicalguidelines\_final.pdf. CLC class descriptions can be found at https://land.copernicus.eu/user-corner/technical-library/corine-land-cover-nomenclatureguidelines/html/.

## **Dataset Description**

#### 1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

#### To obtain information

1.1.2 What are the types of the described generated/collected data?

- observational (e.g.
- sensor data
- data from surveys)
- 1.1.3 What are the formats of the described generated/collected data?

Discipline specific formats

1.1.4 What is the origin of the described data?

Secondary data

1.1.5 What is the expected size of the described data?

MB (megabyte)

500

Title: Geospatial data: Local Climate Zones maps of Athens, Barcelona, Lisbon, Marseille and Naples Template: Horizon 2020



The maps depict the Local Climate Zone (LCZ) classification scheme in Athens (Greece), Barcelona (Spain), Lisbon (Portugal), Marseille (France) and Naples (Italy).

A GIS analysis was used to reclassify land use/land cover primary datasets (see Data source location list) into the LCZ classes. Those primary datasets were collected from the Copernicus Land Monitoring Service website (https://land.copernicus.eu/) in June 2018, covering the five urban areas.

## **Dataset Description**

1.1 Data Summary

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of the project?

To obtain information

- 1.1.2 What are the types of the described generated/collected data?
- observational (e.g.
- sensor data
- data from surveys)

1.1.3 What are the formats of the described generated/collected data?

Discipline specific formats

1.1.5 What is the expected size of the described data?

MB (megabyte)

500

Systems Innovation Approach (SIA) addresses the growing complexity, interdependencies and interconnectedness of modern societies and economies, focusing on the functions of the crosssectoral system? as a whole? and on the variety of actors. The Climate Innovation Window (CIW) is the EU reference innovations marketplace for climate adaptation technologies. ARSINOE shapes the pathways to resilience by bringing together SIA and CIW, to build an ecosystem for climate change adaptation solutions. Within the ARSINOE ecosystem, pathways to solutions are co-created and codesigned by stakeholders, who can then select either existing CIW technologies, or technologies by new providers (or a combination) to form an innovation package. This package may be designed for implementation to a specific region, but its building blocks are transferable and re-usable; they can be re-adapted and updated. In this way, the user (region) gets an innovation package consisting of validated technologies (expanding the market for CIW); new technologies implemented in the specific local innovation package get the opportunity to be validated and become CIW members, while the society (citizens, stakeholders) benefits as a whole. ARSINOE applies a three-tier, approach: (a) using SIA it integrates multi-faceted technological, digital, business, governance and environmental aspects with social innovation for the development of adaptation pathways to climate change for specific regions; (b) it links with CIW to form innovation packages by matching innovators with endusers/regions; (c) it fosters the ecosystem sustainability and growth with cross-fertilization and replication across regions and scales, at European level and beyond, using specific business models, exploitation and outreach actions. The ARSINOE approach is show-cased in nine widely varied demonstrators, as a proof-of-concept with regards to its applicability, replicability, potential and efficacy.





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