

# Introduction to the Landscape Analysis and the Data Management Plan

## RI-URBANS

Research Infrastructures Services Reinforcing Air Quality Monitoring Capacities in European Urban & Industrial Areas  
(Project n. 101036245)



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RI-URBANS (101036245)  
20th of October 2022

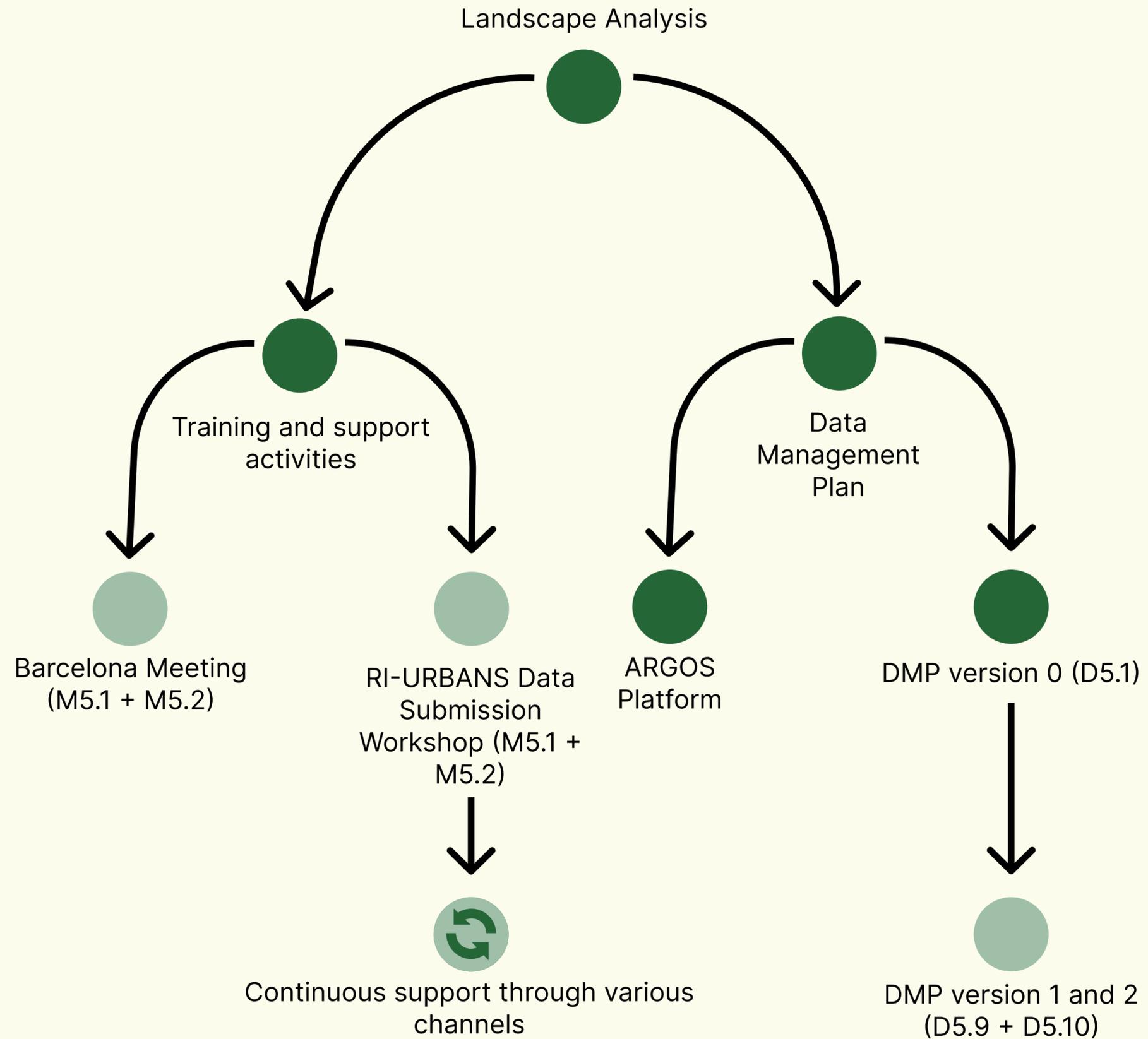
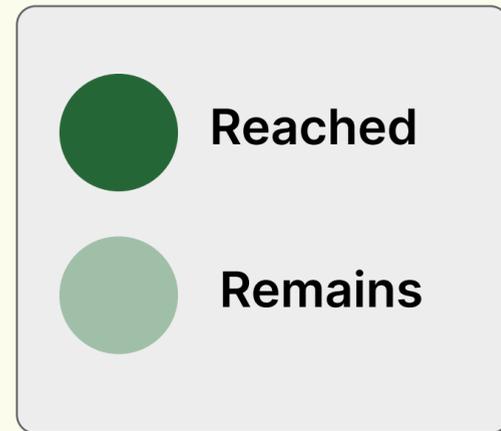


# | Outline

- **Progress Summary**
- **Overview of Task 5.1**
- **Landscape Analysis**
- **Data Management Plan**
- **FAIR Data Management**
- **Training and support**

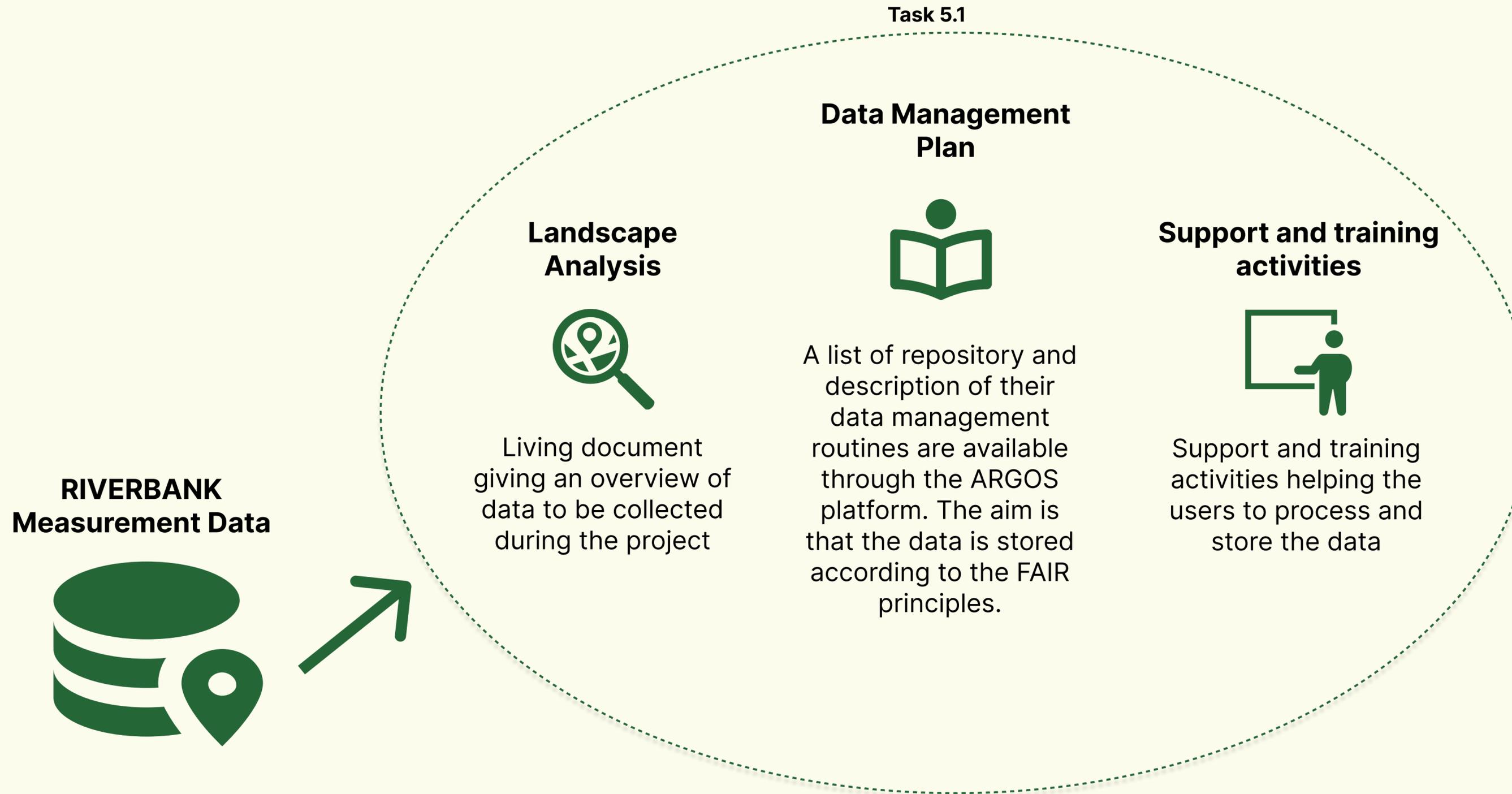


# Progress Summary



# Overview

Services and tools in ACT  
RIS and LAGOS



# Landscape Analysis

## What is it?

- A living document giving an overview of all the datasets to be provided as a part of the RI-URBANS project
- [https://nilu365-my.sharepoint.com/:x:/r/personal/ror\\_nilu\\_no/Documents/RI-URBANS\\_external/RI-URBANS%20Landscape\\_Analysis\\_WP5.xlsx?d=wd2c277fd667c4b6d991d0954c13d35ee&csf=1&web=1&e=dnrltU](https://nilu365-my.sharepoint.com/:x:/r/personal/ror_nilu_no/Documents/RI-URBANS_external/RI-URBANS%20Landscape_Analysis_WP5.xlsx?d=wd2c277fd667c4b6d991d0954c13d35ee&csf=1&web=1&e=dnrltU)

## As a data provider

- We expect that you fill in the sheet, if your data is not in this overview already

1	A	B	C	D	E	F
1	Location (pick city from dropdown)	Observed variable(s)	Platform type	Observation geometry	Instrument type (The instrument type refers to the measurement principle)	Time of day
2	Athens	Aerosol type profiles	Stationary	Remote sensing from ground	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
3	Athens	Aerosol optical properties	Stationary	Remote sensing from ground	Aerosol multiwavelength Raman & depolarization lidar	Contir
4	Athens	Aerosol concentration profile	Stationary	Remote sensing from ground	MW raman lidar + photometer	Contir
5	Barcelona	Particle Number size distribution	Stationary	In Situ	SMPS	Contir
6	Barcelona	Absorption	Stationary	In Situ	Absorption photometer	Contir
7	Barcelona	PM chemistry online	Stationary	In Situ	ACSM	Contir
8	Barcelona	PM chemistry offline	Stationary	In Situ	Offline analysis of filters collected by Hi vol samplers	Contir
9	Barcelona	VOCs	Stationary	In Situ	ToF PTRMS	Contir
10	Barcelona	PM2.5 chemical composition: metals	Stationary	In Situ	High volume sampler + ICPAES + ICP MS	Contir
11	Barcelona	PM2.5 chemical composition: OCEC	Stationary	In Situ	High volume sampler + sunset OCEC offline	Contir
12	Barcelona	PM2.5 chemical composition: ions	Stationary	In Situ	High volume sampler + ion chromatography	Contir
13	Barcelona	Number of ultrafine particles >10 nm	Stationary	In Situ	CPC	Contir
14	Barcelona	VOCs	Stationary	In Situ	ToF PTRMS	Contir
15	Barcelona	OCEC semi-continuous in PM2.5	Stationary	In Situ	Sunset semi-continuous analyzer	Contir
16	Barcelona	Gaseous pollutants: SO2, NOx, O3, CO	Stationary	In Situ	Conventional analyzers	Contir
17	Barcelona	PMx mass concentration	Stationary	In Situ	OPC	Contir
18	Barcelona	eBC (in PM10 and PM1)	Stationary	In Situ	Absorption photometer: MAAP and AE33	Contir
19	Barcelona	Number of UFP >3 nm	Stationary	In Situ	CPC	Contir
20	Barcelona	Aerosol type profiles	Stationary	Remote sensing from ground	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
21	Barcelona	Aerosol optical properties	Stationary	Remote sensing from ground	Aerosol multiwavelength Raman & depolarization lidar	Contir
22	Barcelona	Aerosol concentration profile	Stationary	Remote sensing from ground	MW raman lidar + photometer	Contir
23	Birmingham	Number Particle Size Distribution.	Stationary	In Situ	GAS Analysers (O3, SO2, NO2, NO/NOy, NH3); Solar Radiation	Contir
24	Birmingham	O3; SO2; NO2CAPS; Solar Radiation; CH4; CO; CO2	Stationary	Remote sensing from ground	Mixture of a absorption and counting instruments	Contir
25	Birmingham	PM size distributions and mass concentrations	stationary and mobile	Microsensor	optical particle counter (OPC)	Camp
26	Birmingham	ABLH Atmospheric Boundary Layer Height	Stationary	Remote sensing from ground	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
27	Bucharest	remote sensing: BL height, extinction coefficient	Stationary	Remote sensing & in situ	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
28	Bucharest	ABLH Atmospheric Boundary Layer Height	Stationary	Remote sensing from ground	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
29	Bucharest	Aerosol type profiles	Stationary	Remote sensing from ground	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
30	Bucharest	Aerosol optical properties	Stationary	Remote sensing from ground	Aerosol multiwavelength Raman & depolarization lidar	Contir
31	Bucharest	Aerosol concentration profile	Stationary	Remote sensing from ground	MW raman lidar + photometer	Contir
32	Helsinki	Organics, sulphate, nitrate, chloride, ammonium	Stationary	In Situ	Aerosol mass spectrometer, aethalometer, TEAOM, CPC, DN	Contir
33	Helsinki	ABLH Atmospheric Boundary Layer Height	Stationary	Remote sensing from ground	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
34	Helsinki	Aerosol type profiles	Stationary	Remote sensing from ground	active remote sensing (lidars, ceilometers, radar), passive remote sensing (aethalometers, nephelometers)	Contir
35	Helsinki	Aerosol optical properties	Stationary	Remote sensing from ground	Aerosol multiwavelength Raman & depolarization lidar	Contir
36	Helsinki	Aerosol concentration profile	Stationary	Remote sensing from ground	MW raman lidar + photometer	Contir
37	Marseille	PM1 non-refractory chemical species (OA, NO3, NH4)	Stationary	In Situ	ToF-ACSM (Time-of-Flight Aerosol Chemical Speciation Monitor)	Contir
38	Marseille	Black Carbon	Stationary	In Situ	Aethalometer AE33 (multi-wavelength optical analysis)	Contir
39	Marseille	Metals	Stationary	In Situ	Xact 625i (online XRF analyses)	Contir
40	Marseille	Particles number and size (15-670nm)	Stationary	In Situ	Scanning Mobility Particle Sizer (SMPS)	Contir
41	Marseille	PM1, PM2.5 and PM10 (in µg/m3)	Stationary	In Situ	optical particle counter (FIDAS200; PALAS)	Contir
42	Marseille	Gases (SO2, O3, NOx, CO, CO2 and CH4)	Stationary	In Situ	M4100F UV fluorescence analyzer for SO2 (Teledyne)	Contir



# | Data Management Plan

## Why?

- To describe how the different data repositories handle the research data from the beginning until the end of the project according to the FAIR principles
  - This way we can ensure that the data gathered in the project follows the FAIR principles for data management
- The DMP will also describe ethical and legal issues that can implicate the use and distribution of the data
- Ideally we want to limit the amount of repositories and mainly use ACTRIS/IAGOS for data storage
  - But this might be omitted due to specific needs

## How

- We use a online platform following the H2020 template
- If you use a repository not listed in Argos, you must contact WP5 to add that to the list and to describe the data management routines for that repository

The screenshot shows the Argos DMP interface for the RI-URBANS project. The main content area displays the following information:

- DMP RI-URBANS** (Version 1, Edited: 17 March 2022)
- Grant agreement ID: 101036245**
- Researchers:** —
- Description:** This DMP is a part of Task 5.1 (Implementing data management framework supporting RI-URBANS services) in the RI-URBANS project. The goal of the DMP is to provide data curation recommendations for all data in the project, encouraging links to existing data centers.
- Datasets used:** A list of seven datasets with external links: KNMI Data Platform, Cloudnet, IAGOS, ICARE Server, EBAS, Epidemiological studies, and University of Birmingham Research Archive (UBIRA).
- DMP Authors:** A list of authors with their roles and a 'Remove' button for each:
  - Dimitrios Bousiotis (Member)
  - Jan Theunis (Member)
  - Cathrine Lund Myhre (Member)
  - Markus Fiebig (Member)
  - Richard Rud (you) (Owner)
  - martine.vanpoppel@vito.be (Member)
  - Vanessa Nogueira (Member)
  - Francis Pope (Earth and Environmental Sciences) (Member)
  - Lucia Mona (Member)

On the right side, there is a sidebar with navigation options: **FINALIZE**, **EXPORT**, and **START NEW VERSION**. At the top right, there are links for 'Start new DMP', 'FAQ', and language settings (EN).

\*DMP version 0: <https://argos.openaire.eu/explore-plans/publicOverview/ba44d55c-78d6-4e4d-b89c-4be616d149df>

# Data Management Plan

< Back

**DMP** **RI-URBANS**

Owner: Version 1 Edited: 17 March 2022

Grant agreement ID: 101036245

**DMP Authors**

- Jan Theunis Member **Remove**
- Francis Pope (Earth and Environmental Sciences) Member **Remove**
- Markus Fiebig Member **Remove**
- Cathrine Lund Myhre Member **Remove**
- Lucia Mona Member **Remove**
- martine.vanpoppel@vito.be Member **Remove**
- Dimitrios Bousiotis Member **Remove**
- Vanessa Nogueira Member **Remove**
- Richard Rud (you) Owner

**FINALIZE**

**EXPORT**

- PDF
- Document
- XML
- RDA JSON

**NEW VERSION**

**Invite**

Datasets used

- KNMI Data Platform
- Cloudnet
- IAGOS
- ICARE Server
- EBAS
- Epidemiological studies
- University of Birmingham Research Archive [UBIRA]
- EARLINET

+ Add Dataset

\*DMP version 0: <https://argos.openaire.eu/explore-plans/publicOverview/ba44d55c-78d6-4e4d-b89c-4be616d149df>

# | FAIR Data Management



**Findable**



*E.g. persistent identifiers like DOI's*



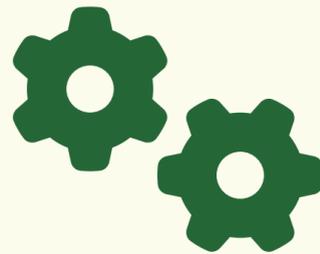
**Accessible**



*E.g. commonly used access protocols like direct download through http or streaming of data using opendap*



**Interoperable**



*E.g. using standardized vocabularies for describing the data, e.g. CF metadata conventions*



**Reusable**



*E.g. creative commons licensing of data and provenance information*

## **Why:**

- Requirement by the EU commission and research funding agencies in Europe and the US

## **As a data provider:**

- You will be ensured long term storage of data using commonly used standards and formats as well as distribution of the data through third party actors like WMO WIS, EOSC and others.



# Thank you!

