

Ref. Ares(2025)10387608 - 27/11/2025

EU FAW READY

D9.3 Data Management Plan 24/11/25

Lead beneficiary: Pensoft Publishers
Author/s: Bilyana Avtova, Nikolay Mehandzhiyski

SUBJECT TO CHANGE

Funded by the European Union

EUFAWREADY receives funding from the European Union's Horizon Europe Research and Innovation programme under Grant Agreement No. 101212676.

Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the EU nor the European Research Executive Agency can be held responsible for them.

Prepared under contract from the European Commission
Grant agreement No. 101212676
EU Horizon Europe Research and Innovation Action

Project acronym: EUFAWREADY

Project full title: Enhancing Europe's readiness for managing fall armyworm, an invasive pest threat

Project duration: 1 June 2025 – 31 May 2029

Project coordinator: Anne-Nathalie Volkoff, INRAE

Call: HORIZON-CL6-2024-FARM2FORK-03

Deliverable title: D9.3 Data Management Plan

WP responsible: WP9

Nature of the deliverable: Report

Dissemination level: Public

Lead partner: Pensoft Publishers

Recommended citation: APA

Due date of deliverable: 30/11/2025

Actual submission date: 26/11/2025

© 2025. This work is openly licensed via a CC-BY 4.0

Deliverable status:

Version	Status	Date	Author(s)
1.0	Draft	17.11.25	Bilyana Avtova, Nikolay Mehandzhiyski
1.1	Draft revision	17.11.25	Baptiste Dauphin
2.0	Final version	24.11.25	Bilyana Avtova,

SUBJECT TO CHANGE

Nikolay Mehandzhiyski

SUBJECT TO CHANGE

Table of Contents

Key Takeaway Messages 5
Summary 5
List of abbreviations 5
1. Introduction 6
2. Data summary 7
3. FAIR data 25
3.1 **F**: Making data **F**indable 25
3.2 **A**: Making data **A**ccessible 27
3.3 **I**: Making data **I**nteroperable 28
3.4 **R**: Making data **R**eusable 29
4. Allocation of resources 29
5. Data security 30
6. Intellectual property rights (IPR) management 30
6.1 Background and access rights 30
6.2 Ownership of results 31
6.2.1 Rights of the granting authority 31
6.3 Protection 32
6.4 Ethics 32
7. Data Management plan follow-up 34
8. References 34
9. Annex 35

SUBJECT TO CHANGE

Key Takeaway Messages

- Deliverable 9.3 Data Management Plan (DMP) provides an overview of EUFAWREADY's data, both data that the consortium anticipates to generate within the project's scope, as well as data that they might reuse from third parties (or sometimes within the consortium itself).
- The DMP provides a set of recommendations for all EUFAWREADY partners to follow when they collect, deposit, generate, or re-use data. The objective of all recommendation is to respect the FAIR principles, and consider any other ethical or legal aspects of data management.

Summary

To ensure the findability, accessibility, interoperability, and reusability of its research data, EUFAWREADY has developed a Data Management Plan (DMP), that constitutes Deliverable 9.3 The DMP is built on the principles of open science, data, and sources, as pre-established in the project's Grant Agreement. It is further enriched by the input of the EUFAWREADY consortium, which they gave through the circulation of a Data Management Plan Questionnaire (See Annex). The document begins with an Introduction (Chapter 1), followed by an overview (Chapter 2) of the anticipated data that will be generated within the project (Table 1), as well as that which might be reused within the project (Table 2). Chapter 3 expands on the FAIR Principles and included recommendations for the consortium.

The document equally addresses more administrative sides of the project, such as resource allocation (Chapter 4), Data security (Chapter 5), Intellectual Property Rights (Chapter 6), and outlines the use of a Data Management follow-up in all project deliverables and milestones, where relevant (Chapter 7).

List of abbreviations

EU	European Union
EC	European Commission
DOI	Digital Object Identifier
FAIR	Findable, Accessible, Interoperable, Reusable
GDPR	General Data Protection Regulation
WP	Work Package
TBD	To be determined
IPR	Intellectual Property Rights

SUBJECT TO CHANGE

GDPR	General Data Protection Regulation
N/A	Not applicable
GIS	Geographical Information System
ORE	Open Research Europe

1. Introduction

As a Horizon Europe project, EUFAWREADY complies with the European Union's principles of open science, highlighting knowledge exchange, open collaboration, and accessibility throughout the scientific process. Throughout and beyond its lifetime, EUFAWREADY will abide by the principles of findable, accessible, interoperable, and reusable (FAIR) data. Such an approach ensures that EUFAWREADY's results are made widely available, and remain accessible beyond the project's end, strengthening its impact. Ensuring that the consortium has agreed upon guidelines, and procedures ensures the project's successful implementation.

The objectives of the following document are to: 1) present a preliminary record of EUFAWREADY's anticipated datasets, 2) support the data management life cycles for all data collected, processed or generated by the project, 3) outline the proper guidelines for data management in accordance with open science principles, 4) describe how data will be handled (how it will be exploited or made available for re-use) and stored, 5) propose licensing schemes.

The project's Data Management Plan (DMP) is a living document with two planned updates, at Month (M) 18 and 36, and hence its current version as outlined in D9.3 is present an anticipatory framework. The document has been developed in accordance with open science principles outlined int he Grant Agreement (GA) and with the help of a DMP questionnaire which has been circulated among consortium members, allowing each organisation to provide information into their anticipated datasets, with their corresponding practices, and needs.

SUBJECT TO CHANGE

2. Data summary

Throughout its lifespan, EUFAWREADY will collect, generate and reuse data, in support of the following objectives, and more:

- Identifying the key stakeholders and gathering input from them
- Identifying distinct genetic adaptive traits of FAW
- Establishing the optimal pheromone trap model and pheromone lure for each EU region
- Developing an automatic FAW recognition and counting system
- Assessing the presence of natural enemies of FAW in the EU
- Developing agroecological and conservation approaches
- Identifying novel semiochemicals
- Testing innovative roles of entomopathogenic fundi (EPF) as plant resistance inducers
- Assessing the complementarity of entomopathogenic nematodes (EPN)

EUFAWREADY will rely on a both self-generated and reused data. Table 1 lists the data that partners currently anticipate generating within the project, whilst Table 2 gives a preliminary outline of datasets the consortium might re-use. Both tables are subject to change and will be updated during the DMP's first update, in M18. Additionally, whilst most of the data expected to be reused comes from external parties, as can be seen in Table 2, some of it will be internal, reusing data produced by members of the consortium.

The majority of the generated data is quantitative data, whilst the predominant methods of generating data seem to be through laboratory-based methods (such as bioassays, lab experiments, physiological measurements, etc.) field-based data collection, and modelling and data processing. There is, predominantly, little sensitive and personal data being generated, however where there is datasets will either be closed or redacted accordingly, or the partners will obtain permission to disclose said information. In the case, for example, of **dataset 45**, the objective is to analyse the acceptability of farmers regarding different levers contained in the IPM Toolbox, and aggregate them according to farmer profiles. Thus, the dataset itself will remain closed as it contains personal data. In the case of **dataset 50**, the stakeholder mapping being produced in WP1, some personal data will be collected through a survey. The survey, made on EU Survey, includes a disclaimer informing participants to what ends their data will be used, how it will be stored, that they may withdraw at any time, and alternatively, their contact information will be used for follow ups or to invite them to future EUFAWREADY activities. The data is stored on EUFAWREADY's SharePoint, which is GDPR compliant, and is only accessible to consortium members.

In Table 1, when addressing the possible users of the dataset, EUFAWREADY maintain the Target Groups list, as stated in the EUFAWREADY Description of the Action (DoA).

*- Researchers/Academia (**Ac**)*
*- Plant breeding companies (**Breed**)*
*- Citizens/Consumers (**Ci**)*

SUBJECT TO CHANGE

- *Knowledge brokers (advisers/trainers/extension services) (**Edu**)*
- *Farmers & growers (agricultural/horticultural sector, **Fa**)*
- *Biocontrol Industry (**Ind**), National/regional phytosanitary services (**Phyto**)*
- *Policy makers (**Pol**)*

SUBJECT TO CHANGE

Table 1: Summary of the data EUFAWREADY anticipates generating

No	Name of the dataset	Contact	Task/WP	Generated via	Size	For mat	Type of data	Sens itive data	Pers onal data	Delivery	Metadata	Users	Access	Re-use
1	NGS	Kiwoong Nam	WP2	Sequence data	500 Gb	.fast q	Sequenc e data	No	No	Embargoe s until the publicatio n of the paper	Sample information	Ac	Open	HPC server
2	Resequencing dataset	Kiwoong Nam	WP2	Genetic variation data	100 Gb	.vcf	Genetic variation data	No	No	Embargoe s until the publicatio n of the paper	Sample information	Ac	Open	HPC server
3	EAG data	Mobolade Akinbuluma	WP2, WP4, WP8	Physiologica l measureme nts	TBD	.csv	Quantita tive data	No	No	After M36	None	Ac, Ind	Open	.csv, .r, .docx
4	Effect of microbials on larval host plant choice	Mobolade Akinbuluma	WP2, WP4, WP8	Bioassays	TBD	.doc x, .csv	Quantita tive data	No	No	After M36	None	Ac, Ind	Open	.csv, .r, .docx
5	Effect of microbials on adult mate choice	Mobolade Akinbuluma	WP2, WP4, WP8	Bioassays	TBD	.doc x, .csv	Quantita tive data	No	No	After M36	None	Ac, Ind	Open	.csv, .r, .docx

SUBJECT TO CHANGE

6	Effect of microbials on adult oviposition choice	Mobolade Akinbuluma	WP2, WP4, WP8	Bioassays	TBD	.docx, .csv	Quantitative data	No	No	After M36	None	Ac, Ind	Open	.csv, .r, .docx
7	Pheromone gland analysis	Mobolade Akinbuluma	WP2, WP4, WP8	GC and GC-MS	TBD	.xlsx, .csv	Quantitative data	No	No	After M36	None	Ac, Ind	Open	.csv, .r, .docx
8	Predictions	Emmanuelle Jacquin-Joly	T7.1	Modelling	TBD	.xlsx	Qualitative data	No	No	M36	None	Ac	Open	Materials and methods
9	SSR	Emmanuelle Jacquin-Joly	T7.1	Data processing	TBD	.xlsx	Quantitative data	No	No	M48	None	Ac, Ind	After commercial potential consideration	Materials and methods
10	Entomopathogenic fungi induced plant systemic protection against FAW	Meelad Yousef	T6.4	Laboratory research		.docx	Quantitative data	No	No	M48	TBD	Ac, Breed, Ind, Phyto, Pol	Open	Data
11	Compatibility between entomopathog	Meelad Yousef and	T6.2	Laboratory research	TBD	.docx	Quantitative data	No	No	M48	TBD	Ac, Breed, Ind,	Open	Data

SUBJECT TO CHANGE

	enic fungi and entomopathogenic nematodes to control FAW	Jullien Brillard									Phyto, Pol		
12	Recommended FAW monitoring trap	Ecobertura	T4.1	Field work, remote sensing	TBD	.docx, .xlsx	Quantitative data, digital	No	No	M36	TBD	Ac, Fa, Ind, Phyto	Intellectual property, commercial	?
13	FAW recognition algorithm	Ecobertura	T4.1, T4.3	Field work, modelling, data processing	TBD	.csv, .txt, .yalm, .pt	Quantitative data, Digital data	No	No	M48	TBD	Ac, Fa, Ind, Phyto	Intellectual property, commercial	?
14	Data_WP4_UNINE	Juan Traine	WP4	Lab bioassays, data processing, literature review	TBD	.docx, .xlsx, .csv	Qualitative data, Quantitative data	No	No	From December 2025 – 2029	None	Ac, Breed, Fa, Ind, Phyto	Open	?
15	Data_WP5_UNINE	Juan Traine	WP5	Lab bioassays, data processing,	TBD	.docx, .xlsx, .csv	Qualitative data, Quantitative data	No	No	2026 – 2029	N/A	Ac, Breed, Fa,	Open	?

SUBJECT TO CHANGE

				6literature review								Ind, Phyto		
16	Pheromone trap captures	Elisabete Figueiredo	WP4	Field work	TBD	.xlsx	Quantitative data	No	No	TBD	TBD	Ac	Open	?
17	Natural enemies of spodotera spp	Elisabete Figueiredo	WP5	Field prospection, lab work	TBD	.xlsx	Quantitative data	No	No	TBD	TBD	Ac	Open	?
18	Potential established and transient populations maps	UNIBS	T3.2	Modelling	~1GB	GeoTIFF, .pdf, .png	Quantitative data, GIS data	No	No	~M36: Embargo until publication in peer-reviewed journal	Coordinate system, Map extension, Data type, Data Unit of Measure	Ac, Edu, Phyto, Pol	No open access until embargo period conditions apply	None
19	Table of estimates of impact on human health	UNIBS	T3.4	Modelling	~10 MB	csv or MSexcel-compatible format	Quantitative data	No	No	~M48: Embargo until publication in peer-reviewed journal	List of tabled variables with explanation and units of measure (if applicable)	Ac, Edu, Phyto, Pol	No open access until embargo period conditions apply	None

SUBJECT TO CHANGE

20	Table of estimates on impact on environmental health (e.g.: Ecosystem Services flow variations)	UNIBS	T3.4	Modelling	~100 MB	csv or MSe xcel-com pati ble form at	Quantita tive data	No	No	~M48: Embargo until publicatio n in peer-reviewed journal	List of tabled variables with explanation and units of measure (if applicable)	Ac, Phyto, Pol	No open access until embarg o period conditi ons apply	None
21	List of plant health measures	UNIBS	T8.1	Policy review	~10 MB	csv or MSe xcel-com pati ble form at	Qualitati ve data	No	No	M12: Embargo until the milestone is reached	N/A	Ac, Phyto, Pol	No open access until embarg o period conditi ons apply	None
22	Plant health guidelines	UNIBS	T8.1	Data processing	~50 MB	.doc x	Qualitati ve data	No	No	M36: Embargo until the milestone is reached	N/A	Phyto, Pol	No open access until embarg o period conditi	None

SUBJECT TO CHANGE

												ons apply	
23	List of RAGT material	Laudinet	T7.6	TBD	100ko	.xls	TBD	No	No	End 2025	TBD	Ac	Restricted to the project members: confidentiality versus competition	TBD
24	Efficacy of native natural enemies as augmentative BC agents	Marc Kenis	T5.3	Experiments	TBD	.xls or .csv	Datasets, microdata, etc. / Parasitism rates	No	No	TBD	TBD	Ac	TBD	TBD
25	Classical biocontrol agent survey and safety tests	Marc Kenis, Y. Colmarez	T5.5	Surveys, experiments	TBD	.xls or .csv	Datasets, microdata, etc. / Parasitism rates	No	No	TBD	TBD	Ac	International standards, including Nagoya protocol	TBD

SUBJECT TO CHANGE

26	World database on parasitoids of FAW	Marc Kenis and INRAE	T5.1 and T5.5	Literature, field surveys and identification	TBD	TBD	Dataset	No	No	TBD	TBD	Ac	Open	TBD
27	Field assessment	Ene Leppik	WP7	Field work	TBD	.docx, .xlsx, .pdf, .mp4, .xml, .csv	Qualitative data, semi-quantitative data, Quantitative data	No	No	TBD	TBD	Ac	Open	None
28	Efficacy of green compounds against invasive FAW	Rajeev Roy	T7.3	Bioassays performed at a lab	TBD	.xlsx	Quantitative data	No	No	M36	Standard metadata	Ac	Open	TBD
29	Lyopellet and ddPCR Development Data	Rajeev Roy, Kelly Papapostolou, Konstantinos Mavridis	T4.5	Data from lab experiments on the creation and testing of ready-to-use lyopellets	TBD	.docx	Textual, internal lab reports	Yes	No	M24	Standard metadata	Ac	Open	The data can be re-used by other researchers or organizations

SUBJECT TO CHANGE

				and ddPCR assays										interested in developing similar qPCR/ddPCR assays. It is advised that users credit the original dataset creators when reusing the data
30	Economic data	Bettina Wenzel	T3.3	Literature review, assessment of statistical data	TBD	.xlxs	Semi-quantitative data	No	No	M42	TBD	Fa, Edu	Open	Sources will be given

SUBJECT TO CHANGE

31	Costs and benefits of plant health measures	Bettina Wenzel	T8.1	Literature review, assessment of statistical data, maybe surveys, calculations	TBD	.xlxs, .docx	Semi-quantitative data	No	No	M42	TBD	Fa, Edu	Open	Sources will be given
32	Costs and benefits of IPM tools	Bettina Wenzel	T8.2	Literature review, assessment of statistical data, maybe surveys, calculations	TBD	.xlxs, .docx	Semi-quantitative data	No	No	M42	TBD	Fa, Edu	Open	Sources will be given
33	Feedback from stakeholders	Bettina Wenzel	T8.2	Statekholder workshops	TBD	.xlxs, .docx	Qualitative data	TBD	Yes	M42	TBD	Fa, Edu	TBD	TBD
34	Evaluation of IPM tools	Bettina Wenzel	T8.2	Literature review, assessment of statistical data, maybe surveys, calculations, stakeholder workshops	TBD	.xlxs, .docx	Semi-quantitative data, Qualitative data	TBD	No	M42	TBD	Fa, Edu	Open	Sources will be given

SUBJECT TO CHANGE

35	Thermal tolerance	Isabelle Darboux	T2.3	Experimental o	TBD	.xlxs	Qualitative data, Quantitative data	No	No	TBD	TBD	Ac, Ind	Open	TBD
36	Metabarcoding sequences	Ogier, Brillard	WP5, WP6	TBD	TBD	TBD	Nucleotide sequences – rpoB gene	TBD	TBD	TBD	TBD	TBD	TBD	TBD
37	Trap tests results	FREDON	WP4	Field work	TBD	.xls	Qualitative data, Quantitative data	TBD	No	2027	None	NPPO	Closed – because of reglementary status of FAW in Europe	TBD
38	Pheromone tests results	FREDON	WP4	Field work	TBD	.xls	TBD	TBD	No	2026	None	NPPO	Closed – because of reglementary status of FAW	TBD

SUBJECT TO CHANGE

												in Europe	
39	Virus Isolate	ABCS	WP6	Experimental, bioassays and screening	TBD	.docx	Quantitative data	Yes: IP	No	M30	Lethal Concentration 50 (LC50) and Letal time 50 (LT50)	Fa, Ind	Product will be made accessible - composition and generation is IP	None
40	Efficacy microbials	Panos Milonas	T6.1	Lab experiments	TBD	.xlsx	Quantitative data	No	No	12 months after the end of the project	Yes	Ac, Edu, Fa, Ind, Phyto, Pol	Closed – IP commercial	None
41	Pheromone composition	Eirini Anastasaki	T4.2	Lab experiments	TBD	.xlsx	Quantitative data	No	No	12 months after the end of the project	Yes	Ac, Edu, Fa, Ind, Phyto, Pol	Closed – IP commercial	None
42	Maize resistant to FAW	Panos Milonas	T7.6	Lab experiments	TBD	.xlsx	Quantitative data	No	No	12 months after the	None	Ac, Breed	Closed – IP	None

SUBJECT TO CHANGE

										end of the project			comme rcial	
43	FAW parasitoids	Pus Wesis	T5.2	Literature review	TBD	.xlsx	Qualitati ve data	No	No	2026	None	Fa	Initially behind institut e fire-wall, open access on publica tion	N/A
44	FAW Field Counts	Pus Wesis	T5.2	Field work	TBD	.xlsx	Quantita tive data	No	Yes: grow ers nam es and addr esse s	2028	GPS co-ordinates for crops	Fa	Initially behind institut e fire-wall, open access on publica tion	N/A
45	Opinions of European farmers about Toolbox	Sabine Battegay	T8.3	Survey	TBD	TBD	Qualitati ve data	No	Yes: nam e and locat ion	M24-M48	TBD	Ac, Breed , Ci, Edu, Fa, Ind,	Closed – rules of person al data	TBD

SUBJECT TO CHANGE

												Phyto, Pol		
46	WP4_Ecobertura_ICIA	Fernando Pinacho, Ana Piedra-Buena	WP4	Field work	TBD	.docx, .xlsx, .jpg	Quantitative data, Semi-quantitative data	No	No	July 2026	N/A	Ac, Edu, Fa, Phyto	Open	TBD
47	WP5_ICIA	Ana Piedra-Buena	WP5	Lab/Semi-field work	TBD	.docx, .xlsx, .jpg	Quantitative data, Semi-quantitative data	No	No	December 2026 and onwards	N/A	Ac, Edu, Fa	Open	TBD
48	WP6_ICIA	Ana Piedra-Buena	WP6	Lab/Semi-field work	TBD	.docx, .xlsx, .jpg	Quantitative data, Semi-quantitative data	No	No	December 2026 and onwards	N/A	Ac, Edu, Fa	Open	TBD
49	WP7_ICIA	Eva Dorta, Ana Piedra/Buena	WP7	Lab/Semi-field work	TBD Ac, Edu, Fa	.docx, .xlsx, .jpg	Quantitative data, Semi-quantitative data	No	No	December 2026 and onwards	N/A	Ac, Edu, Fa	Open	TBD
50	Stakeholder database	Elena Ion	WP1	Survey	TBD	.xlsx	Qualitative data, quantitative data	No	Yes	Continuous	N/A	Internal use	Closed	N/A

SUBJECT TO CHANGE

Table 2: Summary of the data EUFAWREADY partners expect to reuse

No	Name of the dataset	Relevant task	Size	Format	Sensitive data	Personal data	Metadata	Access	Origin	Ownership	Licence	Re-use
1	Raw NGS data	WP2	1TB	.fastq	No	No	Sample information	Open	NCBI SRA	INRAE	No copyright	HPC
2	Contact information	T1.1	N/A	Text	N/A	Yes	Name, surname, email address	Closed (shared only with consortium members)	Partners, online	N/A	N/A	N/A
3	Coconut	T7.1	30GB	.sql	No	No	None	Open	Online resources	Steinbeck group at the Friedrich Schiller University Jena, Germany	CCO	N/A
4	Efficacy of entomopathogenic fungal strains against Noctuids	T6.4, T6.2, T6.1, T6.3	TBD	Laboratory collection	Yes	No	Restricted	UCO	TBD	UCO	TBD	TBD

SUBJECT TO CHANGE

5	Recommended FAW monitoring trap	T4.1	TBD	.docx, .xlsx	No	No	TBD	Closed	Previous filed experiments	Ecobertura	TBD	TBD
6	Meteorological data	T3.1, T3.2	~100GB	.csv, .nc (Depending on the data source)	No	No	Depending on the data source	Open	Reanalysis datasets or meteorological stations	Depends on dataset	Not defined yet	None
7	Phenotyping RAGT material	T7.6	TBD	.xls, .csv	No	No	TBD	Restricted to the project partners	Benaki Phytopathological Institute	RAGT	TBD	TBD
8	Existing and new developed IPM tools for FAW	T8.2	TBD	.xls, .csv	No	No	TBD	Open	Secondary data (literature review)	Open	TBD	TBD
9	Insecticide resistance status in invasive FAW	T4.5	TBD	.xlsx	No	No	Standard	Open	FORTH	FORTH	TBD	TBD
10	FADN data	T3.3, T8.1, T8.2	TBD	.xlxs	No	No	Given with dataset	Open	Acceptance agridata website	EC	TBD	TBD
11	FAO data	T3.3, T8.1, T8.2	TBD	.xlxs	No	No	Given with dataset	Open	FAOSTAT database	FAO	TBD	TBD
12	National statistics	T3.3, T8.1, T8.2	TBD	.xlxs	No	No	Given with dataset	Open	German Federal Statistical Office (Destatis)	Germany	TBD	TBD

SUBJECT TO CHANGE

13	Eurostat	T3.3, T8.1, T8.2	TBD	.xlxs	No	No	Given with dataset	Open	Eurostat website	EU	TBD	TBD
14	Thermal tolerance	T2.3	TBD	.xlsx	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

SUBJECT TO CHANGE

3. FAIR data

As a project operating within the Horizon Europe framework, and taking into account the ever-increasing volume of data, with all of its complexities, establishing a clear and standardised approach to the management of datasets within a project is key. For these reasons, EUFAWREADY will follow the FAIR Guiding Principles for scientific data management and stewardship, first published in 2016 in *Scientific Data*.

The FAIR principles seek to improve **F**indability, **A**ccessibility, **I**nteroperability and **R**euse of datasets by both internal and external stakeholders, equally supporting the ability of machines to interact with said data by creating consistent and structured guidelines.

This chapter will focus on what FAIR principles actually mean, and how EUFAWREADY plans to implement each one.

3.1 F: Making data Findable

As one of the key objectives of making data FAIR is ensuring that it can accurately reused, the first step in this process is being able to find the data. Ensuring that datasets are easy to find by both humans and machines is essential. Therefore, datasets must be described with machine-readable metadata, facilitating their automatic discovery. Ensuring that datasets are described with machine-readable metadata will enable automated systems to handle sorting and prioritisation tasks that otherwise require significant efforts from researchers.

EUFAWREADY will publish its datasets with metadata clearly stating the identifier of the data, and offering descriptive and structural information that provides a thorough representation of the data. With regards to structuring its metadata, EUFAWREADY will operate within standardised formats promoting FAIR principles. Choosing a standard best aligning with the specific type of data that is being handled is crucial when it comes to ensuring compatibility with other datasets in the same field and facilitating discovery.

EUFAWREADY has identified and proposes a number of suitable standards available for use based on each partner's specific data needs and preferences.

Recommendation #1

The EUFAWREADY consortium is invited to use one of the following metadata standards:

- Ecological Metadata Language (EML): widely used in the earth and environmental sciences, EML includes modules for the identification and citation of data packages, for the description of spatial, temporal, taxonomic and thematic extents of data, and research methods and protocols;

SUBJECT TO CHANGE

- DataCite Metadata: offers a standardised framework across disciplines;
- Darwin Core: providing a glossary of terms ensuring consistent terminology and data formats, Darwin Core is a body of standards that facilitate the sharing of biodiversity data

Recommendation #2

Should no particular metadata standard be applied then EUFAWREADY's datasets should be described by:

Necessary:

- Creator(s)
- Creation date
- Title
- Global persistent identifier
- Licence of use
- Embargo period
- Publisher
- Publication date
- Dataset description
- Input data/parameters used to generate the dataset
- Ontology-aligned keywords and meta-tags
- Horizon Europe funding; grant project name (Enhancing Europe's readiness for managing fall armyworm, an invasive pest threat), acronym (EUFAWREADY) and number (101212676).

Highly recommended:

- Version or subset
- Dataset language
- Metadata language
- Date of metadata creation
- Character encoding
- Format version

Identifiers and rich metadata alone is not sufficient to guarantee digital research data's findability on the internet. For this reason, EUFAWREADY will ensure that its (meta)data is registered, indexed and collectable in a searchable resource. This will be done by uploading finalised datasets to a trusted repository, in the case of this project it has been agreed upon to use Zenodo, offering search engines and indexing. Additionally, partners will make data accessible through automated workflows on the GBIF Data Portal and EBV Data Portal.

SUBJECT TO CHANGE

3.2 A: Making data Accessible

Once data has been found by the interested stakeholders, they must be informed about the additional regulations and processes related to its access. Accessibility in the realm of data management practices means ensuring that data and its related resources are readily available and easily obtainable to humans and machines alike. This means lessening barriers and restrictions that could obstruct access by depositing the data in a trusted repository, ensuring its (meta)data is retrievable by its identifier through the use of a standardised communication protocol and guaranteeing that the metadata is accessible, even after the availability of the data itself.

As a Horizon Europe project striving to maximise the impact of its outputs, and promote open science principles, EUFAWREADY will ensure that its research resutls are openly accessibly to the public. To accomplish this, project results will be published in an open and trusted repository (Zenodo).

Additionally, all EUFAWREADY peer-reviewed publications, where possible accompanied by underlying data, will be made fully available in open-access journals. Partners are especially encouraged to use publications venues such as Open Research Europe (ORE).

Recommendation #3

To guarantee accessibility to scientific publications, EUFAWREADY partners should:

- Deposit a machine-readable electronic version of the peer-reviewed paper, at the latest at the time of its publication
- Partners are encouraged to adopt innovative open science practice such as:
    - Early sharing of results through preregistration and preprints: partners can preregister their scientific research hypotheses and methodologies and provide preprints
    - Use of the following platforms:
        - Peer Community In (PCI): PCI is a non-profit, researcher-run platform offering free, open-access peer review services for scientific preprints
        - Research Ideas and Outcomes (RIO) Journal: RIO is a peer-reviewed and open access journal published by EUFAWREADY partner Pensoft Publishers. RIO supports research communication by publishing proposals, ideas and other outcomes of the research cycle, enhancing transparency and efficiency. Partners are encouraged to use RIO to provide access to less traditional outputs
        - Open Research Europe (ORE): ORE is an open access publishing venue for projects funded by the European Commission. ORE may be used both for the publication of scientific papers and for open peer review.
- Provide immediate open access via the repository under the Creative Commons Attribution license (CC-BY) or a license with equivalent rights;

SUBJECT TO CHANGE

    - The licence may exclude commercial uses and derivative works (e.g., CC BY-NC, CC BY-ND) for monographs and other long-text formats
- Should any other research outputs or tools and instruments be needed to validate the conclusions of the scientific publication, this should be indicated via the repository
- Even if there is no associated data, include a Data Availability Statement containing information on where the data can be accessed, ideally without having to refer readers to contacting authors in order to access said data

As previously mentioned, the consortium has expressed a preference in using Zenodo to deposit project datasets, especially as the project can ensure that it covers all FAIR data requirements, most importantly:

- A DOI can be issued for every published record on Zenodo
- Each record's metadata is indexed and searchable directly in Zenodo's search engine immediately after publishing
- Each record's metadata is sent to DataCite servers during the registration of the DOI, and is indexed there
- The metadata for both individual and record collections is harvestable using the standard, open, free, and universal OAI-PMG protocol by the record identifier and the collection name
- Authorisation is not necessary to retrieve metadata as it is publicly accessible and licenced under public domain

EUFAWREADY complies with the principle of making data 'as open as possible, as closed as necessary'. In case where it is necessary, access to specific datasets can be restricted, should a viable reason be provided. For example, should the dataset contain sensitive/personal information the dataset might be restricted, with the corresponding information being omitted, or closed. Table 1 summarises any datasets classified as restricted or closed. After evaluating the finalised data, project partners will determine whether it should be shared in an aggregated and/or anonymised form to protect sensitive and/or personal information.

3.3 I: Making data Interoperable

Once a data has been found and accessed, it is equally as important for datasets to be formatted and presented in a way that enables their interoperability, supporting their integration with analysis, storage, processing tools and workflows. Widely accepted knowledge representation languages, standard vocabularies, and links to relevant metadata will be included to ensure EUFAWREADY's datasets are compatible with others.

Recommendation #4:

EUFAWREADY partners are encouraged to follow the following principles to ensure data interoperability:

- To use a formal, accessible, and broadly applicable language for knowledge representation, such as the RDF extensible knowledge representation model, JSON LD, OWL, etc.

SUBJECT TO CHANGE

- To use vocabularies that are documented and accessible to anyone using the dataset, such as Darwin Core
- To be specific regarding a dataset's relationship to other datasets- to provide a qualified reference outlining the relationship between datasets, and to properly cite other (meta)data by specifying if one dataset expands on another, if additional datasets are necessary to complete the data, or if complementary information is stored in another dataset

3.4 R: Making data Reusable

As previously mentioned, EUFAWREADY's data will be made openly availably in the public domain using standard reuse licences to support the widest use possible by third parties, during and beyond the project's lifetime. All project data will be published with a standardised rich metadata to ensure that users can easily determine whether the data is useful for them in a particular context. This metadata will not only facilitate discovery but also describe the data's provenance, scope, limitations, generation process, technical details, related species, and more. EUFAWREADY metadata will additionally include licensing conditions that are clear to both machines and humans, in order to avoid ambiguity that could obstruct data reuse due to challenges in licence restriction compliance. Should additional documentation be relevant and necessary in order to analyse, validate and reuse data, said documentation – such as project reports, information on methodology, data cleaning, analyses, variable definitions, units of measurement, etc. - will be provided.

Recommendation #5:

To support data's reusability, EUFAWREADY partners are encouraged to:

- Provide a clear and accessible data usage licence to released data
- Describe the data with not only standardised metadata which supports discovery but also providing readme files or documentation which might be needed for data analysis, validation and reuse purposes, together with information on data provenance, scope, limitations, generation process, etc., such as:
    - Data origin
    - Data provider
    - Date of data retrieval
    - Licence of use
    - A URL or DOI for the original data
    - Description of the input data, including its format, structure, and content
    - Steps taken to clean and preprocess the data to ensure data quality and integrity

4. Allocation of resources

Managing data in accrodance with the FAIR principles includes certain costs that can be divided into two main categories: the first, includes article processing charges (APCs) for publishing in open-ac cess journals, whilst the second is related to potential fees for depositing the data in trusted open-

SUBJECT TO CHANGE

access repositories. As EUFAWREADY has agreed to move ahead by using Zenodo, which is supported by organisations like CERN and the EU's OpenAIRE program, and hence does not charge fees for users to upload and access research outputs.

5. Data security

As already established, all open access datasets completed within EUFAWREADY will be deposited in a trusted repository – Zenodo, which guarantees the dataset's long-term preservation. In the meantime, before the completion of a dataset, partners will store their incomplete datasets on their own servers, all of which have regular and/or automated backup systems in place. Partners will predominantly store their datasets on their institutional servers, that are password protected, and often accompanied by two-factor identification.

Recommendation #6:

To ensure the security of datasets, partners are encouraged to perform regular backup procedures and, when possible, confirm the Data Protection Officer (DPO) of their institution, and maintain ongoing communication with them.

6. Intellectual property rights (IPR) management

Intellectual Property Rights (IPR) are the rights given to a person over any creation of their mind, putting legal protections in place, such as: the rights of a person towards their writing, book, painting, sculpture, musical composition, film, computer program, game, etc. In the case of EUFAWREADY IRP would refer mainly to rights over research, writings, systems, etc.

By giving creators control over their work, IPR play an important role in the dissemination of research outputs, ensuring legal safeguards, and supporting commercial opportunities, exclusive usage of content, and recognition. IPR can be in the form of patents, copyrights, and trademarks.

IPR management in EUFAWREADY will be conducted in accordance with Article 16 of the Grant Agreement (GA) and chapters 8 and 9 of the Consortium Agreement (CA). IPR safeguards will be integrated in the project right from its beginning, already pre-established in the CA, in order to ensure the rightful and adequate protection of intellectual property.

6.1 Background and access rights

'Background' refers to any data, know-how or information, be it of tangible or intangible form or nature, including IPR, that is either held by the project partners prior to their accession to the project, and needed for the successful implementation or exploitation of results.

The project partners must give each other access to background that has been identified as necessary for the completion of the action. If said background is subject to rights of a third party,

SUBJECT TO CHANGE

then the partners involved must guarantee it is able to act in compliance with its obligations within the project.

In Attachment 1 of the CA, the consortium has outlined and agreed upon which background will be used within the scope of the project. Parters have also informed each other should any background have specific restrictions and/or conditions either for implementation or exploitation. More detailed information on access rights can be found in Annex 5, Article 16, of the GA.

6.2 Ownership of results

'Results' refers to any effect of the action – in other words anything produced within the scope of EUFAWREADY, be it of tangible or intangible nature, as well as any rights attached to it, including IPR.

As stated in section 16.2 of the GA, the ownership of the results produced within the project remains with the parties who produced said results, rather than with the granting authority.

Nevertheless, two or more parties can jointly own results if they have jointly generated them, and if it is not possible to either a) establish the respective contribution of each beneficiary, or b) separate them for protection purposes. The allocation and terms of exercise of said joint ownership must be agreed upon in writing by both parties. More detailed information on this can be found under Annex 5, Article 16, of the GA.

6.2.1 Rights of the granting authority

Non-sensitive information related to the project, as well as materials and documents received from the project partners may be used by the granting authority (such as deliverables, summaries for publications, audio-visual materials, etc.) for purposes surrounding policy, information, communication, dissemination and publicity. This applies throughout and beyond the duration of the project.

The right to use the consortium's materials, information and documents is given as a royalty-free, non-exclusive and irrevocable licence, including the following rights:

- The use for its own purposes: The granting authority may use said materials to make them available for persons and entities that work for it or any other EU service (institutions, bodies, offices, agencies, etc.) or EU Member State institution or body.
- Distribution for the public: The granting authority may publish results as hard copies and in electronic or digital format, publications on the internet, be in as a downloadable or non-downloadable file. Results may be broadcasted by any channel, public display or presentation, and communicated through press information, services, or included in accessible databases or indexes.
- Editing or redrafting: Materials may be shortened or summarises, other elements such as meta-data, legends, or other graphic, visual or audio elements may be added, and similarly parts, such as audio or video files, may be extracted; materials can be divided into parts or used in a compilation.

SUBJECT TO CHANGE

- Translation
- Storage: Be it in paper, electronic or other form
- Archiving
- The right to authorise third parties: The granting authority may authorise third parties to act on its behalf or sub-license third parties to complete any of the previously stated activities, should that be for the purposes of the information, communication and publicity activity of the granting authority
- Processing: The granting authority may analyse, aggregate materials, documents and information received, producing derivative works

Should the materials be subject to moral or third-party rights, EUFAWREADY must comply with their obligations (obtaining the necessary licences and authorisations from the parties involved.

6.3 Protection

The right to data protection is a core principle of the EU Charter of Fundamental Rights and the Treaty on the Functioning of the European Union, promising individuals right to privacy 'by providing them with control over the way information about them is collected and used' (European Commission, 2021).

If any deliverable contains EU classified information, it must be submitted according to special procedures agreed with the granting authority, and EUFAWREADY partners must always process personal data in compliance with the applicable EU, international and national law on data protection.

When handling or generating data, all consortium members must ensure that personal data is:

- Processed in a lawful, fair and transparent manner in relation to its subject
- Is collected for explicit, legitimate and specified reasons and never processed in a manner incompatible with those
- Relevant and limited to only what is necessary for the purposes that have been stated
- Accurate and current
- Is stored in a way which allows for the identification of the data subject for a period only as long as necessary for the purposes for which the data is processed
- Processed in ways ensuring its appropriate security

Additionally, within the scope of the project, and as stated in section 1.2.7 of the GA, General Data Protection Regulation (GDPR) in EUFAWREADY will be handles by project partner Highclere Consulting (HCC).

6.4 Ethics

In any activity funded by the Europea Union, ethics are a fundamental part of research at all stages, from start to finish, and adherence to ethical standards is vital. All actions within the scope of the project must be carried out in compliance, a) with ethical principles, including ethical standards of

SUBJECT TO CHANGE

research integrity, and b) EU, international and national law, including the EU Charter of Fundamental Rights and the European Convention for the Protection of Human Rights and Fundamental Freedoms and its Supplementary Protocols. Should there be any ethics issues, the project will follow the guidance provided in the EC's Ethics-Self Assessment Guidelines.

EUFAWREADY must adhere to the principle of proportionality, the right to privacy protection of personal data, physical and mental integrity of persons, non—discrimination, and the need to ensure environmental and human health protection at the highest levels. Personal data that is collected within the project will be mostly used for communication and dissemination purposes (WP9 and WP10), following GDPR. Information gathered in WP1, such as the identification of key stakeholders and their input, gathered through webinar, workshops, or recorded meeting, will always gather consent. Vulnerable groups are not going to be involved, and thus no physical or psychological interventions are planned.

Regarding the use of animals in the project, experiments will ensure to use only the minimum numbers of organisms requires for reliable results, and all animals used across work packages will be held in optimised laboratory conditions to ensure the maintenance of their health.

Regarding the use of Artificial Intelligence (AI), which will be employed in WP4 (YOLO family algorithms) for the purposes of automatic FAW adult recognition. The YOLO family algorithms have been selected as they are highly accurate and transparent in decision making. Still, all data gathered this way will be anonymised, encrypted, and uses will be provided with control options.

Additionally, EUFAWREADY will be in compliance with Nagoya Protocol, which is an international agreement providing legal frameworks for the fair and equitable sharing of benefits that arise from the use of genetic resources and their associated knowledge.

Considering the project's scale, the number of partners and countries involved, as well as the range of ethical questions, as stated in the GA, and in Work Package (WP) 11, an Ethics Advisor has been appointed in M1 of the project, who will advise and assist the consortium of the full extent of the ethical framework that the project will exist within, and how to best navigate it and address any possible issues.

More detailed information can be found in Annex 6, Article 14, and in sections 4.1 and 4.2 of the GA.

SUBJECT TO CHANGE

7. Data Management plan follow-up

EUFAWREADY includes a designated "Data Management plan follow-up" including a template of the following tables, in its Deliverables and Milestones templates:

Table X: Main information regarding the data produced for this deliverable, where it is stored and the specific rules to respect concerning access, publication and FAIR principles.

No	Dataset name	Open data	Closed data	Means of dissemination	Maximum delay before access	Dataset access
1						

Table X: Main information regarding potential Intellectual Property protection or GDPR issues.

No	Dataset name	Owner	Name of the current contact	IPR issues	Use of third-party	Restrictions on data sharing (Y/N)

This intends to facilitate the collection of information of data generated and used within the project. By including these tables at the end of every Deliverable and Milestone report, the partners have an opportunity to immediately provide information on the datasets used in the scope of the deliverable's creation.

The tables help to document the project's datasets in relation to accessibility, dissemination and, compliance requirements. The first table concentrates on whether datasets are will be open or closed, how they will be shared, what the timeframe before access is granted is, and under which conditions in can be accessed. The second table focuses on IPR and third-party issues, providing a space to signify should there be any IPR issues, or restrictions on data sharing.

The completion of both tables ensures a transparent and compliant management of data.

8. References

European Commission. (2021, July 5). *Ethics and data protection: Guidance note for applicants and beneficiaries under Horizon Europe* (DG Research & Innovation). https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ethics-and-data-protection_he_en.pdf

SUBJECT TO CHANGE

9. Annex

EUFAWREADY Data Management Plan Questionnaire

This questionnaire aims to collect information about the various types of data that EUFAWREADY members will generate or store. Based on your feedback, a Data Management Plan (DMP) will be created to: 1) document the ownership, licensing and use of the project data; 2) describe the metadata; 3) store safely and enable subsequent use of the research data. The DMP will also define the datasets to be published for open use and the chosen trusted repository. It is a living document with two planned updates in M18 and M36.

There are 10 questions in this survey (approx. ~20min) and it is vital that each partner organisation provides as detailed a response as possible, as this will guide the project's data management practices.

There are 15 questions in this survey.

EUFAWREADY Data Management Plan Survey

We realise you may not yet have exact answers to some of these questions. Please feel free to give us your preliminary estimate, which you can modify/update on your demand when needed or during the mandatory DMP updates before the end of the project (M18 & M36).

In the current DMP, we will clarify that the information it contains is based on an initial data mapping and is subject to change in order to reflect the project's development and arising data needs.

1. First and last name *

Please write your answer here:

SUBJECT TO CHANGE

2. Organisation/institution *

Check all that apply

Please choose **all** that apply:

- [ ] INRAE
- [ ] INRAE Transfert
- [ ] Ecobertura
- [ ] Volcani Centre
- [ ] Sapir College
- [ ] University of Amsterdam
- [ ] University of Brescia
- [ ] University of Cordoba
- [ ] ICIA
- [ ] CABI
- [ ] Pensoft
- [ ] Fredon
- [ ] AGPM
- [ ] AgriOdor
- [ ] Benaki Phytopathological Institute
- [ ] Jeju International Animal Research Centre
- [ ] Highclere Consulting
- [ ] New Zealand Institute of Plant and Food Research
- [ ] University of Neuchatel
- [ ] School of Agronomy
- [ ] Julius Kuhn Institute
- [ ] Foundation for Research and Technology
- [ ] ANSES
- [ ] Andermatt Biocontrol
- [ ] RAGT 2N

Questions 3 and 4 concern the data you will **generate**.

SUBJECT TO CHANGE

3. Please provide the following provisional information for your **generated data**:

1. **Name of the dataset**
2. **Name of the generator**: name of the person who will generate this data.
3. **Relevant task**
4. **Generated via**: for example, field work, modelling, data processing, remote sensing, literature review, policy review, interview, surveys.
5. **Size**: a rough estimate only if you know.
6. **Format**: for example, .docx; .xlsx; .pdf; .mp4; .xml; .csv.
7. **Type of data**: for example, qualitative data; semi-quantitative data; quantitative data; analogue data; digital data; GIS data.
8. **Sensitive data**: Yes/no. If yes, please specify, for example, racial, political, ethical, health, and more here (https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/legal-grounds-processing-data/sensitive-data/what-personal-data-considered-sensitive_en).
9. **Personal data**: Yes/no. If yes, please specify, for example, name, surname, address, email, IP address, location data.
10. **Delivery**: a rough estimate of a timeline. If there is an embargo period, specify why and how long it will apply.
11. **Metadata**: what metadata will be accompanying your datasets.
12. **Users**: to whom they might be useful. Including but not limited to: **Research & Academia, Plant breeding companies, Citizens/Consumers, Knowledge brokers (advisers/trainers/extension services), Farmers & growers, Biocontrol industry, Nationa/regional phytosanitary services, Policy-makers...**

SUBJECT TO CHANGE

13. **Access**: will they be open access? If not, please indicate the reasons, for example, ethical, rules of personal data, intellectual property, commercial, privacy-related, security-related, contract.

14. **Re-use**: potential documents or tools needed to re-use or validate the data.

Please fill in at least one answer

	Dataset 1	Dataset 2	Dataset 3	Dataset 4	Dataset 5
Name of the dataset					
Name of the generator					
Relevant task					
Generated via					
Size					
Format					
Type of data					
Sensitive data					
Personal data					
Delivery					
Metadata					

SUBJECT TO CHANGE

	Dataset 1	Dataset 2	Dataset 3	Dataset 4	Dataset 5
Users					
Access					
Re-use					

This question concerns the data you will **generate**.

4. Would you consider anonymising your **generated datasets** and publishing them in an aggregated form so as to not disclose private information?

If yes, please specify to which dataset(s) that would apply. If not, please explain why. *

Choose one of the following answers

Please choose **only one** of the following:

- ◯ Yes
- ◯ No
- ◯ Not relevant

Make a comment on your choice here:

This question concerns the data you will **generate**.

SUBJECT TO CHANGE

Question 5 concerns the data you will obtain from elsewhere and **reuse**.

SUBJECT TO CHANGE

5. Please provide the following information for the **existing data you will reuse**:

1. **Name of the dataset**
2. **Relevant task**
3. **Size**
4. **Format**: for example, .docx; .xlsx; .pdf; .mp4; .xml; .csv.
5. **Sensitive data**: Yes/no. If yes, please specify, for example, racial, political, ethical, health, and more here (https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/legal-grounds-processing-data/sensitive-data/what-personal-data-considered-sensitive_en).
6. **Personal data**: Yes/no. If yes, please specify, for example, name, surname, address, email, IP address, location data.
7. **Metadata**: the metadata accompanying your datasets.
8. **Access**: open/restricted/closed access.
9. **Origin**: what is the origin of the data?
10. **Ownership**: who owns the data you will reuse?
11. **Licence**: under what licence can you use the data? (Similar to a software license, a data license defines how others may use data that you have created or own and have made available—such as through a data repository.) You can find out more about data licences here (https://book.the-turing-way.org/reproducible-research/licensing/licensing-data)
12. **Re-use**: potential documents or tools needed to re-use or validate the data.

ℹ Please fill in at least one answer

SUBJECT TO CHANGE

	Dataset 1	Dataset 2	Dataset 3	Dataset 4	Dataset 5
Name of the dataset					
Relevant task					
Size					
Format					
Sensitive data					
Personal data					
Metadata					
Access					
Origin					
Ownership					
Licence					
Re-use					

This question concerns the data you will obtain from elsewhere and **reuse**.

Questions 6-10 concern your **data management practices**.

SUBJECT TO CHANGE

6. Please provide a brief summary of your **institutional data management practices**, specifying:

1. **Data location**: where and how data will be stored, for example, institutional server or web hosting.

2. **Server location**: EU or non-EU; compliant or not-compliant with applicable data protection rules (for example, GDPR).

3. **Backup procedures**: type of backup procedures and their frequency.

4. **Protection**: how data security is ensured, for example, password or two-factor authentication.

5. **Responsible**: name the person from your team who will bear primary responsibility for data management and serve as a contact person if questions arise. *

Data location	
Server location	
Backup procedures	
Protection	
Responsible	

This question concerns your **institutional data management**.

SUBJECT TO CHANGE

7. Do you follow a specific naming convention? (e.g., Projectname_month_year_datasetname_version)

If yes, please specify. *

Choose one of the following answers

Please choose **only one** of the following:

- ◯ Yes
- ◯ No

Make a comment on your choice here:

This question concerns your **data management**.

SUBJECT TO CHANGE

8. Do you use any standard metadata vocabulary (https://www.getty.edu/publications/intrometadata/glossary/), standards (https://www.dcc.ac.uk/guidance/briefing-papers/standards-watch-papers/what-are-metadata-standards) or methodologies when creating your datasets? You can find the EU's guidelines for ensuring quality in open data and metadata here (https://data.europa.eu/en/academy/guidelines-ensuring-quality-open-data-and-metadata?).

If yes, please specify. *

Choose one of the following answers
Please choose **only one** of the following:

- ◯ Yes
- ◯ No

Make a comment on your choice here:

This question concerns your **data management**.

SUBJECT TO CHANGE

9. Will you be using standard vocabularies for all data types present in your data set, to allow inter-disciplinary interoperability?

If yes, please specify. *

Choose one of the following answers
Please choose **only one** of the following:

- ◯ Yes
- ◯ No

Make a comment on your choice here:

This question concerns your **data management**.

SUBJECT TO CHANGE

10. Can you identify potential obstacles (e.g., technical, social, policies) that would prevent delivering FAIR data during EUFAWREADY's lifetime and beyond? Information on FAIR data here (https://www.openaire.eu/how-to-make-your-data-fair).

If yes, please specify which dataset(s) you have in mind and provide a brief description as to why it might be problematic.

*

Choose one of the following answers
Please choose **only one** of the following:

◯ Yes
◯ No

Make a comment on your choice here:

This question concerns your **data management**.

Any additional comments?

Please write your answer here:

SUBJECT TO CHANGE

Thank you for filling in EUFAWREADY's data management questionnaire!

Submit your survey.
Thank you for completing this survey.

SUBJECT TO CHANGE