



Data Management Plan & Support Pack

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Abstract

This deliverable contains the Data Management Plan (DMP) of the AgroFossilFree project along with the corresponding Support Pack that provides recommendations and guidelines to partners on how to collect, generate, manage and re-use the AgroFossilFree data. More specifically, this document is a report that specifies how research publications and data will be collected, processed, monitored, catalogued, and disseminated during the project lifetime, as well as after the end of the project. It also includes a Support Pack with guidelines aimed at the project coordinator and the partners, explaining how they should practically apply the guidelines during their research activities and the data collections (stakeholders' requirements about FEETS information, which software tools and services they should use, and how they can align the project requirements with their institutions' standard practices and systems).

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1. Introduction

Having free and open access to scientific publications and research data is usually crucial for researchers that need to access them, in order to base their work on them and make the next step in their research field, instead of having to duplicate existing experiments and research work. However, scientific publications are usually accessible only through commercial publishers and accompanied by an access fee, which needs to be paid either by the researcher's institutional library (as an annual subscription fee or on a request basis) or by the researcher himself (in case the institutional library does not have an agreement with the specific publisher). At the same time, research data are not always accessible, as the publication of research data is not common even for institutional repositories and as a result, such data remain stored in offline locations, such as the hard disks and other storage solutions used by the researchers. This issue was not only due to the fact that researchers are not aware of specific solutions available for the storage and preservation of research data, but also due to the (usually) huge size of research data which renders commercial data sharing solutions as inappropriate for the specific purpose.

This situation was noticed by the European Commission (EC) and it was decided that action should be taken for ensuring that at least research publications and data that have been funded through programmes of the EC will be publicly available to all stakeholders. The first steps were taken in the context of the Open Access Pilot of the FP7 funding program, where the design and implementation of an Open Access Plan by projects funded through the FP7 programme was optional, followed by the Horizon 2020 programme in which the Open Access and Data Management Plan was a mandatory part of the proposals.

In the context of the Horizon 2020 program, the EC published a document titled "Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020". The document clearly describes the need that led to the mandate for open access to scientific publications, research data and their associated metadata that have been produced under funding from the Horizon 2020 programme. At the same time, the document states the European Commission's view on this aspect "information already paid for by the public purse should not be paid for again each time it is accessed or used, and that it should benefit European companies and citizens to the full". According to the latest developments (Open Research Europe), the EC open access publishing platform have been launched recently, in order to provide beneficiaries with a venue to publish their results in full compliance with the open access policies.

In this context, this document provides the plan for the management of research outcomes (and more specifically, the research publications and data) that will be produced during AgroFossilFree lifetime. It aims to ensure that the research activities of the project are compliant with the H2020 Open Access policy and the recommendations of the Open Research Data pilot. In this context, the project's Data Management Plan (DMP) described in this document will outline how research data will be collected, processed or generated within the project; what methodology and standards will be adopted; whether and how this data will be shared and/or made open; and how this data will be curated and preserved during and after the project. The DMP will explain how the AgEnergy platform could be connected with the European EIP-Agri platform, as well as other thematic and global aggregators, such as AGINFRA¹, FAO AGRIS², European Open Science Cloud and OpenAIRE³, CIARD RING⁴, and GODAN⁵.

¹ <http://aginfra.eu>

² <http://agris.fao.org/>

³ <https://www.openaire.eu>

⁴ <http://ring.ciard.net>

⁵ <http://www.godan.info>

2. Methodology

The first step towards the implementation of the data management plan for AgroFossilFree is the identification and analysis of the collected and generated data, referring to the data that needs to be covered by the specific data management plan. A data analysis needs to take place, focusing on the data types and formats, as well as the existing licensing options used, in order to allow the data management plan to meet any specific requirement that exists due to the nature or the license applied on data.

Our research took place in two different phases: The first phase aimed at the identification, extraction, organisation and analysis of all related information through a desktop research of the AgroFossilFree network that could contribute useful information about the existing Fossil-Energy-Free Technologies and Strategies (FEFTS) from related scientific papers, research projects, commercial products, training material and financing tools. This phase provided the landscape and the generic framework in which further analysis would take place and prepared the ground for elaborating on more detailed information to be provided through the second phase of this work.

The aim of the second phase was to extract more detailed and refined information on the topics identified in the previous step. In this context, in collaboration with the project partners, an in-depth analysis of the challenges to be faced when trying to access published data or share own data and the needs in terms of support for publishing data collected from local communities was conducted, according to the Open Access mandate of the EC.

Through this process we aimed to map the landscape of data in the specific context of the AgroFossilFree project and to obtain a better understanding on the context in which the data management plan would function. On top of that, the Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020⁶ were used for ensuring that the project's data management plan will be according to the EC guidelines, meeting all latest and updated requirements. These guidelines were adapted with the inclusion of domain-specific information, such as the use of thematic repositories and aggregators for scientific publications and research data.

3. AgroFossilFree Data sources

The analysis of the available data sources of the AgroFossilFree community (project partners, related projects and the related networks) and their involvement on the collection, processing, generation and re-use of the content is fundamental for understanding the AgroFossilFree content.

3.1 AgroFossilFree partners and landscape

Centre for Research & Technology Hellas (CERTH)

CERTH, as the coordinator of the project, is responsible for the adoption of the H2020 Open Access guidelines to the project, the determination of the appropriate guidelines for project partners, the definition of a set of recommendations for the data collection and generation, and the preparation of the guidelines for each partner in terms of the data creation and dissemination. In terms of data collection and generation, CERTH team is responsible for preparing the corresponding project reports and deliverables, scientific papers that illustrate the project key findings, as well the collection and upload of FEFTS information from academics, industry and a desk research.

Aarhus University (AU)

The main goal of AU is to define the guidelines on how to organise all the national and transnational events and prepare templates that obtain all the information gathered during these events. During this organisation, there is a need to specify the target groups respecting their personal data and receiving the essence of the discussions with the participants without any sensitive data use.

⁶ https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf

Agricultural University of Athens (AUA)

AUA team is responsible for setting up the methodology and the creation of the tools (questionnaires, surveys) that will guide the project partners to collect the FEFTS information from the targeted stakeholders' groups. Its main goal is to define the guidelines on how to specify the target groups, how to organise events for the data collection and how to conduct interviews with individuals and groups. One of the most important contributions of AUA is the design of the survey questionnaire that captures the farmers' needs and interests on FEFTS and analyse the results of the survey in the 8 hubs. In addition, AUA will conduct a literature review of the current energy use status in European agriculture and also conduct the farmers' survey in Greece.

Instytut Uprawy Nawożenia i Gleboznawstwa, Państwowy Instytut Badawczy (IUNG-PIB)

IUNG is an agricultural-related institute that is highly involved with bio-economy mostly under rural context. In AgroFossilFree, IUNG will be responsible for the identification of European and national research projects on energy use in agriculture, but also for FEFTS inclusion in the AgEnergy Platform.

Comite Europeen des groupements de constructeurs du Machinisme Agricolecema (CEMA)

CEMA represents the European agricultural machinery industry, including large multinational companies and a number of European SMEs active in this sector. Since CEMA includes more than 4,500 manufacturers, is key project partner with direct access to the industry that will collect and upload information about FEFTS.

European Conservation Agriculture Federation (ECAAF)

ECAAF is the association of conservation agriculture practices in Europe and represents respective associations at the national and European levels, but also individual expert scientist. Main responsibility for the ECAAF team is to cover all aspects of AgroFossilFree related to carbon compensation through agricultural soils and collect respective FEFTS to upload them into the platform. Additionally, ECAAF will distribute to its network the call for uploading descriptions for innovative and well-known FEFTS.

RESCOOP

REScoop is the European federation for groups and cooperatives of citizens for renewable energy and energy efficiency, covering a growing network of 1,250 RES cooperatives that represent the interests of 350,000 European citizens. The main target of RESCOOP in AgroFossilFree is the introduction of its objectives to this vast amount of stakeholders, assist on gathering FEFTS for the AgEnergy Platform, co-organise the Brokerage event in Brussels and lead the policy guidelines production.

Landbrug & Fodevarer F.M.B.A (L&F)

L&F is a private non-profit advisory; test and research association owned by 30,000 Danish farmers. It is an organization intensively covering all steps of the value chain of Denmark's agriculture and food sector. Its team will be mostly involved into the collection of users' (farmers and consultants') requirements about the FEFTS through the survey conduction and the workshops organisation, as well description of technologies that are already in place to be added in the AgEnergy Platform.

Confederazione Generale dell' Agricoltura Italiana (Confagricoltura)

Confagricoltura is the most important collective organization of Farmers in Italy. It is a private confederation of associations of farmers, representing 60% of the Country' territory, 70% of the Agrifood turnover and 34% of the Italian farmers. Confagricoltura will bring the community to collect the farmers' needs and interest through the farmers' survey and workshops organisation. In addition, Confagricoltura will add as many FEFTS as possible in AgEnergy Platform and mostly consume the platform's information through its members.

Lubelski Ośrodek Doradztwa Rolniczego w Konstawoli (LODR)

LODR provides agricultural consultancy covering activities in the field of agriculture, rural development, agricultural markets and rural households. LODR is a subordinate unit of the Ministry of Agriculture and Rural Development and employs 326 employees, including 250 agricultural advisors. Mostly the team focuses on collecting the farmers' needs through the farmers' survey and the workshops organisation, uploading descriptions of related FEFTS into the platform and promotion of the platform use by its members.

Agricultural & Environmental Solutions (AGENSO)

AGENSO is an SME working as provider of advanced information and communication technologies (ICT) in agriculture and environmental sector. The main contribution of AGENSO team into the data sharing process is the development of the project platform (AgEnergy Platform) that will give the chance to owners and providers of FEFTS to describe their related scientific paper, research project, commercial product, training material or financing tool. A standard format will be used for the description of FEFTS with a common way (standard metadata schema). The AgroFossilFree metadata schema will be in alignment with the EIP-Agri metadata elements. Key aspects of the technical specifications are the interoperability of the system with other systems, like the integration of the content into the EIP-Agri platform. AGENSO will also prepare the workshops with Greek farmers to receive their bottom-up ideas and interests.

Delphy

Delphy stands for Worldwide Expertise for Food & Flowers and offers a number of customized and personalized services, consulting farmers on various agricultural issues related to the production, harvest etc. Apart from capturing the farmers' requirements on FEFTS through the survey and the organisation of workshops in the Netherlands, the team's contribution focuses on adding FEFTS on the AgEnergy platform content, assist on the validation of the descriptors (indicators) of FEFTS into the platform and increase the platform's users through its members.

TEAGASC – Agriculture and food development authority (TEAGASC)

TEAGASC is a well known extension and advisory service institution that has a broader network of consultants and extension officers with direct access to the farmers' communities. The TEAGASC team is involved into AgroFossilFree data sharing through the collection of information about the most prominent FEFTS to be added in the platform, but also conduct the survey and workshops in Ireland.

Wirtschaft und Infrastruktur GMBH & CO Planungs KG (WIP)

WIP is an SME that specialises in strategic and applied research mainly on the energy sector and is responsible for the collection of related information about FEFTS of all categories, as well the development of the controlled AgroFossilFree taxonomy/vocabulary that will organise in better way the collected information into the AgEnergy platform. This will further facilitate the metadata enrichment of the generated information and the faceted search services of the AgEnergy platform on specific thematic keywords. In addition, WIP will conduct the farmers' survey and organise the workshops in Germany.

Trama TecnoAmbiental, S.L. (TTA)

TTA is an international engineering and consulting small-sized firm active in the field of renewable energies and energy efficiency with a recognized track-record in providing electricity services to remote areas. The team focuses on the collection of farmers and consultants' needs and interests through the farmers' survey, the experts' interviews and the workshops organisation. In addition, TTA will contribute in adding FEFTS in the platform.

Iniciativas Innovadoras (INI)

The company provides consultancy specialised in promoting innovation and facilitating cooperation as key factors in the development of organisations. Mostly, the team is responsible for preparing and packaging the promotional material of the project and disseminating to the community, but will also take part in organising the farmers' survey and workshops in Spain.

The geographical distribution of the AgroFossilFree partners can be seen in Figure 1 and shows coverage of most climatic conditions around the continent.

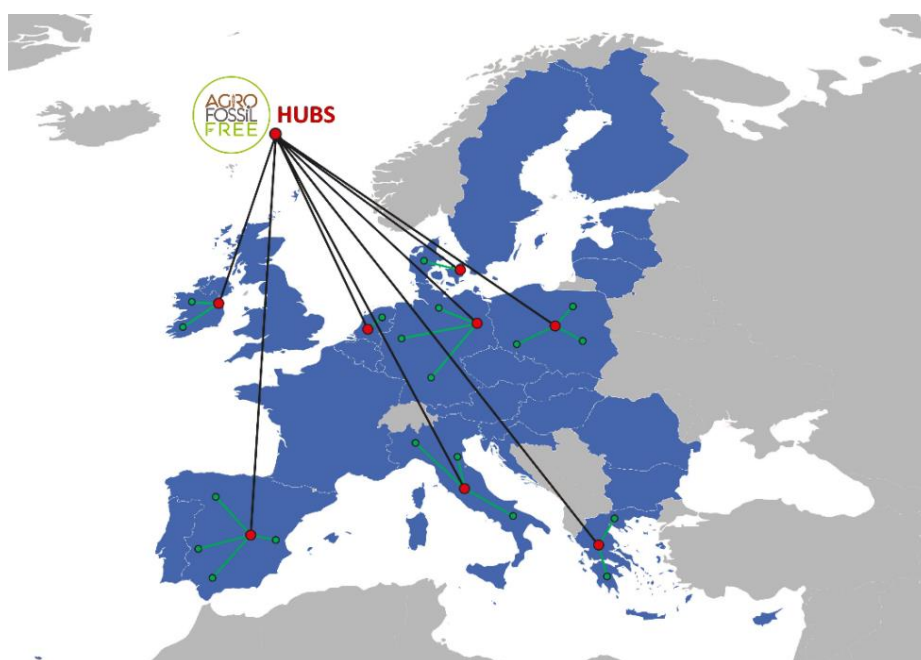


Figure 1: AgroFossilFree geographical distribution

The responsible persons of each project partner are given in the table below.

Table 1: Data Types from VALERIE project

Partner No	Participant name	Acronym	Contact Person
1	Centre for Research and Technology Hellas	CERTH	Thanos Balafoutis a.balafoutis@certh.gr
2	Aarhus University	AU	Claus Soerensen claus.soerensen@eng.au.dk
3	Agricultural University of Athens	AUA	Dimitris Manolakos dman@aua.gr
4	Institute of Soil Science and Plant Cultivation - State Research Institute	IUNG-PIB	Magdalena Borzecka mborzecka@iung.pulawy.pl
5	European Agricultural Machinery Industry	CEMA	Vanja Bisevac vanja.bisevac@cema-agri.org
6	European Conservation Agriculture Federation	ECAF	Julio Román jroman@ecaf.org
7	REScoop EU ASBL	RESCOOP	Daan Creupelandt daan.creupelandt@rescoop.eu
8	Landbrug & Fodevarer F.M.B.A.	L&F	Frank Oudshoorn FRWO@seges.dk
9	Confagricoltura	CONFAGRICOLTURA	Daniele Rossi d.rossi@confagricoltura.it
10	Lublin Agricultural Advisory Center in Konskowola	LODR	Martyna Próchniak mprochniak@lodr.konskowola.pl
11	Agricultural & Environmental Solutions	AGENSO	Zisis Tsiropoulos tsiropoulos@agenso.gr
12	DELPHY	DELPHY	Harm Brinks H.Brinks@delphy.nl

13	Teagasc	TEAGASC	Barry Caslin Barry.Caslin@teagasc.ie
14	Wirtschaft und Infrastruktur GBH & CO Planungs KG	WIP	Dominik Rutz dominik.rutz@wip-munich.de
15	Trama TecnoAmbiental, S.L.	TTA	Jorge Sneij jorge.sneij@tta.com.es
16	Iniciativas Innovadoras	INI	Maite Zarranz mzarranz@iniciativas-innovadoras.es

3.2 AgroFossilFree data stakeholders' communities

Detailed work plan and WP description is included in the GA. An overview, focused on implementation details is presented in this section. The targeted audience who aims to get access to the AgEnergy platform content is divided in two main groups:

1. the FEFTS data providers
2. the FEFTS data users

On one hand, FEFTS data providers are domain experts (researchers, academics, consultants) who have already validated FEFTS of increased Technological Readiness Level (TRL) in their hands, manufacturers who would like to promote their tools/applications to end users, as well researchers who are interested to inform the community about research outcomes related to specific FEFTS.

On the other hand, FEFTS data users are the end users' communities, like individual farmers, farmers' associations, producers' cooperatives, consultants who would like to be informed for the existing technologies that fit to their use cases and finally new investors and manufacturers who are interested to find out the overall investment and the trends on agricultural technologies per thematic topic. Apart from finding the right technology for their case study, AgEnergy Platform users will be the main validators of the uploading content. Through the analytics of the platform, the project consortium will monitor which are the most viewed and downloaded technologies.

4. AgroFossilFree data

4.1 AgroFossilFree data categories

The FEFTS information will be collected by the project partners through:

1. search on publishers' portals for related research publications (Scientific Papers)
2. desk research analysis from previous EU-funded research projects to obtain FEFTS derived from such projects (Research Projects)
3. interviews directly with the technologies' providers or contacts with them to allow them to include their FEFTS in AgEnergy Platform by themselves (Commercial Products). Technologies providers (e.g. manufacturers) will be able to upload related information, following a registration process.
4. desk research and direct contact with educational organisations (Universities, Technical Schools, Vocational Centres) to receive training material on FEFTS installation, maintenance and use (Training Material)
5. desk research and direct contact with financing institutions (state, banks, structural funds, private funding) to identify national and EU-wide funding roots (Financing Tools)

The details about the FEFTS creators, owners and providers will be presented into the platform, as supplementary material to the FEFTS material.

Additionally, the project partners will generate new material, like dissemination material (e.g. project brochures), project deliverables (under the public status) and scientific publications to open access journals or journals with restricted access, as well project reports to conferences and workshops. These materials will be stored into the project website, project platform and other publishers' portals.

4.2 AgroFossilFree data types

The project generates and collects information categorised in four (4) main types:

1. Peer-reviewed scientific publications

The peer-reviewed research publications can be published in open access journals, following a specific validation process that ensures the high quality of the published science. There are two open access options that could apply; the Gold Open Access and the Green Open Access.

By following the Gold Open Access, the publications are published in an open access journal that publisher provides free online access without any embargo period. The open access fee is paid directly by the author, the author's institution or the funding body, according to the article processing charge that is applied by the open access journal. As an example, Elsevier⁷ has list of open access journals with peer-reviewed articles that are immediately free to access and download through the ScienceDirect portal.

Through the Green Open Access option, the author archives a manuscript version after a specific embargo period from publication in the publisher repository or author's institutional repository. The authors pay no fee, as publishing costs are covered by the institutional subscriptions.

2. Scientific publications and reports with internal reviewing process

Scientific publications, reports (e.g. project deliverables under the public status) and presentations published in open access journals, workshops, seminars and other related activities without a peer-reviewed process. The project reports that demonstrate the key findings of the project could be uploaded directly to the publisher repository (e.g. repository with the conference proceedings), while the project deliverables under the public status are uploaded to the AgroFossilFree website.

3. Dissemination material

Project dissemination material includes press releases, brochures and other promotional material of the project and the FEFTS community. Mostly this material is stored into the AgroFossilFree website.

4. Research FEFTS information

The FEFTS data include the following type of data:

- Demographic data of the interviewees that identify the stakeholders' (farmers') needs on farming and FEFTS.
- Information about FEFTS providers (manufacturers, companies, creators, owners, brokers of related services)
- Details about the coordinators and project partners from EU-funded research projects in the FEFTS area
- Details about the authors of the publications on related topics (FEFTS)
- Details about the FEFTS information (paper, project, product, training material, financing tool), including the official name of the project / product and publication title, short description of the technology, the usefulness for farmer, the thematic areas that apply (open-field farming,

⁷ <https://www.elsevier.com/about/open-science/open-access/open-access-journals>

greenhouses, livestock), any multimedia material and link to the creator (manufacturer, company, project coordinator, author, funding authority).

Additional data types that could be considered as project outcomes are the following:

- Details about the subscribers for the AgroFossilFree newsletter and the registered users of the AgEnergy platform
- Good practices / success cases reported under WP1 on examples of successful innovation processes of FEFTS in agriculture. Both handy reports and audio-visual materials to be produced. Reports should be carried following the EIP-Agri metadata requirements.
- Details about project ideas generated in innovation workshops

Organisation of the AgroFossilFree distributed information per work package is shown in Table2.

Table 2: AgroFossilFree distributed information per project work package

WP No	Work Package Title	Generated and/or collected data types
1	Current energy use status in EU agriculture and identification of factors affecting innovation adoption and diffusion of FEFTS	<ul style="list-style-type: none"> • Peer-reviewed scientific publications • Scientific publications and reports with internal reviewing process • Demographic details from farmers' and experts' interviews • Good practices and success cases from farmers' interviews and innovative FEFTS providers
2	Registry of available FEFTS and financing tools in EU agriculture	<ul style="list-style-type: none"> • Peer-reviewed scientific publications • Scientific publications and reports with internal reviewing process • Information about FEFTS providers (manufacturers, companies, creators, owners, brokers of related services) • Organisations details of coordinators and project partners from EU-funded and national research projects • Authors' details of publications on related topics • FEFTS information details
3	Interactive multi-actor innovation networking, consultation and development of policy guidelines on FEFTS adoption in EU agriculture	<ul style="list-style-type: none"> • Peer-reviewed scientific publications • Scientific publications and reports with internal reviewing process • Project ideas generated in innovation workshops
4	AgEnergy Online Platform	<ul style="list-style-type: none"> • Peer-reviewed scientific publications • Scientific publications and reports with internal reviewing process • AgEnergy platform registered users' details
5	Dissemination and Communication	<ul style="list-style-type: none"> • Dissemination material • Newsletter subscribers' details
6	Project Management	<ul style="list-style-type: none"> • Project reports with internal reviewing process

4.3 AgroFossilFree supported document types

The AgroFossilFree data will cover the following formats:

- **PDF & DOC** - Project reports, project deliverables, scientific papers in peer reviewed or not journals

- **PPT** - Presentations in project meetings, presentation in project workshops for engagement of stakeholders, slides in workshops and events for the collection of community requirements and demonstration of the project outcomes in workshops, conference and exhibitions.
- **CSV** - This is the machine readable data format in which the AgEnergy platform content should be exported in order to be integrated into the EIP-Agri platform. This format can be also used for listing project ideas generated from Innovation Workshops and success cases on agricultural innovations coming as a result of the project (to be answered by the partners).
- **Images & video** - Multimedia content uploaded into the AgEnergy platform, providing additional details about the described FEFTS. Related content uploaded into the AgroFossilFree website and the project social media (Facebook, Twitter, etc) that gives details about the progress of the project.

4.4 AgroFossilFree data size

The main online places for the storage of the project data are the AgroFossilFree website and the AgEnergy platform. Additionally, project partners can use their institutional repositories for storage of the documents and reports that are related with the progress and the outcomes of the project. Since the project reports, public deliverables and dissemination material will be accessible through the AgroFossilFree website, the site should provide enough space for the storage of all of this information and AGENSO that has designed the website has already retained large data space in its servers. Above all, the AgEnergy platform will include only the descriptions of the technologies, called metadata records, and links to external sources that originally are described (e.g. manufacturer's website). Since, the minimum number is 1700 described FEFTS into the platform, the request for storage will not exceed 1 GB for the proposed Content Management System (CMS).

5. AgroFossilFree data discoverability

The AgroFossilFree data (publications, research, training material, financing tools and the associated metadata) will be stored in different CMSs, according to the data type (e.g. partners' publications that demonstrate AgroFossilFree project outcomes could be stored into the institutional repository).

5.1 Data storage

Project reports and scientific publications

According to the open access rights, the peer reviewed scientific papers about the project outcomes will be stored to either open access journals and/or publishers repositories with restricted access. Additionally, a description of them could be uploaded into the AgEnergy platform with a link to the original source. For cases with restricted access to the publication, a prior version of it (if available) could be uploaded to the AgEnergy platform.

Project reports and scientific papers with internal reviewing process that explain the usefulness of FEFTS could be directly uploaded into the AgEnergy platform and additionally to the project partners and their institutional repositories.

For partners that do not have a data repository to deposit their research data, different options will be provided, such as the ability to launch a cloud-hosted version of a popular data repository software, such as the OpenAIRE's Zenodo repository service.

Dissemination material

All the dissemination material (e.g. newsletters, press releases, project slides) will be publicly available through the project website. Responsible for updating the dissemination material will be the dissemination partner.

FEFTS information

The AgEnergy platform is the main place for the storage of all the details about the farming FEFTS, in terms of the company / manufacturer / project coordinator / author of scientific paper / author of training material / funding authority details and the technology description itself.

Farmers' personal details

The personal details from farmers, who will join into the WP1 survey for the collection of stakeholders' requirements will not be stored or presented into the AgroFossilFree website or AgEnergy platform. The following table shows the storage options for all the AgroFossilFree data types.

Table 3: Storage options for AgroFossilFree data types

AgroFossilFree data	Storage details (including the information about the preservation)
1. Peer-reviewed scientific publications	
Peer-reviewed scientific publications in scientific Journals	Open access journals and/or publishers repositories responsible for their storage and preservation
2. Project publications and reports	
Open access scientific publications with internal reviewing process	Open access journals and/or publishers repositories responsible for the storage and preservation. Additionally the digital repository OpenAIRE Zenodo could ensure the storage and the preservation
Public project reports with internal reviewing process (public deliverables, reports, slides, etc)	AgroFossilFree website. In terms of the preservation the OpenAIRE or EIP-Agri could be considered
3. Project dissemination material	
Project dissemination material (e.g. press release)	AgroFossilFree website and social media (e.g. Slideshare for project presentations). In terms of the preservation the OpenAIRE or EIP-Agri could be considered
4. AgEnergy Platform	
FEFTS information (e.g. description of technology)	AgEnergy Platform. In terms of the preservation, the information will be integrated (if possible) into the EIP-Agri platform (after the end of the project)
Personal details of the interviewed farmers (name, email, etc.)	Non published data – only demographic data will be included in project deliverables
Details about FEFTS owner / providers (e.g. manufacturer)	AgEnergy Platform. In terms of the preservation, the information will integrated (if possible) into the EIP-Agri platform (after the end of the project)
Details about the authors of open access article on FEFTS	AgEnergy Platform. In terms of the preservation, the information will integrated (if possible) into the EIP-Agri platform (after the end of the project)
Organisation details about the coordinator and/or project partners of an EU-funded project on SFTs	AgEnergy Platform. In terms of the preservation, the information will integrated (if possible) into the EIP-Agri platform (after the end of the project)
5. Other AgroFossilFree content	
AgroFossilFree newsletter subscribers' details	Restricted data - saved into the dissemination deliverable

Successful FEFTS innovation process	AgroFossilFree website - (e.g. section “Results”) - to be defined in a later stage of the project. In terms of the preservation, the information will be integrated (if possible) into the EIP-Agri platform (after the end of the project)
Project ideas generated in innovation workshops	AgroFossilFree website - (e.g. section “Results”) - to be defined in a later stage of the project. In terms of the preservation, the information will be integrated (if possible) into the EIP-Agri platform (after the end of the project)

5.2 Processed AgroFossilFree metadata schema

For publications and reports that are related to the progress of the project, the metadata elements that will be used are in accordance with the guidelines of the publication repository (e.g. AgroFossilFree website, institutional repository, scientific journal repository).

For the FEFTS information (article, project, product, training material, and financing tool), all the related details will be uploaded and stored to the AgEnergy platform during the submission process by the registered users. Each contributor answers specific questions about the provider of the information (e.g. company details) and the generic and specific details about the specific FEFTS he/she introduces (e.g. thematic area that the FEFTS apply, targeted audience). The provided information about the FEFTS will feed their metadata elements.

The development of the metadata schema for the AgEnergy platform content should be done according to international standards that are already in use, following three phases; design, formulation and mapping to EIP-Agri metadata schema. At the first phase “design”, the questionnaire “Mapping the FEFTS” includes all the important information that should be provided for each described technology. At the second phase “formulation”, the metadata elements for the description of the FEFTS information should be standardised with as many pre-defined answers and less free text. Finally, the AgroFossilFree metadata schema should be mapped to the EIP-Agri metadata standard in order to facilitate the content integration.

The following table shows the options in terms of the organisation (using specific information schema - descriptors) for the AgroFossilFree data types.

Table 4: AgroFossilFree data repositories

AgroFossilFree data	Information schema
1. Peer-reviewed scientific publications	
Peer-reviewed scientific publications in Journals	Using the metadata schema and guidelines of the publication repository (e.g. institutional repository, open access journal repository)
2. Project publications and reports	
Open access scientific publications with internal reviewing process	Using the metadata schema and guidelines of the publication repository (e.g. institutional repository, open access journal repository)
Public project reports with internal reviewing (public deliverables, reports, slides, etc.)	Using the guidelines for uploading the content in the AgroFossilFree website (e.g. title, description, author) - No specific information schema

3. Project dissemination material	
Project dissemination material (e.g. press release)	Using the guidelines for uploading the content in the AgroFossilFree website - No specific information schema
4. AgEnergy platform	
FEFTS information (e.g. description of technology)	AgroFossilFree information schema for FEFTS
Personal details of the interviewed farmers (name, email, etc.)	No specific information schema
Details about FEFTS owner / providers (e.g. manufacturer)	AgroFossilFree information schema for FEFTS
Details about the authors of open access article on SFT	AgroFossilFree information schema for FEFTS
Organisation details about the coordinator and/or project partners of an EU-funded project on SFTs	AgroFossilFree information schema for FEFTS
5. Other AgroFossilFree content	
AgroFossilFree newsletter subscribers' details	No specific information schema
Successful FEFTS innovation process	Using the guidelines for uploading the content in the AgroFossilFree website, without a specific information schema - to be defined in a later stage of the project
Project Ideas generated in innovation workshops	Using the guidelines for uploading the content in the AgroFossilFree website, without a specific information schema - to be defined in a later stage of the project

5.2.1 Processed AgroFossilFree metadata schema

The below table indicates the recommended metadata schema for the description FEFTS. For each element, the metadata schema defines the following:

- **Label:** the name by which the element is referenced.
- **Explanation:** the definition of the element.
- **Data Type:** indicates the type of the data used in the element, e.g., string, float, integer etc.
- **Cardinality:** defines if the element is mandatory, optional or recommended. Recommended are the optional elements that provide value to the overall description of the FEFTS.
- **Size:** the number of values allowed.

Table 5: AgroFossilFree recommended metadata schema for the description of FEFTS

Id	Label	Explanation	Data Type	Cardinality	Size	Comments
1	General	General information about the FEFTS			1	
1.1	Name	Name of the FEFTS	String	Mandatory	1..2	The name should be written at least in English.

						If the name should be also given in a native language an additional 'name' element should be created
1.2	Description	Short description of the FEFTS	String	Mandatory	1..2	The description should be written at least in English. If the description should be also given in a native language an additional 'description' element should be created
1.3	Objective	Objective of the FEFTS	String	Recommended	0..1	
1.4	Audio-visual Material	Links to Audio-visual Material	String	Recommended	0..10	For each new link a new element should be created
1.5	Website	Landing page of the FEFTS	String	Recommended	0..10	
1.6	Effects	List of potential effects in the agricultural ecosystem	String	Optional	0..100	Should be selected from a vocabulary list
1.7	Technology Type	Type of technology that is used	String	Recommended	0..10	Should be selected from a vocabulary list
1.8	Price	Price of FEFTS	String	Recommended	0..1	The price should be written in local currency and in €. Local currency should also be indicated
1.9	Farm Size	The size of the farm that the FEFTS is applicable to	String	Recommended	0..10	
1.10	Keywords	A keyword or phrase describing the topic of the FEFTS	String	Recommended	0..1	
1.11	Location	Geography which this FEFTS is located	String	Recommended	0..10	The NUTS level 3 standard should be used
1.12	Cropping System	Cropping System in which the FEFTS can be used	String	Recommended	0..10	Should be selected from a vocabulary list
1.13	Operation Types	Types of operations that this FEFTS can be used	String	Recommended	0..10	Should be selected from a vocabulary list
1.14	User Groups	Groups of Users that could be interested in the FEFTS	String	Recommended	0..10	Should be selected from a vocabulary list
1.15	Market Technology Readiness Level (TRL)	TRL of the FEFTS	String	Recommended	0..1	Should be selected from a vocabulary list
1.16	Intellectual Property Rights (IPR)	IPR of the FEFTS	String	Recommended	0..1	Should be selected from a vocabulary list
1.17	Relevant Links	Links to other websites that are relevant to the FEFTS	String	Optional	0..1	URLs should be comma or space separated
1.18	Additional Information	Any additional information that cannot be explicitly described in any other element	String	Optional	0..1	

1.19	Additional Comments	Any additional comment regarding the FEFTS	String	Optional	0..1	
2	FEFTS Type	This category describes the type of the FEFTS along with general description elements for each type		Mandatory	1	Selected from a vocabulary list. Recommended values: <ul style="list-style-type: none"> Article Project Product Training Material Financing Tool
2.1	Article	Information around the article that provides the FEFTS		Mandatory [if Type is Article]	0..1	
2.1.1	Title	Title of the article	String	Mandatory	1	
2.1.2	Author	Author of the article	String	Recommended	0..1	
2.1.3	Source	Source of the article (Journal/ Conference Paper/ Book Chapter, etc.).	String	Optional	0..1	
2.1.4	Publication Year	Year of the publication	Integer	Optional	0..1	
2.1.5	DOI	Unique URL of the article	String	Optional	0..1	
2.2	Project	Information around the project that provides the FEFTS		Mandatory [if Type is Project]	1	
2.2.1	Name	Name of the project	String	Mandatory	1	
2.2.2	Editor	Author of the metadata	String	Recommended	0..1	Full Name should be provided
2.2.3	Coordinator	Name of the Project Coordinator	String	Recommended	0..1	
2.2.4	Partners	Partners of the Project	String	Recommended	0..90	New 'Partner' element should be created
2.2.5	Start Date	Start date of the project	Date	Recommended	0..1	Use of the following format DD-MM-YYYY
2.2.6	End Date	End date of the project	Date	Recommended	0..1	Use of the following format DD-MM-YYYY
2.2.7	Status	Status of the project	String	Recommended	0..1	Recommended values: <ul style="list-style-type: none"> Ongoing Finished
2.2.8	Funding Source	Funding source of the project	String	Recommended	0..10	Selected from a vocabulary list. Recommended values: <ul style="list-style-type: none"> EU – HEurope EU – H2020 EU – FP7 EU (other) National Industry Self-funded
2.2.9	Budget	Total budget of the project	Float (0,2)	Recommended	0..1	
2.2.10	Final Report	Link to the final report document of the project	String	Optional	0..1	
2.2.11	Objective	Objective of the project	String	Recommended	0..10	The objective should be

						written at least in English. If the objective should be also written in a native language an additional 2.2.11 'Objective' element should be created
2.2.12	Context	The general context that the FEFTS project falls within	String	Optional	0..1	
2.3	Product Company	Information around the company that provides the FEFTS		Mandatory [if Type is Product]	0..1	
2.3.1	Name	Name of the provider	String	Mandatory	1	
2.3.2	Legal Name	Legal name of the provider	String	Mandatory	1	
2.3.3	Address	Address of the provider	String	Recommended	0..1	
2.3.4	Employees No	Number of employees	String	Recommended	0..1	
2.3.5	Provider					
2.3.6	Establishment	Month and year of establishment	String	Optional	0..1	Should be described using the format MM-YYYY
2.3.7	Value Proposition	Value Proposition of the provider	String	Optional	0..1	
2.4	Training Material	Information around the educational content that provides the FEFTS		Mandatory [if Type is Training material]	0..1	
2.4.1	Title	Title of the training material	String	Mandatory	1	
2.4.2	Author	Author of the training material	String	Recommended	0..1	
2.4.3	Source	Source of the article (University / Technical School / Vocational Centres, etc.).	String	Optional	0..1	
2.4.4	Publication Year	Year of the publication	Integer	Optional	0..1	
2.4.5	DOI	Unique URL of the training material (if exists)	String	Optional	0..1	
2.5	Financing Tool	Information around the funding opportunities that provides the FEFTS		Mandatory [if Type is Financing Tool]	0..1	
2.5.1	Name	Name of the funding program/authority	String	Mandatory	1	
2.5.2	Address	Address of the funding program/authority	String	Recommended	0..1	
2.5.3	Establishment	Month and year of establishment	String	Optional	0..1	Should be described using the format MM-YYYY
2.5.4	Value Proposition	Value Proposition of the funding program/authority	String	Optional	0..1	
3	Agricultural Domain	Set of elements for describing the FEFTS application domain				

3.1	Domain Type Group	The domain group that this FEFTS can be used	String	Recommended	1..10	Recommended domains: <ul style="list-style-type: none"> open-field agriculture greenhouses livestock
3.2	Type	A list of predefined values for each of the selected domain type	String	Recommended	1..100	For every new type of the same 3.1 Crop Type Group a new 3.2 Type element should be used

5.2.2 Mapping to EIP-Agri metadata schema

For the future integration of FEFTS information within EIP-Agri platform, a mapping schema should be created that will correlate the FEFTS metadata schema with those of the EIP-Agri. The below table indicates a list of all the required information that has to be provided to the EIP-Agri platform.

Table 6: List of required EIP-Agri elements

Required information (in the sequence foreseen in the official RD guidelines of EIP-AGRI common format)	Category	Type of information
Title (native language)	PROJECT INFORMATION	Obligatory
Title (in English)	PROJECT INFORMATION	Obligatory
Editor	PROJECT INFORMATION	Obligatory
Project coordinator	PROJECT INFORMATION	Obligatory
Project partners	PARTNERS	Obligatory
Keyword-category	KEYWORDS	Obligatory
Project period	PROJECT INFORMATION	Obligatory
Project status	PROJECT INFORMATION	Obligatory
Funding source	PROJECT INFORMATION	Obligatory
Total budget	PROJECT INFORMATION	Obligatory
Main geographical location (NUTS3)	PROJECT INFORMATION	Obligatory
Other geographical location	PROJECT INFORMATION	Optional
Other geographical location	PROJECT INFORMATION	Optional
Final report	(to be added as annex)	Obligatory
Objective of the project (native language)	PROJECT INFORMATION	Obligatory
Objective of the project (in English)	PROJECT INFORMATION	Obligatory
Short summary for practitioners (Practice abstract) in native language	PA1	Obligatory
Description of project activities (native language)	PROJECT INFORMATION	Recommended
Description of project activities (in English)	PROJECT INFORMATION	Recommended
Short summary for practitioners (Practice abstract) in English	PA1	Recommended
Audio-visual material	AUDIOVISUAL	Recommended
Website	WEBSITES	Recommended
Links to other websites	WEBSITES	Recommended
Additional practice abstracts (native language)	PA2 to PA20	Optional
Additional practice abstracts (in English)	PA2 to PA20	Optional
Description of the context	PROJECT INFORMATION	Optional
Additional information	PROJECT INFORMATION	Optional
Additional comments	PROJECT INFORMATION	Optional

It should be noted that currently, the EIP-Agri platform receives information only for agriculture – relevant projects. Therefore, only the FEFTS project-related information can be integrated within the EIP-Agri platform. Actions for future integration of both articles and products should be taken into consideration.

The table below indicates an example of mapping between the EIP-Agri required fields and the FEFTS metadata elements when describing FEFTS information from related projects. There is no FEFTS element for the description of project activities. Although this element is not mandatory in the EIP-Agri required elements set, relevant elements should also be added in the FEFTS metadata schema.

Table 7: Metadata Schemas mapping between EIP-Agri and AgroFossilFree FEFTS list

Required information	Type of information	SFT Metadata Element (Number of Label)
Title (native language)	Obligatory	2.2.1 Project Name
Title (in English)	Obligatory	2.2.1 Project Name
Editor	Obligatory	2.2.2 Project Editor
Project coordinator	Obligatory	2.2.2 Project Coordinator
Project partners	Obligatory	2.2.4 Project Partners
Keyword-category	Obligatory	3.2 Crop Type
Project period	Obligatory	2.2.5 Project Start Date and 2.2.6 Project End Date
Project status	Obligatory	2.2.7 Project Status
Funding source	Obligatory	2.2.8 Project Funding Source
Total budget	Obligatory	2.2.9 Project Budget
Main geographical location (NUTS3)	Obligatory	1.11 General Location
Other geographical location	Optional	1.11 General Location
Other geographical location	Optional	1.11 General Location
Final report	Obligatory	2.2.10 Project Final Report
Objective of the project (native language)	Obligatory	2.2.11 Project Objective
Objective of the project (in English)	Obligatory	2.2.11 Project Objective
Short summary for practitioners (Practice abstract) in native language	Obligatory	1.2 General Description
Description of project activities (native language)	Recommended	Not Available
Description of project activities (in English)	Recommended	Not Available
Short summary for practitioners (Practice abstract) in English	Recommended	1.2 General Description
Audio-visual material	Recommended	1.4 General Audio Video Material
Website	Recommended	1.5. General Website
Links to other websites	Recommended	1.5. General Website
Additional practice abstracts (native language)	Optional	1.2 General Description
Additional practice abstracts (in English)	Optional	1.2 General Description
Description of the context	Optional	2.2.12 Project Context
Additional information	Optional	1.18 General Additional Information
Additional comments	Optional	1.19 General Additional Comments

Additionally, in order to enhance the integration process, a similar mapping between the predefined list of values of EIP-Agri (used in the keyword element) and FEFTS metadata schema should also be performed by the experts of AgroFossilFree.

6. Open Access to data and metadata

6.1 Specify which data and metadata

The AgroFossilFree data that are stored into the project website will be publicly available to the users, in order to be informed about the progress of the project (e.g. into the website section “Downloads”).

The AgEnergy platform content will be accessible to all the targeted users, farmers and extension officers / consultants. The metadata records with all the FEFTS information will be freely available to all the users, through basic or advanced search functionalities of the platform.

The following table shows the open access options for the AgroFossilFree data types.

Table 8: AgroFossilFree data open access options

AgroFossilFree data	Open access options
1. Peer-reviewed scientific publications	
Peer-reviewed scientific publications in Open Access Journals	Scientific publications and the associated metadata stored into the open access journal and the publishers’ repository. The open access publications can be downloaded.
2. Project publications and reports	
Open access scientific publications with internal reviewing process	Scientific publications and the associated metadata stored into the open access journal, publishers’ repository, institutional repository or OpenAIRE. The open access publications can be downloaded.
Public project reports with internal reviewing process (public deliverables, reports, slides, etc.)	Reports and their associated descriptions (e.g. title, description) stored into the AgroFossilFree website and OpenAIRE (optional). The reports can be downloaded.
3. Project dissemination material	
Project dissemination material (e.g. press release)	Reports and their associated descriptions (e.g. title, description) stored into the AgroFossilFree website. The reports can be downloaded.
4. AgEnergy platform	
FEFTS information (e.g. description of technology)	FEFTS description with link (URL) to the original source. Descriptions can be viewed & downloaded, while statistics on the existing FEFTS per thematic category, location or targeted user group could be accessible for registered users (to be defined at later stage of the project).
Personal details of the interviewed farmers (name, email, etc.)	Restricted information (only demographics)
Details about FEFTS owner / providers (e.g. manufacturer)	Descriptions can be viewed & downloaded, while statistics on the FEFTS owners / providers per thematic category, location or targeted user group could be accessible for registered users (to be defined at later stage of the project).
Details about the authors of open access articles on FEFTS	Descriptions can be viewed & downloaded. Link to the original source to access the publication
Organisation details about the coordinator and/or project partners of an EU-funded project on FEFTS	Descriptions can be viewed & downloaded. Link to the original source to access the project details and outcomes.

5. Other AgroFossilFree content	
AgroFossilFree newsletter subscribers' details	Not accessible data
Successful FEFTS innovation process	Data and the associated descriptions (e.g. title, description) accessible through the project website
Project Ideas generated in innovation workshops	Data and the associated descriptions (e.g. title, description) accessible through the project website

6.2 Methods and tools to access data

In terms of the AgroFossilFree website, the dissemination material and project reports (deliverables under the public status) should be shared under “Creative Commons” (CC) public licenses that provide a standard set of terms and conditions for sharing the content. For all the project dissemination material, it is recommended to be used the CC BY 4.0 licensing schema.

As for the AgEnergy platform, the published FEFTS information from scientific publications, related research projects, commercial products, training material and financing tools should be freely available to the users with specific terms of uses. The public Creative Commons licensing schemes CC-BY 4.0 and CC-0 are the most appropriate for the AgEnergy platform content, together with linkage to external original sources that describe the technologies (e.g. the manufacturer website).

For the scientific publications that will be stored in open access journal repositories during the project lifetime, the article processing charges are eligible for reimbursement by the project budget, as this is stated into the Model Grant Agreement, Article 6.2 D.3⁸. A dedicated AgroFossilFree acknowledgment text should be included as a dedicated paragraph into the published article, while the metadata area should include details about the EU-funded programme, the name of the action, the title of the project, the grant number, the publication date, the embargo period (if it applies) and the persistent identifier (digital object identifier). Moreover, the coordinator could set an agreement with the EC that other open access costs related to membership to a journal for publishing in open access or as a pre-condition for lower article processing charges could be covered.

The following table shows how the AgroFossilFree project could be accessed by the interested users.

Table 9: AgroFossilFree data access

AgroFossilFree data	Methods and tools to access the data
1. Peer-reviewed scientific publications	
Peer-reviewed scientific publications in Open Access Journals	Access through the search functionalities of the open access journal and the publishers' repository.
2. Project publications and reports	
Open access scientific publications with internal reviewing process	Access through the search functionalities of the open access journal, publishers' repository, institutional repository or OpenAIRE.
Public project reports with internal reviewing process (public deliverables, reports, slides, etc.)	Access through the project website
3. Project dissemination material	

⁸ http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf#page=82

Project dissemination material (e.g. press release)	Access through the project website
4. AgEnergy platform	
FEFTS information (e.g. description of technology)	FEFTS descriptions accessible through the AgEnergy platform, while statistics on the existing FEFTS per thematic category, location or targeted user group could be accessible for registered users (to be defined at later stage of the project).
Personal details of the interviewed farmers (name, email etc.)	Sensitive data, not available (only demographics)
Details about FEFTS owner / providers (e.g. manufacturer)	Details about the FEFTS owners / providers are accessible through the AgEnergy platform, while statistics on the FEFTS owners / providers per thematic category, location or targeted user group could be accessible for registered users (to be defined at later stage of the project).
Details about the author of open access article on FEFTS	Descriptions can be viewed & downloaded. Link to the original source to access the publication
Organisation details about the coordinator and/or project partners of research projects on FEFTS	Descriptions can be viewed & downloaded. Link to the original source to access the project details and outcomes.
5. Other AgroFossilFree content	
AgroFossilFree newsletter subscribers' details	Sensitive and not accessible data
Successful FEFTS innovation process	Data and the associated descriptions (e.g. title, description) accessible through the project website
Project Ideas generated in innovation workshops	Data and the associated descriptions (e.g. title, description) accessible through the project website

6.3 Methods and tools to access data

Restricted data refer to any confidential or sensitive personal information that is protected by law or policy and it is protected in terms of storage and transit. During the WP1 survey for recording the farmers' interests about the needed FEFTS, the personal information of the interviewees will not be publicly available (e.g. project deliverable under the status public or uploading to the project website). CERTH, as coordinator of the project, declares that the personal data of the interviewed farmers will be used only for the statistical analysis of the results without their dissemination to the public. Additionally, the project partners who are responsible to collect farmers' requirements will hand over to the interviewee a double signed (coordinator and interview responsible) personal private data protection declaration that is already prepared.

Additionally, the statistics about the content of AgEnergy platform could reveal the market size of the existing technologies per thematic area, helping consultants to decide on the most appropriate technology, updating the scientists on the latest achievements in the area and guiding companies and technologies providers on where should be the next investments. This advanced information could be offered with restricted access to registered users. The registration process will be free, while the interested users should declare the purpose of using the FEFTS information. Their personal information will be kept private.

In the framework of dissemination activities under WP5, and eventually on the reporting of success cases on agricultural innovation processes under WP1, the use of testimonials from end-users or

interviews from stakeholders that might be used in any kind of support will be preceded by the signature of a consent form providing permission to use their name, non-sensitive private data and likeness in a photograph, video, or other digital media (“photo”) in any and all of its publications, including web-based publications, articles and posts, without payment or other consideration.

There will be restrictions on access to data from registered users and subscribers to newsletter, registered people to Innovation Workshops to be considered. The information on project ideas generated on Workshops and success cases of FEFTS innovation will also be open and available.

The following table shows the AgroFossilFree data types settings.

Table 10: AgroFossilFree types settings

AgroFossilFree data	Data type settings
1. Peer-reviewed scientific publications	
Peer-reviewed scientific publications in Open Access Journals	No restrictions for open access articles stored (if it is required the article processing cost is paid directly by author).
2. Project publications and reports	
Open access scientific publications with internal reviewing process	No restrictions. The open access specifications are defined by the open access journal, publishers’ repository, institutional repository or OpenAIRE.
Public project reports with internal reviewing process (public deliverables, reports, slides, etc)	No restrictions
3. Project dissemination material	
Project dissemination material (e.g. press release)	No restrictions
4. AgEnergy platform	
FEFTS information (e.g. description of technology)	No restrictions for accessing the FEFTS information. Advanced services could be considered for registered users in terms of accessing additional information (like statistics on existing technologies per thematic category, location or targeted user group could be accessible for registered users.
Personal details of the interviewed farmers (name, email, etc.)	Restricted access for this type of data (sensitive data)
Details about FEFTS owner / providers (e.g. manufacturer)	No restrictions for accessing the details about the FEFTS owners / providers. Advanced services could be considered for registered users in terms of accessing additional information (like statistics on existing technologies per thematic category, location or targeted user group could be accessible for registered users.
Details about the author of open access article on FEFTS	No restrictions on accessing authors’ details of related publications.
Organisation details about the coordinator and/or project partners of a research project on FEFTS	No restrictions on accessing organisations’ details (coordinator and project partners) of related research projects.
5. Other AgroFossilFree content	
AgroFossilFree newsletter subscribers’ details	Restricted data

Success farmers' case studies on using the FEFTS	No restrictions on accessing the information
Project Ideas generated in innovation workshops	No restrictions on accessing the information

7. AgroFossilFree Technology issues

7.1 AgroFossilFree platform technology specifications

The minimum technology requirements for the development of the AgEnergy platform should be the following:

Database Server: MySQL or PostgreSQL

Application Server: Apache, JBoss or WildFly

Development Language: PHP scripting or Java EE

Frontend: Bootstrap or Foundation Framework together with Angular.js

7.2 Additional networks for dissemination of AgroFossilFree data

Since the AgroFossilFree data is organised with a specific data format (using the AgroFossilFree information schema) and are exported into a machine-readable format (e.g., CSV files), the AgEnergy platform content could be easily connected and disseminated to other thematic aggregators. Interested parties from other networks could easily access, mine, exploit, reproduce and disseminate the AgEnergy platform data and the associated metadata.

During the project lifetime, a connection between AgEnergy platform and other systems could be explored, while after the end of the project the interoperability should be explored between EIP-Agri and other systems.

The AGRIS database with more than 8.000.000 bibliographic records on agricultural science and technologies of the Food and Agriculture Organisation (FAO) of the United Nations (UN) is the global thematic aggregator that could be used for the dissemination purpose to a broader network. A prerequisite for exporting the AgEnergy platform data to AGRIS is to map the AgroFossilFree information schema to the AGRIS metadata schema, as well as the AgroFossilFree vocabulary to the AGROVOC multilingual agricultural thesaurus.

OpenAIRE, as the European research data e-infrastructure that catalogues and makes discoverable all European research projects outcomes could be an additional network that FEFTS information, stored into the AgEnergy platform, could be integrated.

For project partners with the technical capacity and the interest to integrate the AgEnergy platform content (after the end of the project), the possibility for the integration of the CSV files into their systems and repositories should be explored.

8. Other issues

8.1 IPR & copyrights

For all the collected and generated AgroFossilFree content, the copyrights remain to the authors and creators of this information. For the scientific publications that are stored in open access journals, the licensing schema of the publication repository should be followed. While Creative Commons licensing solutions could be applied for the AgEnergy platform content. The proposed licensing schemes for the project outcomes by the Commission are the CC-BY⁹ and CC-0¹⁰.

By using the Creative Commons licensing schema CC-BY 4.0, user can share the material in any medium, and format and he/she can adapt (remix and transform) upon this material. The prerequisite for using this content is to provide the name of the creator of the attribution parties. On the other hand, the CC-0, as a universal licensing instrument, enables data creators and owners to waive from copyrights and other related rights in their works so that others may freely build upon, enhance and reuse the works for any purpose.

Since most of the content of AgEnergy platform will be collected from the AgroFossilFree community and described manually by the registered user, the most appropriate licensing schema is the CC-BY 4.0.

The following table deals with the copyright issue of the AgroFossilFree data.

Table 11: AgroFossilFree types settings

AgroFossilFree data	Data type settings
1. Peer-reviewed scientific publications	
Peer-reviewed scientific publications in Open Access Journals	Following the copyright guidelines of the open access journal and the publisher's repository
2. Project publications and reports	
Open access scientific publications with internal reviewing process	Aligned with the licensing schema of the open access journal, publisher's repository, institutional repository or the project repository 9e.g. OpenAIRE)
Public project reports with internal reviewing process (public deliverables, reports, slides, etc.)	Recommendation on using the licensing schema of CC-BY and CC-0
3. Project dissemination material	
Project dissemination material (e.g. press release)	Recommendation on using the licensing schema of CC-BY and CC-0
4. AgEnergy platform	
FEFTS information (e.g. description of technology)	Recommendation on using the licensing schema CC-BY 4.0
Personal details of the interviewed farmers (name, email, etc.)	Not applied
Details about FEFTS owner / providers (e.g. manufacturer)	Recommendation on using the licensing schema CC-BY 4.0

⁹ <https://creativecommons.org/licenses/>

¹⁰ <https://creativecommons.org/publicdomain/zero/1.0/>

Details about the author of open access article on FEFTS	Recommendation on using the licensing schema CC-BY 4.0
Organisation details about the coordinator and/or project partners of an research project on FEFTS	Recommendation on using the licensing schema CC-BY 4.0
5. Other AgroFossilFree content	
AgroFossilFree newsletter subscribers' details	Not applied
Successful FEFTS innovation process	Recommendation on using the licensing schema of CC-BY and CC-0
Project Ideas generated in innovation workshops	Recommendation on using the licensing schema of CC-BY and CC-0

8.2 Allocation of resources

Each project partner has to define the costs that should be considered in order to facilitate the open access for the AgroFossilFree publications and data. The coordinator and all project partners have to define the plan with all the costs that are related to publishing articles under the gold open access condition. Additionally, membership costs that are required for publishing in open access or are pre-condition for a significant lower article processing charge should be notified.

In terms of the workflow for registering and uploading content to AgEnergy platform, the responsibilities among the project partners should be clarified. One key role is the administrator of the system who is responsible for the data storage, preservation during the project lifetime, periodical back-ups of the content and technical support of the platform (like de-duplication metadata records and removal of incomplete and broken links). Apart from the project partners who will be responsible for uploading content into the platform, one important role (assigned to the coordinator) is the validator of the platform content. The AgroFossilFree content validator is responsible to execute the quality assurance process for the uploading content and publish the FEFTS information. Since a number of quality assurance criteria have been fulfilled, the uploaded AgEnergy platform content will be published and will be available for the platform users.

8.3 Team structure

For the data (publications, project reports and dissemination material) stored into the AgroFossilFree website, the dissemination partner (INI) will be responsible for ensuring the high quality of the content with periodically checks that will remove broken links and duplicated records.

As for the AgEnergy platform content, the team structure should include the users' partners, the evaluator and the system administrator. The project partners with direct access to the user communities are responsible to upload the collected information or to check the uploaded content by the registered users from their communities. The evaluator will be the main person for the approval of the uploaded content, making publicly available. Finally, the system administrator will be responsible to execute all the technical checks for removing or merging duplicated records and deleting broken URLs that links the FEFTS information to the original source.

8.4 Ethics

All the personal data from the interviewees (farmers), participating into the stakeholders' requirements analysis (as part of the AgroFossilFree WP1 survey task) is treated as sensitive data and will not be publicly available.

8.5 Data security

During the lifetime of the project the technical partner (AGENSO) will be responsible for the security of the AgEnergy platform content, with regular backups and for solving all the technical issues will be raised in terms of the storage and representation of the data.

After the end of the project, the exported data will be integrated into the EIP-Agri platform. The corresponding EIP-Agri technical team will be responsible for any technical issue regarding the browsing and searching functionalities upon the FEFTS information. However, the AgEnergy Platform will remain online for at least 5 years after the completion of the project.

9. AgroFossilFree support package

The support package includes a list of recommendations that should be applied for the project in general and specifically for each partner, according to its role into the consortium.

9.1 Generic AgroFossilFree recommendations

- To prepare the Data Management Plan within the first six months of the project and update the report during the lifetime of the project when significant changes will happen (e.g., new data types to be included, changes in the consortium)
- To deposit the project's scientific publications to Open Access Journal repository, partners' institutional repository, AgEnergy platform and/or OpenAIRE's Zenodo repository
- Project partners to add the appropriate acknowledgement text to the scientific publications, related to AgroFossilFree outcomes
- Project partners to use the public Creative Commons open access licensing schema (e.g., CC BY 4.0)
- To set up the workflow process for uploading and publishing content into the AgEnergy platform
- To set up the quality assurance process for publishing the AgEnergy platform content
- To define the information schema for the AgEnergy platform content
- To define the AgroFossilFree controlled vocabulary
- To map the AgroFossilFree information schema to the EIP-Agri metadata schema for the content integration

9.2 Recommendations for CERTH - Coordinator

- To prepare the Data Management Plan within the first six months of the project and update the report during the lifetime of the project when significant changes will be happened (e.g. new data types to be included, changes in the consortium)
- To deposit the CERTH's publications and associated metadata related to AgroFossilFree outcomes into Open Access Journal repository or institutional repository (if applies)
- To guide project partners to add the appropriate acknowledgement text to the scientific publications, related to AgroFossilFree outcomes. This information should be included into specific publication section, as well into the metadata fields
- To encourage project partners to use the open access licensing schema (CC BY 4.0) for the publications and reports related to AgroFossilFree outcomes (if there are no restrictions into the publisher repository)
- To upload the information related to FEFTS into the AgEnergy platform with a link directly to the original source (mostly from research projects outcomes and articles)
- As an alternative, the project publications could be stored into the OpenAIRE giving the ability to third parties to access, mine, exploit, reproduce and disseminate them
- If it is required, coordinate the actions for setting up the project repository with all the AgroFossilFree publications into the Zenodo repository of OpenAIRE
- To upload descriptions of the CERTH's publications for FEFTS, as new records into the AgEnergy platform with link to the original source (open access journal repository and/or institutional repository)
- To decide about the validation process for ensuring the high quality of the AgEnergy platform content, e.g. the partners' role, quality assurance criteria for the uploaded content, which uploaded content will be published
- To coordinate the licencing schema that should be applied for the AgEnergy platform content. Most preferred licensing schema is the Creative Commons CC-BY 4.0 that prohibit the system users to re-use and modify the FEFTS information without the previous attribution to the source (AgroFossilFree project or EIP-Agri after the end of the project)
- To set up an agreement with EIP-Agri (if possible) about the exploitation of the integrated AgroFossilFree data into the EIP-Agri platform. E.g. the possibility for updating the content, offer advanced services to EIP-Agri platform users in terms of statics for the FEFTS market
- To prepare the support package for project partners with guidelines on how to generate, collect and disseminate the project content
- To collect data from scientific publication related to FEFTS
- During the project lifetime, costs that are related to gold open access (for CERTH's publications related to AgroFossilFree outcomes) are eligible for reimbursement, as it is explained into the Article 6.2 D.3 of the Model Grant Agreement

- With explicit agreement by the Commission, other open access costs related to membership to a journal for publishing in open access or as a pre-condition for lower article processing charges could be explored (Project Officer could assist on that)

9.3 Recommendations for INI - Dissemination partner

- To deposit the INI's publications and associated metadata related to AgroFossilFree outcomes into Open Access Journal repository (ZENODO)
- To deposit the AgroFossilFree scientific publications, created by INI, into the project repository (e.g. AgEnergy platform, a dedicated repository into OpenAIRE)
- To highlight the AgroFossilFree acknowledge text in a separate paragraph into the publication, as well to the metadata fields (which describe the uploaded publication)
- To apply the Creative Commons licensing schema (CC BY 4.0) for publications and reports related to AgroFossilFree outcomes that facilitate the open access
- To upload the AgroFossilFree dissemination material (deliverables under the public status, press releases, newsletters, slides) into the AgroFossilFree website
- To support on setting up and uploading the FEFTS vocabulary

9.4 Recommendations for AGENSO - Technical partner

- To define the information schema for the description of the AgEnergy platform content (articles, projects, products, training material and financing tools with related FEFTS information)
- To design the metadata elements with as many pre-defined answers
- The final information schema for the AgEnergy platform content should be mapped to the EIP-Agri metadata schema in order to facilitate the data integration (after the end of the project)
- To define the uploading process for the FEFTS information, e.g., users' roles, steps for uploading and publishing the content
- The AgEnergy platform should be able to store different versions for the same FEFTS information, like updates after a certain period of time
- To define and display the terms of use for the AgEnergy platform content
- As part of the quality check control of the uploaded FEFTS information, the system should anticipate the de-duplication and the removal of incomplete records or records that include broken links to the original source
- The AgEnergy platform should be able to export the content into a machine-readable format that could be integrated into the EIP-Agri
- Together with coordinator (CERTH) and WP2 Leader (WIP), define the controlled list of FEFTS keywords that will help contributors of AgEnergy platform content to upload and organise the FEFTS information in a more structured way

- The AgroFossilFree vocabulary (list of controlled keywords for FEFTS) should be mapped to the EIP-Agri vocabulary
- If it is required by the coordinator, AGENSO could build the OpenAIRE's Zenodo repository for the storage of the project publications, ensuring their preservation after the end of the project
- During the project, a communication with the EIP-Agri technical staff should be initiated on how to integrate FEFTS products and articles within the EIP-Agri platform.

9.5 Recommendations for WIP – Taxonomy partner

- To deposit the WIP's publications and associated metadata related to AgroFossilFree outcomes into Open Access Journal repository or institutional repository (if applies)
- To add the AgroFossilFree acknowledge text in separate section into the publication, as well to the metadata fields
- To upload the information related to FEFTS into the AgEnergy platform with a direct link to the original source (mostly research projects outcomes and articles)
- To define the AgroFossilFree vocabulary (controlled list of keywords) for FEFTS that should be used for the organisation of the FEFTS information into the AgEnergy platform
- The AgroFossilFree vocabulary used to describe thematically the project's outcomes should be linked to worldwide standards, like the AGROVOC¹¹ multilingual agricultural thesaurus of FAO of the UN, in order to facilitate the interoperability with other systems
- WIP, as WP2 leader, will support the overall efforts for mapping the AgroFossilFree vocabulary to the EIP-Agri vocabulary
- For AgroFossilFree terms that are completely new topics on EIP-Agri list of keywords, WIP with CERTH and AGENSO will propose to be integrated into the next round of updates of the EIP-Agri vocabulary.
- During the project lifetime, costs that are related to gold open access (for publications related to AgroFossilFree outcomes) are eligible for reimbursement, as it is explained into the Article 6.2 D.3 of the Model Grant Agreement
- To apply the Creative Commons licensing schema (CC BY 4.0) for publications and reports related to AgroFossilFree outcomes that facilitate the open access

9.6 Recommendations for AUA – Survey partner

- To deposit the AUA's publications and associated metadata related to AgroFossilFree outcomes into Open Access Journal repository or institutional repository (if applies)
- To deposit the AgroFossilFree scientific publications, created by AUA, into the project repository (e.g. AgEnergy platform, a dedicated repository into OpenAIRE)
- To add the AgroFossilFree acknowledge text in separate section into the publication, as well to the metadata fields

¹¹ <http://aims.fao.org/vest-registry/vocabularies/agrovoc-multilingual-agricultural-thesaurus>

- During the project lifetime, costs that are related to gold open access (for publications related to AgroFossilFree outcomes) are eligible for reimbursement, as it is explained into he the Article 6.2 D.3 of the Model Grant Agreement
- To apply the Creative Commons licensing schema (CC BY 4.0) for publications and reports related to AgroFossilFree outcomes that facilitate the open access
- To treat carefully sensitive information of the farmers and experts participating in the survey and interviews of WP1
- To collect information about the existing FEFTS by using the specific questionnaire template that is aligned to AgroFossilFree platform information schema
- To register and upload FEFTS information into the AgEnergy platform with a direct link to the original source (scientific publications and products)
- To train the AUA network members (advisors, consultants, extension officers, etc.) on how to upload new FEFTS information into the AgroFossilFree platform
- To support on setting up and uploading the FEFTS vocabulary

9.7 Recommendations for AU – Workshops partner

- To deposit the AU's publications and associated metadata related to AgroFossilFree outcomes into Open Access Journal repository or institutional repository (if applies)
- To deposit the AgroFossilFree scientific publications, created by AU, into the project repository (e.g. AgEnergy platform, a dedicated repository into OpenAIRE)
- To add the AgroFossilFree acknowledge text in separate section into the publication, as well to the metadata fields
- During the project lifetime, costs that are related to gold open access (for publications related to AgroFossilFree outcomes) are eligible for reimbursement, as it is explained into he the Article 6.2 D.3 of the Model Grant Agreement
- To apply the Creative Commons licensing schema (CC BY 4.0) for publications and reports related to AgroFossilFree outcomes that facilitate the open access
- To support on updating the AgroFossilFree vocabulary
- To treat carefully sensitive information of the stakeholders participating in the national and transnational workshops of WP2
- To collect information about FEFTS by using the specific questionnaire template that is aligned to AgEnergy platform information schema
- To register and upload the FEFTS information into the AgEnergy platform with a direct link to the original source (scientific publications and products)
- To train the AU network members (advisors, consultants, extension officers, etc.) on how to upload new FEFTS information into the AgEnergy platform
- To support on setting up and uploading the FEFTS vocabulary

9.8 Recommendations for CEMA, RESCOOP, ECAF – EU Associations

- To deposit their publications and associated metadata related to AgroFossilFree outcomes into Open Access Journal repository or institutional repository (if applies)
- To deposit their AgroFossilFree scientific publications into the project repository (e.g. AgEnergy platform, a dedicated repository into OpenAIRE)
- To add the AgroFossilFree acknowledge text in separate section into the publication, as well to the metadata fields
- During the project lifetime, costs that are related to gold open access (for publications related to AgroFossilFree outcomes) are eligible for reimbursement, as it is explained into he the Article 6.2 D.3 of the Model Grant Agreement
- To apply the Creative Commons licensing schema (CC BY 4.0) for publications and reports related to AgroFossilFree outcomes that facilitate the open access
- To assist their members to register and upload FEFTS information into the AgEnergy platform with a direct link to the original source (scientific publications and products)
- To support on setting up and uploading the FEFTS vocabulary
- Having the technical capacity, the exported AgEnergy platform content (in CSV format) could be integrated into the CEMA repository, supporting the CEMA network members. An agreement with the coordinator is required

9.9 Recommendations for DELPHY, L&F, LODR, TEAGASC, CONFAGRICOLTURA, TTA - Farmers' Associations and Extension Services

- To deposit their publications and associated metadata related to AgroFossilFree outcomes into Open Access Journal repository or institutional repository (if applies)
- To deposit their AgroFossilFree scientific publications into the project repository (e.g., AgEnergy platform, a dedicated repository into OpenAIRE)
- To add the AgroFossilFree acknowledge text in separate section into the publication, as well to the metadata fields
- During the project lifetime, costs that are related to gold open access (for publications related to AgroFossilFree outcomes) are eligible for reimbursement, as it is explained into he the Article 6.2 D.3 of the Model Grant Agreement
- To apply the Creative Commons licensing schema (CC BY 4.0) for publications and reports related to AgroFossilFree outcomes that facilitate the open access
- To collect information about the existing FEFTS by using the specific questionnaire template that is aligned to AgEnergy platform information schema

- To register and upload FEFTS information into the AgEnergy platform with a direct link to the original source (scientific publications and products)
- To train their network members (farmers, advisors, consultants, etc.) on how to upload new FEFTS information into the AgEnergy platform
- Having the technical capacity, the exported AgEnergy platform content (in CSV format) could be integrated into their repository (for those that have one), supporting their network members. An agreement with the coordinator is required
- To support on setting up and uploading the FEFTS vocabulary