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Online content report (update)

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Document Summary

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Duration: 36 months

Project coordinator: Thanos Balafoutis (CERTH)

Abstract

The current deliverable constitutes the second AgroFossilFree online content report and demonstrates the functionalities, content creation, operation, and maintenance activities for the AgroFossilFree official website and the AgEnergy platform. This deliverable is an updated version of the previously submitted deliverable D4.4 "Online content report" of WP4.

Contents

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1. Website

In the context of the project, a website has been developed (**Figure 1**) by AGENSO and can be accessed through the link www.agrofossilfree.eu using any modern browser (Firefox, Edge, Chrome, and Safari). The website has been launched since February 19th of 2021 and is considered as a main communication and dissemination tool of the project. It includes significant information about the project and its results. More specifically, several information regarding the project's overview, objectives, partners, and workshops, as well as information about news and events of AgroFossilFree. The website is translated and available in all 8 partners' languages (English, Greek, Polish, Spanish, Italian, German, Danish, Dutch), for achieving the maximum impact by enabling the optimum dissemination of the project. Change of language is available on the top right of the website, by selecting the corresponding flag.

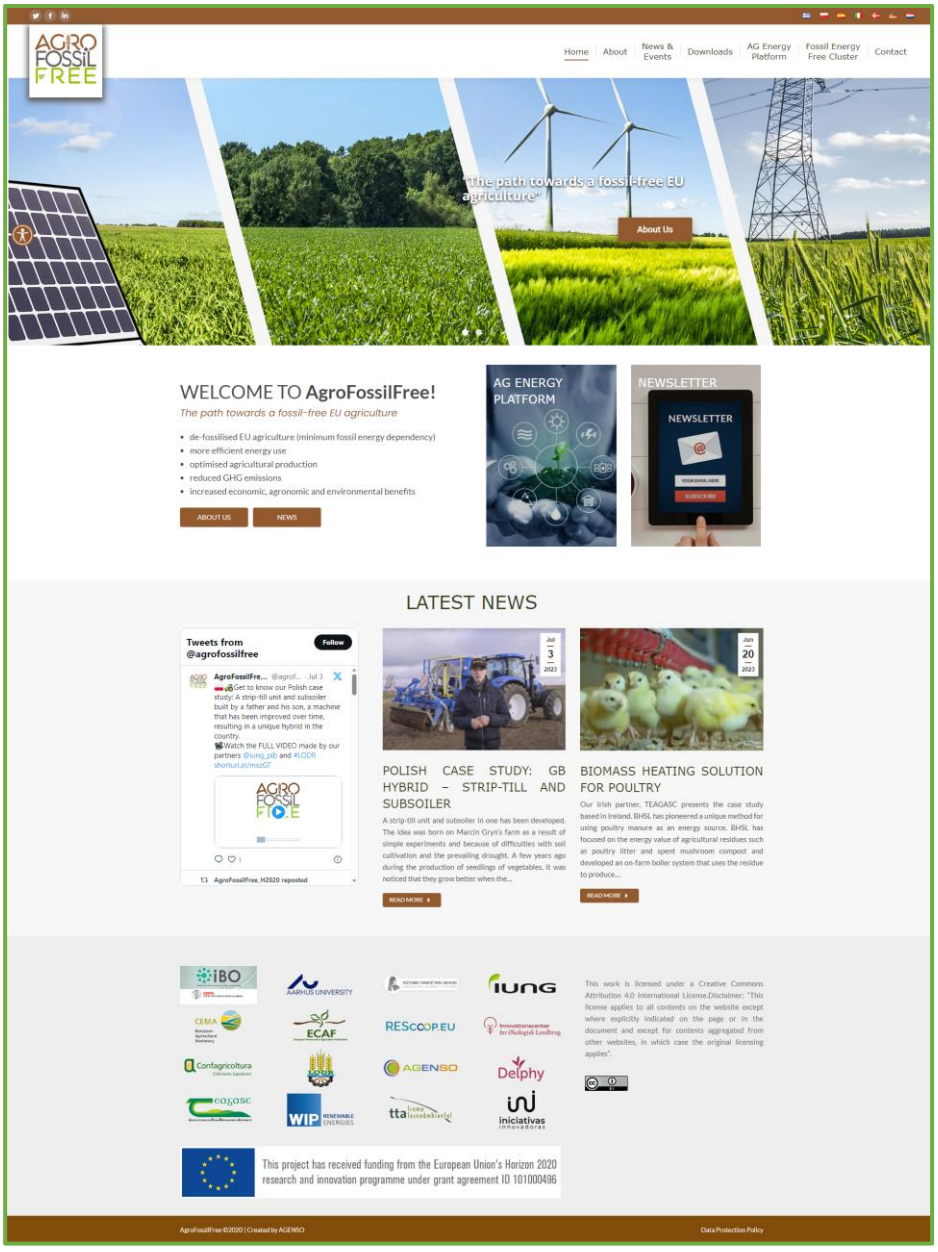


Figure 1. *AgroFossilFree website*

The website's general structure and functionalities are described in detail in the next paragraphs.

1.1. Home/Landing page

The home/landing page of the website is designed to be user-friendly and easy to navigate (**Figure 2**). The ultimate aim of the structure and content of the Home page is to attract visitors to learn about the project, and consequently play a role in the dissemination and communication of the project. As information related to the project is shared through the website, visitors can get acquainted with the aim of the project and stay updated regarding upcoming events and new related to **Fossil Energy Free Technologies and Strategies (FEFTS)**.

Figure 2. *Home/Landing page of the website*

1.2. About

The aim of the current part of the menu is to provide information about the overview of the project, its objectives, partners, and structure, as well as significant figures and information about AFF workshops. More specific details about the sub-menus are described in detail below.

1.2.1. Overview

The aim of the current sub-menu (**Figure 3**) is to provide information about the project's overview, including the main challenges, the definition and categorization of FEFTS, FEFTS examples, and contribution of the project to High Level EU Strategies, such as "EU Green Deal" and "Farm to Fork strategy". In this way, users can familiarize with the project and obtain several general information.

Figure 3. *Overview page*

1.2.2. Objectives

Under this sub-menu (**Figure 4**), users can find information related to the main 5 objectives of the project. More specifically:

- Assessment of the current energy status in EU agriculture and identification of factors affecting innovation adoption and diffusion of FEFTS.
- Identification and registration of available FEFTS from applied research results to market solutions and exploration of existing financing tools for de-fossilising activities.
- Collaboration with all relevant stakeholders in thematic groups using interactive physical and online methodologies to produce community-based ideas for fossil-energy-free strategies and technologies integration in agricultural systems in a regional and EU-basis.
- Creation of an AgEnergy online platform with all available FEFTS to be assessed by stakeholders and provision of a Decision Support Toolkit to propose interventions and financing tools.
- Creation of policy guidelines on EU, regional and national basis and communication of them to increase visibility and promote the proposed strategies and technologies in real agricultural activity in the near future.

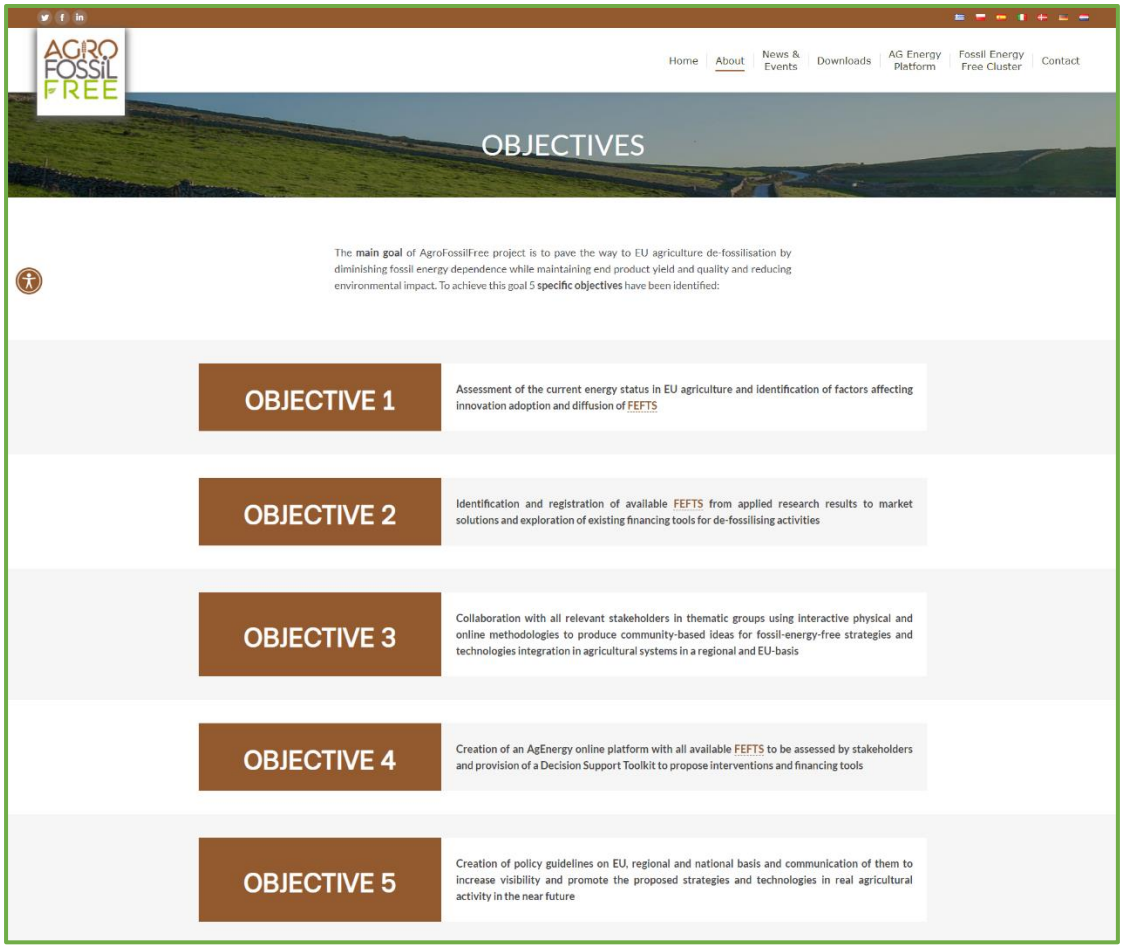


Figure 4. *Objectives page*

1.2.3. Partners

Under the current sub-menu (**Figure 5**), an interactive map containing the project's partners per country around Europe is available. By clicking on each pin on the map users can select the partners to be displayed by each country. In this way, users can easily find specific information about the partners and contact them directly.

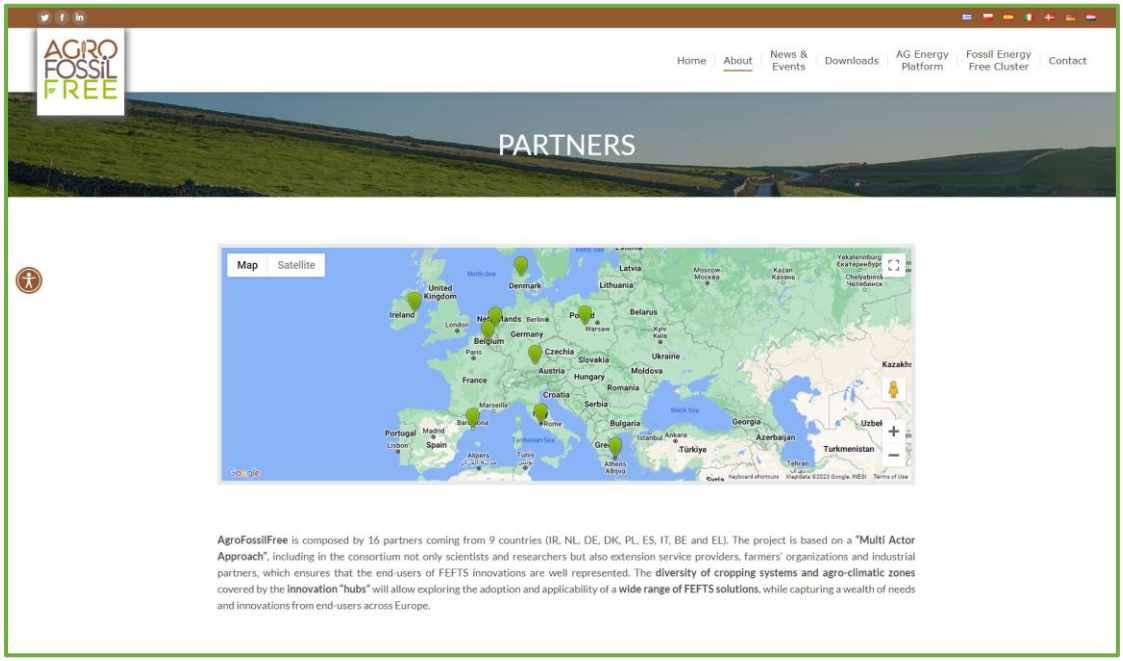


Figure 5. *Partners' page*

1.2.4. Project structure

Under the sub-menu "Project structure" (**Figure 6**), users can find the six Working Packages (WPs) of the project, along with a brief description of each one. The first four deal with the core activities of the project, while the other two are overarching (Communication and Dissemination & Management). More specifically, WPs are the following:

- WP1: Current energy use status in EU agriculture and identification of factors affecting innovation adoption and diffusion of FEFTS.
- WP2: Registry of available FEFTS and financing tools in EU agriculture.
- WP3: Interactive multi-actor innovation networking, consultation and development of policy guidelines on FEFTS adoption in EU agriculture.
- WP4: AgEnergy Online Platform.
- WP5: Dissemination and Communication.
- WP6: Project Management.

Figure 6. *Project structure page*

1.2.5. Figures

Under the sub-menu "Figures" (**Figure 7**), users can find general information and specifications regarding the project, in the form of numbers. This page simplifies the understanding of the complex project's background, by providing simple to understand facts, such as the number of FEFTS, policy guidelines, and practice abstracts.

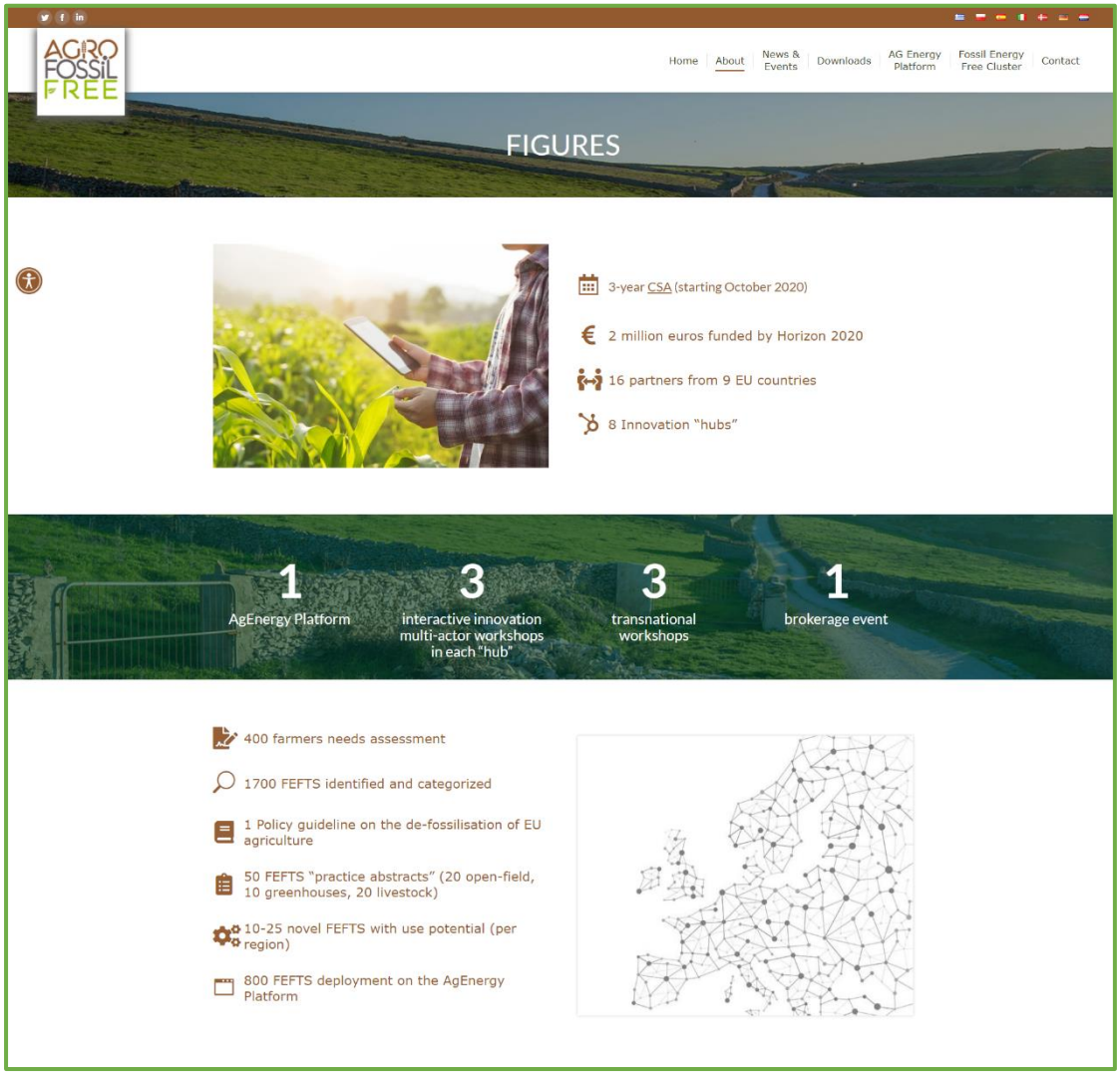


Figure 7. *Figures page*

1.2.6. AFF Workshops

AFF Workshops sub-menu intends to inform users about the different types of workshops that will be conducted during the project, i.e., National innovation multi-actor workshops, regional workshops, transnational workshops, brokerage event etc. (**Figure 8**).

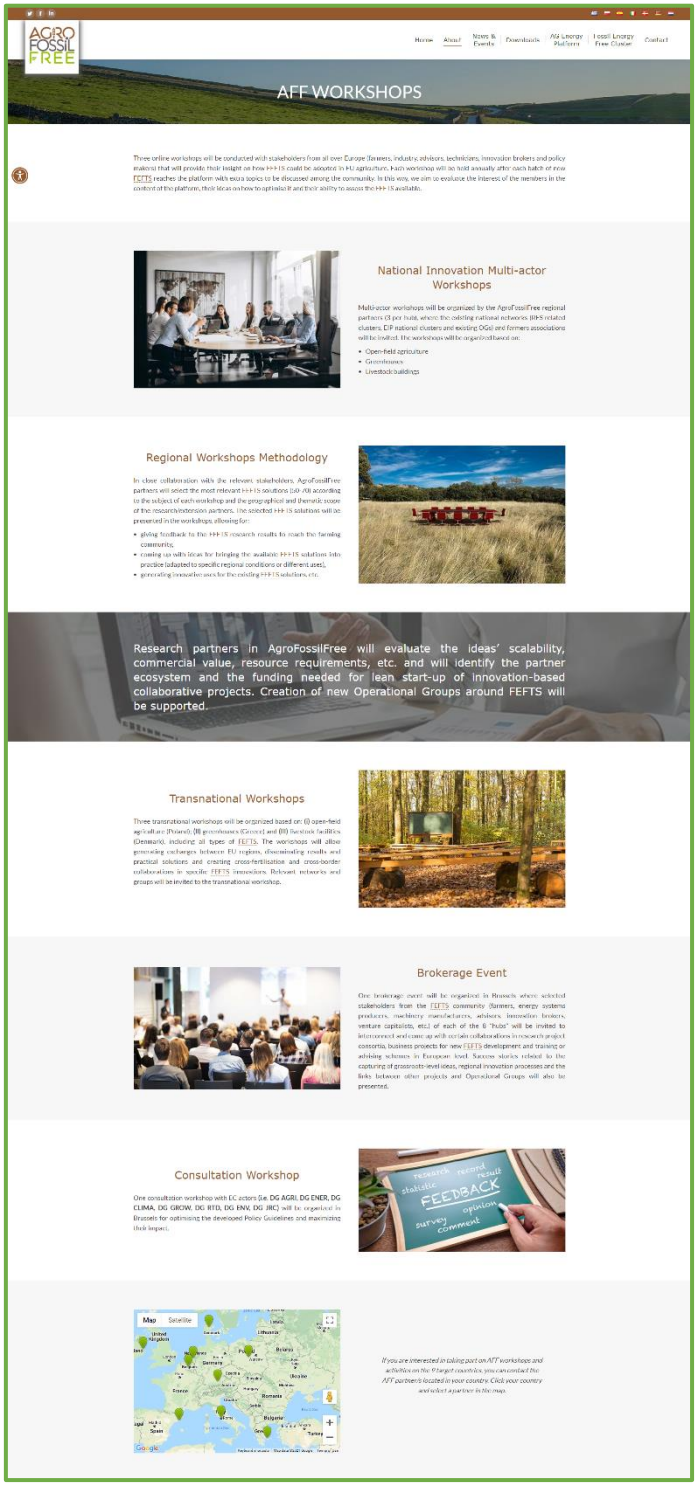


Figure 8. *AFF Workshops page*

1.3. News & Events

The current menu intends to inform users about the new and events of AgroFossilFree. Under this section, relevant information is posted.

1.3.1. News

Under the current sub-menu (**Figure 9**), posts are generated, aiming to inform users regarding project news. The "News" page contains activities related to the project, while the additional possibility to get subscribed to the newsletter of the project is provided to the users, in order to join the AgroFossilFree community.

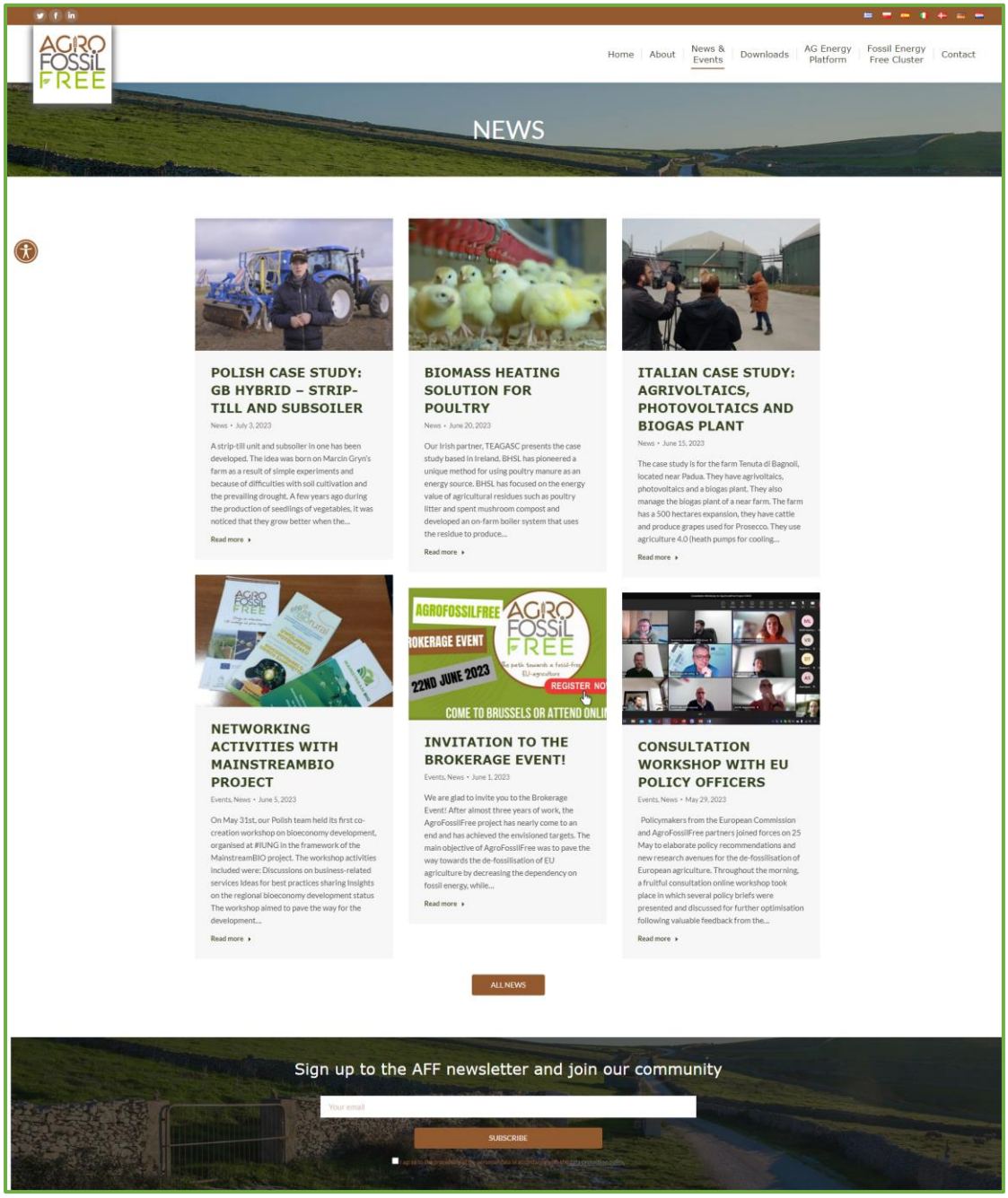


Figure 9. *News page*

1.3.2. Events

Under the sub-menu "Events" (**Figure 10**), users can find information about the conducted or planned events of the project. Users have the possibility to display the calendar according to

their willing, with possible option being the monthly format, the weekly format, the daily format and the list.

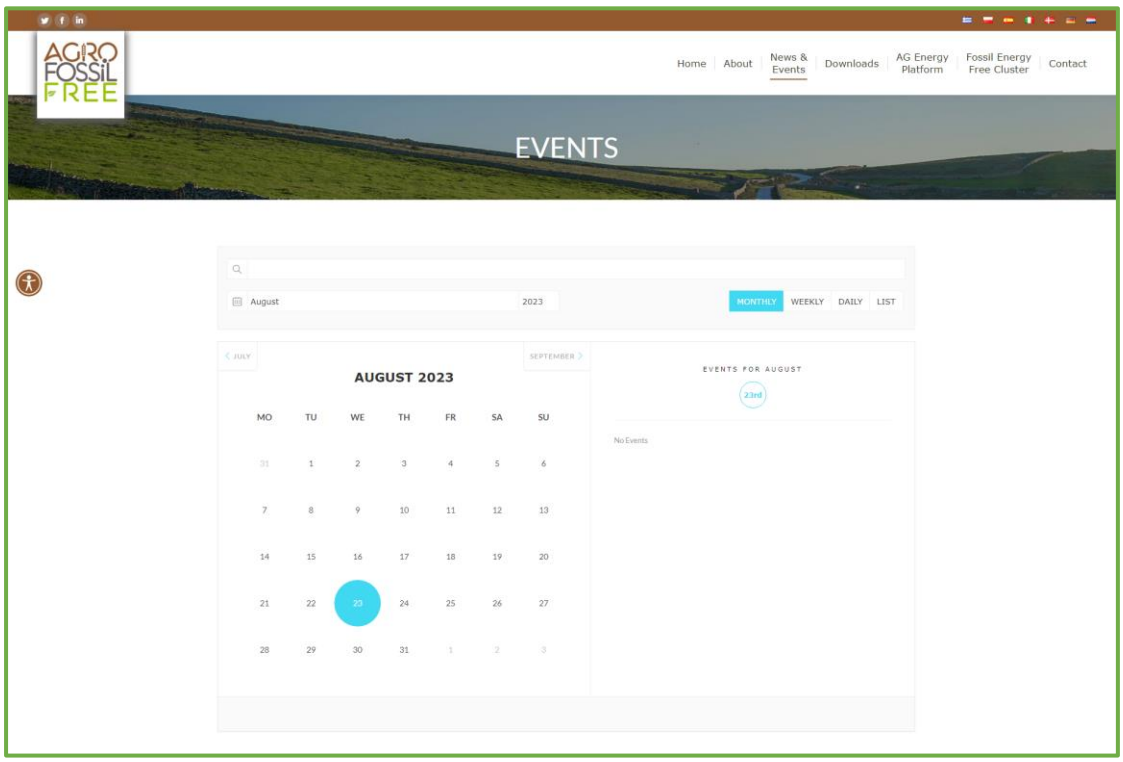


Figure 10. *Events page*

1.4. Downloads

Using this menu, allows users to have access to uploaded material, which is available for download. More specifically, users can find distinct sub-menus referring to communication material, project's deliverables, practice abstracts, and research papers and articles. Detailed description follows below.

1.4.1. Communication material

In the framework of dissemination and communication of the project, several promotional materials have been developed. An AFF leaflet, an AFF roll-up banner, an AFF brochure, as well as a link to a YouTube video regarding the project are available under the sub-menu "Communication material" (**Figure 11**).

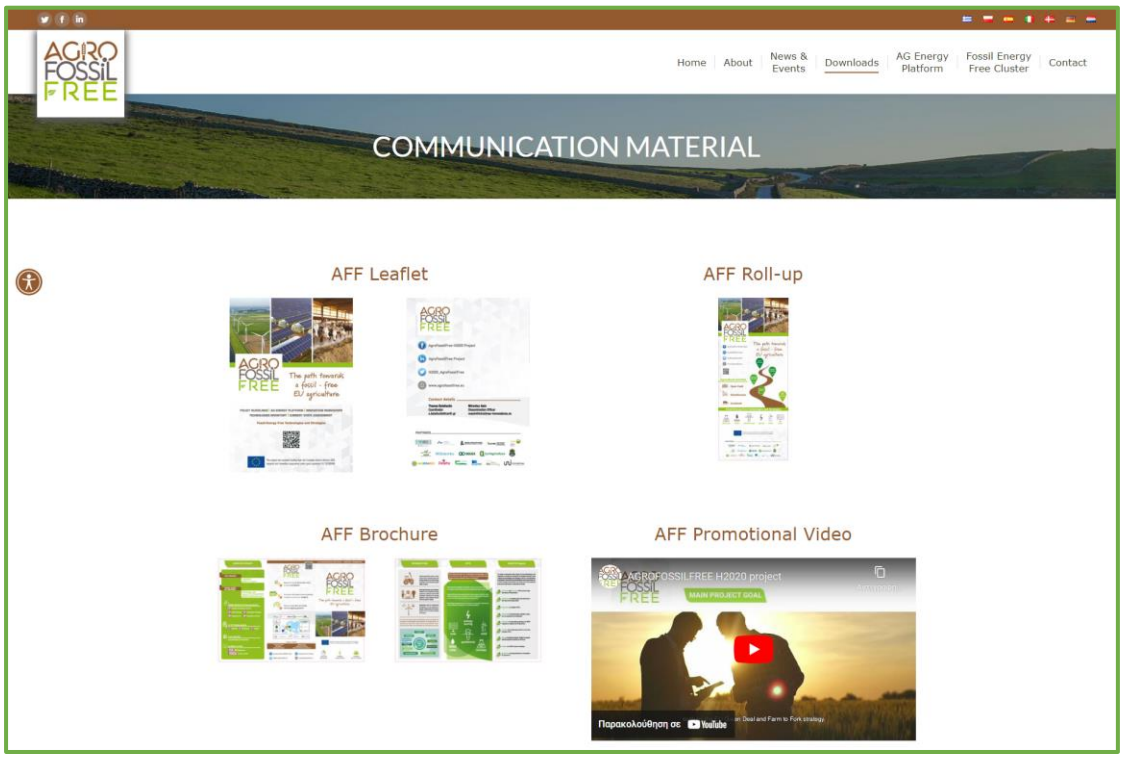


Figure 11. *Communication material page*

1.4.2. Deliverables

The next sub-menu of the menu "Downloads" is entitled "Deliverables" (**Figure 12**). It contains a list of the public deliverables of AgroFossilFree project per WP. It is in the future aims of the project's consortium, to provide all website's visitors with the public deliverables of the project, in an easy downloadable way, aiming to achieve a broader dissemination of the project's outcomes and results.

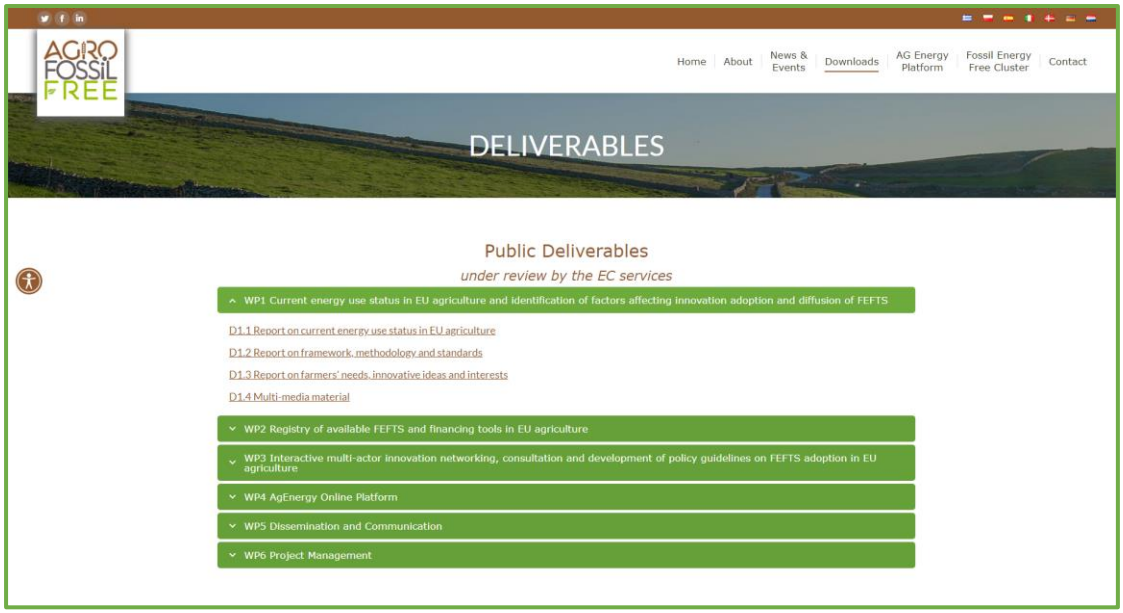


Figure 12*. Deliverables page*

1.4.3. Practice Abstracts

Under the sub-menu “Practice Abstracts”, practice abstracts generated by the project’s partners are provided to users (**Figure 13**). Practice abstracts’ generation is included in the deliverables D5.7 - “First batch of Practice Abstracts” (M18) and D5.8 - “Second batch of Practice Abstracts” (M36), in the framework of WP5. The developed Practice abstracts are structured in an easily understandable and user-friendly format (**Figure 14**).

Figure 13. *Practice abstracts page*

PRACTICE ABSTRACT NO. 21

AGRO FOSSIL FREE

AGENSO

AgEnergy platform

Main results / outcomes

In the framework of knowledge diffusion regarding the defossilization of the agricultural production, AgroFossilFree project has developed AgEnergy platform that is accessible at Agro Fossil Free - Home. AgEnergy platform is an online tool that serves as a freely accessible data sharing platform/repository of innovative Fossil Energy Free Technologies and Strategies (FEFTS). This tool allows accessing scientific papers, research projects, commercial technologies, training materials, and financing mechanisms in a simple and user-friendly way, aiming to provide all interested stakeholders and end-users that operate in the agricultural sector, with information related to clean energy supply, energy efficiency improvement and soil carbon sequestration. The AgEnergy platform is developed for the communication, transfer and distribution of knowledge in an interactive approach. Thus, the platform is available in 8 different languages (English, Greek, Polish, Spanish, Italian, German, Danish, and Dutch).

Practical recommendations

End-users such as producers, agricultural experts, advisory service providers, agricultural cooperatives and associations, along with policy makers can access high-end valuable information about solutions for the defossilization of the agricultural sector. As a result, AgroFossilFree contributes in closing the gap between the available FEFTS, either commercial or from applicable research results, with the everyday EU agricultural practices.

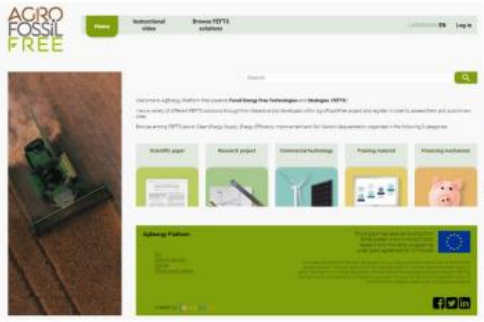


Figure 1: AgEnergy platform

Figure 2: FEFTS preview in AgEnergy platform

Further information

AgEnergy Platform

About this abstract

Authors: Michail Kaminiaris and Zisis Tsiropoulos, AGENSO
Date: March 2022
AgroFossilFree is a H2020 multi-actor project that will evaluate the current status in EU agriculture regarding energy use and assess existing needs, allowing farmers to optimize agricultural production through more efficient energy use and reduced GHG emissions, resulting in economic, agronomic and environmental benefits. AgroFossilFree will create a framework under which critical stakeholders will cooperate to evaluate and promote the currently available Fossil-Energy-Free Technologies and Strategies (FEFTS) in EU agriculture. The project is running from October 2020 to September 2023.
Website: www.agrofossilfree.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement ID 101000496

Figure 14. *Preview of practice abstract*

1.4.4. Research papers and articles

Research papers and articles that have been generated by AgroFossilFree partners are hosted under this section (**Figure 15**).

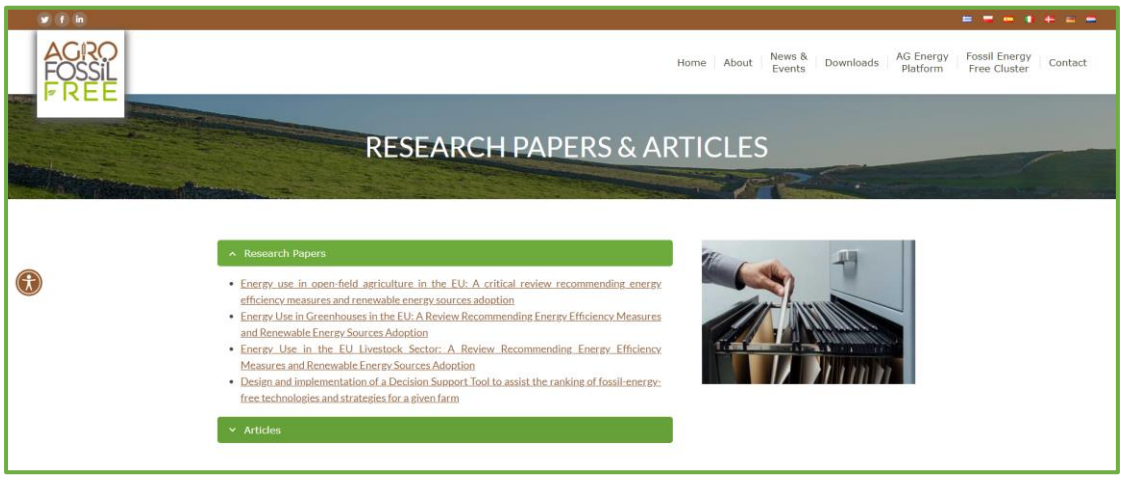


Figure 15. *Research papers & articles page*

1.5. AgEnergy platform

The menu "AgEnergy Platform" of the project's website aims to inform users about the Platform, to provide them the AgEnergy Platform link.

1.5.1. Visit Platform

The sub-menu entitled "Visit Platform", redirects users to the AgEnergy Platform.

1.5.2. About

This sub-menu includes information about the AgEnergy platform, such as the number of FEFTS, the benefits of using the platform, and the problems that it can help to solve (**Figure 16**).

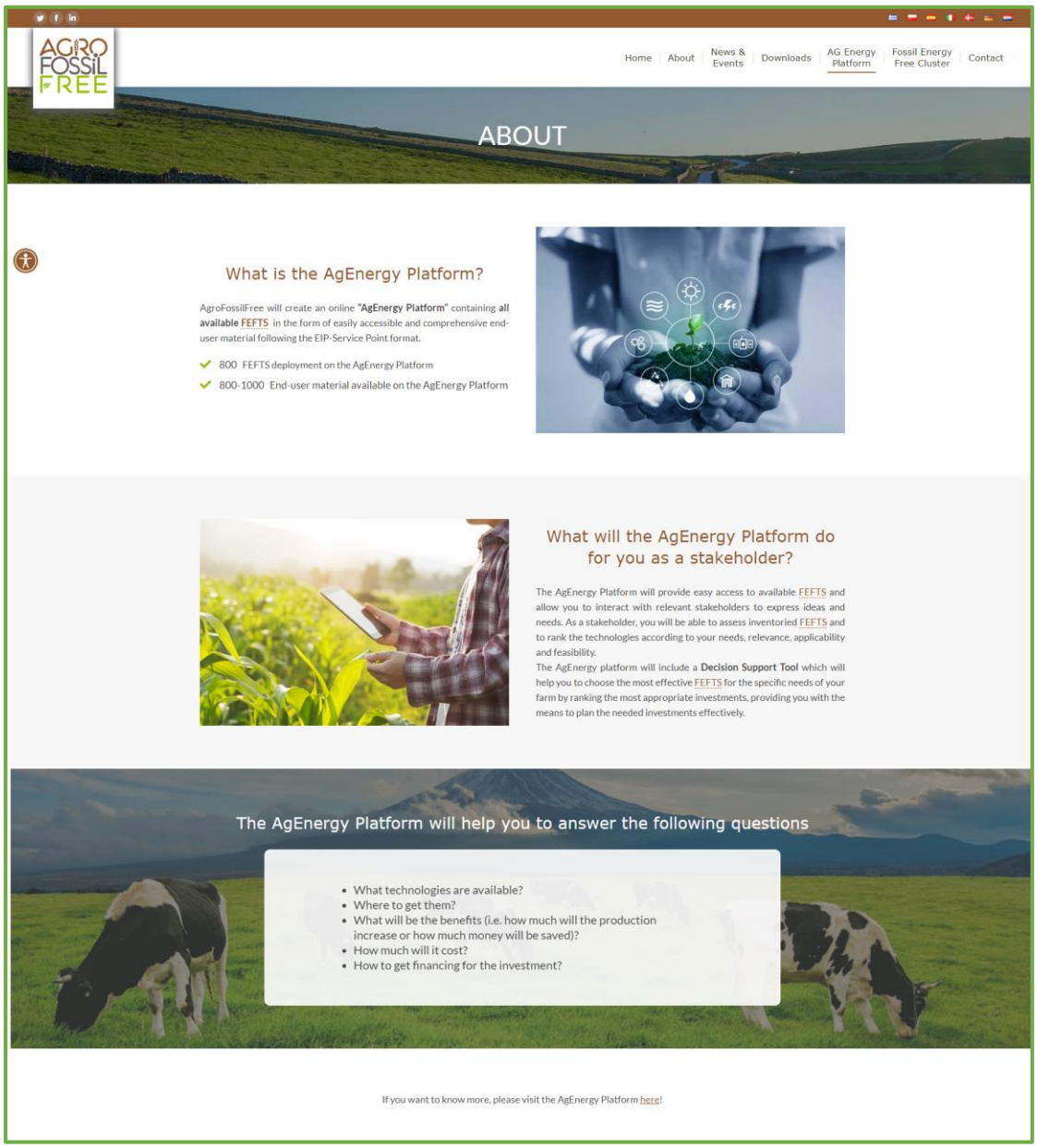


Figure 16. *About AgEnergy Platform page*

1.6. Fossil Energy Free Cluster

The menu "Fossil Energy Free Cluster" aims to demonstrate the cluster that has been created between 6 H2020 projects (including AgroFossilFree), in order to establish collaboration and promote the developed technology solutions to potential stakeholders/end-users in a common way. All 6 projects have been funded under FNR-06 A & B and LC-SC3-ES-3-2018/2020. The current website menu constitutes of 3 main sub-menus, more specifically, Goals, Members and Activities that are described in detail below.

1.6.1. Goals

The sub-menu "Goals" (**Figure 17**) includes information about the Cluster, with details about the collaboration and the focus area of the cluster. Events, success stories, insights, workshops and knowledge are some of the aforementioned focus areas.

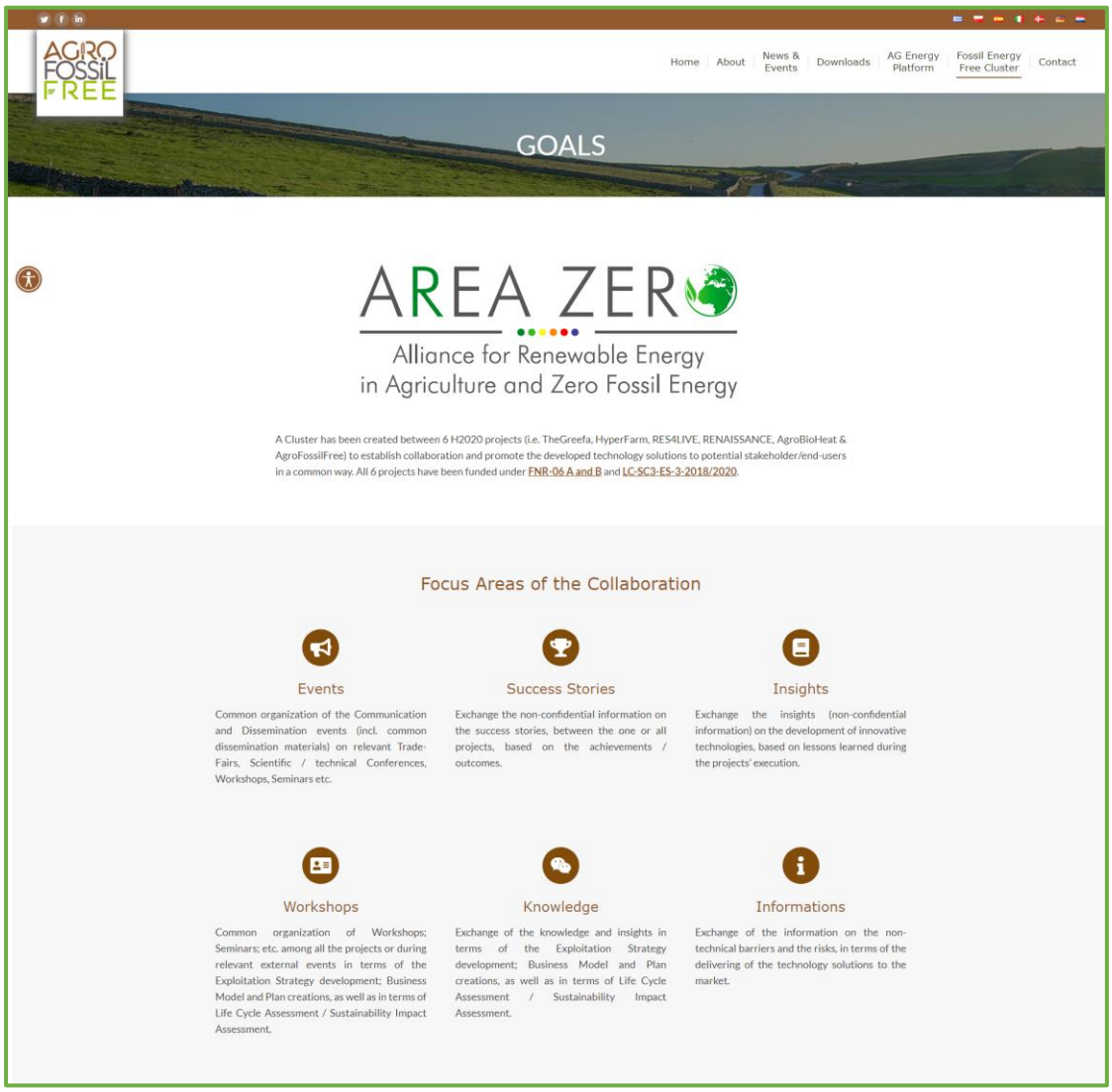


Figure 17. *Goals page*

1.6.2. Members

Under the "Members" sub-menu, users can access information about the members of the Cluster. A short description of each member is provided, accompanied by the corresponding logo of each project, along with a link that redirects to the official website of each member (**Figure 18**).

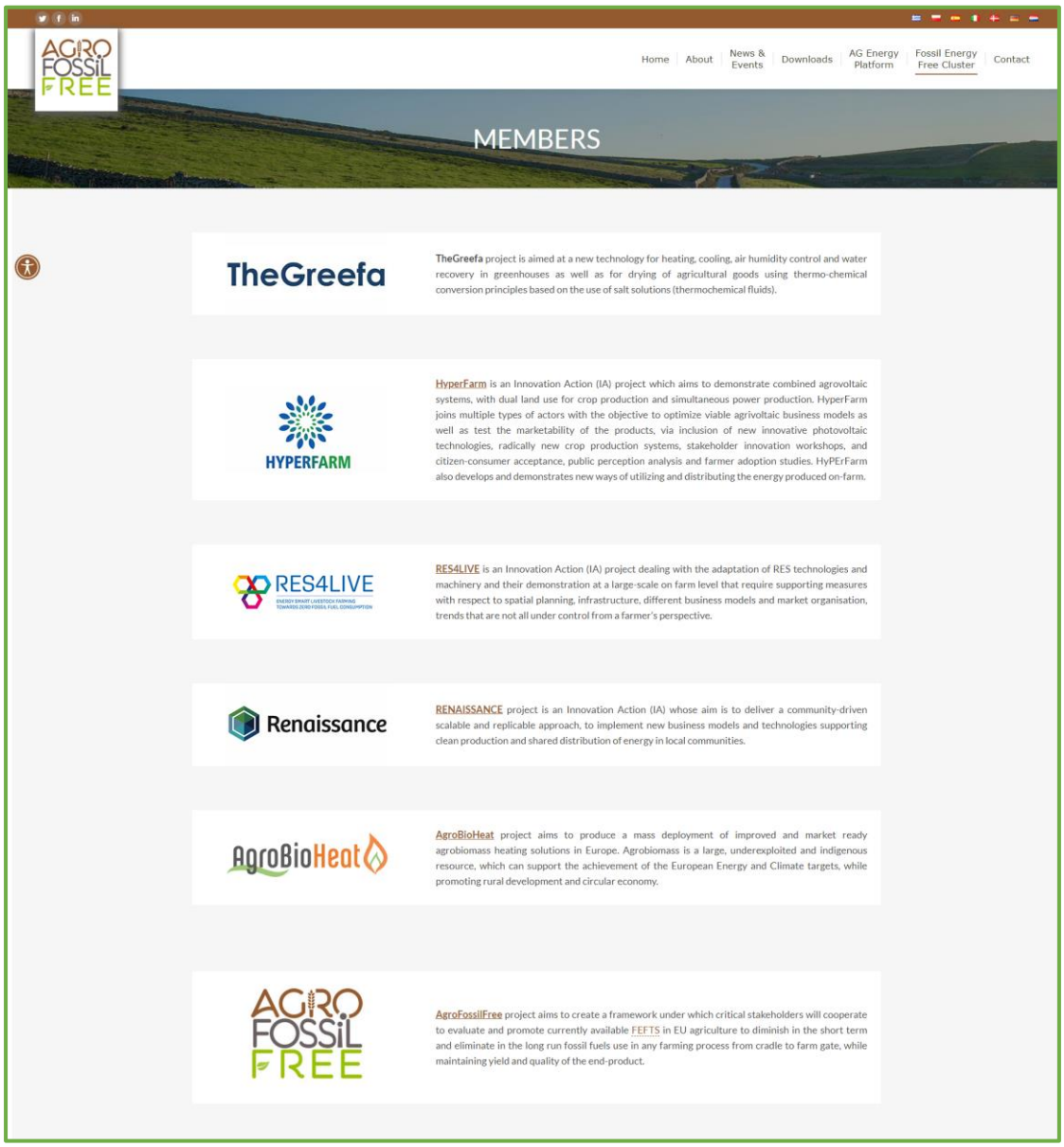


Figure 18. *Fossil Energy Free Cluster's Members page*

1.6.3. Activities

Under the sub-menu "Activities" (**Figure 19**), the dissemination and communication of cluster's results are presented, providing users with an overview of recommendations, identifications, and networking based on the aforementioned results.

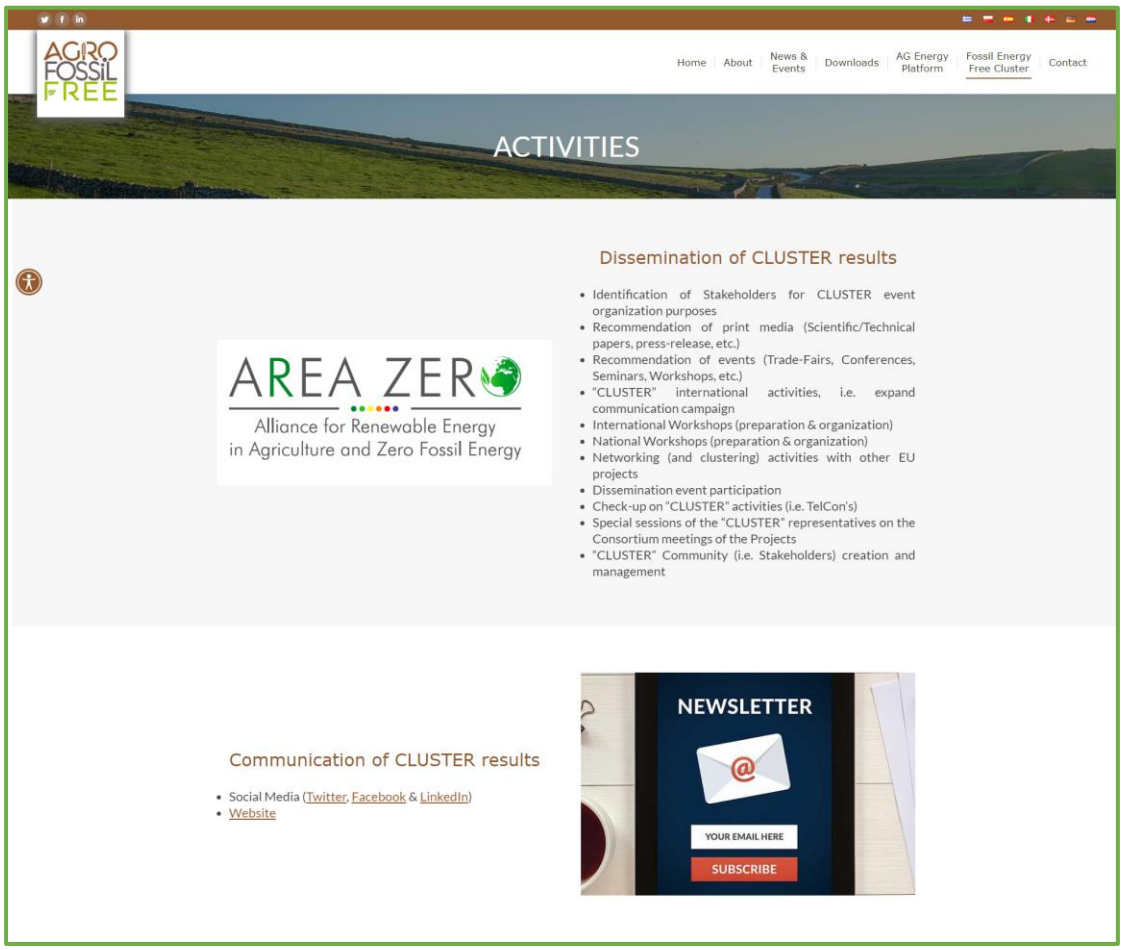


Figure 19. *Fossil Energy Free Cluster's activities page*

1.7. Contact

The last menu on the AgroFossilFree website is entitled "Contact". It includes two distinct sub-menus, more specifically "Contact" and "Links". The 2 sub-menus are described below.

1.7.1. Contact

"Contact" sub-menu (**Figure 20**), includes information about the project coordination, and the dissemination manager of the project. In the current sub-menu, a form is also available for users, in order to contact the consortium, by sending a message.

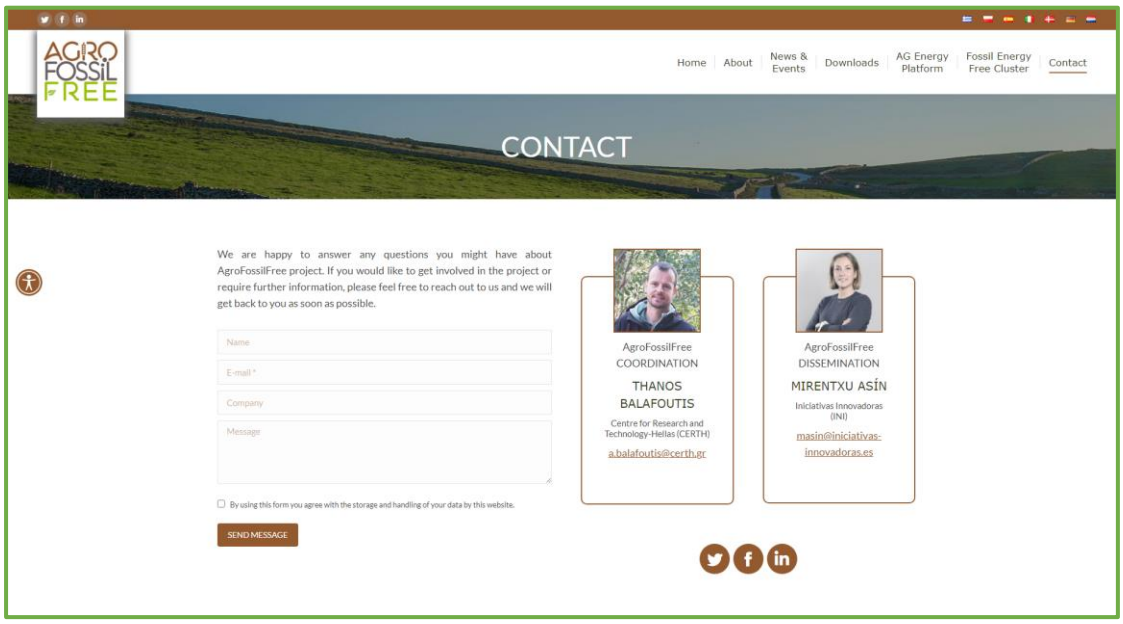
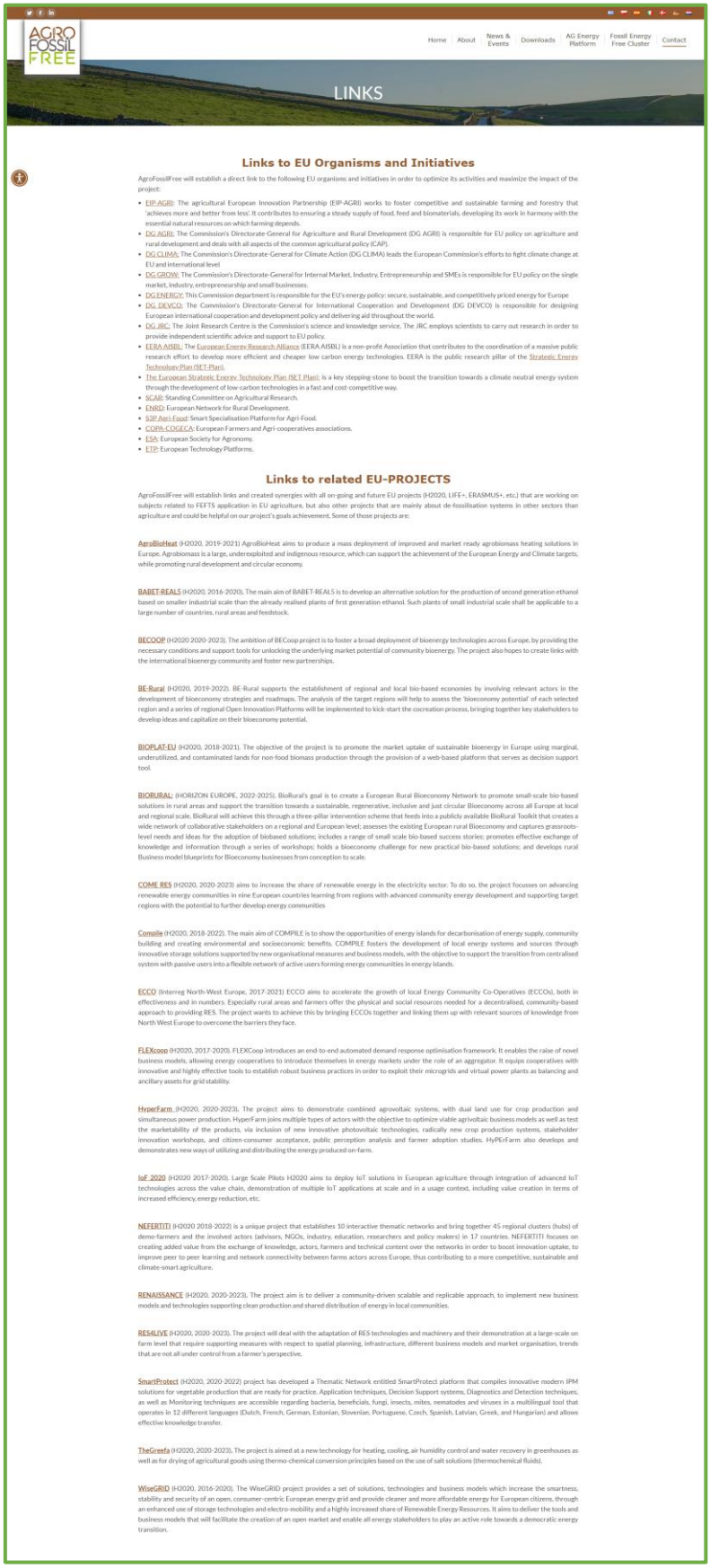


***Figure 20**. Contact page*

1.7.2. Links

"Links" is the last sub-menu of the "Contact" menu (**Figure 21**). It includes an elaborate list with links to EU Organisms and Initiatives, as well as other related EU projects, accompanied by a short description for each one.



AGRO FOSSIL FREE

Home | About | News & Events | Downloads | AG Energy Platform | Fossil Energy Free Cluster | Contact

LINKS

Links to EU Organisms and Initiatives

AgroFossilFree will establish a direct link to the following EU organisms and initiatives in order to optimize its activities and maximize the impact of the project:

- EIP-AGRI: The agricultural European Innovation Partnership (EIP-AGRI) works to foster competitive and sustainable farming and forestry that 'achieves more and better from less'. It contributes to ensuring a steady supply of food, feed and biomaterials, developing its work in harmony with the essential natural resources on which farming depends.
- DG AGRI: The Commission's Directorate-General for Agriculture and Rural Development (DG AGRI) is responsible for EU policy on agriculture and rural development and deals with all aspects of the common agricultural policy (CAP).
- DG CLIMA: The Commission's Directorate-General for Climate Action (DG CLIMA) leads the European Commission's efforts to fight climate change at EU and international level
- DG GROW: The Commission's Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs is responsible for EU policy on the single market, industry, entrepreneurship and small businesses.
- DG ENERGY: This Commission department is responsible for the EU's energy policy: secure, sustainable, and competitively priced energy for Europe
- DG DEVCO: The Commission's Directorate-General for International Cooperation and Development (DG DEVCO) is responsible for designing European international cooperation and development policy and delivering aid throughout the world.
- DG JRC: The Joint Research Centre is the Commission's science and knowledge service. The JRC employs scientists to carry out research in order to provide independent scientific advice and support to EU policy.
- EERA AISBL: The European Energy Research Alliance (EERA AISBL) is a non-profit Association that contributes to the coordination of a massive public research effort to develop more efficient and cheaper low carbon energy technologies. EERA is the public research pillar of the Strategic Energy Technology Plan (SET-Plan).
- The European Strategic Energy Technology Plan (SET Plan): is a key stepping-stone to boost the transition towards a climate neutral energy system through the development of low-carbon technologies in a fast and cost-competitive way.
- SCAR: Standing Committee on Agricultural Research.
- ENRD: European Network for Rural Development.
- S3P Agri-Food: Smart Specialisation Platform for Agri-Food.
- COPA-COGECA: European Farmers and Agri-cooperatives associations.
- ESA: European Society for Agronomy.
- ETP: European Technology Platforms.

Links to related EU-PROJECTS

AgroFossilFree will establish links and created synergies with all on-going and future EU projects (H2020, LIFE+, ERASMUS+, etc.) that are working on subjects related to FEFTS application in EU agriculture, but also other projects that are mainly about de-fossilisation systems in other sectors than agriculture and could be helpful on our project's goals achievement. Some of those projects are:

AgroBioHeat (H2020, 2019-2021) AgroBioHeat aims to produce a mass deployment of improved and market ready agrobiomass heating solutions in Europe. Agrobiomass is a large, underexploited and indigenous resource, which can support the achievement of the European Energy and Climate targets, while promoting rural development and circular economy.

BABET-REAL5 (H2020, 2016-2020). The main aim of BABET-REAL5 is to develop an alternative solution for the production of second generation ethanol based on smaller industrial scale than the already realised plants of first generation ethanol. Such plants of small industrial scale shall be applicable to a large number of countries, rural areas and feedstock.

BECOOP (H2020 2020-2023). The ambition of BECoop project is to foster a broad deployment of bioenergy technologies across Europe, by providing the necessary conditions and support tools for unlocking the underlying market potential of community bioenergy. The project also hopes to create links with the international bioenergy community and foster new partnerships.

BE-Rural (H2020, 2019-2022). BE-Rural supports the establishment of regional and local bio-based economies by involving relevant actors in the development of bioeconomy strategies and roadmaps. The analysis of the target regions will help to assess the 'bioeconomy potential' of each selected region and a series of regional Open Innovation Platforms will be implemented to kick-start the cocreation process, bringing together key stakeholders to develop ideas and capitalize on their bioeconomy potential.

BIOPLAT-EU (H2020, 2018-2021). The objective of the project is to promote the market uptake of sustainable bioenergy in Europe using marginal, underutilized, and contaminated lands for non-food biomass production through the provision of a web-based platform that serves as decision support tool.

BIORURAL: (HORIZON EUROPE, 2022-2025). BioRural's goal is to create a European Rural Bioeconomy Network to promote small-scale bio-based solutions in rural areas and support the transition towards a sustainable, regenerative, inclusive and just circular Bioeconomy across all Europe at local and regional scale. BioRural will achieve this through a three-pillar intervention scheme that feeds into a publicly available BioRural Toolkit that creates a wide network of collaborative stakeholders on a regional and European level; assesses the existing European rural Bioeconomy and captures grassroots-level needs and ideas for the adoption of biobased solutions; includes a range of small scale bio-based success stories; promotes effective exchange of knowledge and information through a series of workshops; holds a bioeconomy challenge for new practical bio-based solutions; and develops rural Business model blueprints for Bioeconomy businesses from conception to scale.

COME RES (H2020, 2020-2023) aims to increase the share of renewable energy in the electricity sector. To do so, the project focusses on advancing renewable energy communities in nine European countries learning from regions with advanced community energy development and supporting target regions with the potential to further develop energy communities

Compile (H2020, 2018-2022). The main aim of COMPILE is to show the opportunities of energy islands for decarbonisation of energy supply, community building and creating environmental and socioeconomic benefits. COMPILE fosters the development of local energy systems and sources through innovative storage solutions supported by new organisational measures and business models, with the objective to support the transition from centralised system with passive users into a flexible network of active users forming energy communities in energy islands.

ECCO (Interreg North-West Europe, 2017-2021) ECCO aims to accelerate the growth of local Energy Community Co-Operatives (ECCOs), both in effectiveness and in numbers. Especially rural areas and farmers offer the physical and social resources needed for a decentralised, community-based approach to providing RES. The project wants to achieve this by bringing ECCOs together and linking them up with relevant sources of knowledge from North West Europe to overcome the barriers they face.

FLEXcoop (H2020, 2017-2020). FLEXCoop introduces an end-to-end automated demand response optimisation framework. It enables the raise of novel business models, allowing energy cooperatives to introduce themselves in energy markets under the role of an aggregator. It equips cooperatives with innovative and highly effective tools to establish robust business practices in order to exploit their microgrids and virtual power plants as balancing and ancillary assets for grid stability.

HyperFarm (H2020, 2020-2023). The project aims to demonstrate combined agrovoltaic systems, with dual land use for crop production and simultaneous power production. HyperFarm joins multiple types of actors with the objective to optimize viable agrivoltaic business models as well as test the marketability of the products, via inclusion of new innovative photovoltaic technologies, radically new crop production systems, stakeholder innovation workshops, and citizen-consumer acceptance, public perception analysis and farmer adoption studies. HyPErFarm also develops and demonstrates new ways of utilizing and distributing the energy produced on-farm.

IoF 2020 (H2020 2017-2020). Large Scale Pilots H2020 aims to deploy IoT solutions in European agriculture through integration of advanced IoT technologies across the value chain, demonstration of multiple IoT applications at scale and in a usage context, including value creation in terms of increased efficiency, energy reduction, etc.

NEFERTITI (H2020 2018-2022) is a unique project that establishes 10 interactive thematic networks and bring together 45 regional clusters (hubs) of demo-farmers and the involved actors (advisors, NGOs, industry, education, researchers and policy makers) in 17 countries. NEFERTITI focuses on creating added value from the exchange of knowledge, actors, farmers and technical content over the networks in order to boost innovation uptake, to improve peer to peer learning and network connectivity between farms actors across Europe, thus contributing to a more competitive, sustainable and climate-smart agriculture.

RENAISSANCE (H2020, 2020-2023). The project aim is to deliver a community-driven scalable and replicable approach, to implement new business models and technologies supporting clean production and shared distribution of energy in local communities.

RES4LIVE (H2020, 2020-2023). The project will deal with the adaptation of RES technologies and machinery and their demonstration at a large-scale on farm level that require supporting measures with respect to spatial planning, infrastructure, different business models and market organisation, trends that are not all under control from a farmer's perspective.

SmartProtect (H2020, 2020-2022) project has developed a Thematic Network entitled SmartProtect platform that compiles innovative modern IPM solutions for vegetable production that are ready for practice. Application techniques, Decision Support systems, Diagnostics and Detection techniques, as well as Monitoring techniques are accessible regarding bacteria, beneficials, fungi, insects, mites, nematodes and viruses in a multilingual tool that operates in 12 different languages (Dutch, French, German, Estonian, Slovenian, Portuguese, Czech, Spanish, Latvian, Greek, and Hungarian) and allows effective knowledge transfer.

TheGreefa (H2020, 2020-2023). The project is aimed at a new technology for heating, cooling, air humidity control and water recovery in greenhouses as well as for drying of agricultural goods using thermo-chemical conversion principles based on the use of salt solutions (thermochemical fluids).

WiseGRID (H2020, 2016-2020). The WiseGRID project provides a set of solutions, technologies and business models which increase the smartness, stability and security of an open, consumer-centric European energy grid and provide cleaner and more affordable energy for European citizens, through an enhanced use of storage technologies and electro-mobility and a highly increased share of Renewable Energy Resources. It aims to deliver the tools and business models that will facilitate the creation of an open market and enable all energy stakeholders to play an active role towards a democratic energy transition.

***Figure 21**. Links page*

2. AgEnergy platform

AgEnergy platform is an interactive tool, developed for accessing a variety of FEFTS solutions, assessing them, and submitting new ones. Browsing among FEFTS about clean energy supply, energy efficiency, and soil carbon sequestration is possible. FEFTS are divided in 5 categories, which are the following:

- Scientific papers
- Research projects
- Commercial technologies
- Training materials
- Financing mechanisms

AgEnergy platform is freely accessible in https://platform.agrofossilfree.eu/ for all users. The platform's menu constitutes of 4 distinct sections, more specifically, Home, Use Cases' Videos, Browse FEFTS solutions, and AI Decision Support Tool, that are described below.

2.1. AgEnergy Platform homepage

The homepage of AgEnergy platform is designed aiming to operate as a user-friendly interface, where different types of stakeholders, such as farmers, farmers' associations, energy generators, energy suppliers etc. have access to high-end innovative technologies and strategies.

On the top right side of the platform, language selection is available. The available languages are the following: English, Greek, Polish, Spanish, Italian, German, Danish, and Dutch. Additionally, next to the language selection, the Log in button is available. Logged in users have the ability to register new FEFTS in order to contribute to the platform's content, and assess FEFTS. New registrations are subjected to evaluation by AgroFossilFree's consortium regarding their quality, validity and completeness before being officially published on AgEnergy platform.

In the homepage of the platform (**Figure 22**), users can select a FEFTS category, among the 5 aforementioned, in order to search for FEFTS using the navigation pathway (**Figure 23**) by selecting the appropriate categories based on the desired result of the query.

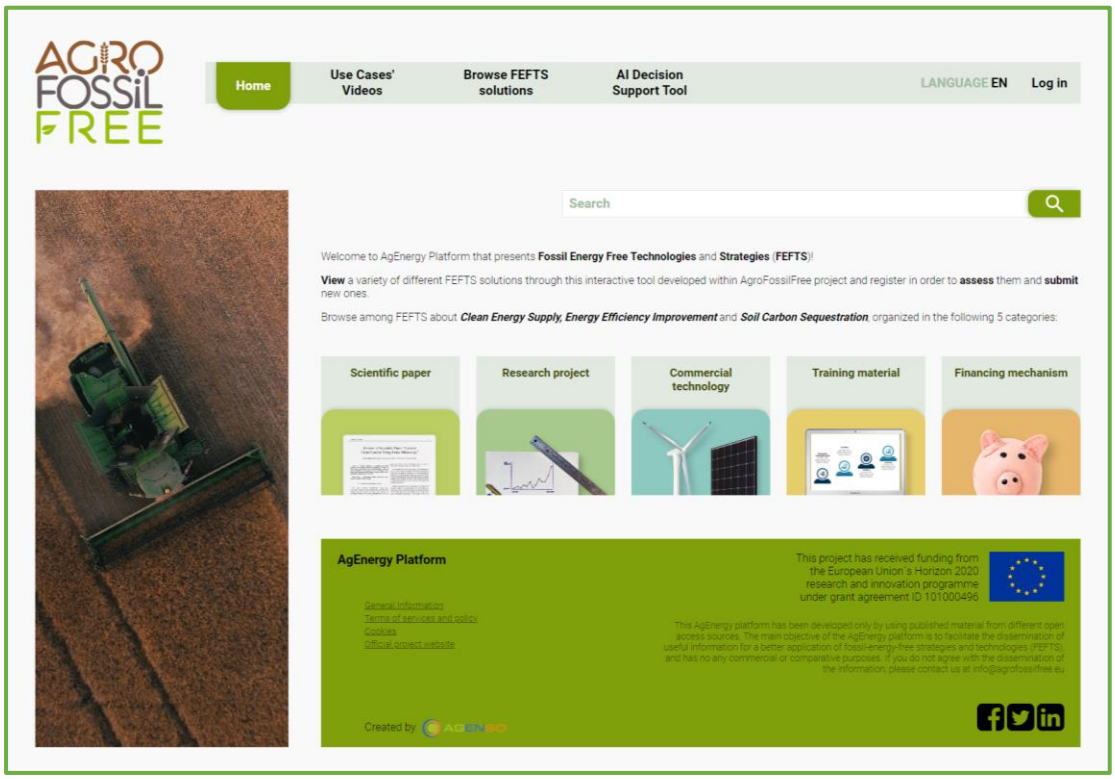


Figure 22. *AgEnergy platform homepage*

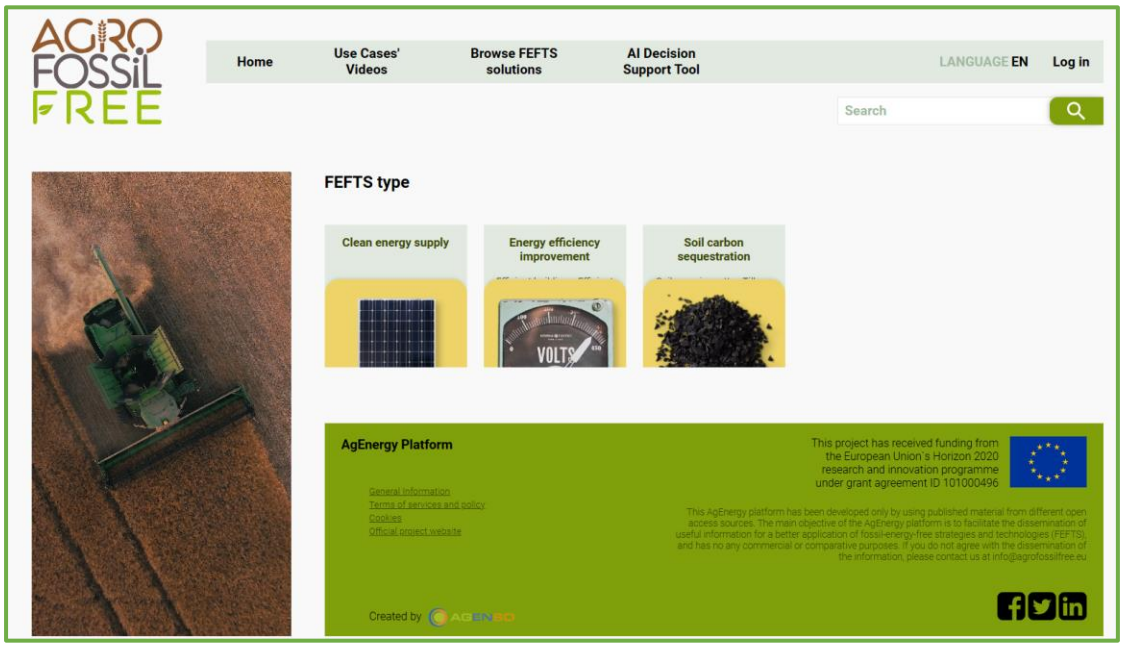


Figure 23. *FEFTS navigation pathway*

2.2. Use Cases' videos

Under this menu (https://platform.agrofossilfree.eu/en/use-cases-video), users can access Youtube links to 10 successful AgroFossilFree use cases in different European countries (**Figure 24**).

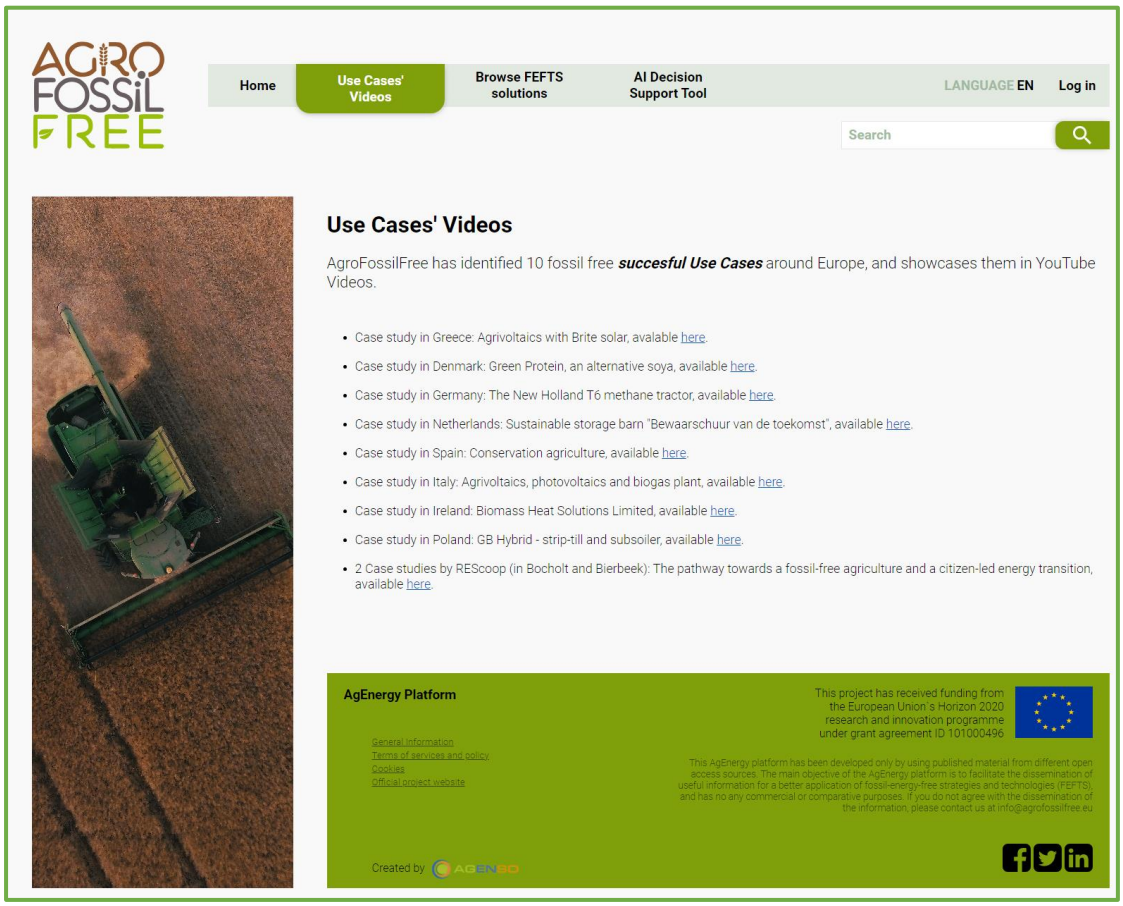


Figure 24. *Videos of successful use cases*

2.3. Browse FEFTS solutions

The menu entitled Browse FEFTS solutions (https://platform.agrofossilfree.eu/en/search) (**Figure 25**) is practically the search results page of the platform, without any preselected filtering, as it would be in case of navigation in the pages of the platform and applying specific appropriate selections. On this page, users can select any of the many interactive filters that appear and hide based on the FEFTS categorization.

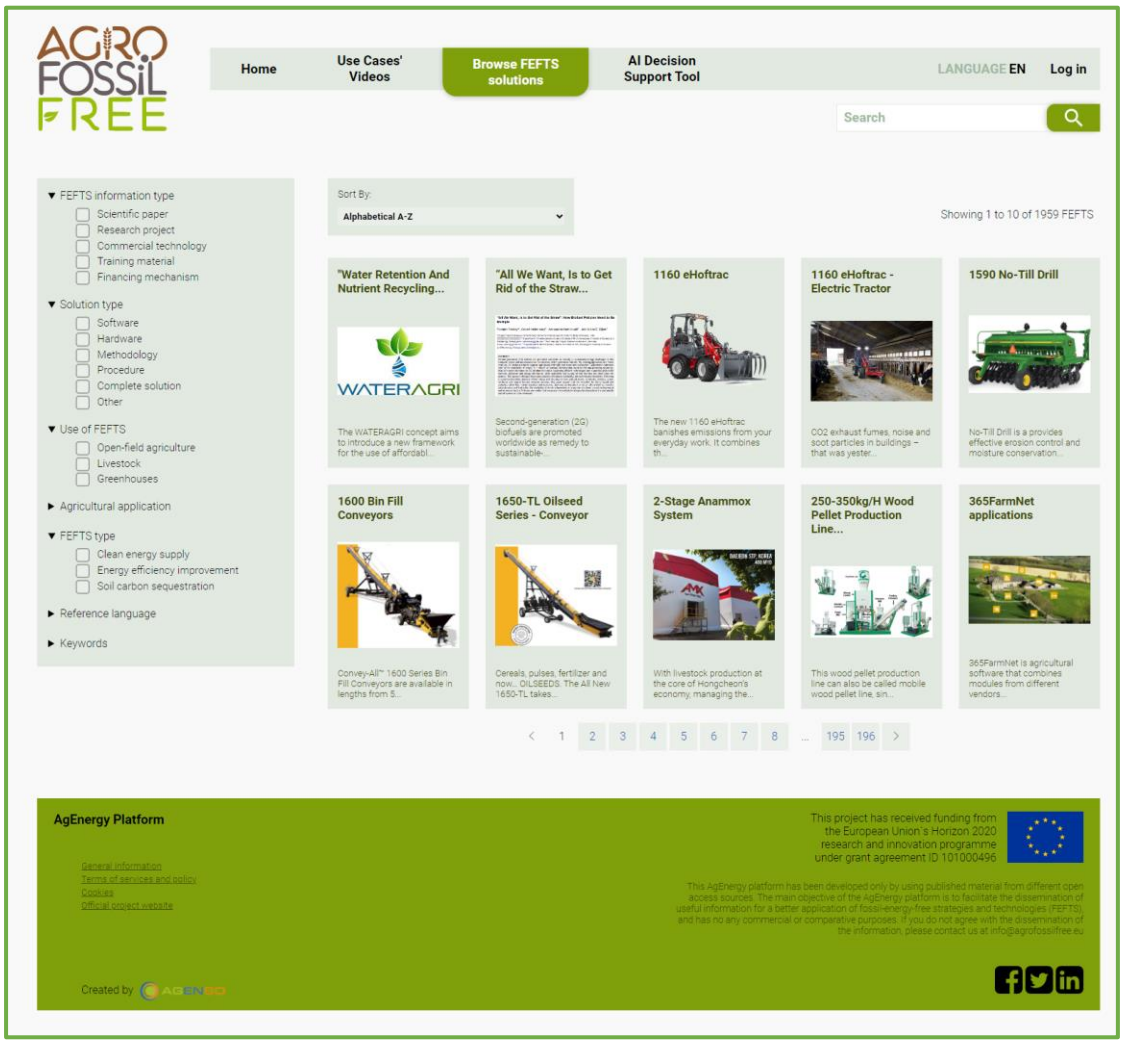


Figure 25. *Browse FEFTS solutions*

2.4. AI Decision Support Tool

The last menu of the AgEnergy platform, provides end-users with access to the AgroFossilFree AI Decision Support Tool (DST) (**Figure 26**) (https://dst.agrofossilfree.eu/). The DST has been described in detail in the previously submitted deliverable D4.5, and enables users to select the most suitable FEFTS based on the needs of the current farm.

To do so, user has to complete a short questionnaire that differentiates among open-field farming (**Figure 27**), livestock farming (**Figure 28**), and greenhouse farming (**Figure 29**). After submitting the form, the DST ranks the list of FEFTSs' categories and displays the FEFTS (commercial technologies, training materials, and financing mechanisms) under a view "solutions button" (**Figure 30**).

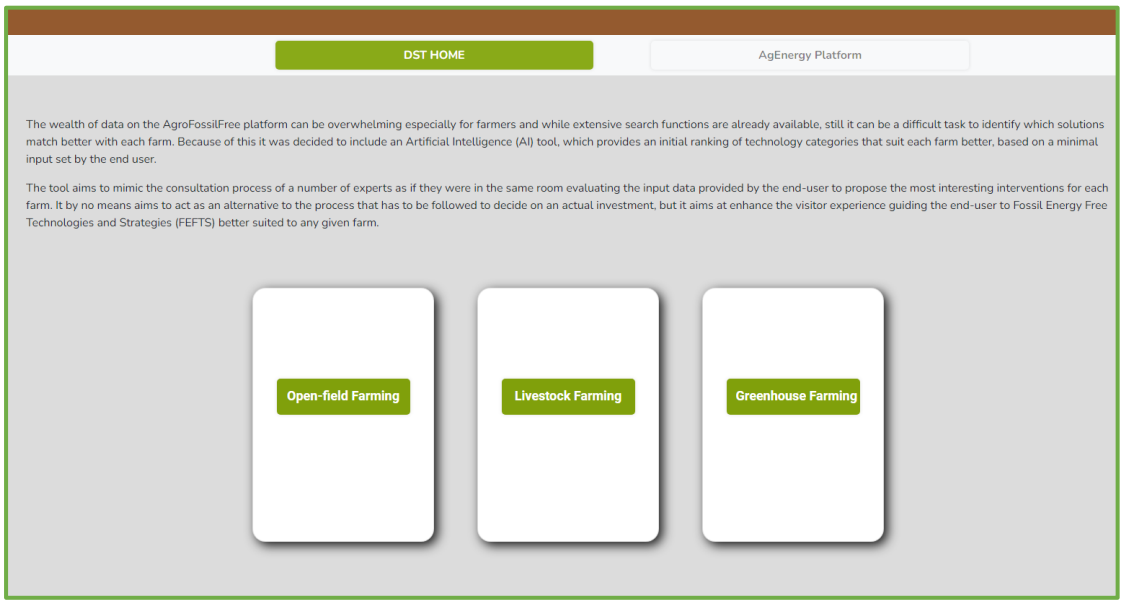


Figure 26. *AgroFossilFree AI Decision Support Tool*

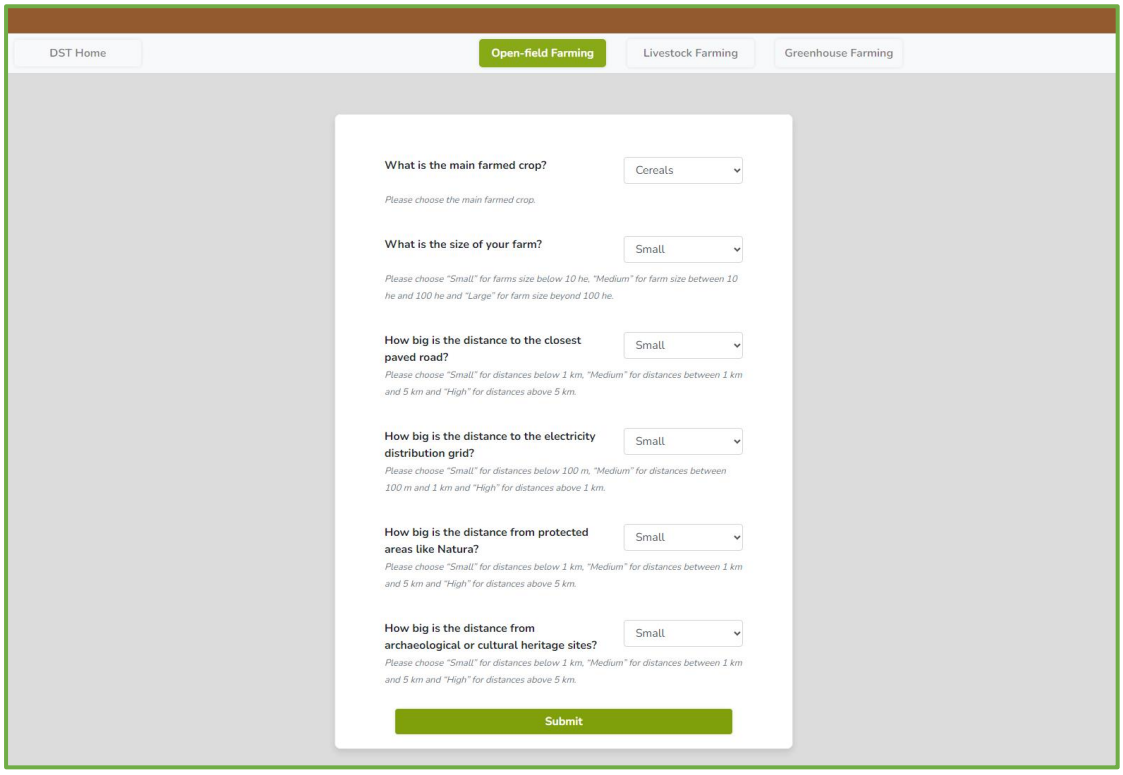


Figure 27. *Open-field farming questionnaire of the DST*

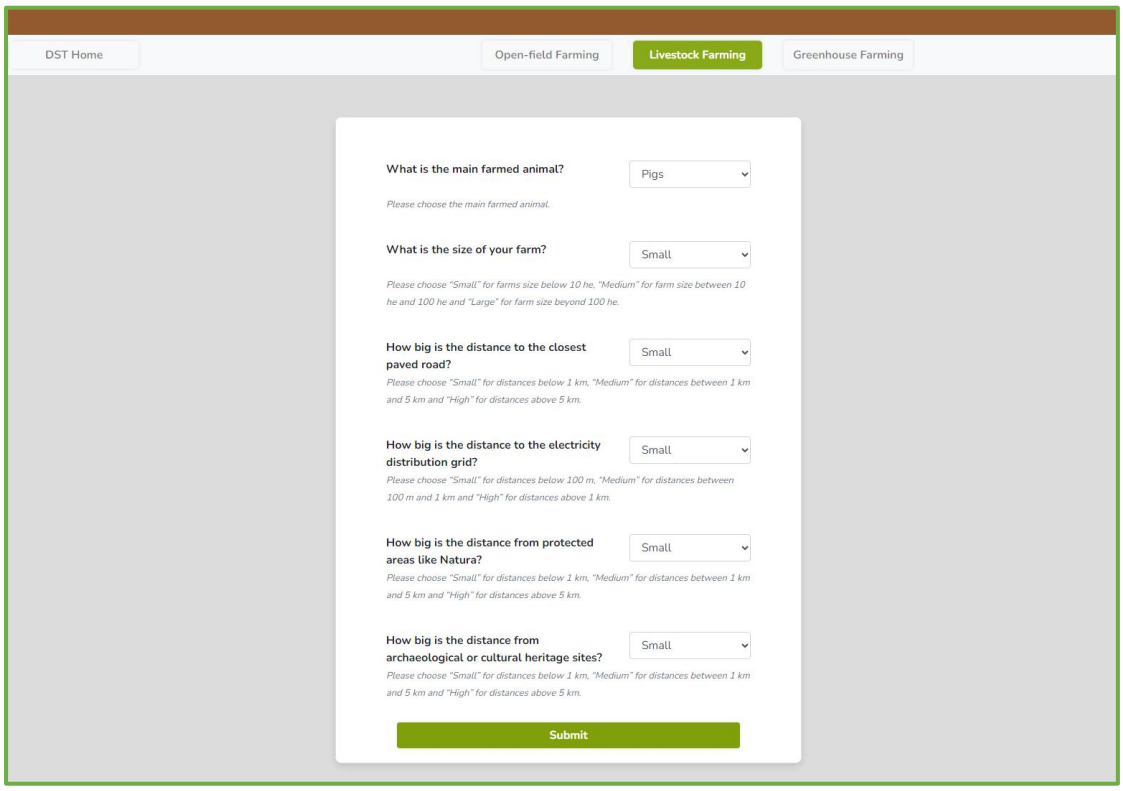


Figure 28. *Livestock farming questionnaire of the DST*

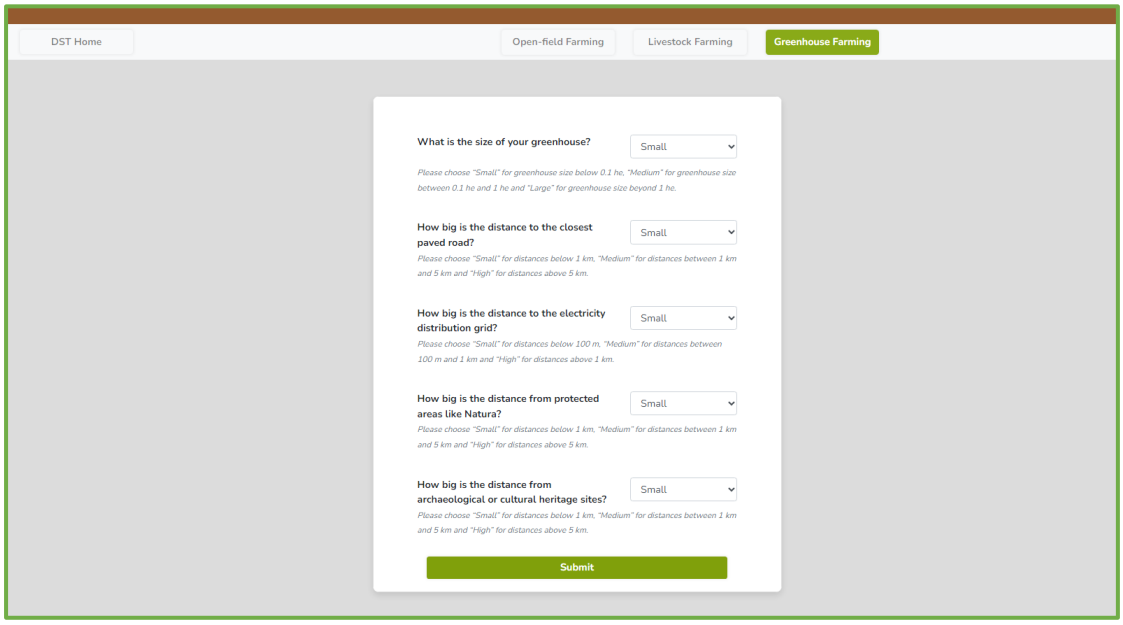


Figure 29. *Greenhouse farming questionnaire of the DST*

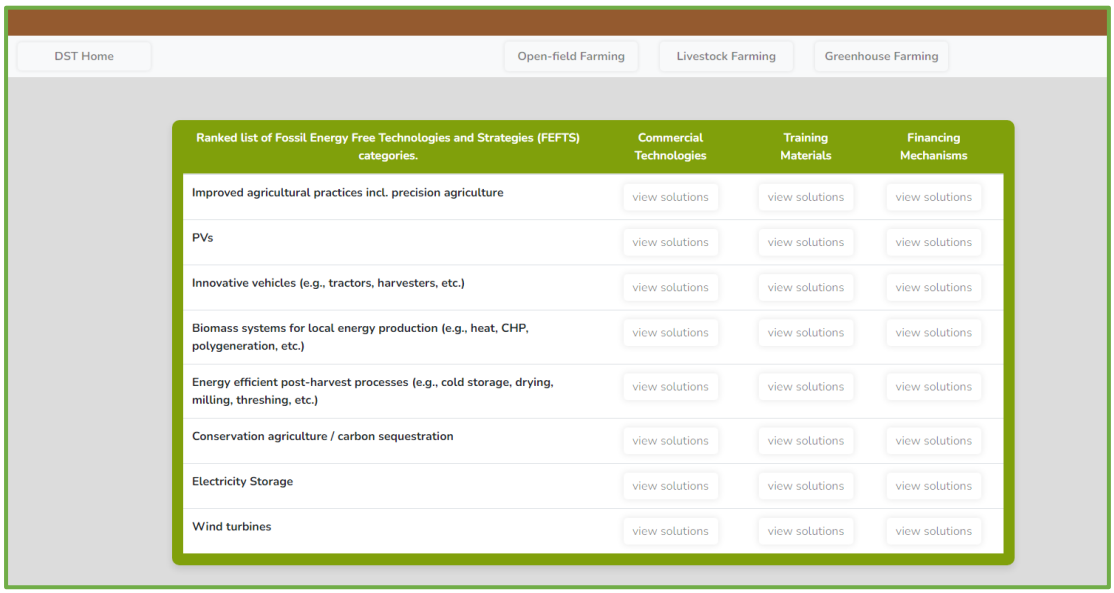


Figure 30. *Ranking of FEFTSs' categories*

3. AgEnergy platform functionalities and specifications

3.1. Search functionalities

A FEFTS search in the AgEnergy Platform can be made with 3 different ways. Firstly, a search bar is available on the homepage of the platform in an easily accessible part of the page in order to facilitate search process, providing all users with the ability to directly search for a specific topic of their interest after typing in the search box. Secondly, when selecting the Browse FEFTS solutions menu, users are being redirected to the final search page where custom filtering may be conducted. The filters are designed and structured enhancing an interactive approach, where a certain selection leads to the opening of filters with the corresponding possible subcategories. This allows users to instantly modify their query by adjusting the appropriate fields and respective values. Additionally, if the inactive fields would not disappear, the high number of possible opened filters in all categories, would now allow a user-friendly experience. Thirdly, the last way is to use the navigation button and click on the desired cub-category at each level. All 3 ways are marked in red in **Figure 31**.

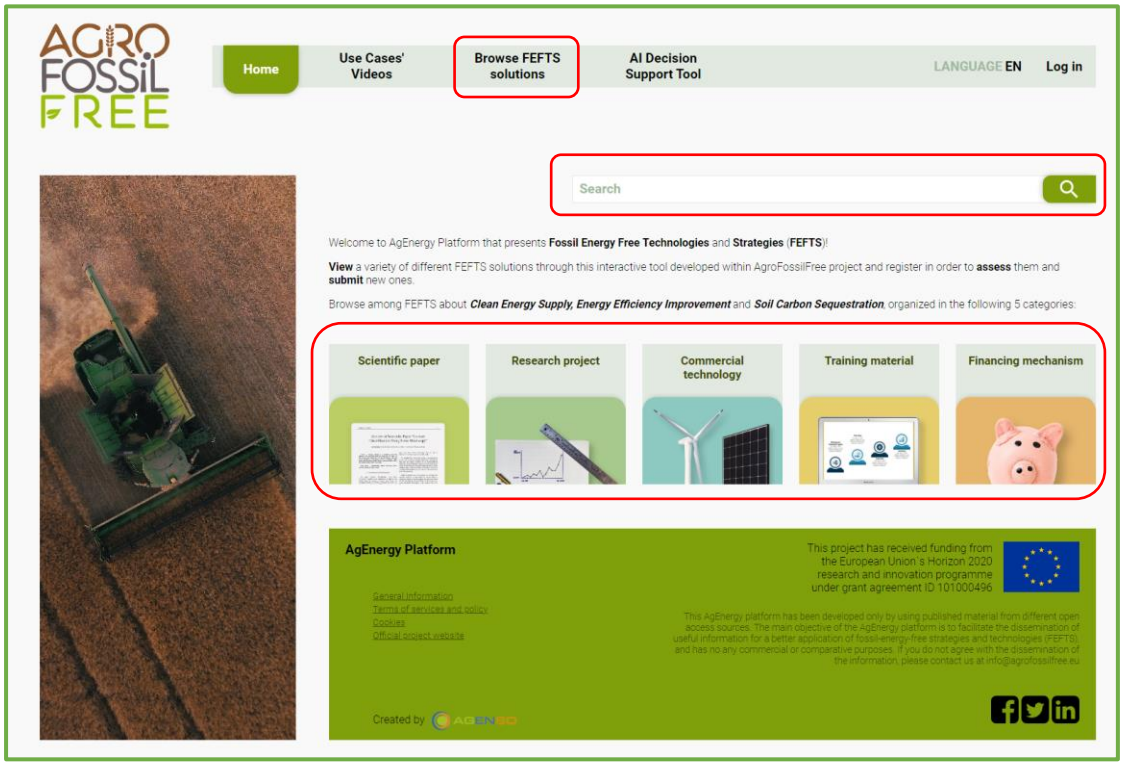


Figure 31. *Ways to search FEFTS*

Sorting of the re is also possible (by newest, by oldest, alphabetically (A-Z), alphabetically (Z-A)), while the number of results displayed based on each time's query are shown on the top right side of the webpage. A pagination is additionally used for limiting the number of results displayed per page, aiming to ensure a user-friendly navigation. The number of pages is displayed at the bottom of the webpage (**Figure 32**).

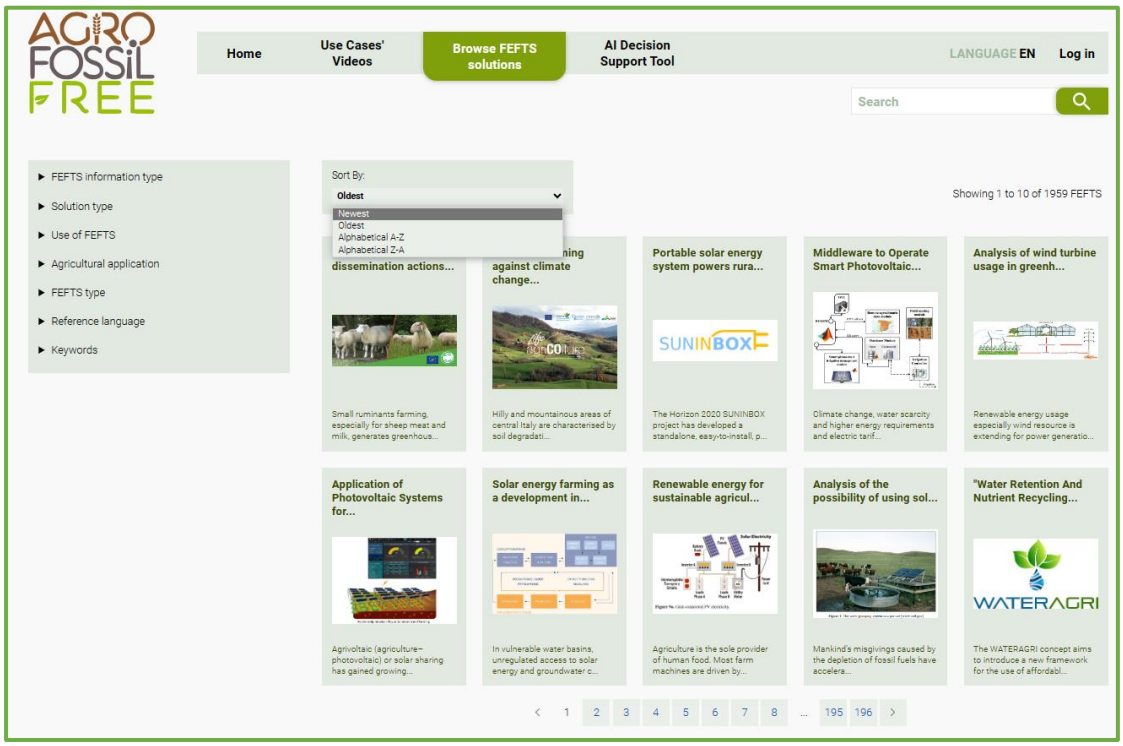


Figure 32. *Search results page*

Finally, it is worth mentioning that a reference language filter (**Figure 33**) and a location filter (**Figure 34**, **Figure 35**, **Figure 36**, **Figure 37**) that is interactive and open/hide based on the FEFTS information type (meaning that are dependent on FEFTS information type toggle switch), are incorporated in the available filters to optimize search process.

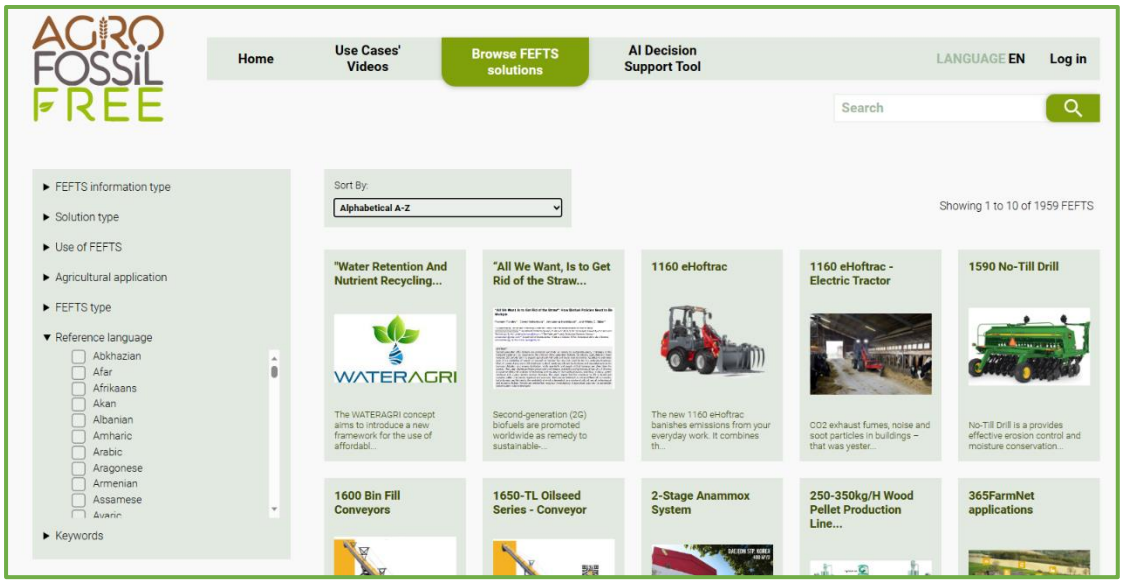


Figure 33. *Reference language filter*

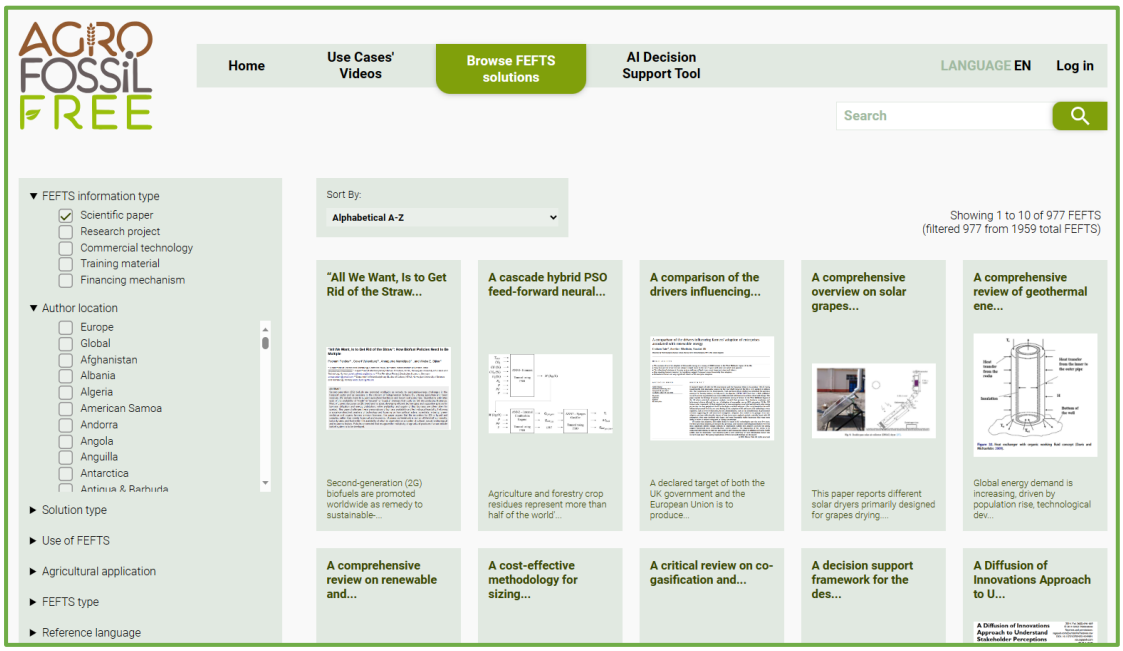


Figure 34. *Author location country filter for scientific papers*

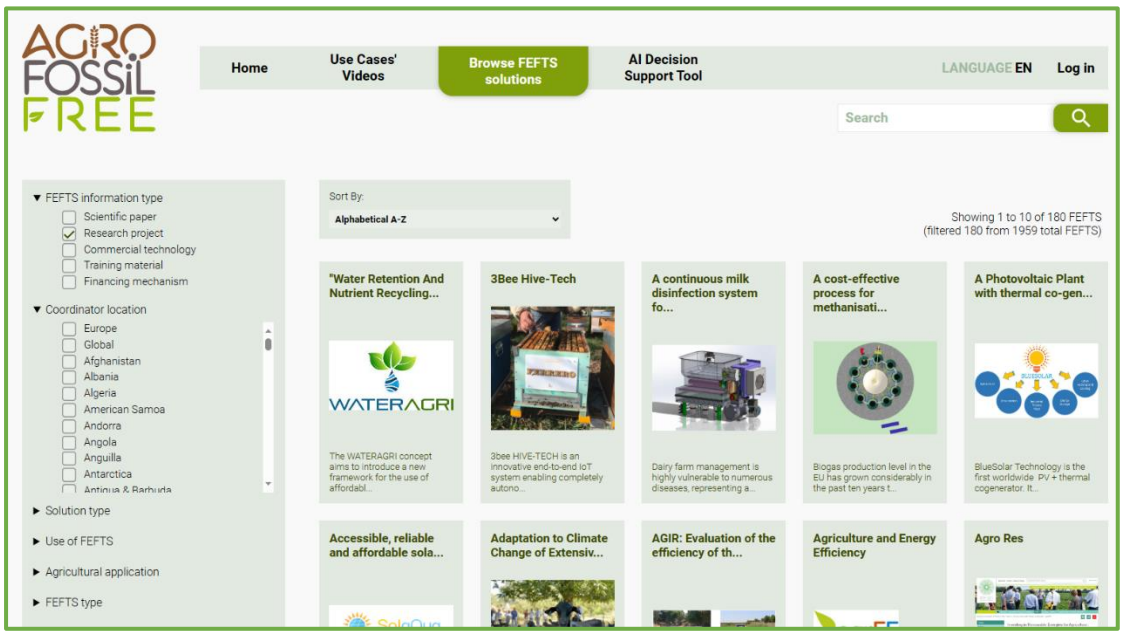


Figure 35. *Coordinator location filter for research projects*

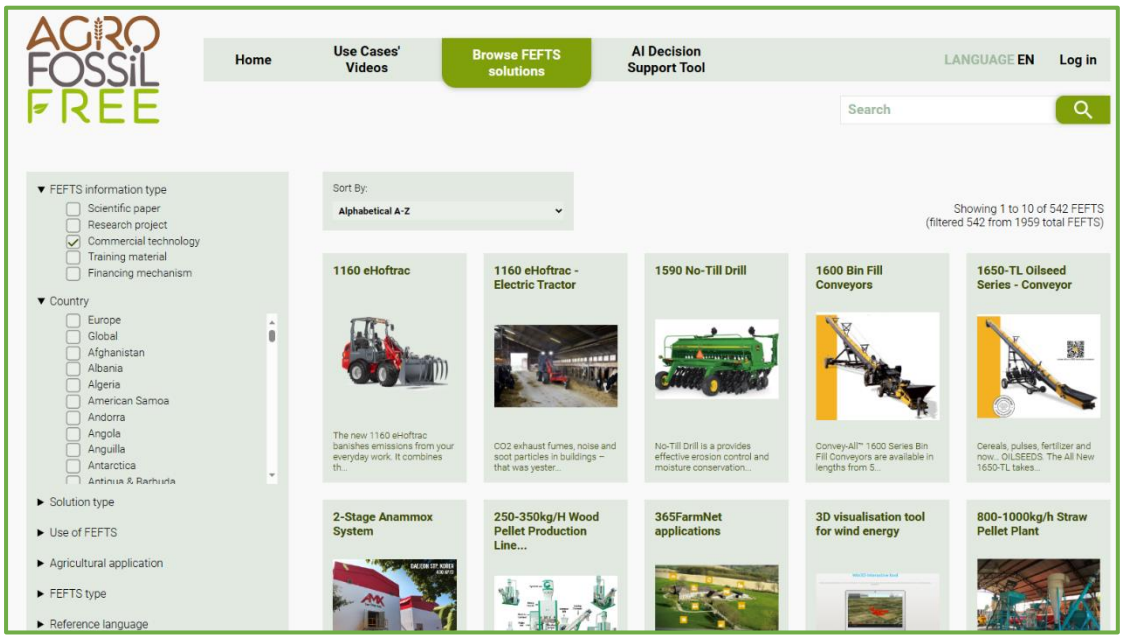


Figure 36. *Country location filter for commercial technologies*

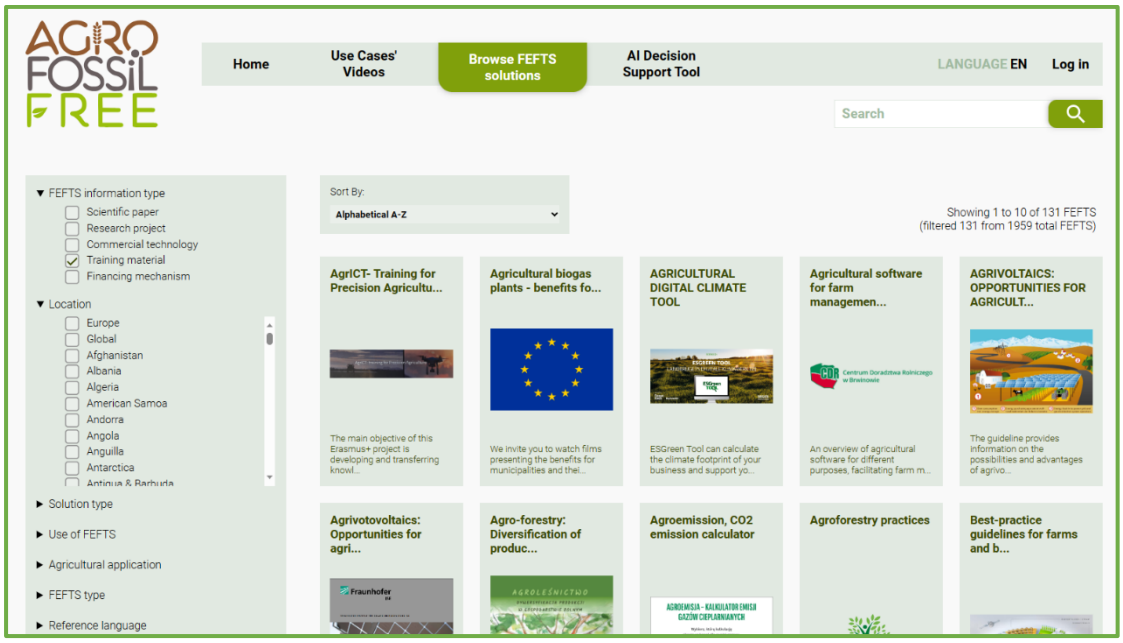


Figure 37. *Country location filter for training material*

3.2. Authenticated user's functionalities

An authenticated user needs to have a profile. Creating a profile is a simple and not time-consuming procedure. After accessing the Log in button, visitors are redirected to the Log in menu, where they can create a profile/register, while existing users can Log in (https://platform.agrofossilfree.eu/en/login) (**Figure 38**). For registering, register button should be selected, and user will be redirected to the Registration page (**Figure 39**). Registration requires providing name, email address and setting a password, while optionally, users can add their job and country.

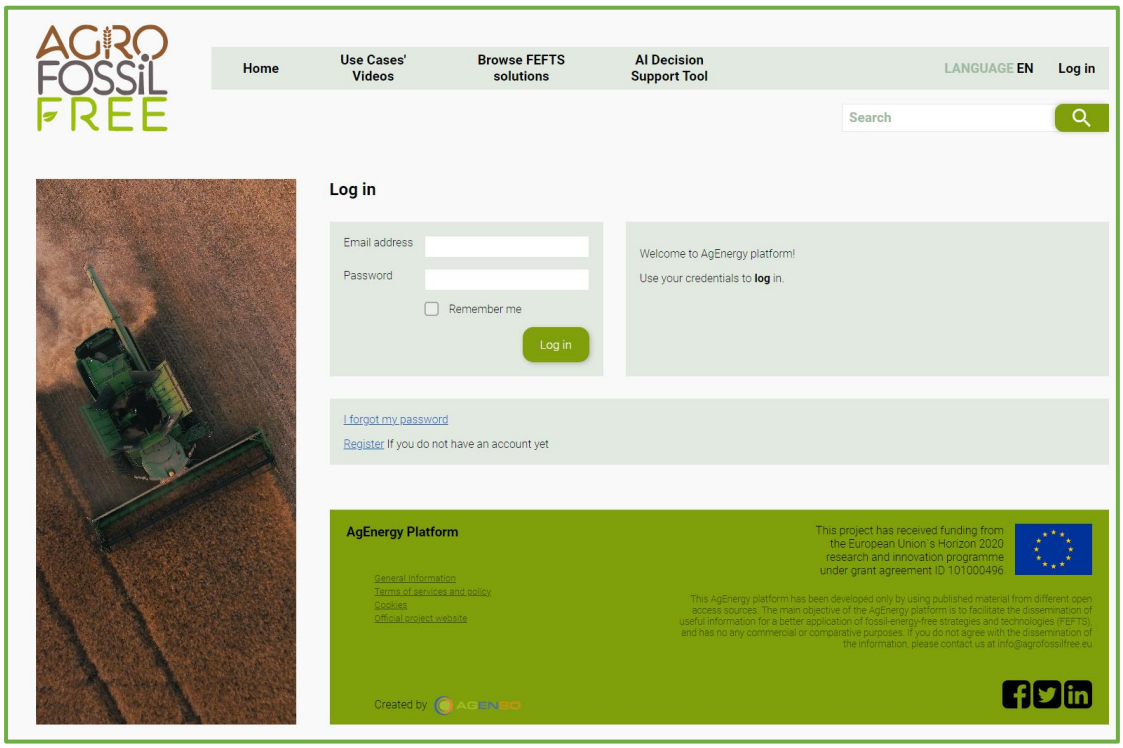


Figure 38. *Log in page*

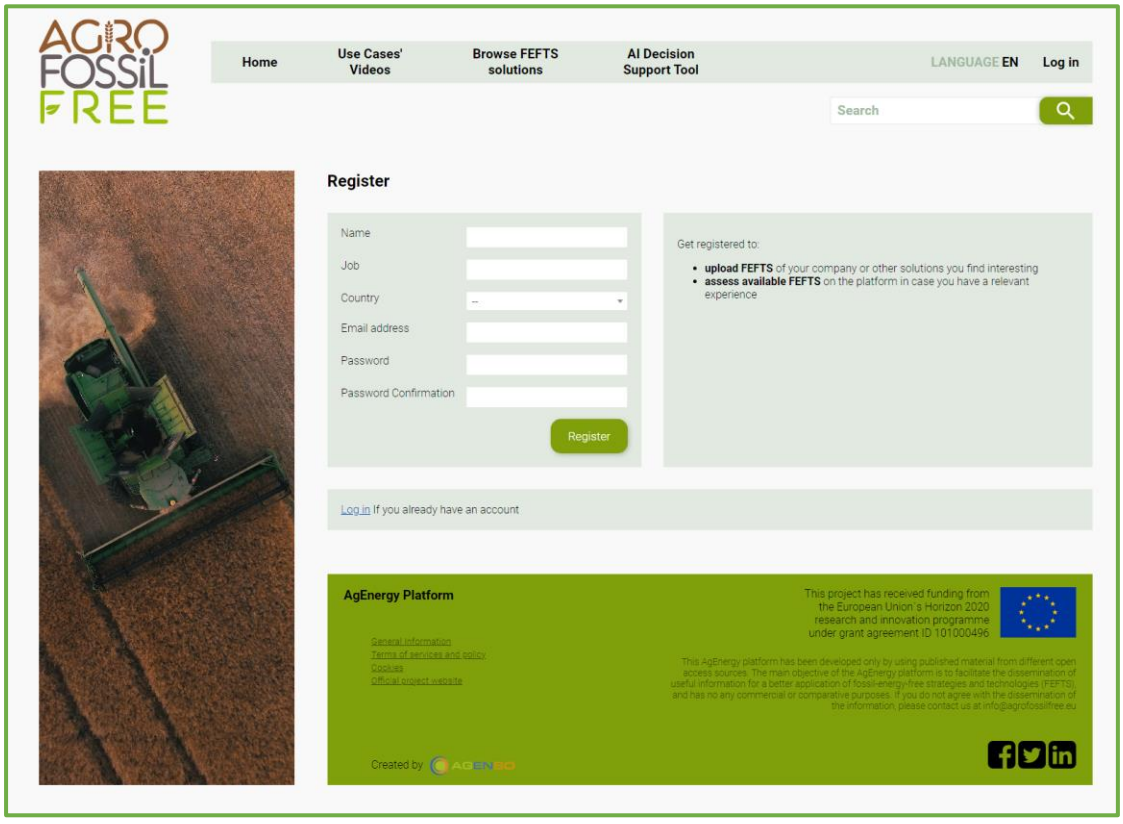


Figure 39. *Register page*

Upon registration, user is characterized as an authenticated user. Authenticated users have the ability to edit their profile, to view the FEFTS that they have already provided and finally to provide new FEFTS solutions to be incorporated in the platforms content. All 3

functionalities are accessible in the profile icon on the top right side of the screen after logging in (**Figure 40**).

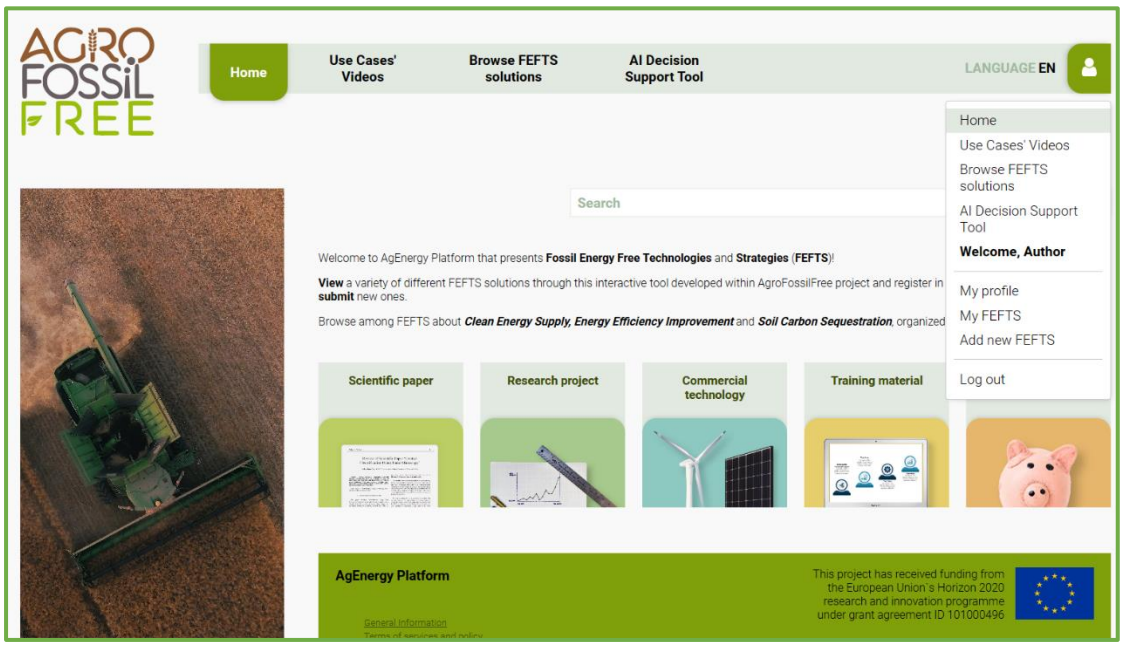


Figure 40. *Profile icon*

All 3 aforementioned functionalities are described below, accompanied by the corresponding figure.

3.2.1. My profile

Editing of profile, allows authenticated users to update the information of their profile (**Figure 41**).

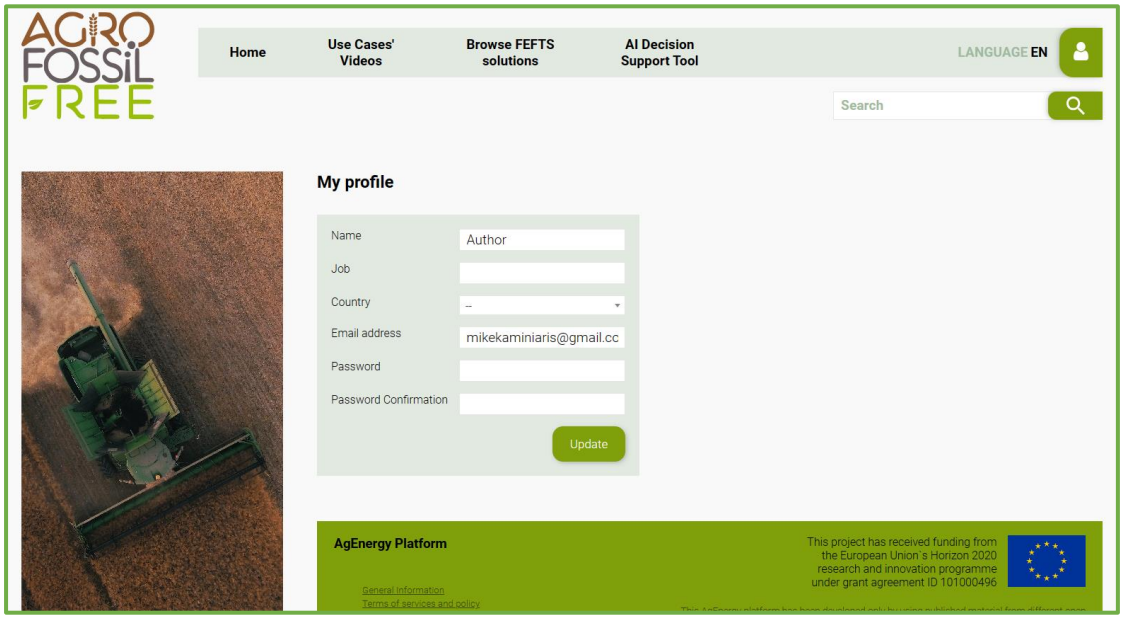


Figure 41. *My profile page*

3.2.2. My FEFTS

My FEFTS page allows authenticated users to access the FEFTS that they have provided (**Figure 42**).

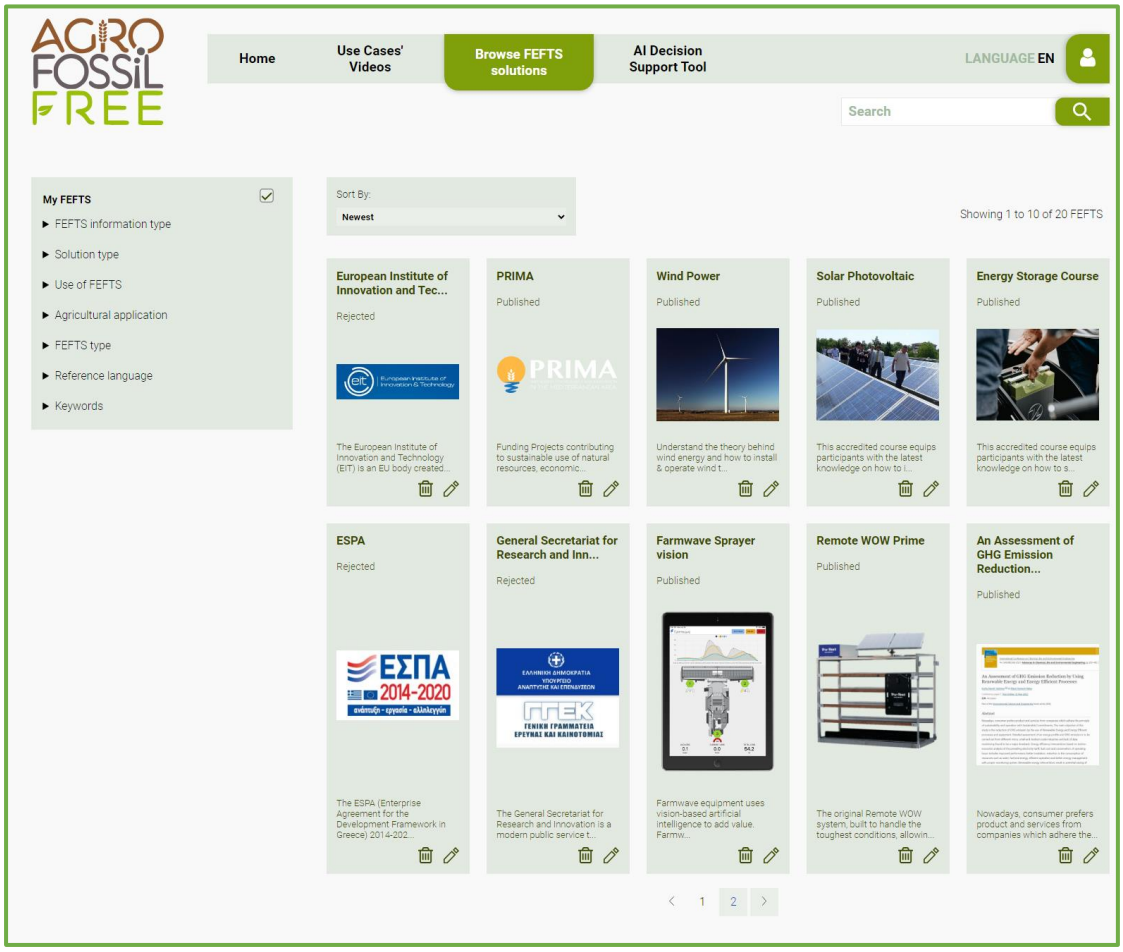


Figure 42. *My FEFTS page*

3.2.3. Add new FEFTS

Add new FEFTS allows authenticated users to add a new FEFTS solution (**Figure 43**). Several fields are displayed, where users need either to select the appropriate choice from a drop-down menu, or to type the text needed in the corresponding section. The FEFTS can be saved as draft or submitted. Translation is also available for the text input areas -where text can be typed- in case user can provide the text in another of the rest available languages. In general, 4 different tabs need to be filled in order to finalize the entry. More specifically:

- Information
- Provider/source
- Material
- Assessment

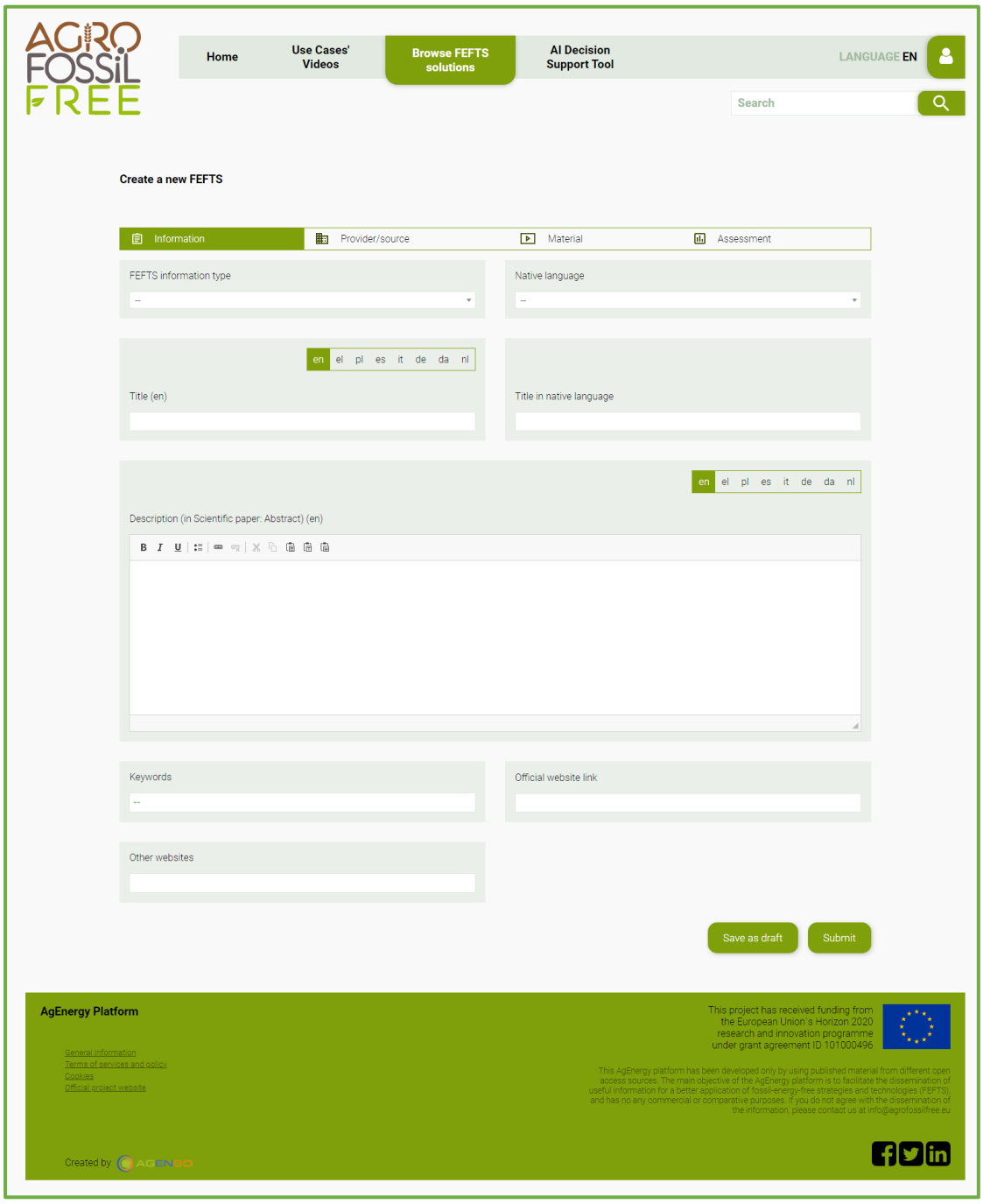


Figure 43. *Add new FEFTS page*

3.2.4. FEFTS assessment

The last feature for authenticated and logged in users is the ability to provide an evaluation/assessment of the publicly available FEFTS. More specifically, when selecting the assessment tab of a FEFTS, a "Give your evaluation" button appear at the bottom part of the page (**Figure 44**) and opens the assessment form. After filling the form, the "Save" button is used to submit the assessment (**Figure 45**). The project consortium is responsible to scan the assessments, in order to normalize the assessment that has been previously made during the FEFTS submission phase.

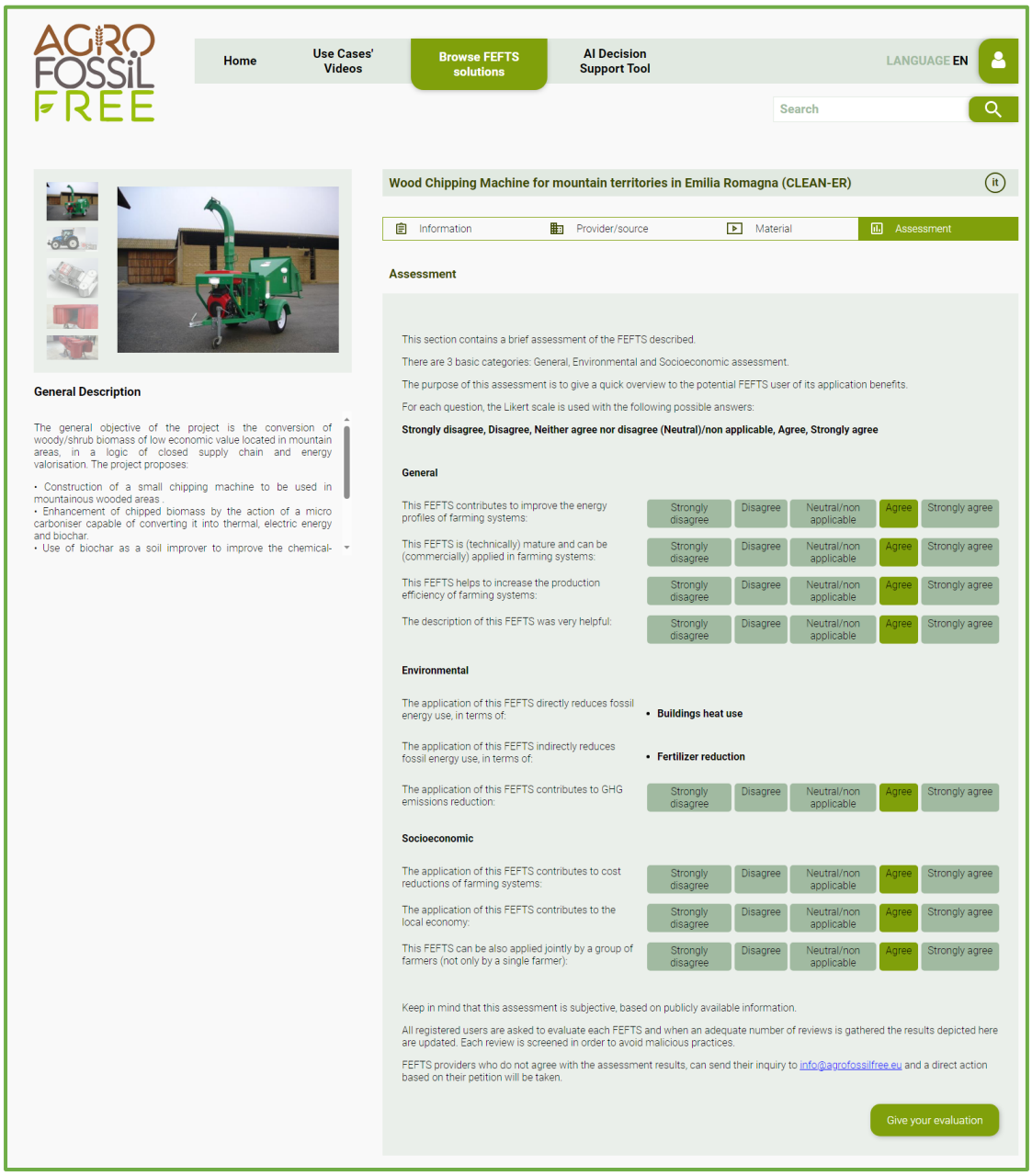


Figure 44. *Evaluation/Assessment button for authenticated users*

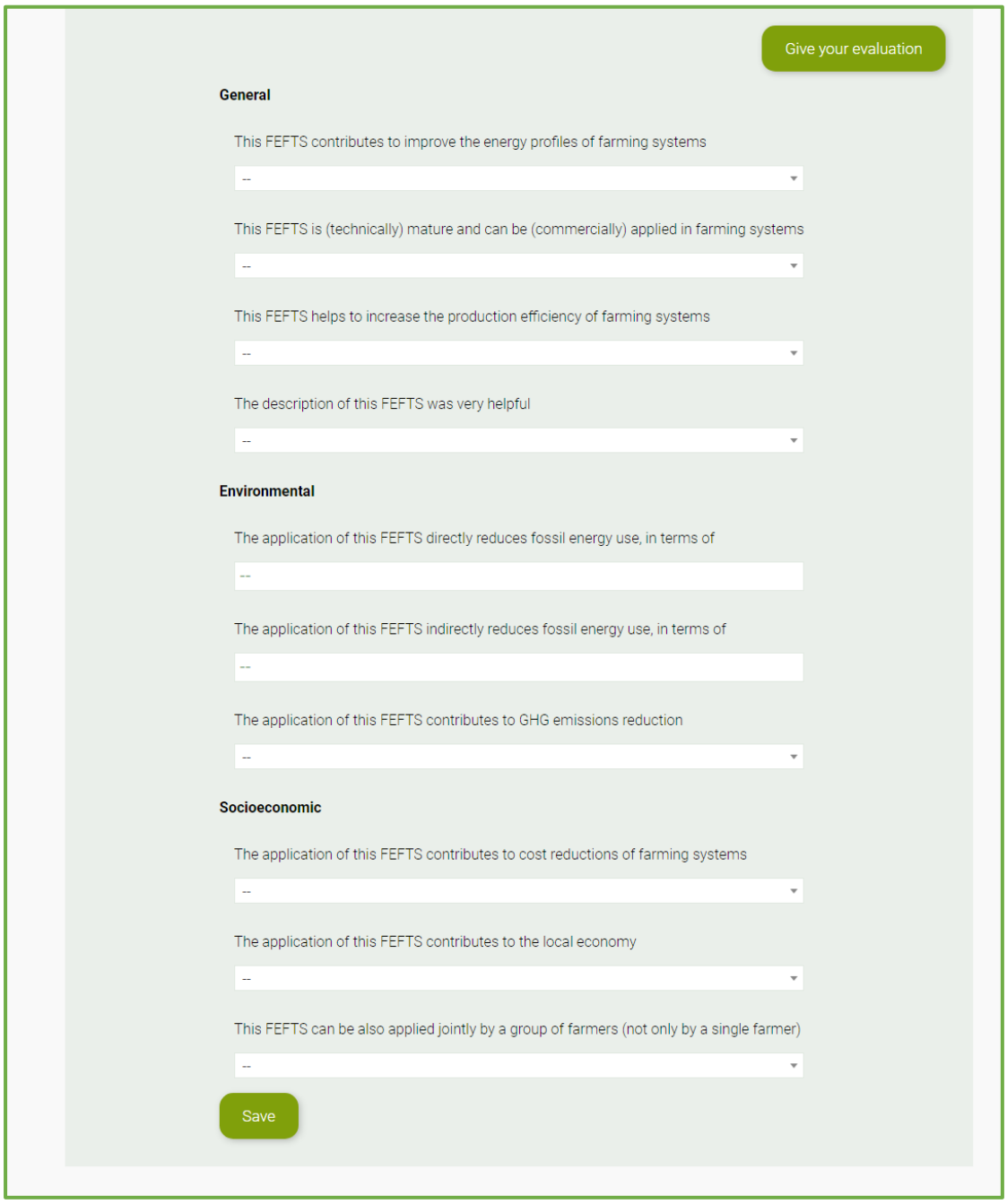


Figure 45. *Assessment form for authenticated users*

3.3. Maintenance and responsibilities

The hub leaders are responsible to provide translations of the uploaded material in their native language. In addition to that, new or updated material submitted in one of the hub languages will be verified by the hub leader. Additionally, hub leaders will act as translators in due time for providing the necessary static text's translation, in order to allow multilingual function of the platform.

AGENSO is responsible for the technical aspects of the platform, such as the configuration of the server and the maintenance of the server. In order to ensure that all security protocols are up to date, necessary updates on the operating system of the server and the platform will be performed. Automated periodical backups will also be performed aiming to maintain data integrity and to ensure that no data will be lost or damaged/corrupted.

3.4. Technical details

The AgEnergy Platform is developed as a Progressive Web Application; thus, it uses modern technologies combined with common ones, such as HTML, CSS and JavaScript to deliver its functionality to potential stakeholders in a fast and reliable way. As a result, visitors can access the full functionality of the platform through any modern web browser, such as Chrome, Edge, Firefox, Safari and/or Opera by navigating to the platform's endpoint (https://platform.agrofossilfree.eu/).

The platform was also designed and developed keeping in mind most screen sizes that visitors may use to access its content. This responsive design technique maximizes the user experience by making the platform accessible by smartphone, tablet, desktop and Smart TVs browsers in a usable and appealing way (**Error! Reference source not found.**). Best practices w ere also followed to speed up the loading process of the application, with the minimum possible use of resources.

The basic installation requirements are for the host server to be equipped with the Apache HTTP software, a recent PHP installation (at least version 7.4.26) and a relational database server such as MariaDB (at least version 10.2.41).

Figure 46. *Smartphone view mode of the AgEnergy platform*

4. Published FEFTS

As of the end of August 2023, 1959 FEFTS solutions have been published on AgEnergy platform (**Figure 47**).

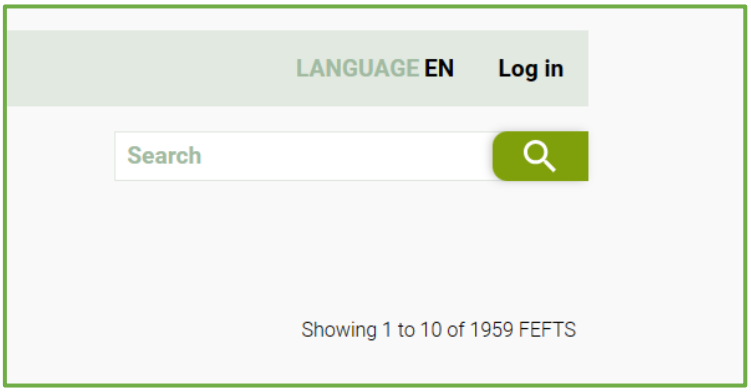


Figure 47. *Published FEFTS-total number (24 Aug. 2023)*

These entries contain a sufficient number of different FEFTS information type. More specifically 977 scientific papers (50%), 180 research projects (9%), 542 commercial technologies (28%), 131 training materials (7%) and 129 financing mechanisms (7%) (**Figure 48**).

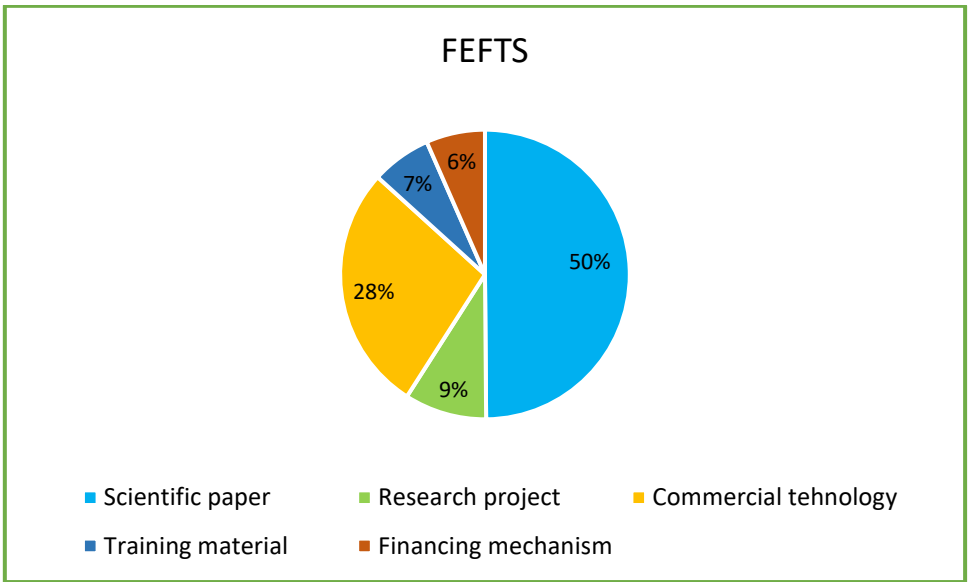


Figure 48. *Percentage of FEFTS in each category (24 Aug. 2023)*

5. Conclusions

In the framework of AgroFossilFree's WP4, a website and an online platform have been developed. The website of AgroFossilFree project constitutes one of the main dissemination and communication tools of the project and provides to all interested users the ability to search information related to the project's overview, objectives, partners, and workshops, as well as information about news and events related to AgroFossilFree. It also provides access to dissemination material such as practice abstracts and research papers and articles. Finally, the link of AgEnergy platform is accessible through the project's website. Regarding the AgEnergy platform, a sufficient number of FEFTS has already been published on the platform. The platform itself operates as an interactive tool for searching and registering new FEFTS solutions. The AgEnergy platform will undergo constant and continuous amendments for its enhancement and proper maintenance, aiming to enable users to access a significant number of available FEFTS.