ALFA

UNLOCKING THE BIOGAS POTENTIAL OF LIVESTOCK FARMING

D3.4

Report on deployment of ALFA Support Measures – Second Round

APRE

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ABBREVIATIONS

APRE	Agenzia per la Promozione della Ricerca Europea
A0CO2	AZZERO CO2 Srl
ARC(s)	Awareness Raising Campaign
BE	Belgium
CAPEX	Capital Expenditure
CERTH	The Centre for Research & Technology, Hellas
DK	Denmark
DoA	Description of action
DST	Decision Support Tool
EBA	European Biogas Association
EDF	European Dairy Farmers
EL	Greece
ES	Spain
ESG	Environmental, Social, Governance
FBCD	Food & Bio Cluster Denmark
IT	Italy
KPI	Key performance indicator
NPVs	Net present Values
OPEX	Operational Expenditure
PEDAL	PEDAL Consulting Sro

Q-PLAN	Q-PLAN International Advisors PC
RES	Renewable Energy Systems
ROI	Return of investment
SIE	Sustainable Innovations Europe
SK	Slovakia
T	Task
WR	White Research

Executive Summary

The ALFA project aims at **enhancing the participation of livestock farming** stakeholders in the promotion and **adoption of biogas solutions** through **replicable support measures that have been tested and validated** across six European countries (Belgium, Denmark, Greece, Italy, Slovakia, and Spain). The significant disparities that define the local livestock/biogas markets across Europe require the implementation of **customized and adaptable solutions**, rather than a one-size-fits-all approach, to effectively support the widespread adoption of biogas solutions through increased engagement of livestock farmers. To address these challenges and respond effectively to differences in culture, market conditions, and more, the ALFA methodology integrated an **iterative development** of Market Uptake Support Measures in **two different rounds**.

This report ***D3.4 – Report on deployment of ALFA support measures – Second Round*** includes a general overview of the entire project period, but focuses in particular on the **deployment of the second round** of activities, from Month 24 (October 2024) to Month 33 (July 2025), outlying all actions carried out by the ALFA consortium – implementation of support services, capacity building and awareness campaigns – along with an assessment of the progress made in relation to the objectives set for these actions.

For a detailed description of the activities implemented in the first round of the project, refer to D3.2 – Report on deployment of ALFA support measures – First Round.

In brief the major activities include:

- Hands-on market uptake support services (business and technical services) to help stakeholders navigate the complexities of the biogas market, by offering tailored guidance in areas such as market research, business planning, access to finance, and technical development. In total, **53 cases from 10 countries were supported** (**achievement indicator - Farms and projects supported: 50**)
- Capacity building activities developed in the ALFA project, namely international webinars, developed to attract an international audience from the livestock sector, held online and in English, and onsite seminars with a regional scope, organised by each Hub. In total, **7 capacity building webinars** and **6 capacity building seminars** were organized across the Hubs (**achievement indicator – capacity building webinars | seminars: <6 | <6**).
- Regional awareness raising campaigns aimed at creating awareness and knowledge about biogas among key stakeholders, to maximise the impact, the visibility and the main messages of the ALFA project. The campaign was divided into 6 versions, tailored to each of the regional Hub. In total, **12 regional awareness raising campaigns** were deployed across Hubs, in particular **1 per Hub per round** (**achievement indicator - Awareness raising campaigns: 12**).

Building upon the deployment of the support measures and the insights gathered through Task 4.1 (Monitoring and evaluation of project activities) and Task 4.2 (Mutual learning and good practices exchange), under Task 4.3 a comprehensive **Replication Guide** will be developed (October 2025 – M36), with contributions from all partners who implemented ALFA's market uptake support measures and operated the project Hubs. The Replication Guide will be **rooted in the practical experiences gained throughout the project** and **will offer concrete methodologies, tools, and actionable guidelines to support stakeholders interested in establishing or adapting similar support**

measures in other EU countries and beyond. It will be designed to **facilitate the replication and scalability** of ALFA's approach, promoting the wider deployment of biogas systems in livestock farming. This Guide will also serve as a foundational document for the **ALFA Final Conference and Policy Roundtable**, to be held in Brussels on **25 September 2025**. The event will aim to catalyse policy alignment and stakeholder engagement across the EU, to refine the Replication Guide through multi-stakeholder dialogue, and to collect meaningful inputs to elaborate a set of **Policy Recommendations** targeting both EU-level and national-level decision-makers. These recommendations will contribute to **mainstreaming biogas solutions at scale**, supporting the EU's leadership in sustainable energy and climate-smart agriculture. Further details will be provided in Deliverable **D4.3 – Replication Guide and Policy Recommendations** (due in Month 36 – October 2025).

1. Introduction

1.1 ALFA project - general overview

ALFA is a Coordination and Support action (CSA) project running from November 2022 to October 2025, funded by the European Union within the framework of Horizon Europe Research and Innovation Action programme.
ALFA aims to tackle the untapped potential of **biogas production from livestock farming** to **enhance** the adoption of **renewable energy sources** (RES) and increase the share of bioenergy as a reliable energy source. As a catalyst for biogas development in Europe, ALFA wants to provide demand-driven **business and technical support** to over 50 livestock farmers and other biogas projects in six EU countries during the project lifespan. To facilitate the implementation of ALFA activities, six Hubs have been strategically established in the six project countries (Belgium, Denmark, Greece, Italy, Slovakia and Spain). These local Hubs serve as **focal points** in all the six regions, acting as coordination centres for the execution of project initiatives. Each ALFA Hub is strictly linked to the **local community, leveraging existing networks and engaging stakeholders,** to ensure the effective delivery of tailored support measures. The support measures have been outlined and deployed through the following project tasks:

- Providing two rounds of business and technical services through the launch of **two open calls** (T3.2, T3.3)
- Boosting knowledge about biogas by implementing **capacity-building activities** in the form of international and regional webinars, and in-person seminars (T3.4)
- Carrying out two rounds of **awareness raising campaigns** promoting the benefits of biogas solutions. The campaign was organised in six different versions one for each regional Hub, tailoring the activities to meet specific local needs (T3.5).

In order to effectively design and deliver the full range of support measures—business and technical services, capacity-building activities, and awareness raising campaigns—**the internal capacity and expertise of the ALFA project consortium were clearly identified and strategically built from the proposal stage**, during the establishment of the consortium itself. In fact, the ALFA consortium was composed of **partners with a strong track record** in providing technical and business support services, in designing and implementing capacity-building initiatives, and in leading awareness-raising campaigns in the context of H2020 and Horizon Europe CSA projects as well as in the market. In addition, consortium members were selected for their **experienced personnel** with relevant domain expertise in key areas such as biogas, business development, financing, capacity building, public awareness, and stakeholder engagement. Roles and responsibilities were assigned based on these competencies **to ensure sufficient internal capacity and effective delivery** of project actions and support measures from the outset.

1.2 Strategic approach used in the implementation of the activities

1. Service Provision:

- **Phased and iterative approach**: the service provision process is designed in multiple phases, beginning with an **open call**, followed by a **needs assessment**, **service pairing,**

and the **provision** of technical and business services. This approach allows for tailored support based on specific project requirements.

- **Regional Hubs and localized implementation**: the six regional Hubs ensure that services are locally relevant and responsive to each country's unique biogas market conditions. Each Hub manager is responsible for mapping the relevant stakeholders to provide tailored support based on the regional market needs.
- **Demand-driven services**: the services offered, including financial, business, and technical support, are tailored to the demand-driven needs of the selected projects. The project team conducts **an in-depth needs assessment** to identify specific challenges, followed by customized service offerings from a portfolio of options.
- **Matching Process:** after analysing the selected projects/case's needs, the Hubs used the **Matching Matrix**[1] to identify the most appropriate services and providers. Allocations were confirmed in a plenary session with all partners. A **Service Action Plan** was then jointly agreed between each project/case and the provider, with facilitation and implementation monitoring by the respective Hub.
- **Evaluation and feedback loop**: after each round of service provisions, reports are drafted where to gather information about the experience and sent back to the awardees for review. A two-sided evaluation is then conducted. This continuous learning process allows for adjustments to the service delivery, enhancing effectiveness.

2. Capacity-Building Strategy:

- **Specialized Seminars and Webinars targeted to the stakeholders**: the ALFA project conducts **targeted seminars and webinars** for capacity-building, in order to increase livestock farmers' knowledge of biogas systems, CO2 reduction, and financial opportunities for sustainable farming.

3. Awareness Raising Strategy:

- **Targeted awareness raising campaigns are customized** for each regional context to improve societal acceptance of biogas facilities. The campaigns are **tailored** to address local cultural, environmental, and economic concerns and aim **to boost social acceptance** of biogas systems by at **least 25%.**
- **Monitoring and evaluation for awareness**: the ALFA project implements a monitoring framework to evaluate the impact of awareness-raising efforts. Pre and post ARCs questionnaires were set to assess and measure progress, and subsequently adapt strategies, as well as replicate successful methods in other regions.

4. Overall strategic focus applied to the project´s activities:

- **Scalable and replicable models**: all strategies are designed with scalability in mind, ensuring that the results of the project can be replicated across various European regions. The goal is to demonstrate the widespread applicability of biogas solutions.

[1] Two dedicated matrixes (excel files) were developed: one for the selection of project/cases (Selection Matrix) and one for the matching process (Matching Matrix).

- **Holistic engagement**: the combination of the different support measures, the support services, the capacity-building activities, and the ARCs were designed to be combined and run simultaneously, to ensure a full maximization of the impact.
- **Evaluation and feedback loop:** this iterative strategy has been applied through the whole project's actions. After the 1st round of service provisions, reports were drafted where to gather information about the experience, to be sent back to the awardees for review and a two-sided evaluation is conducted. This continuous learning process feeds adjustments for the 2nd round of service delivery, enhancing effectiveness.

1.3 Description of the Report

The objective of **D3.4 – Report on deployment of ALFA support measures – Second Round** is describing all the **actions performed in the 2nd round and the results achieved** by the ALFA consortium. These actions were designed to engage and educate a wide range of stakeholders - including farmers, policymakers, researchers, and the general public- with the goal of enhancing the understanding and acceptance of biogas as a sustainable energy source.
While the first section contains the introduction and the fifth section contains the general conclusion, the core of the report is structured as follows:

- **Section 2** introduces the support services provided to livestock farms during the second round, delivered through the second Open Call of the ALFA project. Subsection 2.1 presents the overall timeline—from the launch of the second ALFA Open Call and the application period, to the evaluation of submitted applications, the selection of awardees, the matching process with the most suitable service providers, the joint development of action plans by the Hubs and service providers with each awardee, the actual service provision, and finally, the feedback collected from the supported cases. Subsection 2.2 outlines the overall strategy for the support services while the subsection 2.3 provides a detailed overview of the two main typologies of services offered: business and access to finance support and technical support. In subsection 2.4 each ALFA Hub then offers a comprehensive account of how these services were deployed. The services are presented by Hub- Each Hub presents the specific services delivered, the individual needs of the supported farmers, the assigned service providers, and how the ALFA project ensured a tailored response to each identified need.
At the end of the section, in subsection 2.5 the lessons learned by the ALFA Hubs are summarized—drawing on their direct engagement with awardees, the implementation of the services, the feedback received, and the adjustments already made or foreseen to further enhance service delivery in the future.

- **Section 3** provides an overview of all the capacity-building activities carried out under the ALFA project, including both seminars and webinars, with details on when they were held and which partners were responsible for their organization. Subsection 3.1 presents a detailed account of all the webinars delivered. Each webinar is accompanied by a dedicated table outlining its specific topic, the date it was conducted, the number of participants, the organizing partner(s), and the evaluations received from attendees. Subsection 3.2 follows the same structure, focusing on the seminars. It offers detailed information on the content and objectives of each seminar, including logistical details, participation figures, organizing partner, and participant feedback. Finally, Subsection 3.3 summarizes the key insights and lessons learned that emerged from the organization and evaluation of both webinars and seminars across the ALFA project Hubs. It also outlines a set of

recommendations for the future design and implementation of capacity-building activities, aiming to improve their relevance, outreach, and overall effectiveness.

- **Section 4** provides a comprehensive overview of all the Awareness Raising Campaign (ARC) activities carried out under the ALFA project during the second round. Subsection 4.1 introduces the overall ARC strategy, outlining the campaign's objectives, target audiences, and core messages conveyed across all Hubs. Subsection 4.2 focuses on the key performance indicators (KPIs) associated with the ARCs, along with the monitoring activities implemented to track campaign performance and outreach effectiveness. Subsection 4.3 presents the monitoring framework used to assess the campaign's impact on KPI4: the increase in social acceptance of biogas plants and installations among civil society. This section begins with a description of the objective and explains the monitoring process conducted through three rounds of surveys—baseline, midpoint, and final—used to collect perception data. For each project Hub, a table presents a comparative analysis of the three survey rounds, illustrating percentage changes in respondents' perceptions. Each Hub's data is also visualized through a dedicated graph to highlight these trends. Following the individual Hub analyses, an aggregated comparative table shows the consolidated results across all Hubs, accompanied by a corresponding chart. Subsection 4.4 details the different versions of ARC implementation across the Hubs during the second round. Each Hub is assigned a dedicated table listing the total number and types of awareness-raising actions carried out, with a brief description of each, as well as the geographical coverage of these activities. Finally, subsection 4.5 outlines the feedback collected on the campaigns, the key lessons learned from their implementation, and recommendations for improving the design and execution of future awareness-raising campaigns.

Summarizing, D3.4 – Report on deployment of ALFA support measures – Second Round includes **all the actions undertaken** for the implementation of the support actions -deployment of business and financial support services (T3.2), deployment of technical support services (T3.3), organisation of capacity building activities to facilitate the uptake of biogas in practice (T3.4), and raising awareness campaigns to build acceptance and break down misconceptions (T3.5)- and the **key results** achieved through the project activities, namely: **enhanced business and technical capacity**, **improved societal acceptance** of stakeholders and **scalability and replicability** of the ALFA initiatives (results applicable in various settings, in terms of framework conditions, type of livestock farming, biogas solutions, target biogas value chain, geographic location, etc., and therefore widely replicable to achieve maximum impact).

1.4 Adjustments undertaken to effectively implement the second round of support services

Task 2.4 of the ALFA project (M10–M33) focused on the **iterative development of ALFA market uptake support measures**.
In **D2.4 – ALFA Market Uptake Support Measures – First Version (M13)**, a first version of the ALFA support services was developed, including the definition of each service, the application process, scope and implementation materials, as well as initial resources for the capacity-building programmes (webinars and seminars), and the awareness raising campaigns (ARCs).

Following the conclusion of the **first round of deployment**, it became necessary to **assess the performance of the support measures** in order to refine ALFA's offering. This was achieved

through **several mechanisms** designed to ensure a holistic evaluation approach, including **surveys to collect anonymous feedback** from service awardees and capacity-building activities attendees (WP4, task 4.1), **an internal Excel file to collect feedback** from service providers on the implementation of support services (WP2, T2.4), a **Google form to collect contributions** from webinar and seminar organisers on each event (WP3, T3.4), through **internal meetings** of the ALFA Hubs and service providers to analyse the implementation of support services and propose updates (WP2, activity 2.4) and to identify in advance the challenges to be discussed later with the Advisory Board (AB) regarding the services. Input for capacity building and the ARC were also collected through each ALFA Hub, and **an external validation workshop** was organised with the **Advisory Board** to discuss proposed solutions to the main challenges encountered (WP4, activity 4.1).

As a result of this process and taking carefully into account the **recommendations received** following the submission of ALFA's **1st Periodic Technical Report** (M18)—which covered progress and activities from M1 to M18— **D2.5 – ALFA Market Uptake Support Measures – Interim Version (M23)** was prepared. This deliverable represented a second, refined version of the project's market uptake support measures, improved under Task 2.4 and based on real-life deployment outcomes.
D2.5 outlines all actions undertaken to fine-tune and enhance the support services, capacity-building programme, and ARC strategy. In particular, key updates included:

- **Lessons learnt** from the first round in general and proposed mitigation actions.
- **Revision of the support services**, including the addition of a new service (S11 – Technology Catalogue). It focused on the second version of support services, revised with the Hubs, including updated materials, resources, and workflows.
- **Updates to the capacity-building programme** with revised topics, improved contents, supporting materials and schedules.
- **Adjustments to ARC strategy**, integrating regional insights, lessons from the first round and based on previous campaigns performance.

Regarding the support services, the main challenges identified for the service provision, the lessons learnt from the first round and the effort made to better perform in the second round were:

- **Awardees had more needs than initially expected**: to compromise between the project's scope but also provide a valuable service, all the service providers (when possible) looked for other alternatives in order to offer the best support possible, such as gathering and adding valuable information provided by our external stakeholders (e.g. national biogas associations, advisory board members), providing a list of potential consultancies that could help them move to the next stage and of potential networking opportunities, sharing project reports relevant for them, pointing them to materials or support relevant in their countries (using the material in the Knowledge Centre), and showcasing how the ALFA tools could support them in certain aspects. Partners collaborated in many cases to join expertise to provide a deeper assessment when needed, offering a more holistic view and better guidance for next steps. Service providers noted down requests for gaps between the awardees' needs and the ALFA offerings and even created a new service (service #11) to cover the need of several cases for a catalogue of technologies. In general, the consortium partners collaborated closely to ensure a well-rounded and diverse portfolio of expertise, also benefiting from the support of expert external consultants with established working relationships across the partnership. This process was led by the relevant Service Managers (see D2.4 ALFA market uptake support measures – First Version and D2.5 ALFA market uptake support measures – Interim Version).

- **Some awardees were not aware of their specific needs**: they applied at an early stage and were unsure of what they could need. To address this, ALFA Hub representatives acted as advisors, working closely with service providers, expert external consultants regularly working with partners and awardees to assess each case and jointly define the most suitable support path. The advising activity included having the experts e.g., going through real documents from the awardees' farms, visiting the farms in person for a better firsthand evaluation of the needs.
- **Long response time during service provision from the awardee's side**: in some cases, service provision was slower than expected because awardees took too long to provide the necessary input. To address this, ALFA Hubs and service providers coordinated follow-ups, organizing extra calls when needed to clarify doubts, particularly when delays were linked to limited time availability. During the second round, expectations regarding the required level of involvement were clearly communicated from the start. ALFA Hubs and service providers also strengthened their follow-up efforts, using more direct channels such as WhatsApp alongside email, arranging in-person meetings or site visits to the awardees' farms (when possible), and inviting them to attend project events (Seminars, ML Workshops and field visits) in person to build trust and enhance their sense of engagement.

Regarding the Capacity-Building activities, the main challenges identified, lessons learnt from the first round, and improvements applied in the second round were:

- **Adopting a flexible approach to session planning:** while webinars and seminars require preparation, the consortium's expertise and coordination enabled timely, relevant, and well-structured delivery. Flexibility allowed partners to tailor content to ongoing work and local needs, while also providing space to involve external stakeholders, enriching the sessions and enhancing their value. This approach proved effective during the first round and was further refined in the second round to better align with the evolving priorities of the target audiences.
- **Continuous integration of feedback**: feedback from each session—shared during project meetings or through dedicated forms—was used to inform both the planning and execution of future events. Lessons learnt were promptly incorporated, improving the effectiveness of subsequent sessions in the second round. Results were discussed during the Monthly calls to share feedback on time to inform upcoming activities as the 2nd round was more dense in capacity building activities.

Regarding the Awareness Raising Campaigns (ARCs), the main challenges identified, lessons learnt from the first round, and improvements applied in the second round were as follows:

- **Data collection challenges**: in the first round, collecting baseline data to assess social acceptance proved difficult. To address this, partners broadened the reach of the social media surveys in the second round, using various platforms, including web magazines and national-level channels for advertising. This helped engage a wider audience and improve data reliability across baseline, midpoint, and final measurements.
- **Timing variation across Hubs**: while all Hubs were active in the first round, differences in national awareness levels made some audiences harder to reach. In the second round, partners increased efforts and adapted actions to their specific regional contexts, establishing new collaborations with web magazines, experts, and networks. As regional adaptation continued to be a key strength, each Hub tailored its campaign approach: some produced

infographic videos validated by experts; others focused on informative articles published beyond social media, and this flexible, context-specific execution proved effective and reinforced the idea that harmonisation lies in shared goals rather than uniform methods.

- **Reinforcing the dual-faceted online–offline strategy**: the consortium refined and expanded the use of both online and offline formats. This approach, already introduced during the first round, proved effective in increasing reach and impact.

All the described updates and efforts were essential in laying the foundation for a more effective and targeted implementation of the second round of activities.
Furthermore, in M23, **D3.3 – ALFA Operational Plans for the Deployment of Support Services – Final Version** was produced under Task 3.1 to guide the deployment of the refined market uptake support measures in real-life settings. This report detailed, for each measure:

(i) the measure description,
(ii) deployment activities,
(iii) partner responsibilities, and
(iv) an actionable implementation plan.

Furthermore, it also included the **updated strategy for the second Open Call**, along with **targets** for the deployment of support services, capacity-building activities, and awareness-raising campaigns (ARCs).

Thanks to the iterative methodology applied under Task 2.4 - as illustrated throughout this report and evidenced by the final outcomes of all activities - and to the adjustments made and updated strategy, **the internal capacity and expertise within the ALFA consortium proved appropriate and well-aligned with the needs of the supported projects and stakeholders**.

The consortium successfully provided the necessary tools and market uptake support measures to guide supported projects on their path toward implementing biogas solutions and, in general, to guide civil society towards greater awareness and acceptance of biogas solutions.

In fact, **the consortium successfully supported 53 projects (compared to the target of 50)** through the support services (although **only the Greek, Slovakian and Spanish Hubs met the target of supporting at least 8-9 farms and projects in each Hub**, implemented **more capacity building actions than initially planned (13 in total, compared to the target of 12),** and **carried out 12 tailored regional awareness raising campaigns** that reached a wide range of stakeholders—while maintaining a consistently high quality in all activities, as detailed in the following sections.

Table 1 - Target objectives and achievement indicators

Achievement indicators	Target	Explanation of metrics	Explanation of results	Status
ALFA Hubs | Services delivered	**6 | 50**	**At least 1 service provided to each supported project**		**Achieved**

			6 | 58[2]	
Farms and projects supported	50 (8-9/country)	50 Supported cases	53 Supported cases (4-5 per country/round)	Achieved (per Hub country target partially reached as targeted regions supported cases varied)[3]
Capacity Building webinars | seminars	<6 | <6	Seminars | webinars organised	6 | 7	Achieved
Awareness raising campaigns	12 (1/country/round)	Campaigns organised	12 (1/country/round)	Achieved

2. ALFA support services deployment in both rounds

Each Hub of the ALFA project provided a comprehensive range of services to the livestock farmers, aiming at **supporting the development and implementation of biogas solutions**, focusing on both business and technical aspects. These services are designed to address both business and technical needs, helping stakeholders navigate the complexities of the biogas market while also providing practical solutions for technology implementation. By offering tailored guidance in areas such as market research, business planning, access to finance, and technical development, the ALFA project ensures that livestock farmers, agricultural cooperatives, and biogas technology providers receive the necessary support to shift towards more sustainable energy practices in line with the objectives of the work program. The services have been continuously updated and adapted to the different needs of the regions, ensuring flexibility and relevance to each local context. During the second round, stakeholders from each Hub were reached through the launch of a public

[2] Out of the 53 cases in the second round 5 cases were also given additional support by a second partner as a mentoring service.

[3] The number of supported cases (53) was above the overall target (50), though individual Hubs' contributions varied. This variance is the only notable inconsistency as the uniform uptake per country proved challenging. The consortium responded by engaging additional cases in receptive regions (Greece, Slovakia, Spain) and cases not from the original target countries (Germany, the Netherlands, Portugal, Ukraine) that expanded the reach and the impact of the project. The involvement of one case beyond the EU (Ukraine) is an interesting added value, that indicates the transnational appeal and scalability of ALFA's support services.

open call (the second of the entire project), and this report includes a description and evaluation of the second round of support.

Throughout the entire project, **a total of 53 cases received a support service**, out of a total of 72 applications.
The first open call received 37 applications, out of which 26 received a service (one of them, Magtel, from Spain, was not included in D3.2 due to the fact that the provision of service had not yet been completed at the time of submission of D3.2. Therefore, only 25 cases can be found in D3.2. This specific case is reported in this deliverable).
The second open call received 35 applications, out of which 27 received a service.
The matching process of cases with service providers was carried out collaboratively by all Hubs and was based on the specific needs and requirements of the awardees. The timing of the process and the nature and description of the services are explained in the following subsections of this section.

The 53 cases supported through the project (total of round 1 and round 2) come from **ten countries**:

- Belgium: 5 cases
- Denmark: 5 cases
- Greece: 11 cases
- Italy: 6 cases
- Slovakia: 14 cases
- Spain: 8 cases
- Germany: 1 case
- Portugal: 1 case
- The Netherlands: 1 case
- Ukraine: 1 case

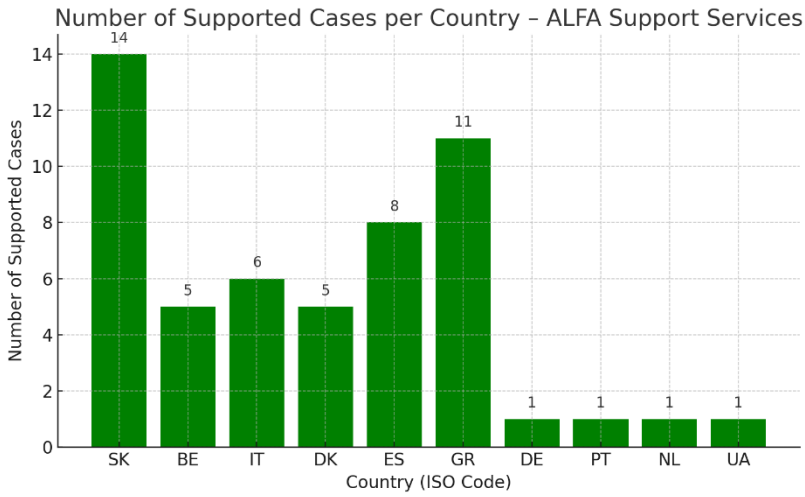


Figure 1 - Number of supported cases per country

Out of the 53 cases who received support services throughout the project, **15 were represented by women**, representing approximately **28,3%** of the total.

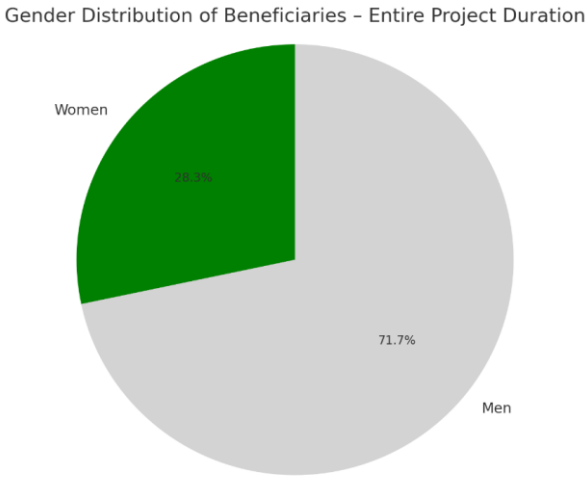


Figure 2 - Supported cases represented by women

Throughout the project, **the 58 support services delivered to the awarded cases included**:

- 6 Market Research (S1)
- 4 Business Modelling and Planning (S2)
- 6 Access to Finance (S3)
- 5 Corporate and Sustainable Finance (S4)
- 5 Farmer/expert to farmer advice (S5)[4]
- 8 Concept Design and Development of Biogas Systems (S6)
- 14 Evaluation of Biogas Potential based on preliminary calculations (S7)
- 1 Energy and Environmental Analyses assessing the energy and carbon footprint across the life cycle (S8)
- 5 Consultancy on the Implementation and Monitoring of Biogas Solutions (S9)
- 1 Technical Support for Farmers in Evaluating and Comparing Plant Suppliers' Quotes (S10)
- 2 Technology Catalogue – Features of Cleaning and Upgrading Equipment (S11)
- 1 Additional service (Legislative requirements for digestate storage in Denmark)

The Technology Catalogue – Features of Cleaning and Upgrading Equipment (S11) was provided to several of the supported cases.

Table 1 - Services distribution

Business Services		Technical Services	
Service	**Total number of services**	**Service**	**Total Number of services**
Market Research	6	Concept Design and Development of Biogas Systems	8
Business Modelling and Planning	4	Evaluation of Biogas Potential based on Preliminary Calculations	14
Access to Finance	6	Energy and Environmental Analyses	1
Corporate and Sustainable Finance	5	Consultancy on Implementation and Monitoring of Biogas Solutions	5
Farmer / Expert to Farmer Advice Additional mentoring in Access to Finance, Technology catalogue for biomethane upgrade (four cases).	5	Technical Support for Farmers in the Evaluation and Comparison of Plant Suppliers' Quotes	1
		Technology Catalogue	2
		Additional service (Legislative requirements for digestate storage in Denmark)	1

[4] Farmer / Expert to Farmer Advice services (mentoring) were also delivered as a secondary, cross-cutting support, extending beyond the definition of standard services to address a broad range of business and technical challenges. This involved assigning an additional service provider to deliver the extra support.

Throughout the project, **the 53 successful applicants to the Open Calls identified themselves as follows**:

- Livestock farm: 31
- Private contractor: 1
- Consultant: 2
- Energy Community: 3
- Environmental engineer: 1
- Biogas plant: 6
- Biogas Consulting/investor: 2
- Agrarian Transformation Society (SAT): 2
- Energy supplier: 2
- Company: 1
- Farmer with biogas plant: 1
- Agricultural and livestock equipment manufacturer: 1

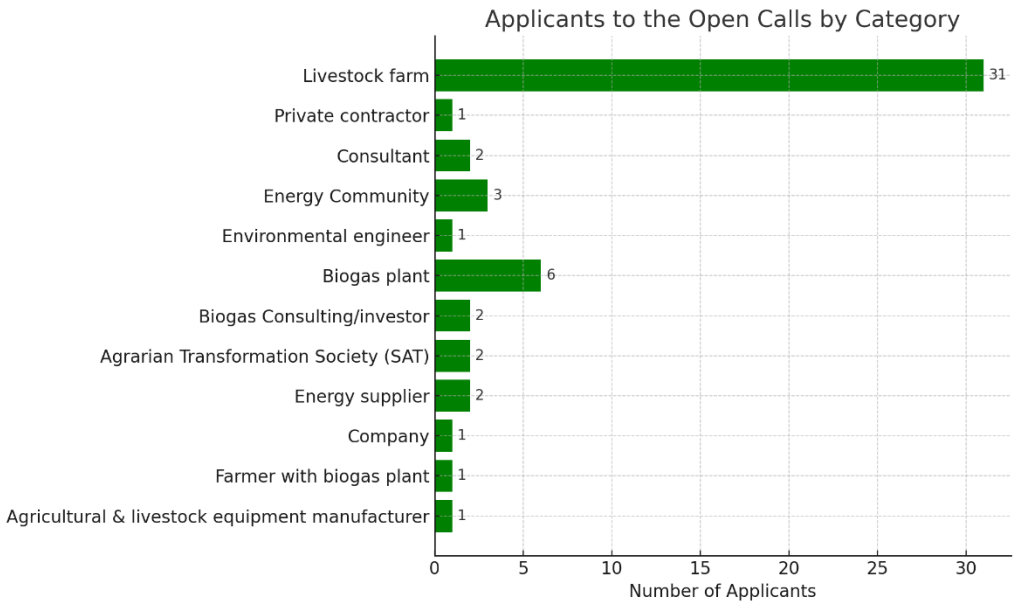


Figure 3 - Category of applicants to the Open Calls

Throughout the project implementation—across both the first and second rounds—the six ALFA Hubs supported a diverse range of biogas projects, as illustrated in the table below. Some Hubs attracted a **higher number of projects**, such as **Greece, Slovakia and Spain**, **successfully reaching or exceeding the target** of supporting **8–9 projects per Hub region**. Conversely, other Hubs—namely **Belgium, Denmark and Italy**—did **not fully reach this target** reflecting to a large extent **the more developed biogas market of these countries as stakeholders are more interested** on optimization rather than initiation, a process that requires substantial longer periods of consultancy well beyond the scope of the project.

However, this variation in performance was largely **balanced out by the general positive results achieved**. Moreover, the inclusion of **additional cases from third countries**—countries not directly represented by a project Hub, such as **Portugal, the Netherlands, Germany, and Ukraine**—ensured a **broader geographical outreach** and **greater European representativeness**. Notably,

the **involvement of Ukraine** added value by extending the project's relevance **beyond the borders of the European Union**, further underlining the **strategic interest and transnational applicability** of ALFA's support services, reflecting the adaptability of the ALFA measures and the potential for scalability across different regulatory, technical, and socio-economic contexts.

Table 2 - Number of supported cases per country in both rounds

HUB	N. of supported projects
Belgium	5
Denmark	5
Greece	11
Italy	6
Slovakia	14
Spain	8
Germany	1 (supported by the Danish Hub)
The Netherlands	1 (supported by the Belgian Hub)
Portugal	1 (supported by the Spanish Hub)
Ukraine	1 (supported by the Slovak Hub)
Total	**53**

Regarding **satisfaction** with the services received, despite numerous follow-ups, not all supported cases completed the evaluation form (as it was not mandatory), and therefore their feedback is unavailable. Among the collected **evaluation forms** (through the monitoring and evaluation framework designed by Q-PLAN in WP4) from both the first and second rounds (aggregated data), **36.3% (12/33) stated that the service exceeded their expectations**, while **48.4% (16/33) reported that the service met their expectations**, resulting in **a total of 84.8% positive responses**, as shown in the table below.

Table 3 - Evaluation of services satisfaction for both rounds

Service satisfaction	1st round	2nd round	Aggregated
The service exceeded my expectations	5/15=33,3%	7/18=38,8%	12/33=36,3%
The service met my expectations	8/15=53,3%	8/18=44,4%	16/33=48,4%
Total	**86,6%**	**83,3%**	**84,8%**

2.1 Timeline for the second round of service provision

For the second round of service delivery, in accordance with the methodology outlined by Q-PLAN in T3.1, an **Open Call for Services** was prepared in **eight languages** (Danish, Dutch, English, French, Greek, Italian, Slovak, Spanish) as a formal invitation to projects to apply for specialised support. In order to facilitate this process, **a dedicated section within the ALFA engagement platform** (https://alfaep.eu/open-call) had already been created during the first round, containing the **Terms of Reference**, i.e. the roadmap for the whole process, detailing the selection criteria and providing clear and precise guidelines for applicants.

The **second Open Call was launched on November 1, 2024**, through the ALFA engagement platform, ensuring systematic involvement across all ALFA regions. Project **partners leveraged their extensive networks** to promote the Call within their respective Hubs. As for the first round, the target groups for this call included farmer associations and their networks, with a **particular focus on livestock farmers and agricultural advisors interested in installing or upgrading biogas systems**. This broad outreach also encompassed farmer associations, energy communities, and other **stakeholders seeking to invest in biogas solutions**, especially those **utilizing manure as a feedstock**. To ensure effective dissemination of the ALFA Open Call, **project partners undertook comprehensive mapping and identification of key stakeholders** within their respective countries. As for the first round, each region was supported by a **dedicated regional Hub manager**, resulting in a total of six Hub managers actively engaged throughout the second round of the project.

Despite significant promotional and efforts by all Hubs, the response to the second Open Call was limited, with a lower-than-expected number of applicants. Building on the lessons learned from the first round of the project -e.g. the drop-out rate of applicants-, all Hubs convened to address this challenge. As a result, **it was collectively decided to extend the Open Call deadline** by two weeks, from 17 January to 31 January 2025. During this extension period, all Hubs intensified even more their outreach efforts through both direct and indirect channels, aiming to encourage more farmers and enterprises to submit their applications. As of January 31, 2025, **a total of 35 applications had been received in response to the second Open Call**.

Once again, the selection process utilized the **Selection Matrix** (see D3.1 and 3.2), through which the consortium evaluated applicants and their projects based on seven (7) criteria: profitability, replicability potential, level of innovation, environmental benefits, involvement of women,

geographical spread, clear need for support, and the principle of 'do no significant harm' was also taken into consideration.

The highest-scoring projects from each region were invited to receive tailored business or technical services through the ALFA program started in February 2025. **The second Open Call received 35 applications, with 27 cases receiving a service** (one support service is still pending at the time of writing this report. This report contains descriptions of 28 cases because, as indicated above, it also includes a description of a service that began in the first round but was not concluded at the time of submitting D3.2).

The interaction between the awarded cases, the Hub managers and the service providers was divided in distinct steps:

- **STEP1**: After the second Open Call, the **needs analysis process** implemented by the ALFA Hubs began with a **preliminary need analysis phase**, during which interviews were conducted with each selected project using a standardized **Needs Analysis Questionnaire** developed by Q-PLAN. This tool was distributed and applied during the initial meetings with the cases to gather structured information on their current status and key challenges. The **KAM approach** was integrated into this process to ensure a more in-depth and tailored engagement with each awardee. Through this approach, the **Hubs were able to conduct a comprehensive analysis of each project's starting point, mapping their specific needs, identifying potential barriers to biogas adoption, and determining which support services within the ALFA project were most suitable to address those needs**, ensuring that each case could receive targeted assistance in line with their development path. Additionally, this methodology would facilitate continuous monitoring of the cases' progress, enabling the **adaptation of support services through follow-up meetings and tailored adjustments**. This structured needs analysis process provided the ALFA consortium with valuable insights into the specific challenges and requirements of each project, allowing for the design and subsequent deployment of a customized and impactful service offering.

- **STEP2**: the matching protocol. After identifying their needs, the subsequent phase involved **pairing each project** with appropriate services from the ALFA services portfolio and assigning the corresponding service providers. In particular, **the matching protocol was carried out first by studying the questionnaires analysing the cases' needs, then by compiling the Matching Matrix, and finally through plenary discussions involving all the Hubs and service providers** to match each case with the most appropriate service and provider. Depending on the needs and preferences of each case, they were matched with the first or second preferred service, within the constraints of the project.
  The **matching criteria took into account the technical requirements, business maturity, specific characteristics, country and language of each awarded project**. The cases outside the original six countries were administered by the most appropriate Hub in terms of suitability, efficiency and available resources.

- **STEP3**: **service provision phase**. For technical support, CERTH, FBCD, and A0CO2 took the lead, while business support was managed by FBCD, Q-PLAN, APRE, SIE, WR, and PEDAL. Q-PLAN kept an overview of the coordination of the entire process, with FBCD and SIE leading the business service coordination and CERTH managing the technical services. Service managers were responsible for preparing all the necessary materials and documents for service delivery, such as **personalised Service Action Plans (SAPs)** for each case,

while service providers were responsible for delivering the service. In addition, in the second phase of service delivery, **awarded projects were assigned with secondary mentors**, where necessary and applicable.

- **STEP4**: **report and evaluation**. A report was prepared by the Service Providers after the completion of the service and sent to the awardees for feedback, review and approval.

Figure 4 - Timeline of the second round of Service provision process

2.2 Strategy for the Support Services

The service provision strategy and methodology for the ALFA project has been essential to ensure a highly targeted, effective, and iterative deployment of support across its six regional Hubs. The key steps can be described as follows:

- **Tailored outreach and engagement**: as for the first open call, each regional Hub actively used local networks and stakeholder mapping to ensure wide dissemination of the open call, targeting farmers, energy communities and investors in the biogas sector. This ensured that the selected projects were highly relevant and committed to the uptake of biogas solutions.
- **Rigorous selection process**: using the **Selection Matrix** (see D3.1 and D3.2), all applications were assessed against clear criteria to identify projects with the highest potential for impact. This ensured that the most promising initiatives were selected for tailored support.
- **Tailored service matching**: after a thorough needs assessment using a standard template **(Matching Matrix)**, selected projects were matched with specific commercial or technical services from the ALFA portfolio, ensuring that each project received the most relevant support according to its challenges and preferences by the most appropriate service provider.
- **Phased service delivery**: service delivery was divided into clearly defined phases, from needs assessment to matching and service delivery, managed by specialised service providers. This structured approach ensured accountability and that projects received high quality support.
- **Continuous evaluation and learning**: at the end of each service provision round, relevant feedback was collected through the information contained in the reports of each supported project. The feedback gathered after the first round of service provision was instrumental in refining the service provision strategy for this second round, incorporating lessons learned to further optimise the process.

2.3 Types of Support Services

As for the first round of service provision, the types of services provided in the second round of the activities of T 3.2 and T3.3 are divided into two categories: **technical services** and **business and access to finance services**.

In terms of Business services, they focus on assisting the supported cases in developing business strategies, accessing finance and conducting market analysis; ALFA has adopted a tailor-made approach, taking into account the unique market conditions of each project. As for Technical services, they focus on the operational and technological aspects of biogas production, offering advice on system design, optimisation and environmental assessments.

A more detailed description of the services is provided in the table below and in the next subsections 2.2.1 and 2.2.2.

<table>
<tr><th colspan="3">BUSINESS SUPPORT</th><th colspan="3">TECHNICAL SUPPORT</th></tr>
<tr><td rowspan="2">Market Research</td><td colspan="2">Business Modelling and Planning</td><td rowspan="2">Concept design and development of biogas systems</td><td colspan="2">Evaluation of biogas potential based on preliminary calculations</td></tr>
<tr><td colspan="2">Corporate and Sustainable Finance</td><td colspan="2">Energy and environmental analyses assessing the energy and carbon footprint across the life cycle</td></tr>
<tr><td colspan="2">Access to finance support</td><td>Farmer to Farmer advice</td><td>Consultancy on the implementation and monitoring of biogas solutions</td><td>Technology Catalogue: Features of cleaning and upgrading equipment</td><td>Technical support for farmers in the evaluation and comparison of plant suppliers' quotes</td></tr>
</table>

Figure 5 - Types of Business and Technical Support Services

2.3.1 Business and access to finance

Service 1: Market Research

This service entails conducting comprehensive market research, employing tools such as the PESTLE framework for external environmental analysis. It includes identifying target markets, providing a detailed market overview encompassing quantification, trends, and competitive analysis, and evaluating market attractiveness through Porter's 5 forces.

Service 2: Business modelling and planning

Planning: The ALFA project supports participants in developing innovative business models tailored to their unique needs, with a specific focus on energy and digestate. This process utilizes the Business Model Canvas methodology to ensure a strategic and adaptable approach.

Service 3: Access to finance support

This service involves identifying European, regional, and national financing opportunities for implementing biogas technologies in livestock farming. It offers step-by-step guidance on securing identified financing options, ensuring a comprehensive approach to financial support.

Service 4: Corporate and sustainable business finance

The ALFA initiative conducts assessments of the profitability of potential investments in biogas systems. This includes evaluating key metrics such as Internal Rate of Return (IRR), Return on Investment (IRR), Return on Investment (ROI), Net Present Value (NPV), Capital Expenditure (CapEx), and Operational Expenditure (OpEx).

Service 5: Farmer/expert to farmer advice

Facilitating mentorship and knowledge exchange, this service connects livestock farmers who have successfully incorporated biogas solutions with those who are interested in similar activities within the supported projects. This collaborative approach aims to harness the wealth of practical experience and insights within the farming community.

2.3.2 Technical Support

Service 6: Concept design and development of biogas systems

Providing conceptual design services that address critical aspects of biogas production, encompassing determinants such as plant size, design, and the selection of appropriate technological solutions.

Service 7: Evaluation of biogas potential based on preliminary calculations

Conducting preliminary calculations to assess biogas potential, considering substrate mixtures to achieve high biogas yield and productivity.

Service 8: Energy and environmental analyses assessing the energy and carbon footprint across the life cycle

Assessing the energy and carbon footprint throughout the life cycle of biogas production via Life Cycle Analysis (LCA). This involves identifying environmentally impactful stages and exploring scenarios related to critical parameters such as feedstock types.

Service 9: Consultancy on the implementation and monitoring of biogas solutions

Offering consultancy services for the implementation and monitoring of biogas solutions, collaborating with farmers to address concerns, and overcome obstacles.

Service 10: Technical support for farmers in the evaluation and comparison of plant suppliers' quotes

Assisting farmers in evaluating and comparing quotes from plant suppliers, supporting the selection of optimal technical solutions for biogas and biomethane production on their farms.

Service 11: Technology catalogue – features of cleaning and upgrading equipment (new service)

The objective of this service is to provide information on the different existing technologies for purifying and upgrading of the gas leaving anaerobic digesters. For both processes, the description of the various technologies is complemented by a table to facilitate comparison and choice based on the general characteristics of the rest of the plant and the type of end use of the gas. The idea is that with this information makes it easier for users to choose the type of equipment best suited to their needs.

In the table below can be seen the updated distribution of service managers and service providers for the second round.

Table 4 - List of services with managers and providers list

Type of service	#	Service name	Service manager	Service providers									
				QPL	FBCD	APRE	PED	WR	SIE	CERTH	A0CO2	EDF	EBA
BUSINESS & ACCESS TO FINANCE SUPPORT	1	Market research	SIE	X	X	X	X	X	X				
	2	Business modelling and planning	SIE	X	X	X	X	X	X				
	3	Access to finance support	PEDAL	X	X	X	X	X	X				
	4	Corporate & sustainable finance	QPL	X	X	X	X	X	X				
	5	Farmer to farmer advise	QPL	X	X	X	X	X	X	X	X	X	X
TECHNICAL SUPPORT	6	Concept design and development for biogas systems (including Biogas potential solutions assessment e.g. direct biogas utilization, upgrade into biomethane, etc (Key information for farmers))	FBCD		X	X				X	X		
	7	Evaluation of biogas potential based on preliminary calculations	FBCD		X	X				X	X		
	8	Energy and environmental analyses assessing the energy and carbon footprint across the life cycle	CERTH							X			
	9	Consultancy on the implementation and monitoring of biogas solutions, operation and maintenance training	CERTH			X				X			
	10	Technical support for farmers in the evaluation and comparison of plant suppliers' quotes	A0CO2		X					X	X		
	11	Technology catalogue – features of cleaning and upgrading equipment	A0CO2								X		

2.4 Deployment of the Services in the six Hubs in the second round

The ALFA project is strategically structured around six regional Hubs located in Belgium, Denmark, Greece, Italy, Slovakia, and Spain, serving as the core engines for deploying tailored biogas-related services. Each Hub played a critical role in adapting the project's Market Uptake Support Services to meet the specific needs and challenges of its local livestock and biogas sectors. This decentralized approach allowed the project to offer solutions that are not only replicable but also highly adaptable to regional market conditions, cultural factors, and local industry frameworks.
By leveraging the expertise and knowledge within each Hub, ALFA ensured that the services provided were delivered with a deep understanding of regional dynamics. This helped in fostering stronger engagement from livestock farmers and other key stakeholders, enhancing the overall effectiveness of biogas solutions in diverse European markets.

During the second round of support services, a total of **27 cases were reached in nine countries**:

- Belgium: 4 cases
- Denmark: 2 cases
- Greece: 7 cases
- Italy: 1 case
- Slovakia: 6 cases
- Spain: 4 cases
- Portugal: 1 case
- The Netherlands: 1 case
- Ukraine: 1 case

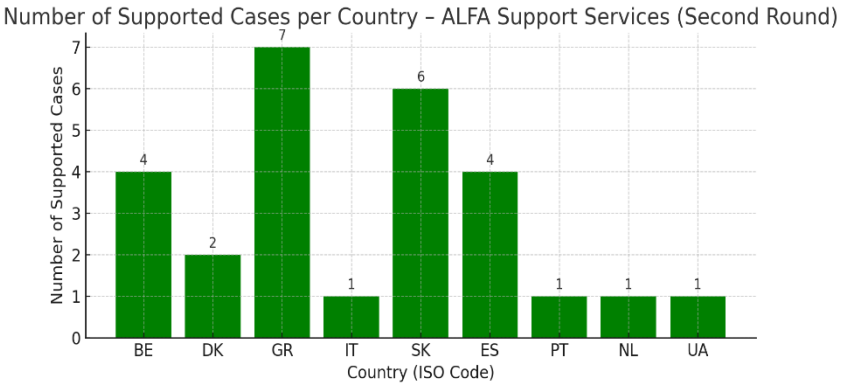


Figure 6 - Number of supported cases per country

Out of the 27 cases who received support services during the second round, **11 were represented by women**, representing approximately **40,7%** of the total.

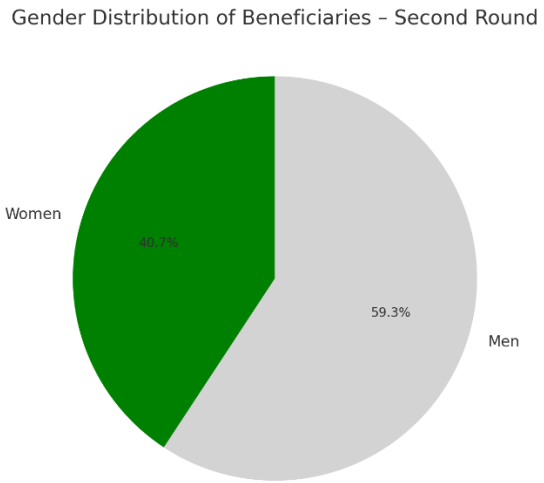


Figure 7 - Supported cases represented by women

During the second round, **the 32 services delivered to the 27 supported cases included**:

- 3 Market Research (S1)
- 3 Business Modelling and Planning (S2)
- 0 Access to Finance (S3)
- 1 Corporate and Sustainable Finance (S4)
- 5 Farmer/expert to farmer advice (S5)
- 4 Concept Design and Development of Biogas Systems (S6)
- 9 Evaluation of Biogas Potential based on preliminary calculations (S7)
- 0 Energy and Environmental Analyses assessing the energy and carbon footprint across the life cycle (S8)
- 3 Consultancy on the Implementation and Monitoring of Biogas Solutions (S9)
- 1 Technical Support for Farmers in Evaluating and Comparing Plant Suppliers' Quotes (S10)
- 2 Technology Catalogue – Features of Cleaning and Upgrading Equipment (S11)
- 1 Additional service (Legislative requirements for digestate storage in Denmark)

In order to meet the needs of the supported cases, the Hubs and service providers very often provided multiple services to the awardees under S5 Farmer/expert to Farmer Advice. The **Technology Catalogue – Features of Cleaning and Upgrading Equipment (S11**), for example, **was provided to several of the supported cases**.

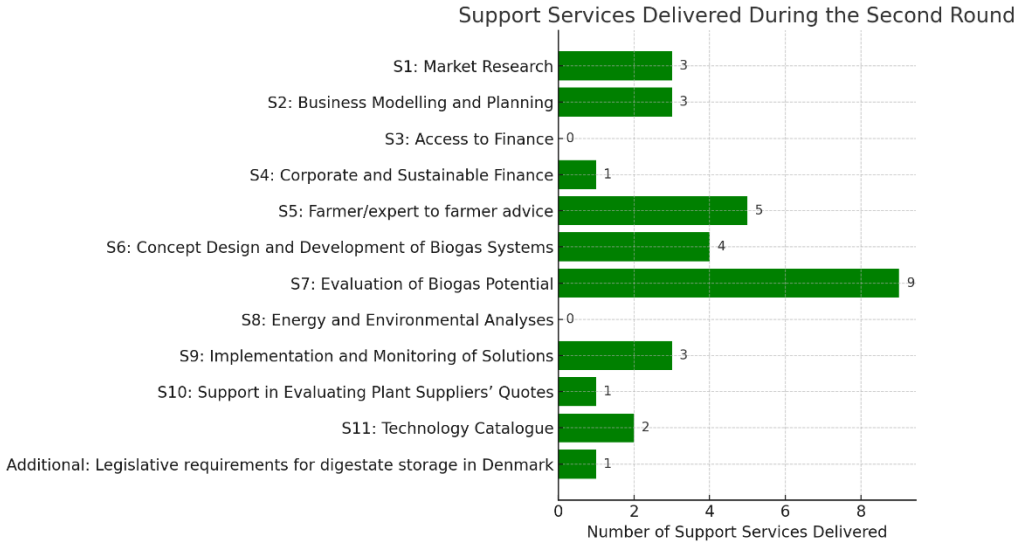


Figure 8 - Typology of delivered services (second round)

2.4.1 Belgium

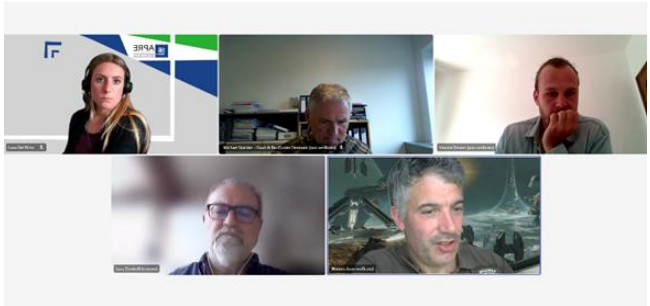
The Belgian livestock sector is increasingly adopting biogas as a solution for energy production and manure management. In the second round of the Open Call, the project received 6 applicants from Belgium, but only 4 of them remained interested during the process; therefore, 4 services (including business and technical ones) were provided in Belgium. The Belgian livestock sector exhibits interest in adopting biogas as a solution for energy production and manure management. Small-scale biogas installations are the most common in farms, and the related commercial and research environments are mature. Farmers show high awareness of biogas solutions. However, financial and regulatory

barriers, as well as other regional-specific challenges, have strongly limited adoption of digesters in farms in recent years.

A total of **five (5) projects from Belgium successfully received support services** over the two rounds. The service providers involved were WR, A0CO2, APRE, and FBCD. The types of services delivered included: Market Research (S1), Business Modelling and Planning (S2), Concept Design and Development of Biogas Systems (S6), Evaluation of Biogas Potential Based on Preliminary Calculations (S7), and Consultancy on the Implementation and Monitoring of Biogas Solutions (S9).

In the second round among the projects administered by the Belgian Hub, one originated from the Netherlands, having been engaged through the Hub's promotion and engagement efforts in the Dutch language. The following reports include the **three Belgian projects** supported during the second round, as well as the **one Dutch project** facilitated through the Belgian Hub. An additional report for a case from Belgium can be found in the Spanish Hub second round reports.

Project 1 (S9-Consultancy on the Implementation and Monitoring of Biogas Solutions)

Awardee project description	De Zwanebloem BV is a dairy farm in Belgium with 1,000 dairy cows and two anaerobic digesters (total 30,000 m³/year). One digester operates thermophilically, enabling digestate export to France. The farm powers a 435 kW engine with biogas, but currently runs at 60% capacity due to limited feedstock. Current inputs include fresh manure from one barn, corn silage, and CCM. Plans include installing a solid floor in a second barn to increase manure supply and seeking authorization for non-GMP substrates. The farm requested support to improve H_2S removal, assess feed strategies, and identify co-substrates to optimize digester output and engine performance.	
Support service provided	S9-Consultancy on the implementation and monitoring of biogas solutions	
Regional Hub	Belgium	
Country of the applicant	Belgium	
Duration of support	March 2025 – May 2025	

Service provider partner	FBCD and APRE	
Contact persons	Wannes Masscheleyn	
Type of organization	Livestock Farm	
Activities and results achieved through the services	The service provided can be summarized as follows: 1. Technology Assessment: The anaerobic digestion (AD) system operates under thermophilic conditions, which enables high biogas yields, faster reaction rates, and effective pathogen removal. However, higher temperatures increase the risk of ammonia inhibition and require close monitoring. Raising the operating temperature in Reactor 1 could improve performance but must be carefully balanced to avoid microbial imbalance. A more diverse substrate mix—including energy-rich co-substrates—is essential to reach full engine capacity. However, no list of potential new feedstocks was provided, limiting further scalability assessment. 2. Component Selection: - Sulphur removal: To mitigate H_2S corrosion and ensure engine compatibility, a combination of in-digester iron salt dosing (e.g., $FeCl_2$, $FeSO_4$) and a biological scrubber is recommended. The biological unit can use ambient air, reducing complexity and cost. A final polishing step using the existing activated carbon filter will lower H_2S to safe levels. - Upgrading Potential: While the current focus is on engine optimization, a future shift to liquid biomethane could be considered. In that case, membrane separation or chemical absorption (e.g., amine scrubbing) would be viable, though all options require prior H_2S removal and gas drying. 3. Constructor Collaboration: No specific collaborations with technology providers were reported. It was recommended to engage suppliers experienced in biogas desulfurization and upgrading, especially those offering modular biological scrubbers or automated iron dosing systems. 4. Comparative Analysis: A combined approach—sulfide precipitation, bioscrubber, and carbon polishing—was suggested to balance efficiency, simplicity, and cost. Summary of Recommendations:	

	• Sulfur removal: Use iron salt dosing, air-based bioscrubber, and activated carbon polishing. • Feed strategy: Mimic cow nutrition by balancing energy-rich and nitrogen-rich substrates for optimal microbial health. • Co-substrate identification: Prioritize local, energy-dense waste; obtain authorizations for non-GMP inputs. • Capacity increase: Proceed with second barn flooring to access more fresh manure. • Monitor parameters: Carefully control temperature, ammonia, and organic loading to maintain thermophilic efficiency.

Project 2 (S1-Market Research)

Awardee project description	A young dairy farmer based in the Belgian Ardennes is currently developing a biogas production unit on his family's farm, which is home to 250 lactating cows. The initiative aims to make efficient use of on-site resources (primarily slurry, manure, and lower-quality crops that cannot be used as animal feed) to generate renewable energy. The project is still in its early planning stages, with no biogas infrastructure yet in place. At present, the farmer is focused on defining the right system size and evaluating technology suppliers offers. A key technical hurdle lies in incorporating the solid phase of the feedstock into the digester in a way that is not only reliable over time but also simple and economically viable, given the limited quantities available. To move forward confidently, the farmer needed expert guidance to help identify the most suitable solutions.	
Support service provided	Market Research	
Regional Hub	Belgium	
Country of the applicant	Belgium	
Duration of support	March 2025 – May 2025	
Service provider partner	White Research	
Contact persons	Maxime Doutreloux	
Type of organization	Dairy farm	

Activities and results achieved through the services	At the beginning of the support service delivery, the awardee collaborated with White Research to identify the specific needs of his farm, using a needs assessment questionnaire and a targeted discussion that helped refine the scope of the service. Based on these insights, a tailored market research analysis was carried out, resulting in the production of a comprehensive report focused on the Belgian biogas sector. The report delivered not only a high-level overview of market dynamics, such as customer segmentation, key technology providers, and regulatory and economic conditions, but also practical guidance tailored to the awardee's context. A particularly valuable output was the inclusion of a Farmer's Guide, which distilled the research into actionable steps and considerations for the uptake of biogas in livestock farming. This section provided a clear synthesis of the findings in a farmer-friendly format, helping to translate complex market insights into practical recommendations. Overall, the support service enabled the awardee to gain clarity on the strategic positioning of the project, better assess supplier options, and prepare for the financial and technical planning phases ahead with increased confidence.

Project 3 (S7-Evaluation of Biogas Potential based on preliminary calculations)

Awardee project description	Mr Marc Vanguestaine is the owner of a livestock farm in Ferrières. It is a family business with 2 employees, one of whom is female. They are currently breeding 500 dairy goats in organic farming and 15 Highland cows. Considering the actual management practices, they have around 2,000 tons/year of goat manure and 200 tons of suckler cows manure. The farm also cultivates 55 hectares of various cereal and legume and 5 hectares of sunflowers. Other 40 hectares could be dedicated to cover crops for the anaerobic digester. Finally, the residual whey and around 300 tons/year of poultry manure from a nearby farm could be used. Mr Vanguestaine would like to evaluate the realization of a biogas plant using the byproducts they have in order to apply a circular economy approach, produce renewable energy and save money.
Support service provided	S7 - Evaluation of Biogas Potential based on Preliminary Calculations
Regional Hub	Belgium
Country of the applicant	Belgium
Duration of support	April-May 2025

Service provider partner	AzzeroCO2
Contact persons	Vanguestaine Marc
Type of organization	Breeding farm
Activities and results achieved through the services	Preliminary calculations of biogas potential, including: • Economic and legislative considerations • Technical considerations • Solution 1: Plant features (technical characteristics, environmental analysis, economic assessment) • Suggested alternative solution: Plant features (technical characteristics, environmental analysis, economic assessment) • Economic assessment. • Environmental assessment

Project 4 (S2-Business Modelling and Planning)

Awardee project description	The Awardee is a young professor from Netherland that for his research activities is in contact with several Energy Communities (both thermal and electric) in the BENELUX and north Germany area. His aim is to multiply the number of Communities while raising their effectiveness and renewables share by providing new economic and social models. He sees the potential of anaerobic digestion and biogas plants; he has a specific interest in the new emerging legal and technical frameworks on RECs to verify the compatibility with biogas plant incentives and understand how to integrate them.
Support service provided	S2 - Business Modelling and planning
Regional Hub	Belgium
Country of the applicant	Netherlands
Duration of support	April – May 2025
Service provider partner	AzzeroCO2
Contact persons	Javanshir Fouladvand
Type of organization	Research institution

Activities and results achieved through the services	The activity required several interactions with the awardee, both to identify the aim and to define the extent of the analysis. During the service, the Italian model for Renewable Energy Communities was deepened to describe the legal framework, the technical characteristics, business model possibilities, incentives, social requirements/effects, and organisational models allowed. At the same time, we provided a report on the evolution of the biogas market and legal framework evolution to highlight the mutual benefits of the two technologies and the limitations. As a result, biogas plants are allowed in renewable energy communities (in compliance with a number of requirements). Integrating biogas into RECs would be of particular interest as it is a fully dispatchable source. The scheme was ''designed'' for PV, so to work well with biogas, some adjustments need to be made, especially at the tariff level. With this in mind, Energy communities could be an opportunity for biogas plants in the near future, and vice versa.

2.4.2 Denmark

In Denmark, biogas production is well-known and the biogas sector has expanded significantly since an energy settlement was reached in 2012. On that occasion, support for biogas production was significantly increased, and it became possible to sell the upgraded biomethane via the gas grid. This meant a change in the business basis for establishing and operating biogas plants. The support scheme has been changed several times since, but the result has been a significant expansion of biogas production in Denmark, where the majority of biogas production now takes place in very large plants with the upgrading of the biogas to biomethane, which is sold via the gas grid. Only a very modest part of biogas production takes place in small, decentralized plants. More than 40% of Danish gas consumption can now be covered by biogas production.
The services offered in the ALFA project have therefore only had limited relevance for the majority of those interested in biogas in Denmark. The services in demand have been long-term processes involving, among other things, regulatory processing and detailed design and planning. It has therefore been difficult to find relevant cases in Denmark. Two technical services have been selected and implemented in Denmark in connection with Round 2.

A total of **five (5) cases from Denmark** were supported across the two rounds. The service providers involved were FBCD, WR, and A0CO2. The services delivered included Market Research (S1), Business Modelling and Planning (S2), Concept Design and Development of Biogas Systems (S6), and Evaluation of Biogas Potential Based on Preliminary Calculations (S7). In addition, one project received an extra service: the Technology Catalogue – Cleaning Equipment Characteristics and Upgrades (S11). The following reports focus on the **two Danish cases supported during the second round** and facilitated by the Danish Hub.

Project 1 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)

Awardee project description	A physical meeting at Løvevej 5 in Thisted 04/04-2025 at 8:30 was held to clarify the possible service that ÁLFA can offer in connection with their plans to establish a biogas plant centrally located in Mors. Anna Worm from the consultancy company Fjordland was also called to the meeting, she works, among other things, with the implementation of the green tripartite in Mors and has participated in the establishment of Morsø Agricultural Council. The plant is planned to process a total of approx. 400,000 tons of biomass per year. A collaboration has been made between 31 farmers, who have invested a total of approx. 1.5 million DKK in the development of the project. ML is employed as director and AC is employed as project manager on assignment. A board of 9 members has been established to make the necessary decisions. The authority processing has started with an application for environmental approval. There is a General Meeting on June 10, when the progress of the project will be discussed. A copy of the biomass plan that has been made for the plant was used to estimate the possible biogas production. As part of the work with the green tripartite, it is planned that a larger amount of grass will be produced on Mors, in order to protect the aquatic environment. The designation of the areas is underway and AW is participating in the work. There may be several thousand hectares on Mors, where approximately 90% of the area is designated as agricultural land. There is a lack of legislation and framework conditions in the area. It is possible to influence the framework and legislation in the area in the coming period. The calculations are made in the MARS program, which is publicly available. The plan is not to include the wet meadows, as harvesting here would damage biodiversity, as these prefer grazing by cattle. The use of large amounts of grass in the biogas plant is seen as an opportunity to ensure a supply of biomass with a high energy content. They are planning with a dry matter content in the reactor tanks of 12% and a TS content in the total biomass input of 16.6%. It was agreed that calculations would be made on three scenarios with low, medium and high grass intake to the biogas plant. Initially, they have assumed 10% grass input, corresponding to 40,000 tons per year. AW provided a statement of how this can be done in relation to the location of the plant. The ambition is then set to grass constituting 15-20% of the biomass as a case.
Support service provided	S7 - Evaluation of Biogas Potential based on Preliminary Calculations

Regional Hub	Denmark
Country of the applicant	Denmark
Duration of support	April 2025 - June 2025
Service provider partner	FBCD
Contact persons	Michael Lyhne
Type of organization	Consultant and start-up company
Activities and results achieved through the services	Note on the possibilities of using large quantities of grass in biogas production at a new plant

Project 2 (S6-Concept Design and Development of Biogas Systems; S11 - Technology Catalogue)

Awardee project description	The farm has approx. 220 dairy cows, 300 young animals and approx. 100 steers. They produce approx. 5,600 tons of manure from their own animals and approx. 29,000 tons are processed through the farm's biogas plant. They have approx. 1,200 tons of residual products. There are 10 employees, 2 of whom are women. They would like to increase revenue by selling biogas/methane or electricity to the grid. They would like to reduce the farm's energy consumption. They would also like to reduce problems with manure handling and improve the fertilizer value of the degassed biomass. The cows lie in straw. They would like to be self-sufficient and independent. The farm is run organically and has been since 1995. We work from a circular and regenerative perspective, where our production must be coherent, and where the residual products of the different productions must be able to be used and upcycled. In addition, we establish min. 3 new biotopes and biodiversity initiatives and planting herbs in the grasslands. All the farm's young animals do nature conservation with grazing, some of them in the Wadden Sea National Park. We have had a small farm biogas plant since 2015. We generally try to work on how the food and energy of the future should be produced in interaction with nature, society and people.

	They grow approx. 900 hectares in total with grain for consumption, feed and breeding of oats, barley, rye spring wheat, winter wheat, broad beans, lupins and seed grass., Rye grass and timothy for roughage, grass and seed potatoes. They are required to cover the degassed biomass. They have purchased an extra tank of 8,000 m^3 which has not yet been installed. It is expected to be installed in May-June this year. It has been purchased and environmentally approved, the building permit is in progress. They have permission for up to 100 tons/day. Slurry from outside is transported and settled N to N. They use their own deep bedding and some from outside. Input and output of 500 m3 and their own storage tank of 3,200 m^3. The temperature in the reactor tank is 46-48 degrees in winter and 48-50 in summer. Reactor tank with hard top of 8,000 m^3 concrete and hardtop and inner lining. They have emptied ½ meter of sand after 7 years of operation. They want the old engine out. They have built a gas pipeline 5.5 km to the biogas plant in Forsum, but that plant was stopped last summer. They send the raw gas to them after removing sulphur. They make approx. 130 m^3/hour biogas and deliver it at 2-3 bar. Some chicken manure may be available. They are being hit pretty hard by the green triangle, as they divert to Ringkøbing Fjord, which is loaded with nitrogen. The green triangle is unclear as far as otters are concerned. They have enough land themselves. They make a lot of grass. They have received both pulp and brown juice from Biorefine, but they are closed this year. They believe there is the same gas potential in grass silage and seed grass straw and grass pulp. The degassed material is sold to suppliers and there are no problems with obtaining enough land.	
Support service provided	Concept Design and Development of Biogas Systems.	
Regional Hub	Denmark	
Country of the applicant	Denmark	
Duration of support	March 2025 - June 2025	
Service provider partner	FBCD	

Contact persons	Andreas Krogh
Type of organization	Farmer with biogas plant
Activities and results achieved through the services	On-site advice and note on the design of biogas plant expansion

2.4.3 Greece

During the second round, technical and business services were delivered in Greece. Three of these services focused on assessing the biogas potential through preliminary evaluations for two individual livestock farms—one specialising in swine and the other in mixed livestock species—and their affiliated association. The assessment included calculations of manure output and biogas yield for each substrate, using available livestock data, estimated manure production per animal type, and literature-based biogas yield values. The aim was to explore the benefits of collaborative, cooperative-scale biogas production to ensure a stable and sustainable energy output. An additional service evaluates the biogas production potential of a poultry farming unit in Ioannina, Greece, by estimating its generation capacity and proposing technical solutions for processing imported poultry manure through anaerobic digestion.
In terms of business services, one project focused on evaluating the financial viability of biogas production from cow manure on a small livestock for self-consumption, based on ESG criteria. Additionally, two business models were developed related to biogas services, specifically focusing on consulting services.

Over the course of the two rounds, a total of **11 cases from Greece** received support. The service providers involved were Q-PLAN and CERTH. The services delivered included Business Modelling and Planning (S2), Corporate and Sustainable Business Finance (S4), and Evaluation of Biogas Potential Based on Preliminary Calculations (S7).
The following reports present the **seven Greek cases** supported during the second round.

Project 1 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)[5]

Awardee project description	This project calculates biogas potential assessments under the "Evaluation of biogas potential based on preliminary calculations" service. This individual case is affiliated to cooperative "Nea Enosi Karditsas" and evaluates the biogas production potential of an individual swine farming unit affiliated with the cooperative. The primary objective of the study is to evaluate the feasibility of achieving energy autonomy at a farm level.

[5] During the second round, the Karditsa Cooperative (Nea Enosi Karditsas) played a proactive role by informing its members about the opportunity to receive advisory services. This internal communication led to increased interest, with several additional farms expressing their willingness to participate in the initiative. The process was actively supported and facilitated by the Cooperative's Manager, who played a key role in streamlining

Support service provided	Evaluation of Biogas Potential Based on Preliminary Calculations
Regional Hub	Greece
Country of the applicant	Greece
Duration of support	March 2025 - June 2025
Service provider partner	CERTH
Contact persons	Iliana Antoniou, Manager, support to the owner
Type of organization	Individual Livestock Farm I
Activities and results achieved through the services	The biogas production potential was calculated based on manure and agricultural waste data provided directly by the owner in collaboration the cooperative, supplemented by validated parameters from relevant technical literature. The swine livestock unit was estimated to produce approximately 6,546 m³ of manure annually. When co-digested with the 400 tons of available agricultural residues (maize, cotton and clover), the projected annual biomethane yield reached 147,121 Nm³, supporting the installation of a 60–65 kWe Combined Heat and Power (CHP) unit for on-site energy self-consumption. Thus, the report provided valuable insight regarding the potential advantages of collaborative approaches to biogas development within cooperative boundaries.

Project 2 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)

Awardee project description	This project calculates biogas potential assessments under the "Evaluation of biogas potential based on preliminary calculations" service. This individual case is affiliated to cooperative "Nea Enosi Karditsas" and evaluates the biogas production potential of an individual livestock unit affiliated with the cooperative, housing a mix of livestock species. The

communication and addressing coordination challenges among members. In parallel, preliminary discussions were held regarding the organization of a dedicated seminar in Karditsa, aimed at further engaging stakeholders and sharing relevant knowledge. However, due to the start of the busy agricultural season, it was not feasible to organize the event during that period.

	primary objective of the study is to evaluate the feasibility of achieving energy autonomy at a farm level.
Support service provided	Evaluation of Biogas Potential Based on Preliminary Calculations
Regional Hub	Greece
Country of the applicant	Greece
Duration of support	March 2025 - June 2025
Service provider partner	CERTH
Contact persons	Iliana Antoniou, Manager, support to the owner
Type of organization	Individual Livestock Farm II
Activities and results achieved through the services	The biogas production potential for all three cases was calculated based on manure and agricultural waste data provided by the owner with the support of the cooperative, supplemented by validated parameters from relevant technical literature. Despite its animal diversity, the limited population of this missed livestock unit resulted in a lower annual manure production of 461,065 kg, which corresponds to approximately 15,129 Nm^3 of biomethane. This output falls below the threshold for justifying the investment in a conventional small-scale CHP system. Thus, the reports provided valuable insight regarding the potential advantages of collaborative approaches to biogas development within cooperative boundaries.

Project 3 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)

Awardee project description	This project includes biogas potential assessment conducted within the framework of the agricultural cooperative “Nea Enosi Karditsas”. The assessment provides an aggregated analysis of the entire cooperative’s biogas potential. The primary objective of the study is to evaluate the feasibility of achieving energy autonomy while also investigating the benefits of cooperative-scale collaboration to ensure stable biogas production.

Support service provided	Evaluation of Biogas Potential Based on Preliminary Calculations	
Regional Hub	Greece	
Country of the applicant	Greece	
Duration of support	March 2025 - June 2025	
Service provider partner	CERTH	
Contact persons	Iliana Antoniou, Manager	
Type of organization	Agricultural Cooperative	
Activities and results achieved through the services	The biogas production potential was calculated based on manure and agricultural waste data provided directly by the cooperative members, supplemented by validated parameters from relevant technical literature. As anticipated, the aggregated manure volume across the cooperative demonstrated the biggest biogas potential, resulting in an estimated 285,728 Nm^3 of biomethane per year, which supports the installation of a 175–180 kWe CHP unit. Thus, the report provided valuable insight regarding the potential advantages of collaborative approaches to biogas development within cooperative boundaries.	

Project 4 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)

Awardee project description	This report aims to quantify the biogas production potential of a poultry farming unit located in Ioannina, Greece. Currently, the facility does not generate its own biogas but instead provide its 200–300 tons of manure annually to an external biogas plant under separate ownership. The awardee previously participated in the 1st Round of ALFA services with a focus on business development and now seeks technical support tailored to the unit's operational needs. The assessment was conducted using available livestock data, estimated manure output per animal category, and literature-based biogas yield values for each substrate. The primary objective of this service is to estimate the unit's biogas generation capacity, address the technical challenges associated with the anaerobic digestion of poultry manure and propose suitable processing and equipment solutions.
Support service provided	Evaluation of Biogas Potential Based on Preliminary Calculations
Regional Hub	Greece
Country of the applicant	Greece
Duration of support	May 2025 - June 2025
Service provider partner	CERTH
Contact persons	Dimitris Bellos, owner
Type of organization	Livestock Farm

Activities and results achieved through the services	The current manure availability (250 tons/year) corresponds to an estimated annual biomethane yield of 26,395 Nm³. This output falls below the required threshold to justify the investment in a conventional small-scale CHP system. Consequently, it was determined that even after the farm becomes operational, the continued importation of poultry manure from the current source and the incorporation of additional organic-rich co-substrates will be necessary to ensure stable digester performance and adequate methane production. While the available feedstock volume does not support the implementation of advanced capital-intensive technologies, a detailed technology catalogue that included pretreatment techniques, digester configurations, and biogas/digestate storage options, was provided. Among the presented alternatives, the most technically appropriate systems, designed to effectively manage the high solids and nitrogen content of poultry manure, were highlighted, outlining potential next steps for future development.

Project 5 (S2-Business Modelling and Planning)

Awardee project description	*DASO Business Performance* is a Business Consultancy and Project Management company that operates in five Business Divisions: (i) Business performance management, (ii) Renewable sources and biogas production management, (iii) Waste management, (iv) Environmental protection, specialised in agro-nutrition and (v) Training academy management. The company is very active in the biogas consulting field with a lot of experience in advising farmers, agricultural associations and other stakeholders in small- and large-scale biogas systems. Within above consulting services a lot of farmers and stakeholders moved forward with the construction of such facilities. The company at the moment is planning to expand its consulting services also to the operation of the biogas plants, with overall aim to constantly maintain and improve the performance of the biogas plant. The business models aim to prove the feasibility of the new company's concept and to demonstrate the short-term profitability of the idea in terms of proper business management structure, organisation and economic viability and the long-term sustainability in the sense of environmental and social standards.	
Support service provided	Business Modelling and Planning	
Regional Hub	Greece	
Country of the applicant	Greece	

Duration of support	April – May 2025	DASO
Service provider partner	Q-PLAN International	
Contact persons	Maria Logara	
Type of organization	Biogas Consulting	
Activities and results achieved through the services	Exploration of business potential to expand from consulting services to the operation of biogas plants, and thus support on the maintenance and improve the performance of biogas plants of their customers. The main outcome of the service provision is a SWOT (strengths, weaknesses, opportunities and threats) analysis, along with the sustainable business model canva analysing key partners, key activities, key resources, value proposition, customer segments, customer relations, sustainable channels, cost structure, subsidisation, revenue streams, environmental and social risks, mitigation measures, environmental and social benefits, end of life. An action plan was developed as a guide for a successful completion of the service.	

Project 6 (S4-Corporate and Sustainable Finance)

Awardee project description	The report provides a financial analysis for establishing and operating biogas production unit using livestock waste in a small livestock farm in Kilkis, Greece. The analysis focuses on biogas units processing waste from 150 cows, which produce about 5tn manure per day.
Support service provided	Corporate and Sustainable Finance
Regional Hub	Greece
Country of the applicant	Greece
Duration of support	March – April 2025
Service provider partner	Q-PLAN International

Contact persons	Adjer Ibraimova
Type of organization	Small Livestock Farm
Activities and results achieved through the services	The potential unit processes 5tn/day of cow manure, producing 23,360 m³/year of methane and 37,079 m³/year of biogas, with an electric power output of 15 kWe. The financial viability is assessed by examining the initial capital expenditure (CAPEX), operational expenditure (OPEX), revenue generation, Net Present Values (NPVs), Payback Period and Return on Investment (ROI), considering cumulative cash flows. The report also highlights significant environmental and social benefits, such as renewable energy production of 15 kWe, a CO2 emission reduction of 10.485 kg CO2eq/year, and the processing of 1,825 tons/year of biomass, which contributes to improved air quality through reduced fossil fuel combustion and better waste management. However the collaboration with other biomass producer was recommended to achieve financial feasibility.

Project 7 (S2-Business Modelling and Planning)

Awardee project description	The technical office operates in Levadia, Greece, and is responsible design, technical studies, construction and supervision along with permits process.. The technical office is interested in expanding its service portfolio in Renewable Energy Systems, and take advantage of the dominated livestock farming activities of the area (Boeotia, Greece), and thus integrate biogas unit (from design, permitting and installation) in its service portfolio The business models aim to prove the feasibility of the new company's concept and to demonstrate the short-term profitability of the idea in terms of proper business management structure, organisation and economic viability and the long-term sustainability in the sense of environmental and social standards
Support service provided	Business Modelling and Planning
Regional Hub	Greece
Country of the applicant	Greece
Duration of support	April – May 2025

Service provider partner	Q-PLAN International
Contact persons	Tzeni Bazioti Technical Office
Type of organization	Biogas Consulting
Activities and results achieved through the services	Exploration of business potential to expand from consulting services to the operation of biogas plants, and thus support on the maintenance and improve the performance of biogas plants of their customers. The main outcome of the service provision is a SWOT (strengths, weaknesses, opportunities and threats) analysis, along with the sustainable business model canva analysing key partners, key activities, key resources, value proposition, customer segments, customer relations, sustainable channels, cost structure, subsidisation, revenue streams, environmental and social risks, mitigation measures, environmental and social benefits, end of life. An action plan were developed as a guide for a successful completion of the service.

2.4.4 Italy

In Italy, the overall picture remains broadly unchanged from the first round of ALFA support services. Most livestock farms share a common interest in installing new biogas plants in order to reduce waste and improve energy efficiency—some to cut energy costs by making the most of their manure resources, others to boost on-farm energy production. Outside a handful of Northern regions where very large agricultural and livestock farms already operate sizable plants, general adoption is still limited, and most interested small and medium sized livestock farms are only at the earliest stages of developing a biogas facility. A further obstacle is the need to navigate restrictions imposed by archaeological or heritage authorities. For many Italian farmers, furthermore, a key priority is still to understand which financial opportunities could make a biogas investment viable. During the second round of ALFA services, the Italian farm supported reflected the typical needs encountered throughout the project. First and foremost is better waste-management: turning “waste” into value through a suitable biogas installation. Farmers see biogas as a pathway to energy self-sufficiency—generating and consuming their own power rather than purchasing it—and thus to improve energy efficiency. A recurring demand is access to trustworthy consultants and plant suppliers who genuinely prioritise sustainable, circular-economy solutions (i.e., digesters sized to run solely on the farm’s own slurry and manure) and offer financially realistic quotes. Many small- and medium-sized livestock farmers want to remain livestock farmers, not speculative investors; they care about animal welfare and, increasingly, about protecting the environment. Yet they have repeatedly received quotes for oversized, overpriced plants, which erodes confidence and raises fears of costly mis-steps.

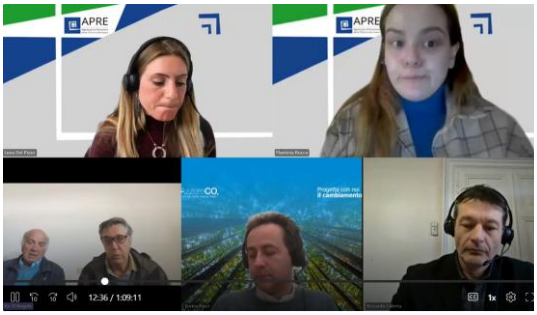
Another theme highlighted in this round is the need to explore in greater depth how small and medium livestock farms might cluster around a single shared digester, given that individually they may not generate enough feedstock to justify a standalone plant. The ALFA experience shows, however, that with the right guidance these farms are genuinely eager to modernise and embrace more sustainable practices on every front.

In total, **six cases from Italy** were supported over the two rounds. The service provider was APRE, selected primarily for language-related reasons. The services delivered included Access to Finance (S3), Evaluation of Biogas Potential Based on Preliminary Calculations (S7), and Technical Support for Farmers in Evaluating and Comparing Plant Suppliers' Quotes (S10).

The following report presents the **one Italian case** supported during the second round.

Project 1 (S10-Technical Support for Farmers in the Evaluation and Comparison of Plant Suppliers' Quote)

Awardee project description	Bufala buona - Azienda Agricola Giancarlo D'Angelo is a buffalo dairy farm located in Rome, Italy. The farm manages approximately 350 buffaloes and processes its milk into mozzarella cheese directly on-site through its own dairy facility. With increasing attention to environmental sustainability and circular practices, the farm aims to completely overhaul its manure management system by introducing a biogas plant to generate renewable electricity, thermal energy and reduce the problem of waste and waste management. When APRE met the consultant and the owner of the farm, the farm was planning to expand, which also included a biogas plant, for which a preliminary design had already been developed. The plant suppliers had proposed a 49 kW system, which would run exclusively on the farm's waste. The company had already submitted a P.A.M.A. to the Department of Environmental Protection in Rome, indicating their intention to install the biogas plant. They planned to install scrapers in the stable to collect the manure into channels. This manure would be then pumped and transferred to a tank, where it will be mixed and sent to the digester. At the outlet of the digester, there would be a separator that would divide the solid portion from the liquid portion. The liquid portion would be collected in a large tank. The solid fraction is intended to be used as bedding, while the heat would be utilized to dry the solid separated material. This process would also reduce the amount of straw required for bedding. Instead of straw, they would like to use the solid fraction. When APRE first met the farm, it was awaiting various authorisations (P.A.M.A., PSR). If the PSR funding (60% subsidy) was not approved, they would be willing to proceed with private financing at a slower pace, as improving manure and waste management remains a priority. Bufala Buona - Azienda Agricola Giancarlo D'Angelo asked us for support on various issues:

	- to determine the correct size of the biogas plant they planned to build, based on accurate estimates of manure production (as no one could specify the quantity of manure produced, and therefore the appropriate size of the plant for proper scaling. The farm only spoke with suppliers, who clearly have their own interests); - to review the quote they had received from the previous biogas plant supplier and assess its accuracy; - advice on agricultural financing, in particular to clarify the implications of PSR financing with respect to GSE incentives, and guidance on optimal financing strategies.	
Support service provided	S10-Technical Support for Farmers in the Evaluation and Comparison of Plant Suppliers' Quote	
Regional Hub	Italy	
Country of the applicant	Italy	
Duration of support	February 2025 - May 2025	
Service provider partner	APRE	
Contact persons	Andrea Vitelli, consultant of Bufala Buona - Azienda Agricola Giancarlo D'Angelo	
Type of organization	Livestock farm	
Activities and results achieved through the services	APRE held multiple meetings with the farm Bufala Buona – Azienda Agricola Giancarlo D'Angelo, including: - two online consultations/meeting - one on-site technical visit at their farm and dairy facility in Rome - one in-person meeting during the Mutual Learning Workshop and field visit organized by the Italian ALFA Hub in Rome. Before applying to the ALFA Project open call, the farm had independently approached a supplier offering a 49 kW biogas plant. However, through the consultancy services provided by APRE and biogas expert Luca Zambelli, it was identified that this supplier had a poor reputation in the market and was involved in multiple legal disputes with other farmers. Additionally, the proposed plant was oversized given the farm's available manure and would have required feed crops—contrary to the farm's intention to reserve crops solely for animal nutrition. The quote received from this supplier amounted to over €420,000 + VAT and was ultimately deemed unsuitable from both a	

technical and strategic standpoint, as it failed to consider the farm's feedstock potential and business model.

Following two initial online meetings, Mr. Zambelli conducted an in-person technical assessment at the farm. During the visit, he worked closely with the farm owner and agrarian consultant to redesign a more appropriate and sustainable biogas system. This included recommendations such as implementing daily fresh manure collection via scrapers along all barn lanes—a key upgrade—and optimizing the location of the digester and storage tanks for greater feasibility and clarity in operations. Thanks to APRE and Luca Zambelli, the farm was then connected with a more appropriate supplier—Bioelectric, a company specialized in small-scale biogas systems. A preliminary evaluation suggested a right-sized 33 kW plant, relying exclusively on manure and mozzarella whey, thereby eliminating the need for dedicated energy crops. Bioelectric also offered to conduct a free biogas potential analysis to support a tailor-made plant design based on actual data. The new quote provided by Bioelectric amounted to €329,000 and followed a step-by-step, data-driven approach aligned with the farm's values and long-term sustainability goals.

Moreover, farm owner Giancarlo D'Angelo and consultant Andrea Vitelli took part in the Mutual Learning Workshop and field visit held on April 15th in Rome. There, they engaged directly with experts from GSE, RSE, and other professionals in agriculture, circular economy, biogas, and animal welfare. During the field visit to Caseificio Formaggi Boccea—a dairy farm operating a small biogas plant powered solely by cheese whey—they benefited from peer-to-peer exchange and received valuable advice from a fellow farmer with hands-on experience.

To date, Bufala Buona – Azienda Agricola Giancarlo D'Angelo has expressed strong commitment and intention to move forward with the construction of its own biogas plant.

2.4.4 Slovakia

In the second round of ALFA support services in Slovakia, a diverse group of cases sought assistance, including livestock farms, agricultural cooperatives, an Ukrainian dairy farm, demonstration biogas plant, biogas association, and a manufacturer of agricultural and livestock equipment. These stakeholders were at varying stages of project development yet shared a common intention: to establish or upgrade (incl. to biomethane) biogas facilities. Their primary motivations included reducing energy costs, achieving greater self-sufficiency, and improving manure and waste management - contributing overall to more circular and efficient agricultural operations. Many projects were still in the ideation stage, facing challenges such as unclear ROI, grid access, and financing, but the supported cases showed a strong willingness to move forward. Requested services ranged from technical guidance on the technology, as well as

biogas-to-biomethane upgrades and feedstock optimization, evaluation of biogas potential based on preliminary calculations, concept design and development of biogas systems, to desulfurization techniques and fertilizer pretreatment methods. Stakeholders also sought insights such as into biomethane market opportunities in Slovakia, environmental legislation, and pollutant storage rules in other EU countries, additional opportunities for earnings in connection with biogas production, the Atlas Map showing the regional distribution of operational biogas plants to assess commercial expansion opportunities. While these requests exceeded the predefined ALFA support service offer, efforts were made to accommodate them the best possible way.

As already mentioned, support was tailored-made to meet the individual needs of each case, in order to de-risk early-stage projects, guide the strategic decisions, and foster long-term sustainability in biogas and biomethane deployment.

A total of **14 cases from Slovakia** were supported over the two rounds. The service providers involved were PEDAL, FBCD, CERTH, and A0CO2, with occasional support from the Slovak Biogas Association to ensure more comprehensive and detailed information delivery. The services provided included Market Research (S1), Access to Finance (S3), Concept Design and Development of Biogas Systems (S6), Evaluation of Biogas Potential Based on Preliminary Calculations (S7), and Consultancy on the Implementation and Monitoring of Biogas Solutions (S9). Additionally, the Technology Catalogue – Cleaning Equipment Characteristics and Upgrades (S11) was offered as an extra service to several projects.
Moreover, one customised service was delivered to the biogas plant in Borčová, Slovakia, who also represents the Environmental Section of the Slovak Biogas Association.

The following reports present **six Slovak cases and one case from Ukraine** supported during the second round and administered by the Slovak Hub.

Project 1 (S9-Consultancy on the Implementation and Monitoring of Biogas Solutions; S11-Technology Catalogue)

Awardee project description	The examined unit constitutes a small on-farm demonstration biogas plant that has been operating since 2000, serving as a practical teaching and academic research facility. The facility houses 100 cattle, generating 5 tons of manure daily, which is used to operate a 22 kWe CHP unit. Given the plant's long operational history, several of its components are naturally obsolete. Thus, the awardee seeks to modernize the system by upgrading outdated equipment and integrating advanced monitoring technologies. Additionally, they seek to incorporate suitable pretreatment technologies to enable the valorization of alternative feedstocks, such as organic kitchen waste. To address these needs, a detailed technology catalogue focused on potential pretreatment methods, modern biogas/digestate storage solutions, available upgrading technologies and advanced anaerobic digestion monitoring systems was developed, while various environmental impact mitigation strategies were additionally proposed.

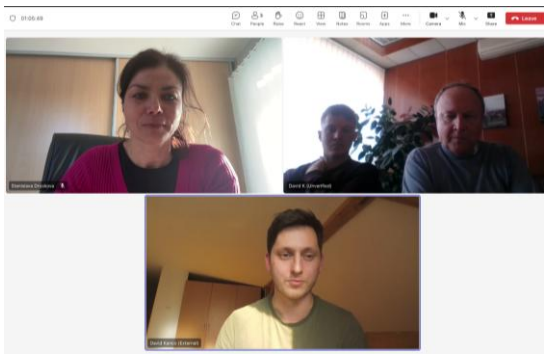
Support service provided	S9 - Consultancy on the Implementation and Monitoring of Biogas Solutions & S11 - Technology Catalogue: Features for cleaning and upgrading equipment
Regional Hub	Slovakia
Country of the applicant	Slovakia
Duration of support	March 2025 - June 2025
Service provider partner	A0CO2 & CERTH
Contact persons	Professor Ján Gaduš
Type of organization	Demonstration Biogas Plant for Academic Teaching and Research
Activities and results achieved through the services	The first part of the assessment, provided by A0CO2, presents a comprehensive overview of available upgrading and desulfurization technologies. This analysis aims at facilitating the selection of the most suitable upgrading/desulfurization solutions tailored to the plant's capacity, operational conditions, and feedstock variability. The second part, provided by CERTH, includes a detailed technology catalogue of pretreatment options, biogas/digestate storage systems and advanced monitoring technologies. Among the presented alternatives, the most technically appropriate systems were identified based on their ability to maintain reproducible operating conditions, maximize biogas yield, allow for easy operation by students and staff, and accommodate co-substrates like organic kitchen waste. The recommended options were evaluated and categorized according to both technical optimality and practical feasibility, with the latter considering economic viability and compatibility with the existing plant scale.

Project 2 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)

Awardee project description	The awardee, EHOSS, is a research and development company specializing in engineering equipment manufacturing for farms and stables, headquartered in Bratislava. EHOSS had previously participated in the 1st Round of ALFA services, focusing on identifying potential national and European funding sources to support the development and deployment of their platform technologies. During the 2nd round of services, the company expressed interest in acquiring an Atlas Map detailing the regional distribution of operational biogas plants,

	aiming to explore opportunities for expanding their commercial activities. Although such a service was not explicitly listed among the standard ALFA service pool, the technical service providers collaborated to compile and analyze relevant data from their respective countries, enabling the development of a comprehensive biogas infrastructure mapping effort. This tailored service was integrated within the framework of Service 7.
Support service provided	Evaluation of Biogas Potential Based on Preliminary Calculations
Regional Hub	Slovakia
Country of the applicant	Slovakia
Duration of support	March 2025 - June 2025
Service provider partner	CERTH
Contact persons	Daria Pylypas, Chief Marketing Officer
Type of organization	Agricultural and Livestock Equipment Manufacturer
Activities and results achieved through the services	The produced report provides an overview of the currently operating biogas plants across Denmark, Greece and Italy. Given the extensive number of installations in Italy, data was presented on a regional basis rather than identifying individual plant locations. To supplement the report, detailed appendices were included, featuring: ● A municipal-level dataset of Italian biogas plants ● An up-to-date list of active biogas facilities in Greece. This customized output supports EHOSS' strategic planning and provides valuable insights into the spatial distribution and scale of biogas infrastructure across key European regions.

Project 3 (S6-Concept Design and Development of Biogas Systems; S11 - Technology Catalogue; Biomethane sales opportunities)

Awardee project description	Mr. Koteles and his family owns a livestock farm with the following parameters: ● Animals: 700 - dairy cows, 500 - heifers up to 2 years, 250 - calves ● Agricultural crops: Wheat - 400ha, Barley - 80ha, Turnips - 200ha, Maize - 350ha, Lucerne - 150 ha, Clover - 100ha, TTP -225ha ● By-products: Straw up to 2000 ton ● Number of employees: 48 (10 women) ● Do you already have a biogas plant: no They would like to build up a biogas/biomethane plant, but before thorough analysis is needed to help them to determine if the overall investment and planned development of the project is financially feasible. They were interested in ad1) the concrete numbers and data/the initial information on the project's return/return on investment); the optimum ratio of feedstock; methods of digestate application; as well as in ad2) technology catalogue for cleaning and upgrading equipment and ad3) biomethane sales opportunities in Slovakia and 3 presentations regarding biomethane and its sale.	
Support service provided	S6 - Concept Design and Development of Biogas Systems (FBCD) S11 - Technology Catalogue: Features for cleaning and upgrading equipment (AzzeroCO2) + Biomethane sales opportunities in Slovakia (David Kanco) + 3 presentations of biomethane (outside of the scope of offered ALFA services)	
Regional Hub	Slovakia	
Country of the applicant	Slovakia	
Duration of support	March 2025 - June 2025	
Service provider partner	FBCD, AzzeroCO2, Slovak Biogas Associations	
Contact persons	David Koteles	

Type of organization	Livestock Farm
Activities and results achieved through the services	The first part of the report presents a comprehensive overview of basic biogas operation and biogas potential in relation to Mr. Koteles farm. Second parts provide the Technology Catalogue, including the biogas cleaning treatment, incl. desulfurization) and upgrading equipment. The final part is a report from SBA regarding the biomethane sales opportunities in Slovakia together with three presentations of biomethane dealers and experts speaking at the SBA conference, which could be useful.

Project 4 (S11-Technology Catalogue: Features for cleaning and upgrading equipment/Biomethane)

Awardee project description	Mr. Zabransky, manager of biogas plant Plavnica, Slovakia (plant with secured feedstock base - estimated 1250 pcs of animals (approx. 10000 tonnes of manure); agricultural crops: approx. cereals 1100 tons, potatoes 1500 tons, haylage 5000 tons; corn silage 3000 tons) would like to upgrade it to a biomethane plant. He was interested in the info regarding the potential upgrade of biogas to biomethane plant; as well as alternative sources of income/ additional opportunities for earnings in connection with biogas production.	
Support service provided	S11 - Technology Catalogue: Features for cleaning and upgrading equipment/Biomethane +Additional opportunities for earnings in connection with biogas production (such as certificates for biomethane; CO2 capture from CHP (engine) plant/its use and storage; CO2 methanization and increased biomethane yield locally; Liquid methane for the transport sector in Germany; Pyrolysis of the fiber fraction, increased gas production and carbon storage; Powe tX) (outside the scope of offered ALFA services)	
Regional Hub	Slovakia	
Country of the applicant	Slovakia	
Duration of support	March 2025 - June 2025	

Service provider partner	AzzeroCO2, FBCD	
Contact person	Ing. Peter Zabransky	
Type of organization	Agriculture cooperative	
Activities and results achieved through the services	The report of provided services consists of the Technology Catalogue, including the biogas cleaning treatment, incl. desulfurization) and upgrading equipment as well as the information regarding the alternative source of funding/additional opportunities for earnings in connection with biogas production. This part of the report offers the comprehensive (such as certificates for biomethane; CO2 capture from CHP (engine) plant/its use and storage; CO2 methanization and increased biomethane yield locally; Liquid methane for the transport sector in Germany; Pyrolysis of the fiber fraction, increased gas production and carbon storage; Power to X).	

Project 5 (Legislative requirements for digestate storage in Denmark)

Awardee project description	The manager of biogas plant Borcova, Slovakia, Ing. Matej Stefanek, who is Slovak Biogas Association representative for the enviro section inquired about the legislative requirements for digestate storage in Denmark (and other ALFA partner countries). As in Slovakia, a regulation has been in place requiring that by December 31, 2029, large-capacity tanks storing pollutants (such as digestate) must be equipped with a so-called "double-walled" system. This ensures that in the event of a leakage, the pollutant does not contaminate the soil, underground water sources or rivers. The regulation mandates that this secondary containment must also be installed beneath existing tanks, which can be costly, challenging, or even technically infeasible. To support our discussions with the Slovak Ministry of the Environment, we need comparative data on whether similar strict requirements exist in other EU countries regarding digestate storage. The following info/report was requested: On which legislation and in what way regulates the issue of storing pollutants from the perspective of water protection in Denmark/Italy/elsewhere?	
Support service provided	The regulatory framework of storing pollutants from the perspective of water protection in Denmark/Italy/elsewhere (outside the scope of ALFA offered services)	
Regional Hub	Slovakia	

Country of the applicant	Slovakia	
Duration of support	April 2025 - June 2025	
Service provider partner	FBCD	
Contact person	Ing. Matej Stefanek	
Type of organization	Slovak Biogas Association	
Activities and results achieved through the services	In connection with the implementation of the Service Action Plan for Ing. Matej Stefanek, Slovak Biogas Association, Mikael Stockler/FBCD had gathered the information from Denmark. The regulatory framework in this area in Denmark is only available in Danish, so the report provides the translated parts of the legal basis from the Danish Environmental Protection Agency and the guidelines from the Danish Working Environment Authority concerning the establishment of biogas plants; as well as Danish material. There are no regulations in Denmark similar to those currently being proposed in Slovakia. In Mikeals' view, establishing so-called "double-walled" systems on existing plants is not technically or economically feasible. From a technical standpoint, he doesn't believe it is possible to retrofit existing tank facilities with a double bottom. If a double bottom is required, new tank facilities would have to be	

	constructed. Double walls might be possible in some cases. A more practical approach would be to secure the plants using alarm systems, barriers, and collection facilities that can be used in the event of an accident. In Denmark they don't have separate legislation for digestate, and/or don't classify it as a pollutant like in SLOVAKIA, but it belongs to liquid manure: Chapter 8 Storage of Liquid Livestock Manure, Silage Juice, and Wastewater. The material to this report attached: 1. A translation of parts of the Danish regulation (link and attached to this document) 2. A translation of the regulatory framework from the Danish Working Environment Authority regarding biogas plants (ditto) 3. A planning guide for Danish municipalities (in Danish only) (ditto)

Project 6 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)

Awardee project description	The Ukrainian company "PODILLYA FOODS COMPANY" JSC operates a modern dairy farm with 3,177 dairy cows and about 4,800 young and other animals in Vinnytsia Oblast. The farm consumes electricity in amounts of about 3,3 million kWh yearly which is spent mainly on ventilation/air conditioning of the farm and operation of milking equipment. During the war in Ukraine many of the electricity power plants were destroyed by Russian missile attacks (see the Note below). This has led to centralized power outages and interruptions in the supply of electricity. Since the dairy farm has a 24-hour ventilation system for maintaining a microclimate for the health and comfort of cattle and for regular cows milking, power outages can lead to illness or even death of animals. Note: according to Financial Times, Jun 5, 2024, Ukraine's domestic energy production has dropped from 55GW to below 20GW due to bombardments or to Russian occupation, with Russian missile attacks causing the worst blackouts since the start of war. Based on the above circumstances, and taking into consideration that the farm produces about 110 thousand tons of manure yearly that must be utilized, the company considers a project of construction of a biogas plant with electricity generation for farm consumption and selling the rest on the electricity market. The plant will use as raw material **the cattle manure mixed with wheat straw.** We can add sugar beet pulp and residues in the amount of 25 000 tons yearly for the biogas production as well. Based on all the raw materials mentioned above we expect to build a biogas plant **with a capacity of 2,0 - 2,5 MWh.** We consider the further use of biogas for production of electricity and biomethane for export to the EU as well. **The company's business activity data:**

	1. Dairy farm: • Type and how many animals: dairy cows - 3177, heifers - 800, other cattle – 4000. • Number of employees on dairy farm: 216, women - 101. • Estimated amount of manure produced**: 117 000 tons per year**. The average content of dry matter in the total manure mass mixed with wheat straw is about 21% (including wheat straw). All manure is mixed with wheat straw because straw is used as bedding for cattle in proportion of about 90/10. 2. **Land** under crops of PODILLYA FOODS COMPANY: • wheat - 7070 ha, corn - 6704 ha, soy - 9980 ha, sugar beet - 7894 ha, sunflower - 9966 ha, plants for silage - 2645 ha, rapeseed - 1512 ha, barley - 437 ha. • Quantity of by-product: wheat straw - 12 000 tons yearly. 3. Sugar production of the Group: • Quantity of by-product: sugar beet pulp and residues – 50.000 tons and 20.000 tons yearly accordingly.	
Support service provided	#7 Evaluation of Biogas Potential based on Preliminary Calculations (BASIC BIOGAS OPERATION AND BIOGAS POTENTIAL & additional notes/comments)	
Regional Hub	Slovakia	
Country of the applicant	Ukraine	
Duration of support	March 2025 - June 2025	
Service provider partner	FBCD	
Contact person	Mr. Volodomyr Opryshko	
Type of organization	Dairy farm in UA	
Activities and results achieved through the services	The report estimates the possible biogas production on a very large cattle farm in Ukraine. It contains a general description of the biogas process and the factors to be aware of in connection with the establishment and operation of a plant and concludes with estimates of the possible biogas production on	

	the Podillya Foods Company farm. It also contains the additional notes/comments addressed via email.

Project 7 (S1-Market Research)

Awardee project description	Model biogas plant for practice: The idea of establishing a model biogas plant has been introduced as part of the possible future activities of the State Research Institute of Animal Production. The intention is to develop a sustainable system for managing biological waste generated by the farm and its associated slaughterhouse. Currently, all bio-waste is collected and removed by external service providers, relying on an outdated and economically burdensome disposal method. During the initial consultations, it became evident that the farm's own feedstock resources would not be sufficient to support the continuous operation of a biogas facility. Therefore, it was mutually agreed to carry out a targeted market research study, incl. in-depth analysis of the Slovak biogas and biomethane sectors, with particular attention to the Nitra region and its specific challenges, as well as the PESTLE analysis. The special attention was agreed to be given to the identification and evaluation of potential external sources of input materials - such as by-products from nearby agricultural cooperatives, bakeries, and dairies etc, - located within an optimal 40–50 km radius of the proposed site.
Support service provided	S1 - Market Research
Regional Hub	Slovakia
Country of the applicant	Slovakia
Duration of support	March 2025 - June 2025
Service provider partner	PEDAL Consulting s.r.o.
Contact person	Martina Vršková
Type of organization	State organisation running livestock farm
Activities and results achieved through the services	The report, prepared for Martina Vršková, presents a comprehensive market analysis of the Slovak biogas and biomethane sectors, with a focus on the Nitra region. It outlines global and regional market trends, projecting significant growth in the European biogas market, driven by decarbonization policies, renewable energy targets, and the circular economy. Slovakia's National Energy and Climate Plan sets a biomethane production target of

	200–300 million m³ annually by 2030, positioning biogas as a strategic tool for energy security and rural development. Despite its potential, the Slovak biogas sector faces several structural challenges, including the absence of operational subsidies, long delivery times for biogas technologies, limited availability of high-quality feedstock, and inefficient waste segregation systems. The report also highlights the fragmented nature of the market and identifies emerging business models such as biomethane injection and bio-CNG/LNG production. The study includes a PESTLE analysis identifying key political, economic, technological, legislative, and environmental factors influencing project feasibility. It also explores permitting challenges, digestate legislation, and investor uncertainty due to policy volatility. A major outcome of the study is a field-based market mapping of over 100 potential suppliers of organic feedstock—such as agricultural by-products, bakery waste, and dairy residues—within a 40–50 km radius of the proposed site in Nitra. This database, along with a comparative chart of the energy efficiency of various feedstock types, provides a practical foundation for future procurement and logistical planning. The findings aim to support the long-term viability of the envisioned biogas plant by ensuring access to a stable and locally sourced supply of input materials.

2.4.5 Spain

Several farms and cooperatives across Spain share similar challenges in developing biogas plants. Their needs for the 2nd round were focused mostly in technical support, specifically in the preliminary calculations for biogas plants, and consultancy for biogas implementation and monitoring. On the business/finance side, the interest was focused on the identification of interesting public financing opportunities, as well as market analysis to understand the context and state-of-the-art of biogas technologies in certain regions.

The general goal for most awardees was to have a first approach to biogas and to understand how they could valorize the manure they already have available in their farms, taking advantage also of other crops or associations of farmers in order to move their projects forward. For this, they needed to better understand what biogas potential was available from the available biomass, type/size of plant that would work best for them, and how much energy they could generate from it in order to use it for self-consumption within the farms. Due to the high demand of the services, the Spanish Hub, in addition to the Spanish cases, also managed one case from Belgium and one from Portugal.

It is important to mention that due to delayed timings in the receival of the data of one of the awardees from the 1st round, one of the services was completed in November 2024, falling out of scope for the first version of this report. This project is now reported as Project 1 below. All other projects belong to the 2nd round.

A total of **eight (8) cases from Spain** were supported across the two rounds. The service providers involved were SIE, CERTH, A0CO2, and APRE. The services delivered included Market Research (S1), Access to Finance (S3), Concept Design and Development of Biogas Systems (S6), Evaluation of Biogas Potential Based on Preliminary Calculations (S7), Energy and Environmental Analysis—

Assessing the Energy and Carbon Footprint Across the Life Cycle (S8), Consultancy on the Implementation and Monitoring of Biogas Solutions (S9), and the Technology Catalogue – Cleaning Equipment Characteristics and Upgrades (S11). Service S11 was provided as a secondary service to several projects supported by the Spanish Hub.

In addition, the Hub attracted one project from Portugal, highlighting its extended outreach and regional impact beyond the core ALFA countries.

The following reports include **one Spanish case from the first round** (completed after the previous Deployment Report D3.3 submission), as well as **four Spanish cases**, **one Portuguese case**, and **one Belgian case** supported during the second round and administered by the Spanish Hub.

Project 1 (S8-Energy and Environmental Analyses: Assessing the Energy and Carbon Footprint across the Life Cycle)

Awardee project description	Sofia González Hergueta represented Magtel, an energy company currently operating on the treatment, valorization and recycling of 200,000 ton/yr of livestock farming and agricultural waste via: ● Anaerobic digestion plant which generates electric and thermal energy for self-supplying the farm. ● Biogas upgrading for the obtention of biomethane (98-612 MW/yr). ● Compressed biomethane (250 bar) will be transported using off-grid logistics until the injection point. ● Purification and liquefaction of biologic CO2 for the agrifood industry, production of e-methanol and integration with renewable H2 to obtain synthetic methane. ● Obtention of feedstock for fertilizers, in addition to irrigation waters. ● Composting plant. Among the challenges identified, the need for the optimization of economic viability of the digestate treatment systems, especially for the liquid fraction of the digestate following centrifugal separation, was one of the main barriers. When speaking about the financial plan and the treatment technologies for the liquid fraction of digestate, it would be valuable to know the minimum flow volume of liquid fraction is enough to make it economically viable for nutrient recovery or evaporative concentration. Then, during the meetings with the experts and ALFA Hubs, the need for a carbon footprint analysis was also identified. A comparison between 3 different technologies the company was considering on implementing, so they sent the relevant data for the analysis for CERTH to make the analysis. Due to the timing of the receival of data and internal project deadlines, **this service had to be completed later than others from the 1st round, so it could not be included in the previous version of this report.**	
Support service provided	Energy and Environmental Analyses: Assessing the	

	Energy and Carbon Footprint across the Life Cycle	
Regional Hub	Spain	
Country of the applicant	Spain	
Duration of support	May 2024 - November 2024	
Service provider partner	CERTH	
Contact persons	Sofía González Hergueta, Technical Director of Biomethane Projects.	
Type of organization	Energy solutions consultancy.	
Activities and results achieved through the services	Energy and environmental analysis of scenarios BA4.1, BA5 and BA6 (scenarios sent by the awardee with the relevant data), including: ● Analysis and identification of the boundaries for the study for each scenario. ● Life cycle inventory and key assumptions for each scenario. ● Analysis of the global warming potential, acidification and eutrophication potential for each scenario. ● Conclusions on the report results (factors of dependency, comparison of energy demand and emissions for all scenarios, etc). Even though biomethane constituted the main product for each examined scenario, deviations in sub-processes conditions as well as different co-product processing and management, resulted in significant differences in environmental impacts. Scenario BA.4 utilized a digestate liquid fraction to ammonium sulfate conversion, minimizing energy demands while producing a refined chemical compound. This processing pathway resulted in lower Greenhouse Gas (GHG) emissions (0.85 kg CO_{2eq} / m^3) compared to the other scenarios when considering the inclusion of each co-product process without additional energy supply. In scenarios BA.5 and BA.6 a liquid fraction evaporation unit was employed, resulting in increased GHG emissions from the biomass boilers used for steam production. The Acidification Potential (AP) and Eutrophication Potential (EP) impact categories showed great dependency to energy heavy activities, since no ammonia production, fugitive emissions or digestate leaching were considered in the present assessment. Scenario BA.6 was attributed to the lower AP impact (6.22e-06 kg SO_{2eq} / m^3) compared to the scenarios BA.4	

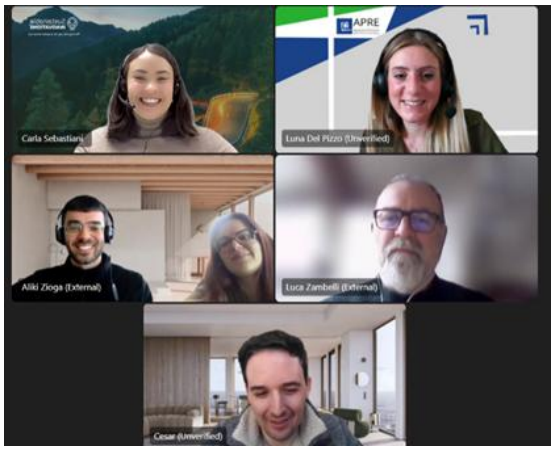
	and BA.5 (7.50e-06 kg SO_{2eq} / m^3 and 7.56e-06 kg SO_{2eq} / m^3 respectively), solely due to lower total energy demands caused by the direct sale of CO2 and the solar thermal units. However, in terms of EP, scenario BA.4 showcased the lower impact (3.93e-06 kg PO_{4eq} / m^3), since the other two cases were linked to increased NOx emissions from the necessary steam production.

Project 2 (S9-Consultancy on the Implementation and Monitoring of Biogas Solutions; S11-Technology Catalogue)

Awardee project description	Alcarrás Bioproductors SAT is the result of a collaborative effort between 150 farming families in Alcarrás, Spain; seeking to reduce the challenges and costs of managing pig and cattle manure and slurry. Since 2022, its composting plant has been producing compost with slurry, manure, and wood from fruit tree uprootings. Savings in slurry management and the sale of compost of varying qualities are key to its viability and pave the way for new value streams, such as biogas. They produce about 25,000 tons of manure a year from the swine and cattle they raise. Around ten employees, including two women, work for them across 30 hectares of corn fields. They handle livestock manure and turn it into sustainable products in partnership with specialists. They applied for the 1st round for access to finance support services, and for the 2nd round with a more technical approach (currently using the energy for self-consumption and injecting electricity to the grid). They currently have a functioning anaerobic digester with cogeneration, and they are currently installing a second one that should be up and running by September. The motivation behind applying again was that they are considering a number of options for installing a system for the upgrading of biogas.	
Support service provided	Consultancy on Implementation and Monitoring of Biogas Solutions	
Regional Hub	Spain	
Country of the applicant	Spain	
Duration of support	April 2025 - June 2025	

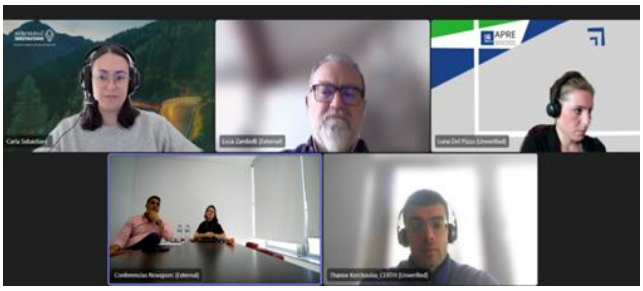
Service provider partner	A0CO2 and CERTH	
Contact persons	Alex Bayo, CTO (I+D+i) Circular Bioeconomy	
Type of organization	SAT (agrarian transformation society)	
Activities and results achieved through the services	I was decided that the information that could bring most value to the awardee was at two fronts: 1) A0CO2: To provide recommendations on the use of membrane technology for upgrading, and evaluation of the process. 2) CERTH: Recommendations on the use of additives in the digester, both for those used in small and big quantities (small quantities used for example to correct acidity or reduce sulfur or biomass to improve the gas quality). The first part of the service included a comprehensive overview of available upgrading and desulfurization technologies. This analysis serves as a facilitator for selecting the most suitable purification/upgrading solutions based on plant-specific requirements The second part delivered a detailed overview of well-established additives used in anaerobic digestion. The report systematically compared their structural and chemical properties, operational benefits, and limitations, enabling informed decisions on additive selection to optimize biogas yield and process stability.	

Project 3 (S6-Concept Design and Development of Biogas Systems)

Awardee project description	Owner of livestock farm in Huesca (together with his family) with 13,300 swine and with soon to be added 12,000 hens and 14,000 piglets. They have the potential of using olives as well as manure for biogas production. They grow alfalfa, corn, wheat and barley at an extension of 110 Ha. They have 4 employees out of which 2 are women and they don't have a biogas installation, but they want to install one to connect to the nearest gas grid injection point. They want to create employment since they are a very small town with 100 inhabitants and only 6 kids. They have all permits for the livestock farm, they have 3 already built, 1 authorized but waiting to be built and another one pending authorization. They're about to start construction of the new stage of the farm, with a solid storage facility, they'll build a new one to store liquids, and they'll install a machine to separate solids and liquids. They want to use sprinkler irrigation to avoid having to use a machine to pump it into the field. They were interested in knowing how to store the biogas, what additional infrastructure was needed once it's stored, the type of structure, how to transport it (gas pipeline), and how a mini biogas plant works to do everything together (design/process). The injection point is very far away at the moment, but there's a plan to bring it 15 km from the village. They're considering using biogas for self-consumption, and only one farm has electricity; the others run on diesel and solar panels, but they want to stop using diesel completely, and the solar panels aren't enough.	
Support service provided	Concept Design and Development of Biogas Systems	
Regional Hub	Spain	
Country of the applicant	Spain	
Duration of support	March 2025 - June 2025	
Service provider partner	APRE & CERTH	

Contact persons	César Pueyo, farm owner.
Type of organization	Family farm.
Activities and results achieved through the services	In order to help César, APRE & CERTH came together to provide him a joint service which included: 1) A preliminary evaluation of each swine farm's biogas production capacity, based on available feedstock data and comparable literature results. 2) Technology catalogue and equipment recommendations for each stage of the biogas production chain including: · Advisory on Feedstock Transportation & Storage. · Pre-treatment Options and Suitable Technologies. · Digester Selection. · Biogas Storage Solutions. · Biogas Valorization Strategies. Given the close proximity of the examined units and the moderate manure quantities produced at each, two installation scenarios were considered: ● A centralized biogas plant installed at "La Viña" farm, receiving transported manure from all three farms. ● The implementation of an individual biogas configuration in each farm, supplying electricity and heat for on-site consumption. In the centralized plant scenario, the combined annual swine manure volume of 27,560 m³ was estimated to yield approximately 413,614 Nm³ of biomethane, supporting the operation of a 170–180 kWe Combined Heat and Power (CHP) unit. In contrast, the individual unit scenario would support CHP capacities ranging from approximately 50 to 70 kWe per farm, demonstrating the feasibility of distributed generation and increased energy self-sufficiency. While both approaches are technically viable, key factors influence their strategic value. The centralized option offers better economies of scale but is hindered by the logistical and economic burden of frequent manure transport, the current lack of a feed-in tariff in Spain, and the inability to transmit generated electricity to the non-host farms. Thus, at the moment, the individual systems were found to better align with objectives of local energy autonomy, reducing reliance on external energy sources and avoiding transport-related costs. Furthermore, the contribution of olive leaves was found to be negligible in terms of methane potential, rendering its transport and inclusion in the feedstock mix inefficient. All available pretreatment options, digester configurations, and biogas/digestate storage technologies were presented, while tailored approaches were demonstrated based on current manure volumes and characteristics, economic viability and potential additional substrates such as hen manure.

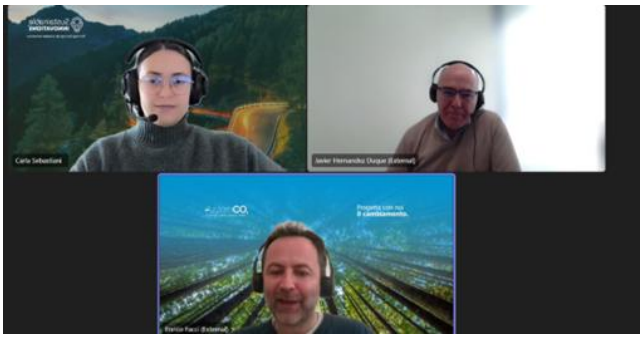
Project 4 (S6-Concept Design and Development of Biogas Systems)

Awardee project description	NOVAPORC are owners of livestock farms in Bullas, Murcia, with 1,500 pigs producing around 10,100 tons of manure a year and they don't grow crops. The farm has around 25 employees, out of which 3 are women. They don't have a biogas plant on site, and the nearest plant is 12km away. They are a limited society interested in knowing more about biogas and practical ways in which they can incorporate this technology in their farms. They needed technical support for the installation of small biodigesters, since large plants are very large investments, and they want to do it in a smaller scale. Their goals are to close the loop on sustainable economics, process water use, and make them more efficient for self-consumption, as well as analyzing the possibility of using by-products as fertilizer. Specifically, they needed support in the technology selection, plant/process design, and project drafting examples.	
Support service provided	S6-Concept Design and Development of Biogas Systems	
Regional Hub	Spain	
Country of the applicant	Spain	
Duration of support	From April to May	
Service provider partner	CERTH & APRE	
Contact persons	Carolina Nicolás, Quality and Environmental Department.	
Type of organization	Agricultural and Livestock Farms	

Activities and results achieved through the services	The service provided can be summarized in: 1) Estimation of biogas potential in order to assess whether the available swine manure could support a small-scale CHP unit for on-site electricity and heat self-consumption. 2) A comprehensive technology catalogue with specific options for the characteristics of the case. During the meeting with Carolina, it was clarified that the primary goal of the projected installment constitutes the sustainable management of generated waste, rather than the maximization of biogas output. Thus, given that swine manure is currently the only available substrate, the incorporation of external co-substrates was not recommended in order to minimize additional transportation costs and maintain operational simplicity. The farm's swine manure production was calculated to yield approximately 59,063 Nm^3 of biomethane per year, which supports the installation of a 25 kWe CHP unit. Thus, it was determined that the current capacity is well-suited for a small biogas installation to partially cover the farm's internal electrical and thermal energy needs. Additionally, a detailed technology catalogue which included digester options and biogas/digestate techno was provided. In response to Carolina's expressed interest in odor reduction from manure storage and land application, the service also included an overview of digestate separation techniques, as this approach offers notable benefits when it comes to nutrient management and odor mitigation.

Project 5 (S11-Technology Catalogue: Features for cleaning and upgrading equipment)

Awardee project description	Company interested in developing and implementing biomethane plants between 30-50 GWh/year with a treatment capacity of 100,000-200,000 tons of manure a year. They have 80 employees in Italy, but they are only starting their activity in Spain, as they have yet to install their first plant on Spanish soil. Tonello Bioenergy started with photovoltaics, then expanded to renewables in Italy, and has now opened a branch in Spain. They are identifying areas of interest where there is abundant raw material to build plants. They handle the complete development, engineering, permitting, construction, technology, operation, and maintenance of the plants. They were interested in a biogas potential assessment, odour studies, minimizing odours in plants, plant problem-solving, and social acceptance of

	biogas-biomethane, and were very interested in a technology catalogue of upgrading equipment.	
Support service provided	Technology Catalogue: Features for cleaning and upgrading equipment	
Regional Hub	Spain	
Country of the applicant	Spain	
Duration of support	From April to May.	
Service provider partner	A0CO2	
Contact persons	Javier Hernández, Spain Area Manager.	
Type of organization	Limited Company.	
Activities and results achieved through the services	Development and provision of a technology catalogue for upgrading technologies, specifying the best upgrading systems depending on the injection pipelines, on pressure, gas distribution, etc.	

Project 6 (S1-Market research; S3 - Access to finance)

Awardee project description	Antonio manages a livestock operation with approximately 250 animals, including 140 dairy cows and calves (equivalent to about 220 head when accounting for livestock units) in Portugal (north of the country). He also cultivates corn silage and ryegrass mixtures, though, like most farms in the region, he does not plan to dedicate crops to biogas, due to limited land availability. He is located in a densely farmed area with thousands of cows within a 50 km radius, where cooperatives (particularly AGROS, the main union of cooperatives) play a significant role. Although there is growing interest in renewable energy and biogas, Portugal lacks significant development in this area, with only one small biogas plant currently using cow manure. The local regulatory environment is perceived as overly “green” or restrictive, which may be slowing progress. This farmer is a small producer who is curious about the profitability and practicality of biogas. He’s especially interested in seeing working systems and exploring whether a joint biogas system with other farmers could be viable. Collective or cooperative-based systems seem to be the most accessible model in the region. In the meantime, investment is flowing more readily into solar energy, and many farms are opting for this route. Still, there’s strong interest in best-practice demonstrations for biogas that reflect the region’s reality. The farmer is also looking into funding sources and public support opportunities for renewable energy projects. He is a member of EDF and sees value in biogas for self-consumption, sharing benefits with neighbors, and producing better-quality fertilizer for silage maize and grass crops.	
Support service provided	S1- Market research & S3 - Access to finance	agros DESDE 1949 UNIÃO DE COOPERATIVAS
Regional Hub	Spain	
Country of the applicant	Portugal	
Duration of support	March 2025 - April 2025.	

Service provider partner	SIE	
Contact persons	Antonio Campos, farmer.	
Type of organization	Farm association.	
Activities and results achieved through the services	Merging of two services: market research and access to finance. During the meeting, Antonio highlighted his primary need of understanding the technology currently available in Portugal, to know the options to move forward. Also, he was interested in acquiring public funding in order to take the next steps. With this in mind, SIE drafted a report describing: ● Energy market in Portugal (growth forecasts, drivers and barriers, comparison with other countries, comparison between regions within Portugal, consumption of gas by sector - potential customer segments, generation of biogas per type of feedstock) ● Energy and climate policy and regulations in Portugal (Green taxation law, Feed-in tariffs, System for Management of Intensive Energy Demand, Electricity Sector Law, National Gas System Law, and regulating authorities identified, highlights of the Portuguese Biomethane Action Plan) ● Biogas potential in Portugal ● Technologies for biogas/biomethane production in Portugal (list of potential technology providers per process, including anaerobic digestion, biogas upgrading, biomethane production and valorisation, connection to the grid and production of electricity as end-use of biogas, with some examples of active biogas projects in the country) ● The portuguese business model for biogas (describing how other have done it to use as successful case scenarios, with some recommendations from their experience) ● Funding opportunities applicable (list of national grants, subsidies and auctions, Horizon Europe grants, EIC grants/equity)	

Project 7 (S7-Evaluation of Biogas Potential based on Preliminary Calculations)

Awardee project description	François Herbiet and his wife (Catherine Vrancken) run a farm primarily focused on dairy production in Belgium. This year, they are planning to expand the cow barn. Before starting the construction, they wanted to conduct a study on the feasibility of installing a biogas production unit. This study will guide their choices in the barn's design and help carry out some preparatory work for the installation. The study of the installation of this cogeneration unit will help them determine: The layout to consider for the barns. Their needs in heat and electricity. Their desire to self-consume as much self-produced energy as possible. The various investments needed afterwards to optimize self-consumption (batteries, hot water tanks). The constraints imposed by our grid operator (DSO)
Support service provided	Evaluation of Biogas Potential based on Preliminary Calculations
Regional Hub	Spain
Country of the applicant	Belgium
Duration of support	May 2025 - May 2025.
Service provider partner	A0CO2, with support from SIE for translations.
Contact persons	François Herbiet, farmer.
Type of organization	Family farm.
Activities and results achieved through the services	Preliminary calculations of biogas potential, including: ● Economic and legislative considerations ● Technical considerations ● Solution 1: Plant features (technical characteristics, environmental analysis, economic assessment) ● Suggested alternative solution: Plant features (technical characteristics, environmental analysis, economic assessment) ● Economic assessment.

2.5 Feedback & Lessons Learnt

Following the internal and external validation sessions conducted after the first round of service delivery, several challenges were identified:

- **Awardees' needs exceeding initial expectations**: many awardees demonstrated a greater range of needs than anticipated. This highlighted the importance of involving external stakeholders, such as biogas associations and advisory board members, to provide more comprehensive support;
- **Limited awareness of specific needs**: some awardees were not fully aware of their specific requirements, making it challenging to tailor services effectively;
- **Delayed responses from awardees**: long response times from awardees posed coordination challenges, necessitating follow-ups and additional calls by ALFA Hubs and service providers to ensure timely progress.

Based on the lessons learned during the first round, several adjustments were implemented to enhance the service delivery process in the second round:

- **Improved clarity**: clear deadlines and explicit expectations regarding the level of involvement required from applicants were emphasized;
- **Practical examples**: previously reported examples of services were shared to provide applicants with concrete references;
- **Streamlined application process**: efforts were made to shorten and simplify the application procedure;
- **Customized services**: services were tailored to better address the specific needs of awardees;
- **Support by ALFA Hubs**: ALFA Hubs took on guiding roles, assisting applicants in selecting the most suitable services;
- **Collaborative service provision**: enhanced collaboration among partners ensured the delivery of comprehensive services;
- **Expanded resources**: a list of consultancies was made available to awardees for deeper analysis of needs that extended beyond the scope of ALFA services.
- **A significant new service** (#11) was introduced in the second round to address emerging needs and improve overall service delivery.

Additional support was provided to certain cases through the Expert-to-Farmer advisory service, facilitated by the assignment of an additional service provider.

Despite these adjustments, some challenges from the first round persisted during the second round, including awardee multiple and complex needs, the limited awareness among some awardees of their specific requirements, and occasional delays in responses from awardees. However, the ALFA Hubs were better equipped to manage these issues in the second round due to the refinements made in processes and the additional support mechanisms introduced. These efforts contributed to a more effective and responsive service delivery framework.
Some additional lessons and key remarks emerging from the implementation of the second round of support services include:

- As highlighted in Greece, the collaboration with the Karditsa Cooperative and in Slovakia, the collaboration with the Slovak Biogas Association further underscored **the strategic importance of engaging established local structures** (such as cooperatives or other value chain actors) **to effectively reach smallholder farmers**. This experience demonstrated the potential of such collective approaches to address the persistent challenge of fragmented and small-scale livestock holdings. By leveraging cooperative models and similar aggregation mechanisms, coordination among producers can be improved, and the viability of biogas investments enhanced through economies of scale. Moreover, these models enable the integration of a broader range of agricultural residues—such as corn waste, pruning debris, and forest residues—thus improving feedstock quality.
- **Mentoring sessions** delivered throughout the project—covering both business and technical aspects—**revealed a notable shortage of specialized expertise in biogas development**. This lack of technical capacity continues to represent a significant barrier to the wider implementation and scaling of biogas projects in most participating countries.
- **The Business Modelling and Planning service** was further refined and tailored to reflect the specific characteristics of each country's biogas ecosystem. Adjustments accounted for local agricultural practices, regional energy needs, and economic conditions, allowing for a more context-sensitive and effective approach to project design and service delivery.
- **A flexible and holistic approach** keeps cases more engaged and responsive to cooperation, especially for **small Livestock farms.**
- **The timeline** for the entire process should take into account the agricultural calendar, particularly periods of intensive labour demand.

Nonetheless, **a major structural barrier remains: the lack of a clear, stable, and supportive regulatory and policy framework for biogas**. **While interest in biogas technologies is growing**—both among individual farmers and industry players such as poultry and dairy enterprises—**market has not reached its full potencial**. Regulatory uncertainty, coupled with the reluctance of financial institutions to fund biogas projects under current conditions, continues to hinder progress. The anticipation of a forthcoming national biogas law in some countries such as Greece has further delayed investment decisions. This emphasizes the **urgent need for regulatory clarity and supportive policies** to unlock the sector's full potential. Although this observation was specifically reported by the Greek ALFA Hub, the situation is relevant and shared across several participating countries.

To summarise, table 5 presents the deployed business and technical support services with their targets and status of achievement.

Table 5 - Support services with targets and status

Activities	Targets	Reached
Market research (target markets, analysis of external environment using the PESTLE framework, market overview, evaluation of market attractiveness through Porter's 5 forces, consumer insights etc.) Business modelling and planning (innovative methodologies like the Business Model Canvas to tailor business, focusing on energy and digestate). Access to finance services identify European, regional, and national financing opportunities for implementing biogas technologies in livestock farming. Corporate, and sustainable finance service assesses the profitability of potential investments in biogas systems, considering metrics such as IRR, ROI, NPV, CapEx, and OpEx. Farmer/Expert to Farmer Advice serves as a hand on guidance on the sector. Concept design and development (conceptual design services to address crucial aspects of biogas production, including determining plant size, design considerations, and appropriate technological solutions). The evaluation of biogas potential utilises preliminary calculations to optimise substrate mixtures, enhancing biogas yield and productivity.	The six established ALFA Hubs, develop its national biogas market under the respective financial frame, as at least 8-9 farmers or other stakeholders will be supported in each target country. Reduction of >20% risk perceived of investment in biogas systems and technologies in the respective financial frameworks and markets	6 ALFA Hubs established. The consortium supported 53 cases in total, but not all Hubs reached to support 8-9 farmers in each target country. The aggregated results from both rounds show a clear positive shift in the comfort level of participants regarding investment in biogas, indicating a perceived reduction in associated risks. In total, 23 respondents (70%) reported feeling more comfortable (17 "More Comfortable" and 6 "Much More Comfortable") about investing in biogas following their participation in the ALFA services.
	The suite of business and technical services will contribute with >1660TJ renewable heat and electricity in the EU market from produced biogas annually, based on the supported projects' outputs. All the deployed activities via the technical services will save >270.000tn CO_2 annually, utilising manure for biogas production, and not fossil fuels, and 330.000tn CO_{2eq} annually in terms of GHG savings from sustainable manure management.	A number of technical services have been provided to farmers and groups of farmers during the project period. The various services have contributed to clarifying the different options for participation in biogas production or the establishment of new facilities among the participating parties. The processing time for establishing biogas plants and the time it takes to establish new biogas plants is so long that it is not currently possible to prove how much additional biogas production the project has contributed to creating in the individual countries. The

Activities	Targets	Reached
Energy and environmental analyses are conducted using Life Cycle Analysis (LCA) to assess the overall impact of biogas production (environmentally impactful stages, scenarios related to critical parameters such as feedstock types). Consultancy on implementation and monitoring actively collaborates with farmers, addressing concerns and obstacles specific to each project. Technical support for farmers in the evaluation and comparison of plant supplier quotes ensures the selection of optimal technical solutions for biogas and biomethane production on their farms. The technology catalogue with features of cleaning and upgrading equipment supports the comparison of the available purifying and upgrading technologies.		project has contributed to creating great awareness about the possibilities for increasing biogas production in general. The tools, technical descriptions and overviews generated through the project can continue to be used and contribute with useful knowledge and overview to the future development of biogas production in the EU in general. Based on data provided from each supported case, as well as results generated during service provision, all defined targets were effectively met. Specifically, the ALFA services resulted in a total annual output of 2540 TJ renewable heat and electricity from the produced biogas, while subsequently preventing 302,170 tons of fossil CO_2 emissions and 365,017 tons of GHG emissions from untreated manure.

3. Capacity Building

Capacity-building activities have been a key asset of the ALFA project to provide the Hubs and the broader community with **new knowledge**, deepen **their understanding of biogas technologies and strategies** for reducing greenhouse gas emissions in the context of livestock farming. The capacity-building activities as outlined in Task 3.4 were divided into two strategies: developing **Online International Webinars** and **Onsite Seminars.** Experts from various fields, within CO_2 capture technology, green financing, and biogas sustainability were involved, so that the arranged events could upskill the stakeholders and offer valuable insights into innovative solutions for addressing the challenges of the green transition. Moreover, these activities facilitated the **exchange of practical knowledge** between industry experts and participants, enabling them to explore new

opportunities for self-sufficiency and energy production at the local level. In terms of resources and materials, a "best practices" guide developed in T2.4 will be a valuable asset for both webinars and seminars.

The planned **Seminars** not only increased awareness of biogas solutions but also helped stakeholders navigate the financial and technical aspects of implementing these technologies. In doing so, they fostered collaboration and knowledge sharing, empowering participants to make informed decisions and contribute to the development of a sustainable biogas market. The **Webinars** were held online further extending the reach of the events, allowing for continued dissemination of information to a wider audience, maximizing the impact of the capacity-building efforts. The overall gender balance as a whole for both webinars and seminars is of around **42% of female participation** and 58% of male participation.

3.1 Webinars

International webinars, developed to attract an **international audience** from the livestock industry, were held online and in English. They were short programmes (1 to 2.5 hours) and had a specific topic. Each webinar's topic was addressed by at least one project partner, depending on their field of expertise. In preparation for these activities, a list of topics was proposed and developed by the project partners (see D2.7 for more detail) considering their expertise.

During the 1st round (May 2024 - M18), one webinar was held, while the remaining 6 were held after the conclusion of the 1st round and during the rest of the project (Nov 2024 - M25, March 2025 - M29, May 2025 - M31, June 2025 - M32 and July 2025 - M33). The concentration of webinars during the 2nd half was foreseen, as it was expected that in the 2nd half of the project the partners would have more lessons learnt and input to share in the webinars, after fostering the experience from the 1st round and better understanding the knowledge gaps.

The **average number of attendees was 35 per session**, and overall, the ALFA webinars had a total of 243 attendees. The table below shows the percentage per type of stakeholders that participated in the sessions:

Table 6 - Stakeholders engaged through webinar sessions

Stakeholder	Percentage
Research/academia	34%
Energy sector	20%
General public	18%
Biogas providers	7%
Livestock farmers	5%
Media	2%

This percentage shows that the most interest for the sessions was received from researchers, energy sector and the general public, which shows a great potential for the uptake of these technologies in terms of dedicated knowledge and citizen acceptance. Of course, even when ALFA did achieve the **participation of livestok farmers**, they accounted **only for 5% of the total number**. This is due to the **difficulty of engaging farmers through online methods**, as they prefer face to face collaboration in most cases as they work in the field and tend to be busy or not be available. The remaining percentage (14%) is for attendees that chose the "others" category. It is unclear though which was the actual total percentage of livestock farmers as they may have opted to self-determine in other categories as well. It also should be noted that the webinars can be accessed in ALFA Engagement Platform and ALFA Youtube channel. To date a total of 600 views has been reached.

SIE was charge of the internal training, organisation, structure and deployment of the webinars (creating the agenda, the registration form and the Zoom seminar, organising a trial with the speakers, introducing, closing and moderating the proper webinar, etc.), while White Research were responsible for their promotion in the project's social media, and the partner(s) involved in every webinar of the specific content explained.

When looking at the feedback gathered from participants during the sessions (through the monitoring and evaluation framework in D4.1, detailed feedback can be found in D4.2 Report on Evaluation of market uptake support measures – Second Round) around **96.7% stated that they felt satisfied** with the webinars content, speakers and interactive activities.
Detailed reports for each webinar are presented below **(tables 7 – 13)**.

Table 7 - Challenges and needs for the uptake of biogas in livestock farming in Europe (1st round)

Webinar description	The webinar "Challenges and needs for the uptake of biogas in livestock farming in Europe" brought together key partners SIE, WR, and EBA to discuss the sector's challenges and opportunities. SIE introduced the session and speakers, followed by WR presenting the ALFA project and its survey findings on biogas adoption. EBA provided insights into the European biogas market and its role in the energy transition. An interactive discussion and Q&A allowed participants to explore solutions for overcoming barriers and fostering biogas adoption in livestock farming across Europe.	
Title	Challenges and needs for the uptake of biogas in livestock farming in Europe	
N. of attendees	38	
Date and Time	May 23, 2024 15:00 – 16:00 (CET)	
Partner	WR, EBA, SIE	

Activities and results carried on through the event	· Presentations by SIE, WR, and EBA on biogas adoption challenges and opportunities in European livestock farming. · WR shared key findings from the ALFA project surveys, highlighting expert and citizen perspectives. · EBA provided insights into the European biogas market, its potential, and benefits. · Interactive session with a short survey to guide discussions on overcoming barriers. · Q&A and open discussion, allowing participants to explore strategies for fostering biogas adoption.
Evaluation of the event	The event evaluation highlighted active participation and engagement from attendees, who contributed through live surveys and a dynamic Q&A session. Participants showed strong interest in implementation strategies, regulatory barriers, and successful biogas models across Europe. Feedback was positive, particularly regarding the insights from the ALFA project and the European biogas market analysis. Key challenges were identified, including the need for incentives, public perception issues, and technical difficulties. The webinar also facilitated valuable connections between experts, industry professionals, and interested citizens, fostering potential future collaborations.

Table 8 - WASTE-TO-ENERGY: Opportunities and challenges of biogas plants (2nd round)

Webinar description	The webinar "Waste-to-Energy: Opportunities and Challenges of Biogas Plants" explores the potential of biogas production from agricultural and livestock waste, highlighting its role in renewable energy and emissions reduction. It is part of the ALFA Project, funded by the EU, which aims to enhance market adoption of biogas technologies. The sessions cover biogas plant operations, biodegradable waste processing, regulatory challenges, and case studies from Slovakia and the Czech Republic. Experts discuss technological advancements, policy frameworks, and economic viability, emphasizing biogas as a key player in sustainable energy transitions.	
Title	WASTE-TO-ENERGY: Opportunities and challenges of biogas plants	
N. of attendees	32	
Date and Time	November 14, 2024 10:00 – 11:00 (CET)	
Partner	PEDAL, SIE	

Activities and results carried on through the event	The event facilitated insightful discussions on biogas technologies, regulatory frameworks, and practical applications, highlighting key opportunities and challenges in the waste-to-energy sector. · Expert presentations on biogas plant operations, biodegradable waste processing, and technological innovations. · Case studies from Slovakia and the Czech Republic showcasing successful biogas projects. · Discussions on regulatory challenges and market opportunities for biogas adoption. · Introduction of tools and support services offered by the ALFA Project for stakeholders. · Networking opportunities for industry professionals, policymakers, and researchers. · Q&A sessions addressing key concerns in the waste-to-energy sector.
Evaluation of the event	The event successfully provided a comprehensive overview of the waste-to-energy sector, particularly focusing on the potential of biogas plants. Through expert presentations, case studies, and interactive discussions, attendees gained valuable insights into technological advancements, regulatory frameworks, and market opportunities. The exchange of ideas between industry professionals, policymakers, and researchers fostered collaboration and knowledge-sharing. Moreover, the introduction of ALFA Project support tools added practical value for stakeholders looking to implement or optimize biogas solutions. Overall, the event was well-structured, informative, and impactful in promoting sustainable energy transitions.

Table 9 - Biogas: A Possible Yet Unknown Ally (2nd round)

Webinar description	The webinar "Biogas: A Possible, Yet Unknown Ally" took place on March 19, 2025, highlighting the overlooked potential of biogas in promoting sustainable agriculture and the circular economy. Industry experts discussed how biogas could reduce farming's environmental impact while enhancing energy efficiency and economic resilience. Luca Zambelli, a renewable energy consultant, shared insights on tailored biogas solutions, while Lorenzo Maggioni provided an in-depth analysis of innovation in the sector. Additionally, Roberto Vezzoli presented a real-world case study on his dairy farm's successful biogas integration, and Rafael Jacob Garcia presented BIOCAM as the Spanish success case. Participants gained valuable knowledge of practical and sustainable energy solutions for agriculture.	
Title	Biogas: A Possible, Yet Unknown Ally	
N. of attendees	41	
Date and Time	March 19, 2025 11:00 – 12:00 (CET)	

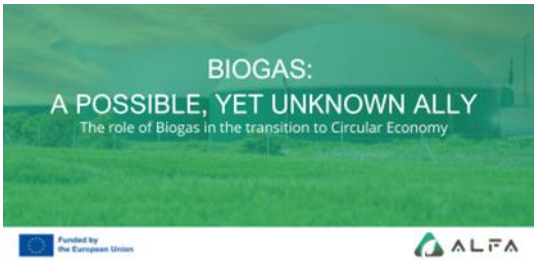
Partner	APRE, SIE	
Activities and results carried on through the event	The webinar provided in-depth discussions on the role of biogas in sustainable agriculture, offering practical insights, expert analysis, and real-world applications for farmers and industry professionals. · Expert presentations on biogas technology, sustainability, and its economic benefits for agriculture. · A detailed analysis of biomethane innovation and its alignment with European sustainability goals. · A real-world case study showcasing successful biogas integration in dairy farming · Best Practices from Italy and Spain: Insights on how small and medium-sized farms can adopt biogas solutions for energy self-sufficiency. Biogas plants showcased: LA CONCHETTA DI VEZZOLLI and CYCLE0 · Q&A session allowing participants to engage with experts and address industry challenges. · Networking opportunities to connect stakeholders in renewable energy and sustainable farming.	
Evaluation of the event	The webinar successfully shed light on the significant yet underutilized role of biogas in sustainable agriculture, providing attendees with valuable knowledge on its environmental and economic benefits. Expert presentations offered a well-rounded perspective, from technical innovations and policy insights to real-world applications in farming. The case study demonstrated the practical feasibility of biogas integration, reinforcing its potential for small and medium-sized farms. Engaging discussions and a dynamic Q&A session allowed participants to address key industry challenges and explore tailored solutions. Overall, the event was insightful, informative, and instrumental in promoting biogas as a viable energy alternative in agriculture.	

Table 10 - Empowering Circular Innovation: Tools and Insights from the ALFA Project (2nd round)

Webinar description	The ALFA Project webinar titled “Empowering Circular Innovation: Tools and Insights from the ALFA Project” was organised to present the main tools developed within the project to support circular economy practices in the livestock sector, utilising biogas solutions, tapping into the huge potential of feedstock in the wider sector. The event focused on showcasing the ALFA Engagement Platform and the Decision Support Tool (DST), aiming to

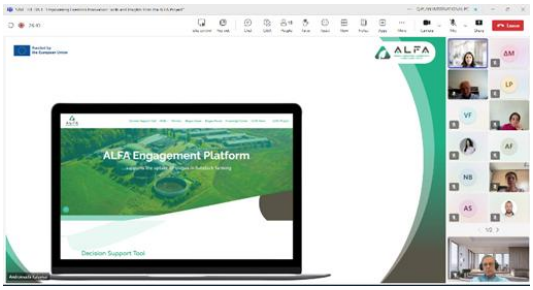
	encourage collaboration, knowledge sharing, and sustainable innovation from livestock farmers, to biogas experts.	
Title	"Empowering Circular Innovation: Tools and Insights from the ALFA Project"	
N. of attendees	15	
Date and Time	May 15, 2025 14.30 – 15.30 (CET)	
Partner	Q-PLAN & FBCD	
Activities and results carried on through the event	The webinar began with a brief introduction to the ALFA Project, highlighting its goals and relevance to circular economy and biogas solutions. This was followed by a live demonstration of the ALFA Engagement Platform, showing how users can access and interact with the tools and resources. The presentation of the Decision Support Tool (DST) explained how it helps stakeholders evaluate biogas opportunities and make informed decisions. A Q&A session followed each session, allowing participants to raise questions and provide comments. The event helped raise awareness about the ALFA tools and encouraged further interest in their use, serving as guide for the following users.	
Evaluation of the event	The webinar engaged participants from different sectors, including livestock farmers, awardees from the service provision, consultants, and biogas professionals. The content was well received, and participants expressed interest in testing and applying the ALFA tools in practice, and participation in additional ALFA events such as mutual learning workshops and field visits. Overall, the event contributed positively to the outreach of the ALFA Project results.	

Table 11 - Biogas Framework Conditions: Market Challenges, Policy Trends & Future Opportunities (2nd round)

Webinar description	The webinar "Biogas Framework Conditions: Market Challenges, Policy Trends & Future Opportunities" explored the current landscape of the biogas sector in Europe. It presented market conditions across ALFA Hubs, identified common implementation challenges, and examined evolving policy frameworks. Speakers from Sustainable Innovations, the European Biogas Association, and White Research shared key insights and strategic recommendations for the sector's development. The session concluded with an interactive Q&A, fostering dialogue among stakeholders, policymakers, and industry experts.	
Title	Biogas Framework Conditions: Market Challenges, Policy Trends & Future Opportunities	

N. of attendees	35 attendees	
Date and Time	June 11, 2025 | 11:00 – 12:30 (CET)	
Partner	SIE, WR, EBA	
Activities and results carried on through the event	During the event, SIE presented the status of biogas markets in the different ALFA Hubs, highlighting shared barriers and regional specificities. WR outlined current EU regulatory trends and proposed actionable recommendations to foster biogas uptake, on the basis of the policy-related analysis and learnings arising from ALFA activities. The session enabled knowledge sharing between project partners and external stakeholders, strengthening synergies across the sector. The interactive Q&A allowed participants to raise concerns, exchange views, and contribute to shaping future priorities for biogas development.	
Evaluation of the event	The webinar proved highly valuable in consolidating cross-sector knowledge on biogas framework conditions. Key outputs included a clear mapping of common market challenges across ALFA Hubs, as well as policy insights on EU regulatory trajectories. The presentations helped translate project findings into concrete recommendations, while the Q&A session surfaced practical concerns from stakeholders. Overall, the event fostered strategic alignment between policy trends and local implementation needs, reinforcing ALFA's role in guiding biogas innovation.	

Table 12 - The use of straw for biogas production (2nd round)

Webinar description	The webinar provides an overview of the technologies that have been used for pre-treatment of straw before use in biogas plants. A presentation of the latest research results for biogas production based on straw is given and two companies present their technology and economics in the use of straw for biogas production.
Title	The use of straw for biogas production
N. of attendees	57
Date and Time	June 12, 2025 14.00-15.00 (CET)
Partner	FBCD

Activities and results carried on through the event	The webinar focused on the use of straw for biogas production, with presentations covering pretreatment techniques, research developments, and industrial applications. Food & Bio Cluster Denmark opened the session, followed by Aarhus University's insights on optimizing straw utilization. Linka Energy shared technology for converting straw to energy, while Kinetic Biofuels discussed using briquettes directly or via bedding. A Q&A session allowed participant interaction, and a final wrap-up concluded the event. Feedback was requested via an evaluation form sent to attendees after the session to assess engagement and relevance. Expert presentations: Sessions covered straw pretreatment methods, research on straw use for biogas, and industrial applications by Linka Energy and Kinetic Biofuels. Interactive segment: A live Q&A and open discussion allowed attendees to engage directly with the speakers and clarify key points.
Evaluation of the event	At the end of the webinar, participants received an email with a link to an evaluation form. By the following day at noon (13 June), several responses had been collected. Feedback was largely positive: most attendees rated the webinar as "Excellent" or "Above Average", found the information "Very Applicable", and felt "Very Much" more confident in the topic. Satisfaction levels were mostly "Very Satisfied". Attendees primarily heard about the event through email, newsletters, and social media. Suggestions for improvement included allowing more time for Q&A and adding more technical depth in future presentations.

Table 13 - EDF Farms Go Green

Webinar description	On 8th July, European Dairy Farmers (EDF) in collaboration with Q-Plan International organised the webinar as part of the ALFA project to explore on-farm renewable energy solutions, with a focus on biogas. The session brought together dairy farmers and stakeholders from across Europe to exchange practical experiences and challenges related to biogas implementation. Three EDF farmers from Italy, Germany, and France presented detailed case studies, representing a variety of farm sizes, technologies, and business models. The event also addressed policy and regulatory barriers hindering wider adoption. The webinar provided a platform for peer learning, knowledge exchange, and reflection on enabling frameworks to scale biogas uptake in the agricultural sector.	
Title	EDF Farms Go Green- Lessons from EDF Farmers Driving Green Energy in Agriculture	
N. of attendees	24	

Date and Time	July 8, 2025 12:00 – 13:30 (CEST)	
Partner	EDF	
Activities and results carried on through the event	The webinar presented real-life biogas case studies from 3 EDF farms in France, Germany and Italy, highlighting hands-on experience with biogas systems. Presentations covered technology set-up, operational costs, feedstock sources, policy and sustainability impacts. Three real life case studies were presented in detail from EDF farmers from Germany, Italy and France. Speakers openly shared their key challenges including financial, regulatory and operational barriers. Policy gaps and practical recommendations were discussed collectively, aligning with ALFA's objective to support sustainable, low-carbon energy solutions in farming. The session fostered peer exchange and encouraged knowledge transfer among farmers and stakeholders. Above all the webinar was aligned with ALFA's goal of supporting low-carbon energy solutions particularly biogas in agriculture.	
Evaluation of the event	The webinar was a focussed and insightful session, with active engagement from key stakeholders across the dairy and renewable energy sectors. The participant group included dairy farmers, business partners and project stakeholders. Participants appreciated the transparency of speakers especially in discussing financial, technical and regulatory hurdles. Farmers' insights helped stimulate conversation around policy improvements and technical support needs. The webinar successfully contributed to awareness, knowledge sharing, and inspiration for action under the ALFA project.	

3.2 Seminars

The seminars, designed to address different **topics of public interest**, were strategically held alongside **major events** such as livestock or energy **fairs to maximize visibility and engagement.** These seminars were structured as one-day events, each lasting over four hours, and **conducted primarily in person**, with the option of a hybrid format to accommodate broader participation. Each seminar was organized and promoted by the regional Hub managers, with logistical support provided by SIE and promotional assistance provided by WR. The seminars were tailored to a regional audience, ensuring a **localized approach** that resonated with participants familiar with the Hub's area of influence. By using the **local language** and focusing on region-specific topics, the seminars fostered a comfortable and inclusive environment for attendees. In total, six seminars were conducted - one in each Hub region of the ALFA project.

One seminar was deployed during the 1st round (M19), while the other five were deployed after the conclusion of the 1st round (M23, M24, M28, M32). Similar to webinars, this was foreseen, given that during the second half of the project the partners were expected to have a better understanding

of the local needs and topics of interest for each country. The average attendee number for the ALFA seminars was 36, the same as the webinars, and the sessions were able to engage a total of 221 attendees.

When looking at the feedback gathered from participants during the sessions (through the monitoring and evaluation framework in D4.1, detailed feedback can be found in D4.2 Report on evaluation of market uptake support measures - Second Round), around **90.4% stated that they felt satisfied** with the seminars approach, content, speakers and interactive activities.

Details of these seminars, including their scope and key features, are presented in the following tables 14 - 19.

Table 14 - Italian Hub seminar details (1st round)

Seminar description	This seminar was organised in the context of a major event: a Machinery and Agriculture Fair, MO.ME.MA where many farmers gather every year for decades. It was a great opportunity for ALFA and for the speakers to find a specialized audience and get in touch with many farmers, and livestock farmers. Having our event inside such an event with many attendees facilitated our chances of establishing contact with stakeholders that might be interested on other project's activities.	
Title	"Prospettive avveniristiche per lo sviluppo del biogas in Italia ed in Europa" ('Futuristic prospects for the development of biogas in Italy and Europe').	
N. of attendees	54	
Date	May 3rd 2024 10:00-17:00 (CET)	
Partner	APRE	

Activities and results carried on through the event	Apart from APRE representing the ALFA project, there were four more speakers: Lorenzo Maggioni (Institute of Atmospheric Pollution Research, IIA CNR); Emanuele Vicentini & Chiara Agazzi (Green Evolution); and Luca Zambelli (Expert consultant on sustainability in biogas systems). The event went well and created interest among the public. Speakers were happy to be able to share information that they considered is not enough taken into account. They were impressed by the project's aim of spreading information about the advantages of biogas and that we are making an effort in increasing awareness. They were happy that our event was televised by a local TV. The event was successful, all attendees increased their knowledge about biogas and the speakers had opportunities of sharing more about their work and their field. The meeting was recorded, so we wish to capitalize from this experience and gather more knowledge in order to transfer this knowledge to our awardees. It was useful to participate in this meeting before actually deploying the services, because this activity helped us in having a better insight in the field of Biogas. It was not very easy to gather attendees online, so it was crucial to be inside an already organized event, where it was easier for us to engage the right stakeholders.

Table 15 - Belgian Hub seminar details (2nd round)

Seminar description	The seminar of the Belgian Hub was a full-day event organised and moderated by White Research. The event took place at a livestock farm in Merchtem, Flanders. The event was mostly held in Dutch to engage local stakeholders. About half of the participants were livestock farmers, and the rest consisted of researchers and industry representatives specialising in biogas or biomethane production in agriculture. EBA supported the seminar with a tailored presentation about the state of biogas in Belgium and the EU.	
Title	Biogas in de veehouderij: voordelen en uitdagingen	
N. of attendees	26	
Date and Time	February 18, 2025 10:00 - 15.30 (CET)	
Partner	WR	

Activities and results carried on through the event	Presentations by experts from research and industry (Inagro, Biogas-E, EBA, Biolectric), field visit to a biogas plant in a livestock farm, and a policy discussion session. More specifically, the agenda contained the following items: • Presentation of the SEMPRE-BIO project • Presentation of the Value4Farm project • Presentation of the ALFA project and ALFA's survey findings • Guided tour to the farm's biogas plant, including Q&A with the farmer and the technology provider • Presentation of Biolectric's small-scale digestion technology • Presentation on ALFA's support services and case studies • The state of biogas in the EU (in English) • Discussion on farmers' challenges and policy gaps • Next steps of the ALFA project, final Q&A and feedback
Dissemination Activities	Besides social media posts from ALFA's and WR's accounts and website, we collaborated with several regional partners for promotion. More specifically, the event was announced in the newsletters of Inagro and Biogas-E, it was uploaded in the agendas of Landbouwleven (an agricultural magazine) and Biolectric, while the farmer's association Boerenbond and WR conducted dedicated email campaigns. InAgro News, InAgro Newsletter, WR post, Landbouwl website, Bioelectric website, Value4Farm, ALFA Project LinkedIn (post 1, post 2, post 3, post 4, post 5)
Evaluation of the event	Besides offering valuable knowledge to participants, ALFA gained insights from relevant local stakeholders on their views and challenges and about current policy issues and prospects. Most participants filled in our feedback survey, showing, overall, a high level of satisfaction with the seminar.

Table 16 - Danish Hub seminar details (2nd round)

Seminar description	Approximately one-third of all livestock manure in Denmark had already been degassed, and the expansion of biogas production continued to grow, increasing the focus on optimizing nutrient utilization in the degassed biomass. One of the key challenges was ensuring high nitrogen availability, especially in biomass that had only been partially converted in biogas reactors. Additionally, phosphorus regulations-imposed restrictions on fertilizer use for some biogas plants and their customers. To address these challenges, a seminar was held to assess the utilization of degassed biomass from Danish biogas plants and explore strategies for improving its fertilizer quality. The event featured expert presentations and provided a platform for participants to share experiences and propose new solutions to enhance the efficient use of degassed biomass.

Title	The use of degassed biomass	
N. of attendees	38	
Date and Time	November 6, 2024 09.00-16.00 (CET)	
Partner	FBCD	
Activities and results carried on through the event	The event provided key insights into the future of degassed biomass utilization, focusing on nutrient recovery, emissions reduction, and economic viability. Experts from SEGES Innovation, Aarhus University, and the biogas industry discussed biogas feedstocks, fertilizer optimization, and regulatory impacts. In the morning session, presentations covered future biomass sources (Frederik Schmidt), post-treatment strategies to improve fertilizer quality (Henrik B. Møller), and field trial results on digestate use (Martin N. Hansen). A panel debate explored ways to reduce agricultural emissions while maintaining green energy production. The afternoon session focused on technological advancements. Topics included methane emissions from digestate storage (Sasha D. Hafner), biochar for phosphorus recovery (Camilla Lemming), and large-scale pyrolysis for carbon capture (Henrik Nørskov Petersen). Industry partners also shared experiences from commercial biogas plants and future development plans. The event emphasized the importance of continued collaboration between researchers, industry, and policymakers to enhance the sustainability and efficiency of biogas systems.	
Dissemination Activities & Evaluation of the event	Made public on FBCD web site https://www.foodbiocluster.dk/events/2742378260. After the event, an automatic survey was sent from FBCD event platform	

Table 17 - Greek Hub seminar details (2nd round)

Seminar description	On June 5th, 2025, Q-PLAN INTERNATIONAL organised a training seminar titled "Utilising the Potential of Biogas in the Livestock Sector", as part of the 10th HAEE Energy Transition Symposium. The event was held in a hybrid format, both onsite at Maroussi Plaza Centre in Athens and online via MS Teams. The seminar was conducted in Greek, with the exception of one presentation in English by the European Biogas Association. The aim was to inform and engage stakeholders on sustainable biogas solutions, technological innovations, and digital tools developed within the ALFA project, with a strong emphasis on the circular economy and entrepreneurship.	
Title	Utilising the Potential of Biogas in the Livestock Sector Αξιοποιώντας το Δυναμικό του	

	Βιοαερίου στον Κτηνοτροφικό Τομέα	
N. of attendees	20 in total with full participation (13 Online – 7 Onsite) Several others (~25 persons) attended partially presentations of interest, while the on-site full-time attendees had the opportunity to join also the 10th HAEE Energy Symposium.	
Date and Time	Thursday, June 5th 2025, 11.00 – 14.00 EET, under the umbrella of 10th HAEE Energy Transition Symposium	
Partner	Q-PLAN with the support of CERTH. EBA participated with a presentation at EU level	
Activities and results carried on through the event	The seminar included presentations and discussions from ALFA partners, experts in the field and other related EU Projects. Key activities involved the presentation of the ALFA project's objectives and outcomes, demonstration of support tools for farmers and investors, and sharing of successful case studies from Greece and Europe. Technical aspects of biogas production, including costs, regulatory and national policy developments, were also addressed. Special emphasis was given in addressing different biogas investment scenarios and on topics related to sustainability of such investments, technical challenges (biogas plant size estimation, LCA) and national specificities (geographical dispersion of biomass, small size herds). The event concluded with an interactive roundtable discussion, highlighting sector needs and linking biogas to broader sustainability goals. During the seminar the practicalities of the ALFA project's tools and methodologies were presented, as well as strengthened connections among stakeholders. Project promotional material was available at the Symposium registration desk.	
Dissemination Activities	The seminar was promoted through the official channels of the ALFA project (incl. social media, website and ALFA Engagement Platform) and its local partners (Q-PLAN and CERTH), targeting professionals in livestock, energy, and policy. Invitations were shared directly via emails, via social media, and via the HAEE Symposium platform. Information about the event, along with registration links and the agenda, was made publicly available through the abovementioned channels. During the event, participants received printed and digital materials, including also attendees of 10th HAEE Energy Transition Symposium.	

Evaluation of the event	The event was attended by stakeholders from different sectors, including engineers in biogas plants, researchers, policymakers, and business representatives. Participants expressed interest in the tools and solutions presented, and the interactive session received positive feedback for encouraging open dialogue mainly in cost bottlenecks. Feedback from attendees indicates a high level of satisfaction with the seminar's content, structure, and relevance. A formal evaluation survey was distributed to collect further input and inform future project activities and events.

Table 18 - Slovak Hub seminar details (2nd round)

Seminar description	The ALFA capacity-building seminar, titled "Turn Waste into Energy: Opportunities and Challenges of Biogas Plants," took place on 15 October 2024 at the LOFT Hotel in Bratislava. Organised by PEDAL Consulting in collaboration with the Slovak Biogas Association, the event brought together 42 participants from government, academia, industry, and farming. The programme included expert sessions on biodegradable waste legislation and practical applications for biogas production. Participants engaged in open discussions, knowledge sharing, and networking. As part of the European Biomethane Week, the seminar supported ALFA's objective to advance renewable energy through manure-based biogas. Feedback reflected high satisfaction, underscoring its relevance and applicability to attendees' professional work.	
Title	Turn Waste into Energy: Opportunities and Challenges of Biogas Plants	
N. of attendees	42	
Date and Time	October 15, 2024 09:00 – 16:00 (CET)	
Partner	PEDAL	

Activities and results carried on through the event	The seminar offered a full-day training focused on biodegradable waste management and its integration into biogas production, combining legislative insights with hands-on practices. It brought together key stakeholders for knowledge exchange and collaborative discussions. • Presentations on legislative frameworks and practical applications for biogas plants • Open panel discussions after each session to foster dialogue • Networking opportunities during breaks and lunch • Insights into feedstock suitability and digestate use • Strong participant satisfaction and actionable feedback collected
Dissemination Activities	Several online actions were taken to promote the seminar: • PEDAL Consulting website • European Biomethane Week • Email campaign to more than 40 stakeholders. • Social Media posts from PEDAL profile: • Invitation**:** LinkedIn, Facebook Twitter (X) • Reminder**:**LinkedIn, Facebook, Instagram, Twitter (X) • Countdown 1: LinkedIn, Facebook video, Instagram reel, Twitter (X) • Countdown 2: LinkedIn, Facebook video, Instagram reel, Twitter (X) • Day of Event: LinkedIn, Facebook video, Instagram reel, Twitter (X) • Slovak Biogas Association: LinkedIn post
Evaluation of the event	The seminar was well-received, attracting diverse stakeholders and fostering meaningful dialogue on biogas policy and practice. Participants praised the content quality, expert presentations, and networking opportunities. Suggestions included improving time management and focusing more on practical applications. Overall, feedback was highly positive, confirming the event's relevance and success

Table 19 - Spanish Hub seminar details (2nd round)

Seminar description	At the SEPOR Fair in Lorca, Murcia, on October 30th, a session focused on biogas and livestock farming took place. The event began with a welcome catering and an icebreaker activity called "Find Your Number." Carla Sebastiani and Daniel Matilla from Sustainable Innovations opened the session and introduced the key speakers. They presented the ALFA project and presented the experts such as Luis Puchades from AEBIG, Amparo Fresneda from AEBIG, and Jacobo Bouzada from JB Ingenieros who discussed Spain's biogas potential, government initiatives, and successful case studies like BIOGASTUR. The session included networking activities and a co-creation workshop and concluded with an open discussion.	
Title	Leveraging the potential of biogas in the livestock sector	
N. of attendees	41	

Date and Time	October 30, 2024 09:00 – 14:30 (CET)	
Partner	SIE	
Activities and results carried on through the event	The event successfully fostered knowledge exchange and collaboration on biogas solutions for livestock farming. • Presentation of the ALFA Project: Introduction to EU-funded initiatives supporting biogas implementation. • Expert Talks: Insights on Spain's biogas potential, government support, and real-world applications. • Networking and Collaboration: Speed networking and co-creation workshop encouraged idea-sharing among attendees. • Case Study: BIOGASTUR: Demonstration of a large-scale biogas plant's success despite industry challenges. • Open Discussion: Attendees shared feedback, reinforcing the importance of biogas in sustainable farming.	
Dissemination Activities	The recording of the seminar was uploaded to the project's YouTube channel. SIE also promoted the results of the seminar through the website and social media. To increase the participation SIE launched a few social media post: This week SIE attends to SEPOR Invitation to SEPOR	
Evaluation of the event	Besides offering valuable knowledge to participants, ALFA gained insights from relevant local stakeholders on their views and challenges and about current policy issues and prospects. Most participants filled in our feedback survey, showing, overall, a high level of satisfaction with the seminar.	

3.3 Feedback and Lessons Learnt:

The following insights and recommendations emerged from the evaluation of the seminars:
The evaluation of the national seminars and webinars across the ALFA project Hubs (Belgium, Denmark, Greece, Italy, Slovakia, and Spain) provided valuable insights and lessons for the design and delivery of capacity-building activities:

- **Focusing on locally grounded yet widely relevant themes**: While biogas is a global topic, successful seminars addressed region-specific challenges (e.g., nitrogen management in Denmark, small-scale digesters in Belgium, or policy gaps in Slovakia) while linking them to

EU-level trends and regulations, thus enhancing both local relevance and cross-regional transferability.

- **Enhancing strategic outreach**: Engagement increased significantly when events were promoted through trusted local networks, such as agricultural magazines (e.g. Landbouwleven), regional farmer associations (e.g. Boerenbond), and events with built-in target audiences (e.g. SEPOR in Spain, MO.ME.MA in Italy). Multi-channel promotion (social media, newsletters, partner websites) proved essential for visibility.

- **Leveraging established platforms**: Co-locating seminars within existing high-traffic events (e.g. fairs or livestock exhibitions) facilitated direct contact with stakeholders who are otherwise difficult to reach and increased spontaneous participation.

- **Tailoring timing and language**: Attendance and engagement were highest when seminars were scheduled outside of peak farming periods and delivered in the local language (as in Belgium and Slovakia), making the content more accessible and meaningful.

- **Promoting innovation through practical relevance**: Sessions that combined technical expertise with real-world case studies (e.g. BIOGASTUR in Spain, on-farm biogas in Belgium) helped attendees understand the operational and economic realities of biogas adoption, increasing the perceived value of the seminars.

- **Fostering interaction and co-creation**: Activities such as panel debates, Q&A sessions with technology providers, and co-creation workshops enhanced participant involvement, allowed for experience sharing, and fostered peer learning. Interactive formats also contributed to higher satisfaction levels across all Hubs.

- **Gathering and applying feedback**: Post-event surveys offered actionable suggestions (e.g. more practical demonstrations, time management improvements), helping partners refine their future engagement strategies.

Overall, these insights **underscore the importance of context-sensitive planning, dynamic formats, and stakeholder collaboration** in delivering effective and impactful capacity-building events within the ALFA project.

To summarise, table 20 presents the capacity building activities conducted with their targets and status of achievement.

Table 20 - Deployment activities and targets for the capacity-building programmes

Activities	Targets	Achieved
Participatory process to involve citizens and raise awareness (Webinar) General information about biogas (Seminar section)	Increased awareness and understanding of biogas processes among livestock stakeholders, including policymakers and innovation advisors (up to 10.000	Webinars: 243 stakeholders engaged (holistic approach to biogas, e.g. main technologies used for generating and valorising biogas and biomethane in farms)

	stakeholders, among other ALFA activities) Increased awareness and mitigation of methane emissions, assuming carbon savings from utilising non-fossil energy up to 270.000tn/year	Seminars: 221 stakeholders engaged (specific regional approaches to topics relevant to each country (e.g. regulation, policymaking, success cases)
Presentation of ALFA Support services and ALFA Tools as part of the ALFA Engagement Platform (Webinar) Introduction to ALFA and its support services (Seminar section)	Enhanced knowledge about available ALFA support services, thus engaging an increased number of women and young farmers in biogas value chain (>10% increased ratio)	The webinars and seminars included an introductory session that showcased all the project tools and also the introduction to the support services. The tools had a specific webinar dedicated to showcasing how to use them.
Challenges and needs for the uptake of biogas in livestock farming (Webinar)	Identification of challenges and needs, contributing to informed decision-making, and enhancing awareness of citizen attitudes to increase social acceptance (up to 25%)	The webinar sessions allowed stakeholders to interact and provide their views via different interactive and Q&A sessions, allowing the consortium to identify potential pain points and ways for improvement.
Review of successful cases (Webinar) Best practices/Success cases (Seminar section)	Encouraging the emulation of successful biogas projects	Review and promotion of successful cases via a webinar dedicated for success cases in Italy and Spain. Also, all seminars also brought relevant regional success cases to enrich the sessions.
Waste management and treatment and biogas plants, The use of straw for biogas production(Webinar)	Promotion of sustainable waste management practices, aiming at >330.000tnCO2eq/year, in terms of GHG elimination from sustainable processing of manure	Webinars held on technical topics which aimed to boost the adoption of these technologies while opening a space for success cases and questions from farmers.

4. Awareness Raising Campaigns

4.1 Description

Awareness-raising campaigns are essential tools for driving behavioural change by **informing, engaging, and mobilising** stakeholders. Within the ALFA project, the overarching objective of the Awareness Raising Campaign (ARC) was to **maximise the impact, visibility, and key messages** of the project, while **fostering greater understanding and acceptance of biogas solutions** by civil society in Europe—particularly among livestock farmers and other relevant actors in the renewable energy landscape.

The **ALFA ARC has been conceptualised and coordinated by APRE**, the project's Task Leader for awareness-raising activities, and **implemented through a decentralised approach by each of the six regional Hubs**—Belgium, Denmark, Greece, Italy, Slovakia, and Spain. This approach ensured alignment with overall project goals while enabling each Hub to customise the campaign **based on their regional context, level of knowledge and specific barriers**. As such, the ARC pursued a dual objective: (i) to inform and empower livestock farmers and local stakeholders, and (ii) to foster broader societal and policy-level acceptance of biogas systems.

As a preliminary step for the preparation of a general strategy, APRE collected the feedback provided during the implementation of the ALFA co-creation workshops under T2.2. Through the workshops, different stakeholders of each Hub were reached to understand their needs, expectations and perceived barriers.
To ensure coherence across regions while allowing for flexibility, **a general framework**—complete with key messages, narrative, claim ("Together for biogas: what goes around, comes around…in circular economy!"), and hashtags—was provided by APRE. The key elements were common to all Hubs and were used as guidelines to implement the regional ARCs. In fact, despite the fact that the specificity of the awareness-raising measures has been based on the context of each Hub, it is important to underline that the ALFA ARC, despite its six ramifications, has been conceptualised with a spirit and a strategy made of common messages and objectives. Each Hub then tailored the core components to their audience and local context, adopting a **mix of online and offline actions**. In general, campaign activities included the production and publication of articles and interviews, social media posts, participation in external events, production and publication of promotional videos, collaborations with different types of media, and contributions to the ALFA Biogas Forum.

The ARC followed a strategic, iterative structure, implemented in **two rounds of 10 months each**. The first round ran from December 2023 to September 2024 (M14–M23), while **the second round spanned from October 2024 to July 2025 (M24–M33)**. In both rounds, ARC activities were carried out with the following objectives in mind:

- **Addressing social barriers** to the general acceptance of biogas, in particular the misconceptions of citizens and their negative perceptions surrounding biogas systems (e.g., concerns about odour, noise, or environmental impacts), **through accurate information and positive narratives highlighting the advantages and sustainability**. The goal of the ARC **was to improve the societal acceptance of biogas facilities amongst citizens by 25%** (or above).

- **Raising awareness about biogas systems and their benefits and fostering acceptance of farmers** to incentivise a wider group of biomass owners to produce and bring biogas to market.
- **Informing policy makers around criticalities, barriers and needs perceived by other stakeholders,** mostly farmers (e.g., uncertain policy landscape; unsupportive regulatory framework; poor supply chain coordination; complex administrative and legal procedures).
- **Communicating** to farmers the **existing possibilities of financial support** to compensate for the high initial investment costs for the implementation of biogas systems, and informing policy makers of the need to simplify the procedures for accessing financial support.
- Making farmers more aware of **the financial benefits of biogas,** in order to overcome their reticence due to the perceived investment risks.

Target groups addressed spanned **livestock farmers** (especially those without biogas plants), **governmental agencies and policy makers** at both national and EU levels, **biogas supply chain actors and entities** (such as biogas producers and national energy providers), **civil society** (citizens and associations), **professionals and researchers**, and relevant **EU initiatives and funded projects**.

While the details of the first round of the ARC are presented in **D3.2 Report on deployment of ALFA support measures - First round**, this document focuses on the second round of the ARC, which actions were refined and implemented on the basis of lessons learnt, feedback and insights from the implementation of the first round. In fact, as already mentioned in the section 1.4, the lessons learned and the identified areas for improvements —as also outlined in **D2.5 ALFA Market Uptake Support Measures – Interim Version** and **D3.3 ALFA Operational Plans for the deployment of support services – Final Version**— were taken into account when adjusting the strategy and implementing the second round of the ARC. In particular, the **strategic review** for the second round addressed several critical insights, taking into account:

- challenges in data collection,
- discrepancies in implementation timelines,
- the need for more tailored regional messaging and channel selection,
- the importance of combining even more digital and in-person outreach to maximise impact.

The second round of the ARC placed even **greater emphasis on** the strategic value of **region-specific adaptations**. Examples of regionally customised approaches implemented by the Hubs in this round include:

- **The Belgian Hub** focused on delivering technical content, such as presenting national incentive schemes, and targeted farmers and policymakers through specialised media outreach. A notable example was the article published in *Landbouwleven*—one of Flanders' leading agricultural magazines, which addressed both farmers and public authorities—aimed at informing about the benefits of biogas and the available incentives to encourage its adoption. Online visibility was further reinforced through targeted social media posts and contributions to the ALFA Biogas Forum.
- **The Danish Hub**, operating within a country where biogas is already well integrated into agricultural practices—accounting for around 40% of the national gas grid—concentrated its efforts on promoting the activities of the ALFA project and highlighting Denmark's leadership in the sector. The campaign prioritised showcasing ALFA's added value through LinkedIn posts, active participation in sector events, and the production of two best-practice videos promoting Danish biogas models internationally.

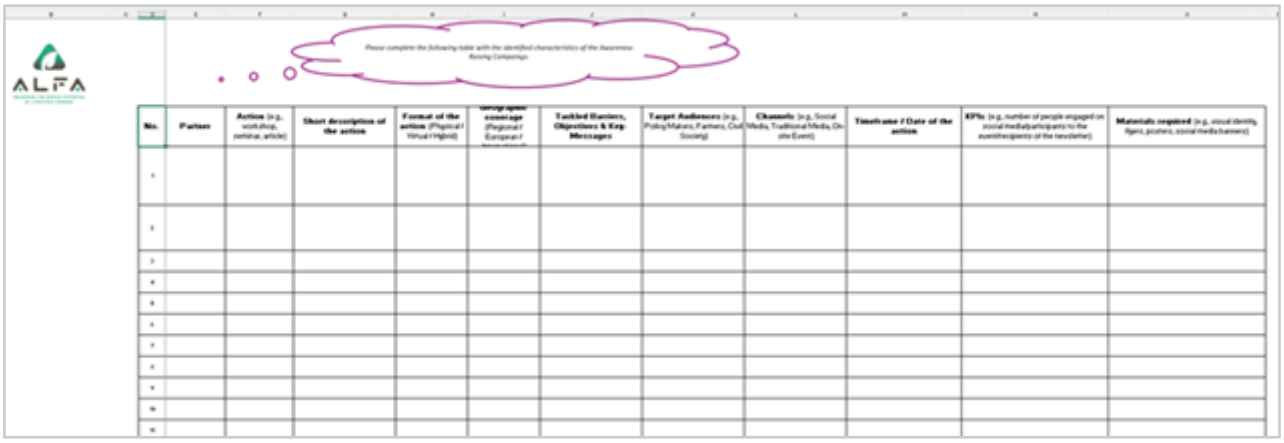
- **The Greek Hub** centred its campaign on addressing misinformation and the persistent NIMBY ("Not In My Back Yard") effect in the national debate around biogas. Engaging online content, including posts, infographics, and discussions on the ALFA Biogas Forum, helped clarify the environmental and circular economy benefits of biogas, engaging primarily stakeholders already active in the renewable energy sector and reaching out to cooperatives and biogas, energy and renewable energy associations.
- **The Italian Hub** expanded its outreach by diversifying both content formats and audiences. Unlike the first round, which was more focused on technical content directed at farmers and professionals, this round emphasised inclusivity within the biogas and renewable energy sectors. A series of articles and interviews with women and men working in small-scale farming were published across both specialised platforms tied to the agricultural community and broader media outlets focused on social issues, such as gender equality. These real-life stories showcased how the ALFA project supported farmers in adopting appropriately scaled biogas systems, discouraging oversized investments and promoting circular economy principles, offering inspiration and practical guidance for small-scale farmers. Furthermore, although the Italian Hub participated in several events, the campaign during the second round was implemented primarily through digital channels.
- **The Slovak Hub** addressed one of the main barriers to biogas uptake: access to finance. It launched an extensive online campaign to inform farmers and stakeholders about available funding mechanisms, grants, and financial opportunities. Posts were shared via the websites and social media channels of PEDAL and local partners, including the Slovak Biogas Association, and reinforced through offline activities such as local events, engaging a wide network of organisations, increasing both visibility and outreach.
- **The Spanish Hub** adopted a hybrid approach that combined digital and on-site efforts. Its campaign maintained a steady flow of social media content—ranging from infographics and thematic posts to event announcements—while ensuring direct engagement with citizens, policymakers, and farmers through participation in numerous in-person events.

Despite the diversity of these regionally tailored approaches, which proved flexibility being a key success factor, APRE, as Task Leader, ensured coherence with the overall strategy. This was achieved through **monthly coordination calls**, during which **Hubs shared progress updates, challenges, and best practices**. This iterative and participatory process **strengthened mutual learning around awareness-raising activities** and allowed each region to benefit from the experiences of the others.

4.2 KPIs and Monitoring activities

Being **APRE in charge of collecting all input from partners**, an excel file has been provided as a tool for each Hub Manager to be used for **monitoring the ARC in their country**. Shared in the project repository and containing two different sheets for each round of the ARC, **each regional monitoring file has been filled and regularly updated by Hub managers** with regards to the first and second rounds of the campaign. In addition to the progress in the official related project KPIs achievement, the file kept track also of other indicators, necessary to formulate a detailed quantitative analysis of the ARC implementation, e.g., events (number of events, number of participants, their overall satisfaction), case studies and field visits, social media (number of posts, average engagement per posts, total reach, perception change).

The monitoring file is shown in the picture below.



No.	Partner	Action (e.g. workshop, seminar, article)	Short description of the action	Format of the action (Physical / Virtual / Hybrid)	Geographical coverage (Regional / European / International)	Tackled Barriers, Objectives & Key Messages	Target Audiences (e.g. Policy Makers, Farmers, Civil Society)	Channels (e.g. Social Media, Traditional Media, On-site Event)	Timeframe / Date of the action	KPIs (e.g. number of people engaged on social media/participants to the events/recipients of the newsletter)	Materials required (e.g. visual identity, flyers, posters, social media banners)
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

Figure 9 - ARC monitoring file

As can be seen in the **D3.2 Report on deployment of ALFA Support measures - First round**, following the first round of awareness campaigns, some of the project's objectives had already been achieved:

KPI-9: Stakeholders with enhanced awareness of socio-economic and environmental benefits of biogas (>10,000). **Through all the activities carried out during the project, more than 10,000 stakeholders were reached**, generating awareness of the socio-economic and environmental benefits of biogas (achievement indicator >10,000). This include stakeholders engaged by the Hubs (interviews, surveys, co-creation workshops, services awardees, capacity building recipients, mutual learning participants), recipients of the awareness raising campaigns (reached in social media – ALFA & partners' accounts-, informative mails, local awareness raising events), stakeholders reached by the Hubs (invited to take part in activities e.g. open calls), participants in Networking event, recipients of the newsletters, views of the promotional videos, unique visitors in the website and ALFA engagement platform, people in the external events being informed about ALFA, participants in the events co-organized with the synergies. Thanks to the **dissemination activities carried out in parallel to the local awareness campaigns**, the ALFA project has far reached the targeted followers (target >1000), participated in more than 15 external events presenting the project, its activities and results (target >15) and distributed well over 300 promotional materials (target >300) such as flyers, leaflets, and brochures to participants in the ALFA project and at external events[6]. Furthermore, the above mentioned stakeholders will be joined in the future by other stakeholders attending the Final Event & Policy Roundtable, to be held on 25th September in Brussels, and the recipients of the Replication Guide + Policy briefs.

KPI-10: Increased women and young farmers involved in biogas value chain (>10%). Although this KPI was not easy to quantify, several elements and indicators point to a **significant contribution by the ALFA project to increasing the involvement of women and young farmers in the biogas value chain** in ALFA Hubs, in line with the achievement of the KPI.

[6] For further details on the objectives, targets, and results of the Communication and Dissemination activities (WP5), refer to D5.5 **"Dissemination and Communication Plan and Results – Final Version,"** which will be published in October 2025 (Month 36).

In fact, out of the cases who received support services through the two ALFA Open Calls, **15 were represented by women**, representing the **28,3**% of the total. These included female farmers, livestock owners, consultants, and representatives of companies exploring biogas solutions. In addition, **27 applications** to the two ALFA Open Calls **came from candidates aged between 15 and 39 (37,5%)**, out of 72 applications.
Where data on gender could be monitored, participation at events organized by ALFA—such as mutual learning workshops, field visits, and networking events—consistently recorded a **female participation rate of approximately one-third** of total attendees.
In the awareness-raising campaigns, all Hubs made a great effort to **highlight the role of women** in farming and livestock farming, biogas, renewable energy, and research by conducting and publishing interviews with female stakeholders. These also **included women directly supported through ALFA services who are now in the process of implementing biogas solutions** on their farms and who later took part **as speakers at ALFA events**, sharing their experiences **to inspire other farmers**. Several of these interviews were published in online articles, including on platforms specifically dedicated to gender equality and women's participation in science and the green economy—such as *She is a Scientist*.

The lack of Eurostat data specifically on livestock farming has been noted in studies reporting a 38% decrease in livestock farms between 2005 and 2016, compared to a 29% drop in total agricultural holdings (*ScienceDirect*, 2021). In general, **only about 30% of farms in the EU are managed by women**, and the gender gap is even wider in countries with strong livestock sectors, where the **percentage of female farm managers can drop to 10–11%** (Eurostat, 2022). **Young people remain underrepresented as well: only 12% of farms are managed by people under 40**, and among these, just 3% are young women (Eurostat, 2019).
In this context, the ALFA project—with **28,3% of supported cases being represented by women (15 out of 53),** strong female participation in events, and targeted visibility efforts—demonstrates a **meaningful contribution to increasing the presence of women and young farmers in the biogas value chain**. While there is still room for improvement, this result is particularly significant in livestock-related contexts where female participation is typically lower than average. ALFA's support for the inclusion of women directly addressed this underrepresentation. By **showcasing stories of women adopting biogas solutions and taking on active roles** (as speakers and interviewees), the project contributed to **bridging the gender gap**—aligning also with the Common Agricultural Policy (CAP) objectives of enhancing women's participation in agriculture.

At the end of the first round of awareness-raising campaigns, it was not yet possible to verify the achievement of the objective related to increasing social acceptance of biogas plants and facilities among citizens by more than 25% (KPI4). This was due to the fact that, when submitting D3.2 Report on deployment of ALFA Support measures - First round, the second round of awareness campaigns still had to be implemented, and the project consortium had to wait until the end of the second round to launch the third ALFA survey and collect the final data. These data, collected at the end of the second round, were compared with the baseline data and interim data, and the comparative analysis is presented below.

4.3 Monitoring framework for awareness and acceptance on biogas

In order to measure the **increase in social acceptance of biogas plants and installations among civil society by more than 25%**—and thus verify whether the KPI-4 target had been achieved—the ALFA project implemented a dedicated **awareness monitoring framework** designed to assess the impact of its awareness-raising efforts.
The achievement of this KPI was assessed by analysing and comparing data from **three identical online surveys**, disseminated through the six different Hubs and social media channels:

1. **Baseline survey** – conducted before the launch of the 1st round of the campaign, targeting the general public to gauge initial levels of biogas acceptance.
2. **Midpoint survey** – carried out at the end of the 1st round of the campaign.
3. **Final survey** – conducted at the end of the 2nd round of the campaign.

The surveys were promoted in seven languages on the ALFA project website and its social media channels. Additionally, each Hub supported the promotion by sharing the surveys through their respective communication channels. Respondents were asked to evaluate three core questions:

- Does a biogas plant create socio-economic benefits?
- Does a biogas plant create environmental benefits?
- Does a biogas plant contribute to developing sustainable and inclusive agriculture (e.g., gender inclusivity)?

Participants/respondents could rate each question on a 1–5 scale:

- 1 = Negative impact
- 2 = Moderately negative impact
- 3 = Neutral impact
- 4 = Moderately positive impact / Moderate benefit
- 5 = Very positive impact / Strong benefit

To evaluate the effectiveness of the campaign, **responses scoring 4 or 5 were considered positive**. For each country, **the share of positive responses was calculated and tracked across the three rounds, followed by a computation of the percentage point increase between Survey 1 and Survey 3**. In total, **626 individuals participated in the three surveys** (1st round: 177 respondents; 2nd round: 244 respondents; 3rd round: 205 respondents). While some Hubs like Italy, Slovakia and Greece recorded higher participation levels, others such as Belgium, Denmark and Spain had fewer respondents. However, even where participation was limited, the comparative analysis provides insights into the evolution of public opinion. Below are country-specific analyses, followed by an aggregated overview.

4.3.1 Belgium

Table 21 - Country-specific analysis for Belgium

Survey	Q1 (Socio-economic benefits)	Q2 (Environmental benefits)	Q3 (Sustainable & inclusive agricolture)
1° survey	85.7%	85.7%	71.4%
2° survey	50.0%	75.0%	0.0%
3° survey	100%	100.0%	92.3%
Increment % over time	**+14.3%**	**+14.3%**	**+20.9%**

In Belgium, a total of 24 people responded to the different rounds of surveys. The surveys were disseminated in Dutch, French, and English to ensure broader accessibility, and were promoted through the communication channels of both the Belgian Hub and the ALFA project. Although participation was limited, the results show a fluctuating but generally upward trend in positive responses regarding the benefits of biogas. Although the third round of the survey had the lowest number of responses, it recorded positive responses in all three thematic areas. These results suggest a growing awareness and acceptance of biogas in Belgium, while also reflecting the challenges of reaching a broad and consistent audience in a multilingual context.

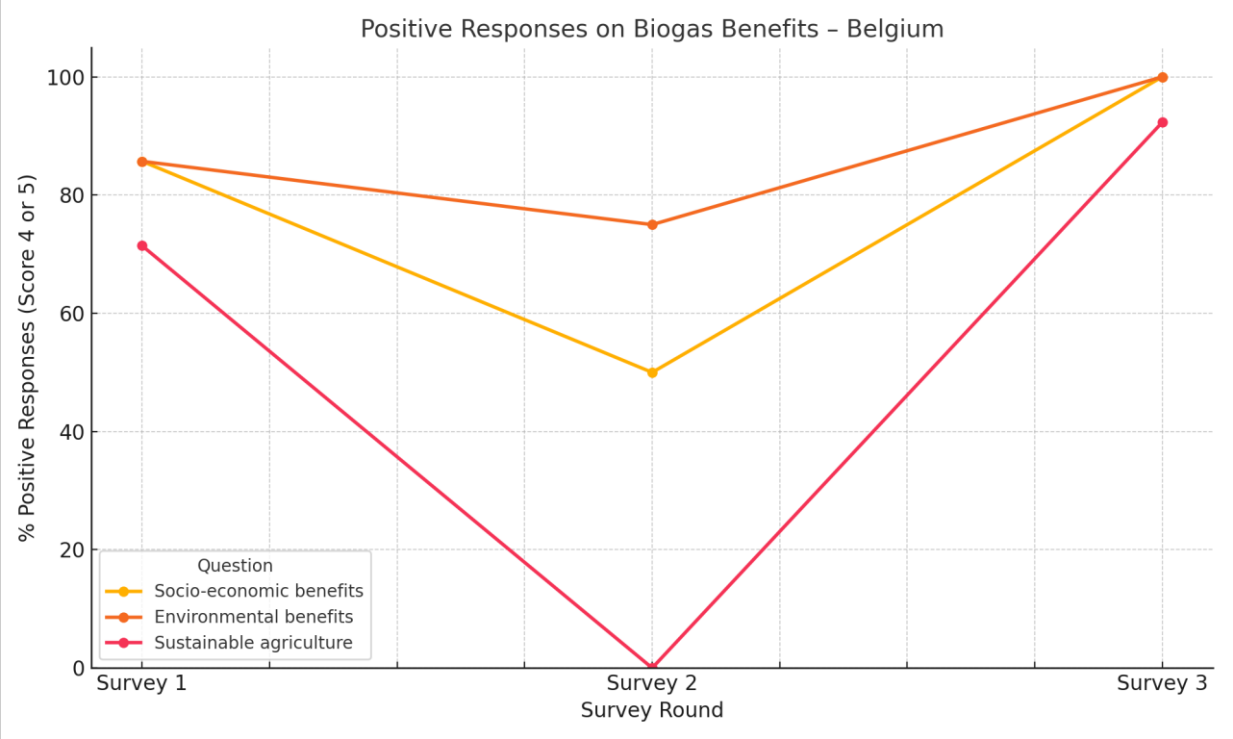


Figure 10 - Change in the perception of biogas benefits in Belgium

4.3.2 Denmark

Table 22 - Country-specific analysis for Denmark

Survey	Q1 (Socio-economic benefits)	Q2 (Environmental benefits)	Q3 (Sustainable & inclusive agricolture)
1° survey	50.0 %	100.0 %	50.0 %
2° survey	80.0 %	86.0 %	78.0 %
3° survey	66.7 %	91.7 %	87.5 %
Increment % over time	**+16.7%**	**-8.3%**	**+37.5%**

In Denmark, a total of 76 people responded to the various rounds of surveys. The analysis shows a positive trend in society's perception and acceptance of the impacts of biogas. Compared to the first round, there was an increase in positive responses to two of the three questions (Q1 and Q3). However, although the perception of environmental benefits remained high, there was a slight decline in positive responses to question Q2.

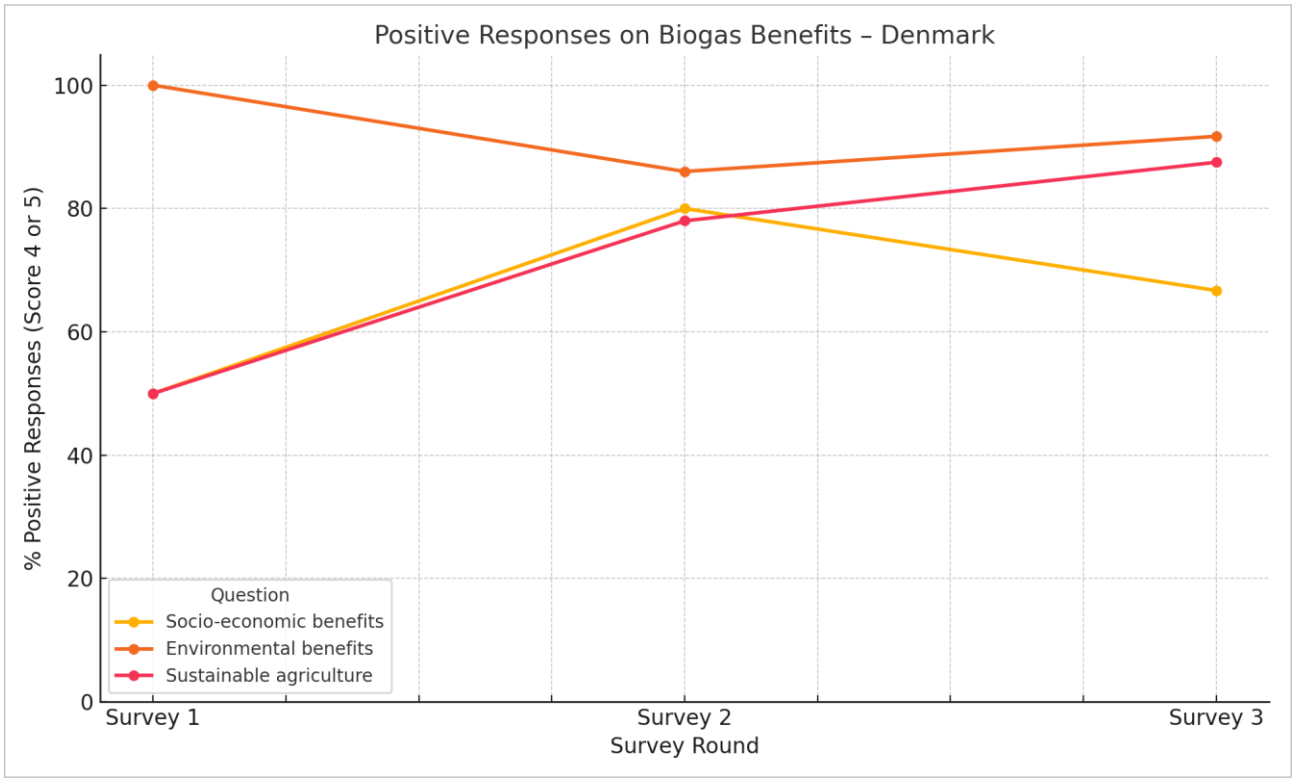


Figure 11 - Change in the perception of biogas benefits in Denmark

4.3.3 Greece

Table 23 - Country-specific analysis for Greece

Survey	Q1 (Socio-economic benefits)	Q2 (Environmental benefits)	Q3 (Sustainable & inclusive agricolture)
1° survey	43.8%	43.8%	31.2%
2° survey	25.8%	35.5%	32.3%
3° survey	100%	100%	38.0%
Increment % over time	**+56.2%**	**+56.2%**	**+6,8%**

In Greece, 96 people responded to the different rounds of surveys in total. The analysis of the three rounds shows an increase in positive perceptions and acceptance regarding biogas, especially in the third round. This upward trend in the third survey could suggest that the awareness campaign had a good impact, particularly in shifting perceptions from mixed or neutral to favourable.

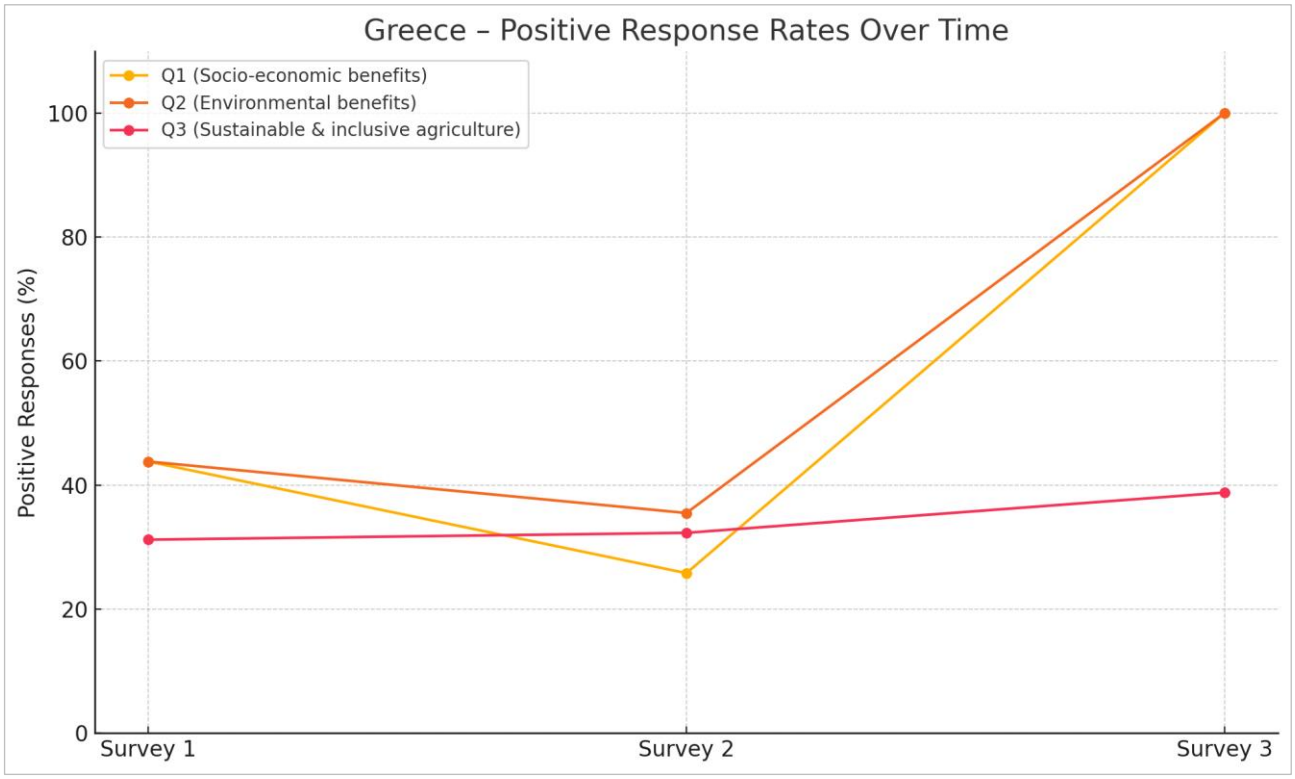


Figure 12 - Country-specific analysis for Greece

4.3.4 Italy

Table 24 - Country specific analysis for Italy

Survey	Q1 (Socio-economic benefits)	Q2 (Environmental benefits)	Q3 (Sustainable & inclusive agricolture)
1° survey	16.33%	20.9%	11.6%
2° survey	81.5%	80.0%	67.7%
3° survey	88.3%	96.1%	90.9%
Increment % over time	**+72.0%**	**+75.2%**	**+79.3%**

In Italy, a total of 228 people responded to the different rounds of surveys. The analysis of the three survey rounds shows a positive evolution in public perception and acceptance regarding the impacts of biogas. In fact, for all three questions positive responses increased significantly compared to the first round.

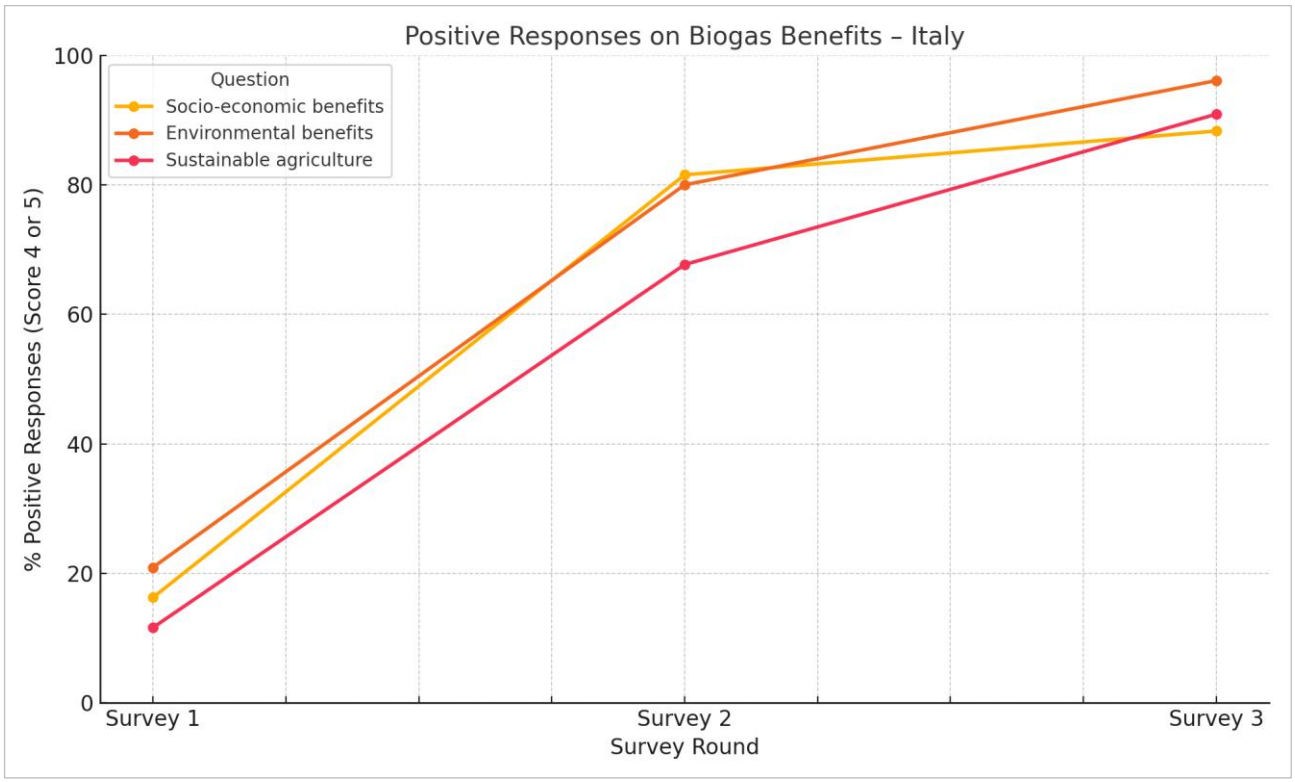


Figure 13 - Change in the perception of biogas benefits in Italy

4.3.5 Slovakia

Table 25 - Country-specific analysis for Slovakia

Survey	Q1 (Socio-economic benefits)	Q2 (Environmental benefits)	Q3 (Sustainable & inclusive agricolture)
1° survey	89.3%	91.1%	73.2%
2° survey	94.7%	93.0%	82.5%
3° survey	100.0%	100.0%	82.6%
Increment % over time	**+10.7%**	**+8.9%**	**+9,4%**

In Slovakia, 136 people responded to the various rounds of surveys. The analysis reveals consistently high levels of public awareness and acceptance of the impacts of biogas. For all questions, positive responses were already high in the first survey and continued to grow throughout the campaign, confirming its reinforcing effect in maintaining and improving acceptance.

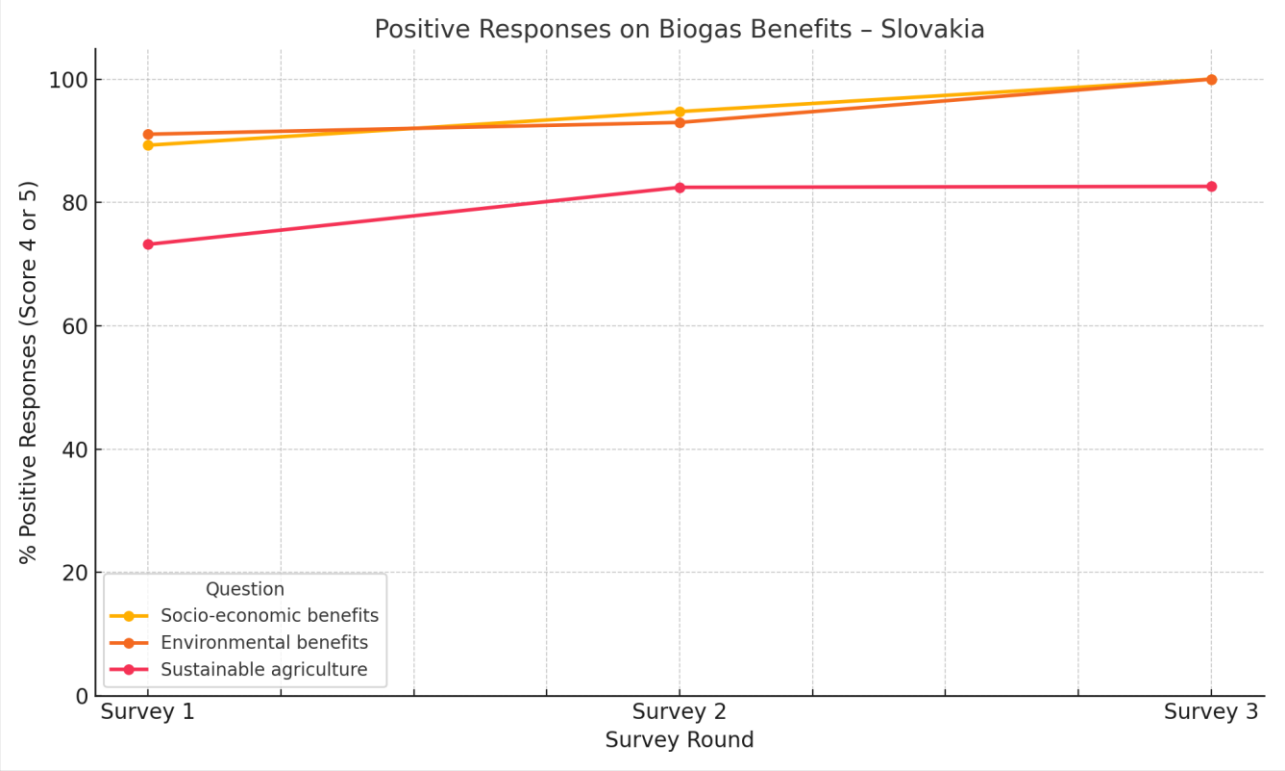


Figure 14 - Change in the perception of biogas benefits in Slovakia

4.3.5 Spain

Table 26 - Country-specific analysis for Spain

Survey	Q1 (Socio-economic benefits)	Q2 (Environmental benefits)	Q3 (Sustainable & inclusive agricolture)
1° survey	70.0%	60.0%	60.0%
2° survey	75.0%	82.1%	64.3%
3° survey	75.0%	82.1%	64.3%
Increment % over time	**+5.0%**	**+22.1%**	**+4.3%**

In Spain, a total of 66 people responded to the various rounds of surveys. The analysis showed a moderate but steady increase in public awareness and acceptance of the impacts of biogas. In fact, for all three questions, positive responses increased or remained stable between survey 1 and survey 3. As can be seen from the data in the table, the largest percentage increase was recorded in relation to the environmental benefits of biogas in livestock farming (Q2), suggesting that the awareness campaign helped to consolidate and strengthen the public's understanding of the benefits of biogas, particularly with regard to its environmental impact.

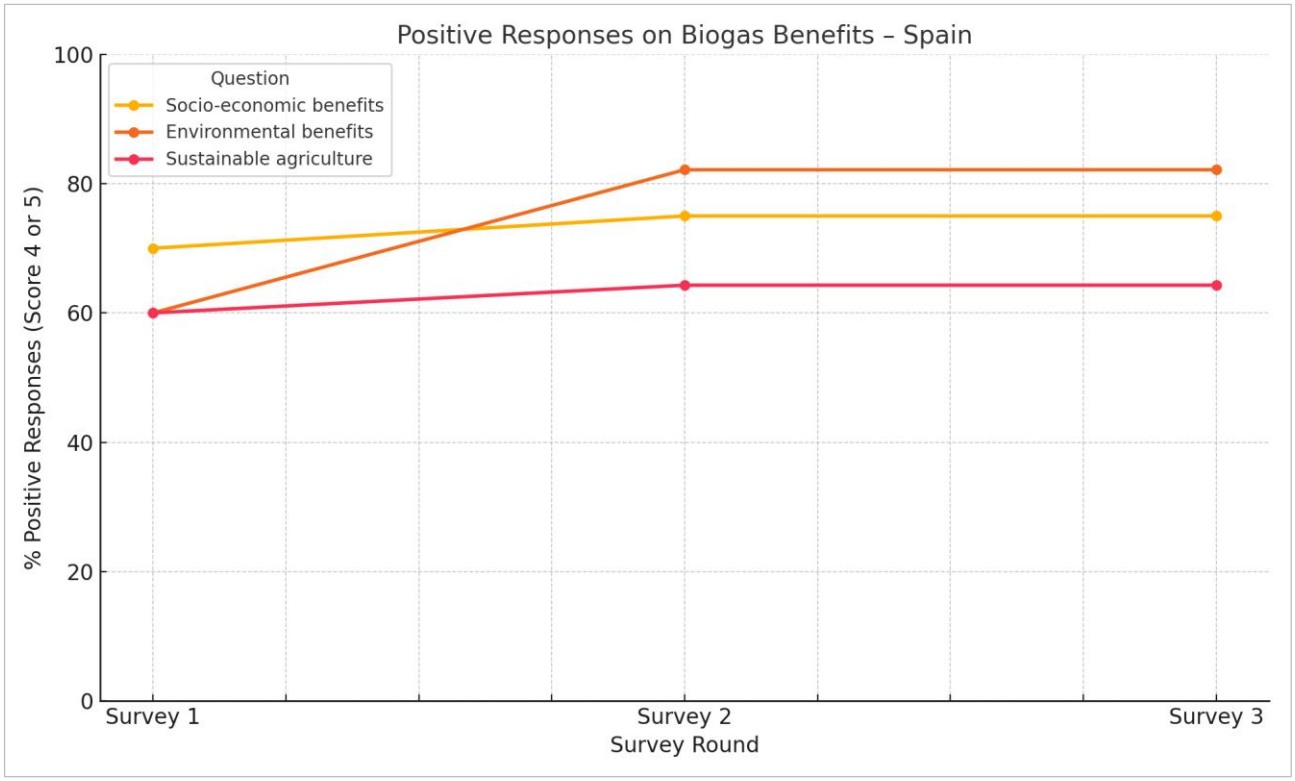


Figure 15 - Change in the perception of biogas benefits in Spain

4.3.7 Aggregated data - all Hubs

Table 27 - comparative analysis of aggregated data from all Hubs

Survey	Q1 (Socio-economic benefits)	Q2 (Environmental benefits)	Q3 (Sustainable & inclusive agricolture)
1° survey	48.02%	79,57%	38.42%
2° survey	75.74%	78.72%	67.23%
3° survey	89.24%	95.31%	74.30%
Increment % over time	**+42.22%**	**+15.74%**	**+35.88%**

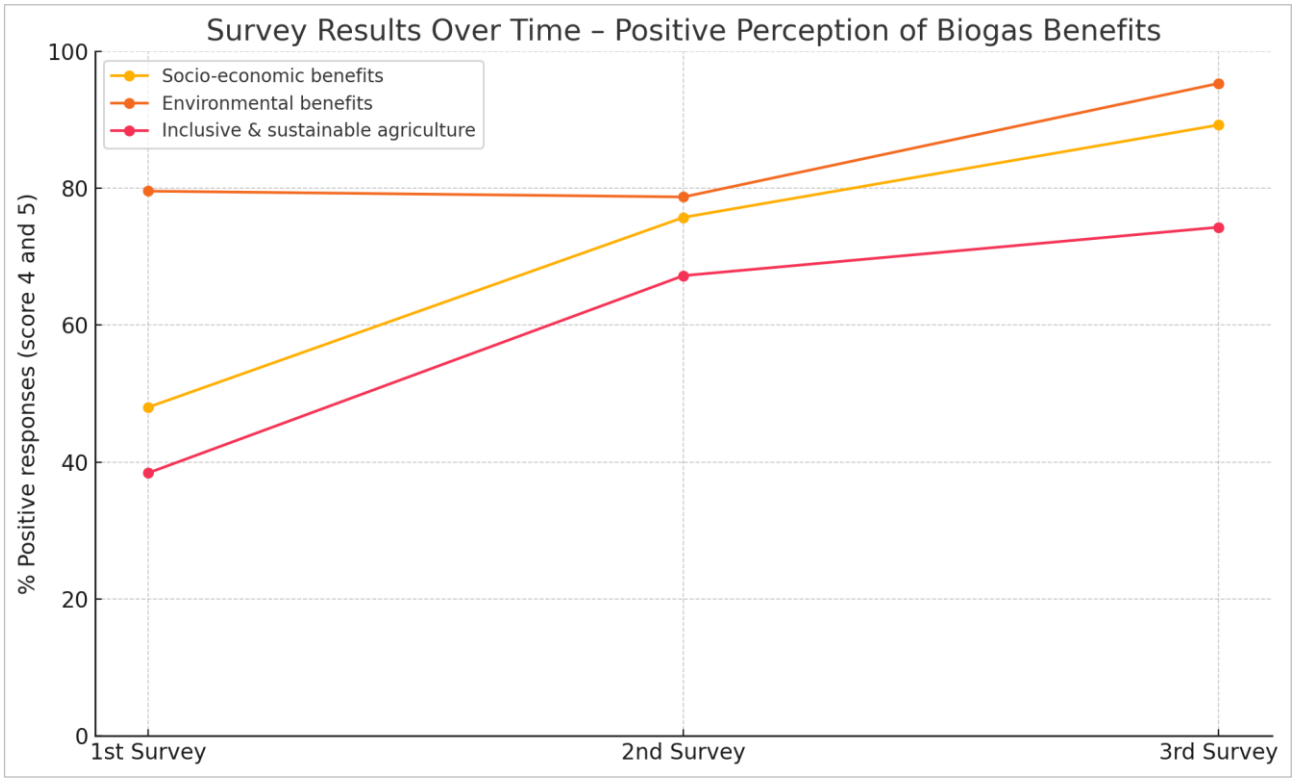


Figure 16 - Change in the perception of biogas benefits among project Hubs

The analysis of the baseline, midpoint, and final survey data **clearly indicates a positive upward trend in all three areas** over the course of the project.

First Round (Baseline) - Across all Hubs:

- 48.02% of respondents gave positive responses (scores 4 or 5) to the question on socio-economic benefits (85 out of 177 total respondents)

- 79.57% responded positively on environmental benefits (74 out of 177)
- 38.42% responded positively regarding sustainable and inclusive agriculture (68 out of 177)

Second Round (Midpoint) - Across all Hubs:

- 75.74% gave positive responses (scores 4 or 5) to the question on socio-economic benefits (178 out of 244 total respondents)
- 78.72% responded positively on environmental benefits (185 out of 244)
- 67.23% responded positively regarding sustainable and inclusive agriculture (158 out of 244)

Third Round (Final) - Across all Hubs:

- 89.24% responded positively (scores 4 and 5) to the question on socio-economic benefits (199 out of 205 respondents)
- 95.31% responded positively on environmental benefits (203 of of 205)
- 74.30% responded positively to the question on sustainable and inclusive agriculture (159 out of 205)

In relation to the perception and acceptance of the **socio-economic benefits** of biogas, **the overall increase from baseline to final data was calculated at 42.22% (Q1), showing the** achievement of the targeted 25% increase in public awareness and acceptance.
With regard to the perception and acceptance of biogas in relation to its environmental benefits, **the overall increase from the first to the third round was 15.74% (Q2).** The percentage increase of less than 25% in environmental perception could be attributed to the fact that respondents already had a higher baseline awareness, which the campaign helped to further reinforce. Although this figure (on its own) did not reach the 25% increase, it still reflects a significant improvement.
With regard to the perception and acceptance of biogas in relation to the **development of an inclusive and sustainable agriculture, the overall increase** from the baseline data to the final survey **was 35.88% (Q3)**, confirming the achievement of the targeted 25% increase in public awareness and acceptance.
From the comparison of these data from all six Hubs it is possible to state that the awareness campaigns implemented under the ALFA project have effectively contributed to **improving public perception and acceptance of biogas facilities**. Although the level and pace of improvement varied by country, several key patterns emerged:
- Countries with initially low awareness (e.g., Greece, Italy) showed significant growth in positive perceptions;
- Countries with already high awareness (e.g., Slovakia) experienced consolidation and reinforcement of support;
- The greatest improvements were observed in perceptions of socio-economic benefits and in relation to the development of an inclusive and sustainable agriculture.

Certainly, **lack of knowledge and potential social resistance still exist toward biogas projects**, including those in the livestock farming sector. This insight emerged through the ALFA project's extensive engagement with a wide range of stakeholders and experts, as well as by comparing our consortium's experience with those of other consortia implementing related initiatives.

For instance, the Horizon Europe GreenMeUP project conducted a study on social acceptance, which revealed that most respondents reported low levels of self-perceived knowledge regarding

biofuels, biogas, and biomethane. Specifically, the share of respondents who gave below-average scores (1 to 3 on a 7-point scale) was 55% for biofuels, 57% for biogas, and 68% for biomethane.

As illustrated in the graph (taken from the presentation of the GreenMeUP survey results), when asked about biogas, the majority of respondents (57%) reported knowing nothing (23%), very little (18%), or little (16%) about it.

In this context, the results showed by the analysis of the surveys produced by ALFA are even more significant. While the ALFA project alone cannot transform public perception or raise awareness at a large European scale, these results demonstrate that also a single project—when based on well-structured communication strategies, combined with strong local engagement and multilingual outreach—can meaningfully contribute to a broader, collective effort to promote awareness and social acceptance. In doing so, ALFA Awareness raising campaigns have helped lay a stronger foundation for the wider uptake, public support, and policy endorsement of sustainable energy solutions such as biogas.

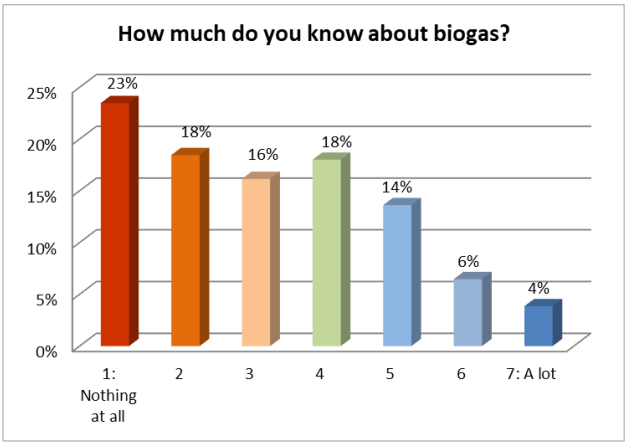


Figure 17 - Social acceptance about biogas, GreenMeUp project

4.4 2nd round timeline

The timeline for the second round of the Awareness Raising Campaigns spans from M24 (October 2024) to M33 (July 2025). The campaign plan has been structured as an action plan, visualized through a Gantt diagram attached below:

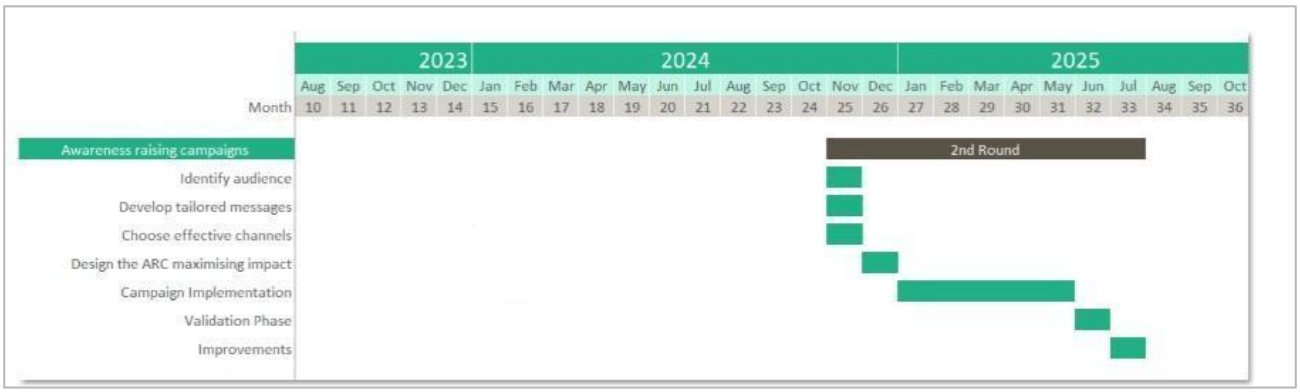


Figure 18 - Gantt for the 2nd round of the ARC

4.5 Different versions of the ARC Implementation per Hub

The Awareness Raising Campaigns were tailored and adapted into different versions based on the specific needs and characteristics of the Hub, in each participating country. Each campaign was customized to address local conditions, considering factors such as prior knowledge of biogas and biomethane, national regulations, and market dynamics. This approach enabled the development of targeted strategies that effectively raised awareness and encouraged greater participation from key stakeholders in each national context.

4.5.1 Belgium

In the second round of ALFA's Awareness Raising Campaigns (ARCs), the Belgian Hub has continued on raising awareness about the benefits and opportunities that biogas offers and enhancing societal acceptance of biogas in livestock farming, primarily among farmers, local policy-makers and citizens as a whole. White Research (WR) has conducted 3 different types of activities, namely an online social media campaign, posts in the biogas forum, and an article on traditional media. The social media campaign consisted of a series of 6 social media posts, published on WR's own social media channels, that followed the consistent theme of addressing societal acceptance barriers and support needs of farmers in Belgium. The use of traditional media consisted of the publication of an article in the Flemish agricultural magazine Landbouwleven, one of the main magazines for farmers and policymakers involved in agriculture in Belgium. The article was published both in the digital and printed formats of the magazine. Lastly, WR prepared a post for ALFA's Biogas Forum, in which the incentive schemes available to livestock farmers in Belgium were presented. The combination of actions had the goal to maximise outreach by engaging the distinct types of target audiences in an appropriate way, tailoring the messages and communication channels to the most relevant ones for farmers, policymakers and citizens as a whole, respectively. In addition, the second round of ARC activities in the Belgian Hub was also meant to complement those actions of the first round, which, beside online communications, also consisted of actions targeting local farmers and policymakers from a specific region (through organising an event at a farm) as well as researchers (through conference papers and presentations at the EUBCE conference).

Partner involved	**WHITE RESEARCH (WR)**	
Total n. of actions	**6**	
Type of action	**Detailed description (Message)**	**Type of target audience & total numbers of users reached /involved with the Action**

Posts on social media channels	White Research posted six (6) social media posts focused on promoting ALFA's awareness-raising activities in Belgium and communicating about the challenges and needs for adoption of biogas in livestock farming. They featured the capacity-building event held at a livestock farm in Flanders, highlighting presentations from key projects and a guided tour of the on-site biogas plant, as well as national media coverage in Landbouwleven. Another post focused on measuring public perception of biogas in Belgium,and the manure-based biogas support levels in Belgian society by utlilising an interactive LinkedIn poll. A dedicated post included in the latest edition of the White Research Journal, which explored Belgium's evolving biogas landscape with examples like the Messancy Biométha project in Wallonia and regional support schemes in Flanders. A third post included the launch of the third round of ALFA's public awareness survey in Dutch and French, aimed at assessing public perceptions of biogas across Flanders and Wallonia. This was followed by a reminder post urging last-day participation and a final post summarising survey engagement. Lastly, White Research prepared one additional post for the end of June to recap key lessons learnt and highlight successful cases in Belgium.	Through these actions, White Research reached a total of 2,365 individuals, primarily targeting farmers and members of civil society. The figure refers to total post impressions.
Article in magazine	Below there is an excerpt of the article published in the Flemish agricultural magazine Landbouwleven (in Dutch). The article was written independently by the journalist Thor Deyaert, who also attended ALFA's seminar in Belgium to gather more information about the project, its activities, results and goals. The article was published in both the digital and printed formats of the	Landbouwleven is one of the main (if not the main) magazine for farmers and professionals in the agricultural sector in Belgium. However, its influence and target audience extends beyond farmers, reaching policymakers, researchers, students, and other stakeholders in the agricultural sector.

	magazine. 20 ≡ Dier De Europese bio-economie **Lopen Europese ambities gelijk met die van boeren?** **De Europese Unie zet toch op zijn minst een deel van zijn geld in op bio-economie. De productie van biogas en -methaan moet voor extra inkomsten voor boeren zorgen. Bij deze hoeragelui-den klonken tijdens een event georganiseerd door project Alfa toch wel wat kanttekeningen.** Uit de Europese landbouwvisie die de Commissie op 19 februari presenteerde, is het duidelijk dat bio-economie voor bijkomende inkomstenbronnen voor (pnge) boeren moet zorgen. Bio-economie omvat alle economische activiteiten die gebruik maken van biologische organismen of processen, inclusief de verwerking van teelten of reststromen zoals dierlijke mest tot voedsel, diervoeder, biogebaseerde produc-ten en bio-energie. Volgens de visie komt er dit jaar nog een nieuwe stra-tegie om de Europese bio-economie te boisteren. "Die zal in het bijzonder gunstig zijn voor de boerenge-meenschap, omdat het de diversificatie van waarden-tromen mogelijk maakt, landbouwreststoffen valori-seert, de rol van primaire producenten in de waarde-keten versterkt en voor nieuwe banen zorgt in de plat-telandsgebieden." Twee Eurocommissarissen zette die ambitie vorige week nog eens extra in de verf tijdens een bezoek aan het Koeweidehof van melkveehouders Bart Vander-straeten en Marijke D'Hertefelt in Merchtem. " Bio-eco-nomie biedt heel wat opportuniteiten voor Europa", ken (zie ook Landbouwleven van 6 maart 2025 en van 20 februari 2025). Melkveehouder Bart van het Koeweidehof kan ervan meespreken. Door de stikstofproblematiek mag hun biogasinstallatie de groen van de kustde niet meer vol-gen. "Meer onderzoek naar biogas en -methaan is al-tijd goed, maar de wetgeving bepaalt de snelheid van innovatie op de boerderij. Als de wetgeving het toe-laat, zouden er heel wat meer biogasinstallaties vol-gen in Vlaanderen." **Biomethaan** Desondanks is de productie van biogas al meer inge-burgerd in Vlaanderen. Ondertussen zijn er volgens project Alfa zo'n 80 biogasinstallaties in onze regio, vooral pockethergisters die dierlijke mest gebruiken biomethaan als transportbrandstof gebruiken. "Bin-nen een jaar weten we hopelijk meer over wat heil-baar is op landbouwschaal", zegt Sander Vandries-schen van Inagro. **Eigen energienoden** ValueFarm voerde ook een bevraging uit bij boeren in de EU-lidstaten waar het project actief is. Bijna 60% van de respondenten gaf aan geïnteresseerd te zijn in energiediversificatie. Boeren zijn dus wel op zoek naar manieren om zelf energie op te wekken. "Logisch ook, met de hoge energieprijzen van de laatste jaren", al-dus Vandriesschen. Uit deze lijste bevraging bleek wel dat een landbouwer in de eerste plaats landbouwer wil blijven, en geen energieboer. "Zelf energie produceren is voor een	
Post in the biogas forum	A post was published in March 2025, in ALFA's Biogas Forum. The post summarised the financial incentives available to farmers investing in biogas in Belgium, which range from investment subsidies, tax deductions, certificates for the amount of green energy produced or energy savings, etc. The post also intended to directly engage farmers from Belgium and other regions, asking them what schemes were proving to be most useful for biogas uptake and what schemes were missing in their regions.	The target audience were Belgian livestock farmers. The post had 28 views on ALFA's Engagement Platform
Geographic coverage	**Belgium and Europe**	

4.5.2 Denmark

As a leading biogas nation, where 40% of the gas in the Danish gas grid is supplied from biogas production, biogas technology and production are already very well integrated in Danish agriculture.

That said, as a country and an organisation working directly on the topic, we still support initiatives to promote the increase the uptake of biogas production in Europe. In the ALFA project, we have therefore focused on promoting this European initiative (the ALFA project itself) and helping to spread the word about the benefits of biogas production.

In the second round of the Awareness Raising Campaign, we have not only promoted the ALFA project and services online on social media and the FBCD website but also at events to interact with and engage the Danish industry, farmers, research communities and authorities to push development forward. With regard to social media content, we have mainly focused on promoting the ALFA project services: the Open Call, the EU survey and events.

Moreover, we have produced 2 best practice videos from 2 Danish biogas plants for the use on ALFA channels for inspirational purposes and to spread awareness of Danish biogas production internationally.

Partner involved	**Food & Bio Cluster Denmark (FBCD A/S**	
Total n. of actions	***25***	
Type of action	**Detailed description (Message)**	**Type of target audience & total numbers of users reached /involved with the Action**
Posts on social media channels	**11 posts on FBCD's LinkedIn account, promoting the ALFA project, initiatives and activities** 1: Promotion of the ALFA Open Call, round 2: LinkedIn post 2: Promotion of theme day on the use of degassed biomass: LinkedIn post 3: Promotion of ALFA Open Call, round 2: LinkedIn post	**FBCD LinkedIn account followers: 11,875** representing the industry, research communities, innovators, investors, national, regional and local policy-makers and authorities. Statistics in total: 12,560 impressions of the posts all together

Food & Bio Cluster Denmark
11.007 followers
7mo • Edited •

Overvejer du at investere i biogasløsninger?...

Så kan du fra i dag ansøge om gratis hjælp til etablering eller forbedring af biogasanlæg!

ALFA Project tilbyder gratis, skræddersyet hjælp til biogasprojekter inden for landbrug med husdyrproduktion. Det kan fx være i form af sparring til investering eller teknisk support til at vurdere potentialet i at drive biogasanlæg.

Registrer dig og indsend din ansøgning **senest den 17. januar 2025**.

Du kan få:
- Sparring til dine forretnings- og investeringsbeslutninger om at investere i biogas
- Teknisk support til at vurdere potentialet og knowhow til at drive biogasanlæg
- Knowhow om markedsintroduktion
- Skræddersyet handlingsplan
- Mentorordninger og netværksmuligheder
- Samarbejde og synlighed i det europæiske biogasfællesskab

Sådan ansøger du:
1. Registrer dig på ALFA Engagement Platform: https://linkd.in/dtsrwPJf
2. Bekræft din registrering via e-mail
3. Udfyld det korte, online ansøgningsskema og formularen til informeret samtykke
4. Bekræft alle de oplysninger, du har modtaget i din e-mail

Læs mere og ansøg senest den 17. januar 2025: Se link i kommentarfeltet

Har du brug for mere information eller hjælp til at ansøge? Så kontakt Michael Stackler på mcs@foodbiocluster.dk.

#ALFAOpenCall #SustainableLivestock #BiogasInnovation

Show translation

4: Promotion of ALFA Open Call, round 2, last call: LinkedIn post

5: Promotion of ALFA promo video: LinkedIn post

6: Promotion of EU survey: LinkedIn post

7: Promotion of networking event in Denmark: "*Green Energy Connection*: *Biogas*, *Biomethane*, *and Beyond*": LinkedIn post

8: Wrap-up and thank-you post about the two-day event in Denmark: LinkedIn post

	Food & Bio Cluster Denmark 11,807 followers 2mo • Last week, we had the pleasure of welcoming the consortium partners from the ALFA Project to Denmark 🙂 The purpose of the visit was to explore Danish biogas facilities, exchange knowledge and experiences, and strengthen the network between the European partners and Danish stakeholders within the biogas sector with the common goal to expand biogas production across Europe ⏳ During the visit, we discussed opportunities for collaboration and shared insights on how we can support the sustainable development of the biogas sector across borders – both technologically and politically. **A big thank you** to all the Danish companies and organisations who contributed with knowledge, inspiration, and great energy 💡 🔗 A special thanks to Karsten Bo Sørensen from BioCirc, Mogens Møller Hansen and Henrik Møller from Aarhus University, Bruno Sander Nielsen from Biogas Danmark, Karsten Hjorth from Lundsby Renewable Solutions A/S, Stéphane Bosc from Ammongas, Frank Wennerberg from GreenFarm™, Andreas Gravholt from SEGES Innovation, Allan Olesen from GrønGas A/S and Niels Østergaard. ALFA project partners: Centre for Research & Technology Hellas (CERTH) Q-PLAN INTERNATIONAL AzzeroCO2 European Biogas Association PEDAL Consulting White Research APRE - Agenzia per la Promozione della Ricerca Europea Sustainable Innovations (SIE) #EuropeanDairyFarmers (EDF) It was a pleasure having you 🍋 ALFA project visit and workshops in Denmark - 27 pages 9: Promotion of 2 best practice videos from Danish biogas plants GrønGas A/S and Vrejlev Biogas: LinkedIn post	

	Food & Bio Cluster Denmark 11,807 followers 1mo • Today, Denmark is one of the most advanced biogas nations in the world – measured by technology, climate impact, and integration into the energy system This position has not come about by chance. It is the result of dedicated collaboration across the entire value chain – from biomass suppliers and plant operations to logistics, upgrading, and sales. Companies like **GrønGas A/S** and **Vrejlev Biogas** in Northern Jutland are great examples of how Danish producers successfully combine technological innovation with practical implementation. They demonstrate how we can efficiently handle diverse biomass types, optimise operations using digital tools, and achieve high upgrading efficiency – all while delivering stable volumes to the gas grid and providing attractive solutions to the market. **Hear how they make biogas work** - watch our short interviews with Allan Olesen (GrønGas A/S) and Laury Kristoffersen (Vrejlev Biogas): **Meet GrønGas A/S**: https://lnkd.in/db7ByhDz **Meet Vrejlev Biogas**: https://lnkd.in/dbGtnksu Thank you to everyone in the sector who continues to raise the bar and show what Denmark is capable of – and what we can export to the world. Biogas is no longer just about waste management – it is a powerful mix of energy production, climate action and business development #biogas #greentransition #renewableenergy *The videos are produced under the auspices of the* ALFA Project. 10: Promotion of FBCD webinar about straw to biogas: LinkedIn post 11: Promotion of ALFA survey 3: LinkedIn post	
Participation in events organized (online/ presence)	Participated in / organised 3 events promoting biogas in Denmark 	Stakeholders, technology providers, energy companies, research institutions, biogas plant owners and operators, consultants, farmers Total number of users reached: 628

	  Photos from Agromek 2024, where Michael Støckler gave a presentation about the ALFA project and services	
Newsletter mentions	Promotion of the ALFA project and services in Danish and English	Recipients of Food & Bio Cluster Denmark's Danish and English newsletters, including industry, research communities, innovators, investors, national, regional and local policy-makers and authorities The total number of subscribers of the FBCD DK and UK newsletters is: 5483 subscribers - and the number of ALFA relevant total sends during the ARC Second Round accounts for is 20,854 sends. Total number of clicks on links to website articles: 376

	newsletters during the period.	
Presentations	2 presentations promoting the ALFA project given at conferences, theme days and trade fairs	Stakeholders, technology providers, energy companies, research institutions, biogas plant owners and operators, consultants, farmers

	      Photos from the theme day on the use of degassed biomass on 6 November 2024	Total number of users reached: 628
Website posts / articles	2 articles / news items promoting the ALFA project on the FBCD website. 1: "Gratis hjælp til biogasprojekter" ("Free help for biogas projects") Read here 2: "Hjælp os med at blive klogere" ("Help us learn more") Read here	Research communities, farmers, industry, national, regional and local policy-makers and authorities Total numbers of views: Article 1: 32 Article 2: 37
Geographic coverage	**Denmark and Europe**	

4.5.3 Greece

The Awareness Raising Campaign (ARC) in Greece, titled *"Together for biogas: what goes around, comes around…in circular economy!"* and *"Driving clean energy to the fullest: let's allow biogas to express its true potential!"* (the greek titles actually used are *"Ας μάθουμε περισσότερα για τις δυνατότητες της κτηνοτροφίες στην παραγωγή βιοαερίου"* and *"Κτηνοτροφία και Περιβάλλον: Η επανάσταση του Βιοερίου")* aims to **enhance societal acceptance of biogas** through strategic **online actions and on-site events**. Q-PLAN, manager of the Greek ALFA Hub, with the support on occasion from CERTH, undertook activities designed to increase **public awareness and support** for biogas and therefore facilitate **societal change.**

A major component of the Greek ARC involves **social media campaigns**. These campaigns utilise posts with visuals, and infographics, to increase public awareness about biogas. **Forum engagement** is another key strategic component within the ARC. By participating in the ALFA forum, the campaign reaches audiences who are already interested in renewable energy and biogas, providing them with up-to-date information. Additionally, **attending on-site events** and conferences allows the campaign to promote biogas directly to stakeholders, creating opportunities for face-to-face engagement and the dissemination of ALFA results.

The campaign addresses several **misconceptions and barriers** to biogas adoption. One of the barriers that is tackled is the Not In My Back Yard **NIMBY phenomenon**. Furthermore, the campaign highlights the **environmental benefits** of biogas, emphasising its role in waste management and greenhouse gas reduction, and the overall circularity by design of biogas units. **Social barriers**, particularly **negative perceptions** surrounding biogas systems, are also addressed through the dissemination of information about their benefits, fostering acceptance among farmers and incentivising a wider group of biomass owners to produce and bring biogas to market. The campaign also highlights **biogas as an integral part of the bioeconomy and circular economy.** This message is directed not only at farmers and livestock producers but also at the wider community, including civil society, professionals, researchers, and other EU-funded projects, emphasising the socio-economic benefits of biogas for each stakeholder in the value chain.

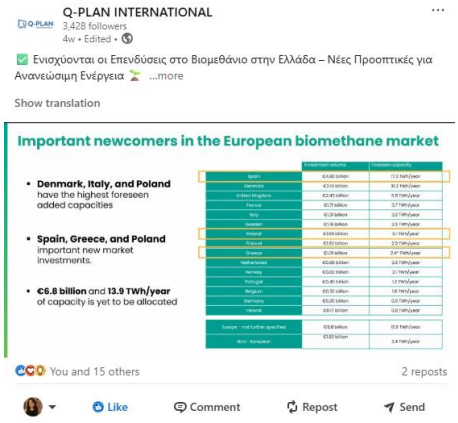
The general **target groups** for the ARC include **livestock farmers** who have not yet implemented **biogas plants, biogas supply chain entities, civil society, and associations**.

Partner involved	**Q-PLAN International (Q-PLAN) and Centre for Research and Technology Hellas (CERTH)**	
Total n. of actions	**19**	
Type of action	**Detailed description (Message)**	**Type of target audience & total numbers of users reached /involved with the Action**

Press Release	Open Call II Announcement in Hellenic Association of Biogas' (HABIO) website link	Biogas Stakeholders
Posts on social media channels (7 topics covered in total, 9 posts on three social media posts) **ALFA Forum (11 posts)**	Social Media posts "Livestock Farming goes Green" Social Media post "Why say YES to biogas?" Social Media Post "Do you want to contribute to the development of biogas in the livestock sector?"	Farmers, Civil Society Q-PLAN Social media accounts followers: 4576

Social Media Post "Renewable energy doesn't have to come from far away... It can start from your livestock farm!"

Social Media Post: Investments in Biomethane are Boosted in Greece – New Prospects for Renewable Energy



ALFA Forum Topic "Overcoming Common Barriers to Biogas Adoption"

ALFA Forum "Mitigating the

	Environmental Impact of Biogas Production: Sustainable Solutions" ALFA Forum "Community Benefits of Biogas Production" ALFA Forum "Biogas Systems: A Contribution to Circular Economy"	
Organization of or participation in events including presentations (online/ presence)	Event attendance in the context of Forward Green 2025, May 13th – 15th 2025, Thessaloniki, Greece. Q-PLAN hosted a stand, were the video of ALFA was in the loop and leaflets/bookmarks were distributed.	Industry, other business The total number of participants is not known. However, 39 ALFA leaflets were distributed and numerous attendants visited the stand and were briefed about ALFA.
Geographic coverage	Greece and Europe	

4.5.4 Italy

As for the first round, for the second round of the ALFA Awareness Raising Campaign (ARC), the Italian Hub maintained the title of the ARC campaign "Together for Biogas: what goes around, comes around…in circular economy!", translated into Italian as "Insieme per il Biogas!". Building on the lessons learned from the first round, the Italian Hub revised and enhanced several aspects of the original ARC strategy, incorporating and systematising the insights and adaptive

measures gained from previous experience. The strategy was expanded in terms of formats and target audiences, with a **particular focus on enhancing online activities**, such as web articles, which had proven successful in the previous round. As a result, the Italian Hub placed greater emphasis also on **stand-alone online activities**, targeting different audiences, and the structure of the articles was further refined to **combine technical and informative content with a social perspective**, with a particular **emphasis on inclusiveness and gender equality** in the biogas sector. This approach aimed to boost the visibility, relevance, and impact of these materials. In-person events were also organised, although to a lesser extent. For these activities, the Italian Hub consistently sought to ensure that all physical events were mirrored, amplified, and extended through digital channels, thereby increasing their reach and relevance.

The campaign focused on raising awareness of the benefits of biogas, debunking common misconceptions among farmers and the general public, and highlighting the real-world stories of livestock farmers. A pillar of this second round were the strategic synergies with several established media platforms. The Italian Hub continued its collaboration with *Ruminantia (https://www.ruminantia.it/)*, a specialised online magazine with a strong community that includes farmers, livestock farmers, biogas technology providers, agri-food professionals and animal welfare experts (e.g. veterinarians and associations). Furthermore, the articles have been then promoted through Ruminantia's social media pages, with dedicated posts, multiplied by many associates of its community.
Additionally, a new collaboration was also launched with the platform *She is a Scientist* (https://sheisascientist.com/) to promote gender equality in the biogas and renewable energy sectors. This resulted in the publication of 2 articles spotlighting women working in biogas, bioeconomy, or broader renewable energy fields.

The Italian Hub also collaborated in synergy with *QualeEnergia.it (https://www.qualenergia.it/)*, a leading Italian energy and environment magazine, to broaden outreach and highlight ALFA project activities, including the Mutual Learning Workshop and field visit held in Rome in April 2025. An important element of this collaboration was the interview with Antonio Trionfi Honorati, owner of a farm of excellence featured on the ALFA website and speaker at the Rome Mutual Learning Workshop, who shared his experience and the history of his farm with a biogas plant, highlighting both the positive and negative aspects with farmers and livestock farmers, researchers and policy experts involved in incentive programmes and biogas development.

Finally, ALFA has joined the European Bioeconomy Network - EuBioNet (https://eubionet.eu/), a proactive alliance of 160 EU-funded projects and initiatives that work to promote, communicate and support the bioeconomy. The alliance's main objective is to maximise efforts by increasing knowledge sharing, networking, mutual learning and the coordination of joint activities and events. In this framework, ALFA also had the opportunity to publish articles in the dedicated section of the alliance's website.

During this second round of the ARC, the Italian Hub focused on few selected key messages tailored to specific target audiences and delivered through appropriate communication channels, including:
- support for small-scale farmers by recommending biogas systems appropriately sized to their real manure availability, avoiding oversized, costly, and unrealistic solutions that contradict the logic of circular economy
- the necessity and potential of collaboration between small farmers for the joint development and implementation of biogas plants
- promotion of gender equality and women's work and research in farming, biogas, bioeconomy and the renewables in general

- the environmental benefits of biogas, targeting broader civil society.

The table below shows how the Italian Hub has combined the type of action with the messages selecting the proper target audience.

Partner involved	**APRE – Agenzia per la Promozione della Ricerca Europea & AzzeroCO2**	
Total n. of actions	**56**	
Type of action	**Detailed description (Message)**	**Type of target audience & total numbers of users reached /involved with the Action**
Posts on social media channels 27 posts on LinkedIn and Facebook	Throughout the second round of the awareness raising campaign, 28 posts were published, mostly on LinkedIn and Facebook. These were shared by both APRE and AzzeroCO2, as well as by the social media pages of the magazines and networks the Italian Hub collaborated with, such as Ruminantia and She is a Scientist social media pages. These posts generally served to promote the activities carried out and the results achieved, as well as to disseminate the published articles further. Some examples are provided below:	Farmers, Civil Society, Researcher, general public APRE LinkedIn account followers: 14.988 APRE Facebook account followers: 7.100 #Apreprogetti average views on LinkedIn & Facebook, per each post: >1000 AzzeroCO2 LinkedIn account followers: 9.681 Reactions to posts: 258 Interactions: 2.483

AzzeroCO2
9,504 followers
3mo •

In un'intervista a She is a scientist, progetto editoriale di promozione sociale per abbattere gli #stereotipi di genere e il #gendergap, la nostra Maria Assunta Vitelli, in qualità di esperta di #ComunitàEnergeticheRinnovabili, ha approfondito il ruolo che le CER possono giocare nel mix energetico locale, ma non solo.

Nel nostro confronto sono stati esplorati temi chiave come:
⚡ Lo sviluppo delle Comunità Energetiche Rinnovabili in Italia ed Europa
🚜 I vantaggi dell'integrazione del biogas nelle #CER per aziende agricole e comunità locali
👩‍🔬 L'importanza della partecipazione femminile nella transizione energetica
📄 Le sfide normative e le opportunità per il futuro

L'intervista si inserisce nel contesto di ALFA Project - finanziato da Horizon Europe e di cui AzzeroCO2 è partner - che mira a valorizzare il potenziale del biogas e a promuovere la diffusione delle energie rinnovabili.

Scopri di più nell'intervista completa!
Link nel primo commento👇

#EnergieRinnovabili #Biogas #ComunitàEnergetiche #Sostenibilità #DonneNellaScienza #EconomiaCircolare #TransizioneEnergetica

Show translation

APRE - Agenzia per la Promozione della Ricerca Europea
14,845 followers
6mo •

#APREprogetti 👉 ALFA Project open call per il sostegno a progetti di biogas nel settore zootecnico

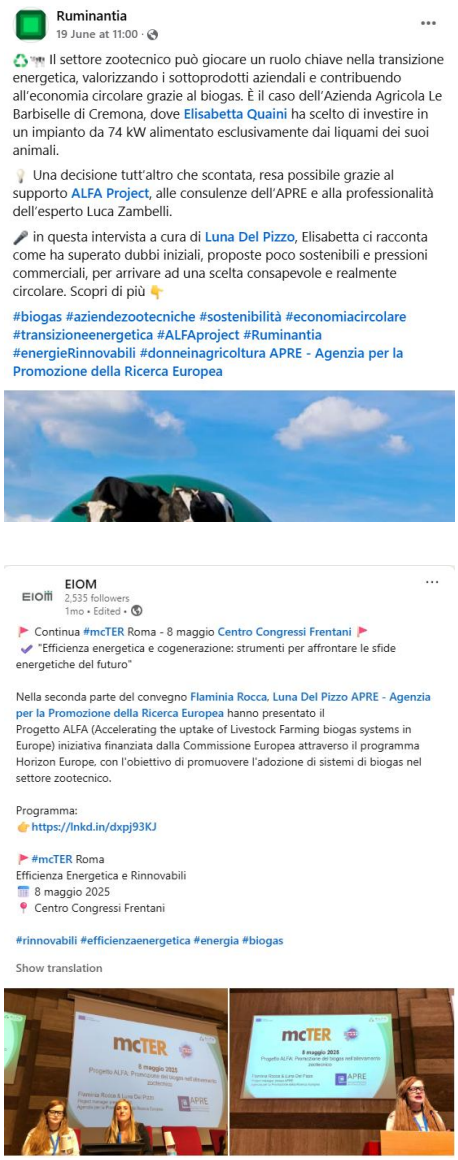
📢 Sei un allevatore o un'allevatrice e vorresti sapere di più sugli impianti di #biogas? Vuoi ricevere supporto gratuito e personalizzato? Partecipa ora al bando aperto di #ALFAproject, progetto di cui APRE è partner 🌾🐄

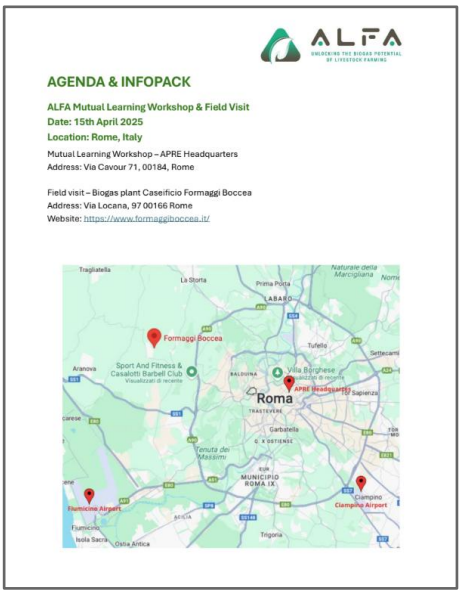
🎯 Il team di esperti di ALFA é pronto a offrire assistenza commerciale e tecnica, opportunità di networking e molti altri servizi! 🤝

📅 Invia la tua candidatura entro il 17 gennaio 2025

Maggiori informazioni ℹ️ https://bit.ly/4hTattp

Show translation

	 Ruminantia 19 June at 11:00 · Il settore zootecnico può giocare un ruolo chiave nella transizione energetica, valorizzando i sottoprodotti aziendali e contribuendo all'economia circolare grazie al biogas. È il caso dell'Azienda Agricola Le Barbiselle di Cremona, dove Elisabetta Quaini ha scelto di investire in un impianto da 74 kW alimentato esclusivamente dai liquami dei suoi animali. Una decisione tutt'altro che scontata, resa possibile grazie al supporto ALFA Project, alle consulenze dell'APRE e alla professionalità dell'esperto Luca Zambelli. in questa intervista a cura di Luna Del Pizzo, Elisabetta ci racconta come ha superato dubbi iniziali, proposte poco sostenibili e pressioni commerciali, per arrivare ad una scelta consapevole e realmente circolare. Scopri di più #biogas #aziendezootecniche #sostenibilità #economiacircolare #transizioneenergetica #ALFAproject #Ruminantia #energieRinnovabili #donneinagricoltura APRE - Agenzia per la Promozione della Ricerca Europea EIOM 2,535 followers 1mo • Edited • Continua #mcTER Roma - 8 maggio Centro Congressi Frentani "Efficienza energetica e cogenerazione: strumenti per affrontare le sfide energetiche del futuro" Nella seconda parte del convegno Flaminia Rocca, Luna Del Pizzo APRE - Agenzia per la Promozione della Ricerca Europea hanno presentato il Progetto ALFA (Accelerating the uptake of Livestock Farming biogas systems in Europe) iniziativa finanziata dalla Commissione Europea attraverso il programma Horizon Europe, con l'obiettivo di promuovere l'adozione di sistemi di biogas nel settore zootecnico. Programma: https://lnkd.in/dxpj93KJ #mcTER Roma Efficienza Energetica e Rinnovabili 8 maggio 2025 Centro Congressi Frentani #rinnovabili #efficienzaenergetica #energia #biogas Show translation 	
Posts on Biogas Forum	The Italian Hub published 6 articles on ALFA Biogas Forum: - The Italian Hub of ALFA project supports the Renewable Energy Community (REC) in Monchio delle Corti municipality. link - Renewable Energy Communities and Biogas. link - Cosa serve al biogas per guardare al futuro? - articolo di QualeEnergia.it link - Le comunità Energetiche Rinnovabili e il Biogas come opportunità per la sostenibilità e l'economia circolare - Intervista a	Farmers, civil society, policy makers, researchers, experts, energy providers Biogas Forum members: 166 Views of Italian Hub posts: 287

	Maria Assunta Vitelli - She is a Scientist web magazine. link - Small plants, big impact: new collaborative models for agricultural biogas – interview with Laura Brida, founder of Eco8 srl. link - Allevamento e biogas: il caso dell'Azienda Agricola Le Barbiselle di Elisabetta Quaini link	
Organization of or participation in events including presentations (online/ presence)	The Italian Hub attended 4 events: **Mutual Learning Workshop and field visit** (**Rome, 15 April, 2025**). The ML Workshop -organized by the ALFA italian Hub-was held at APRE's headquarters and focused on policies, actions, and measures to support the market uptake of biogas solutions. A networking lunch followed, and in the afternoon, participants visited the biogas plant at Marella Farm – Caseificio Formaggi Boccea.  ALFA AGENDA & INFOPACK ALFA Mutual Learning Workshop & Field Visit Date: 15th April 2025 Location: Rome, Italy Mutual Learning Workshop – APRE Headquarters Address: Via Cavour 71, 00184, Rome Field visit – Biogas plant Caseificio Formaggi Boccea Address: Via Locana, 97 00166 Rome Website: https://www.formaggiboccea.it/ 	Researchers, experts, biogas plant manufacturers and suppliers, companies operating in the energy sector, policy makers. > 19 participants at the Mutual Learning Workshop and (5 women out of 19) and 24 participants at the field visit (6 women out of 24) > 350+ visitors at MCTER Energy Efficiency and Cogeneration 2025 > 3.000+ visitors at Innovation Village 2025 > 50 attendees at BioRural Innovation Challenge – South-Western Europe Finals (Valladolid, Spain)

	  BioRural Innovation Challenge – South-Western Europe Finals (Valladolid, Spain): During this high-profile event dedicated to groundbreaking innovations in the circular bioeconomy, AzzeroCO2 presented the ALFA project in a dedicated session, sharing the key results achieved over the two and a half years of implementation. **MCTER Energy Efficiency and Cogeneration**: APRE participated in the event held in Rome and, in a plenary conference, presented the ALFA project, sharing the work the work carried out over two and a half years of the project, the results achieved, and two success stories that illustrate the concrete impact of the support offered by the Italian Hub. These success stories are those of Azienda Agricola Barbiselle (winner of the ALFA 2024 Open Call) and Bufala Buona - Azienda Agricola D'Angelo (winner of the ALFA 2025 Open Call): two excellent examples of how the project supported livestock farms to adopt innovative	

	solutions for improving energy efficiency through biogas, circular economy and animal welfare. **Innovation Village 2025**: APRE participated in the 10th edition of this leading innovation fair organized by various partners including local universities, CNR institutes, high-tech clusters, professional associations, and companies. During the thematic session *"Bio-based industries and research"*, APRE presented the ALFA project and its key achievements through a talk titled *"Boosting the adoption of biogas systems from livestock waste: the case of the European project ALFA."* The session explored the strategic role of the bioeconomy in driving industrial innovation, focusing on how research-industry collaboration can accelerate the adoption of sustainable, circular, and technology-driven solutions in response to current environmental challenges. 	

Articles	The Italian Hub published a total of 11 articles across different sectoral platforms: **2 articles on QualEnergia.it**: • One promoting ALFA's second Open Call targeting livestock farms link • One covering the Mutual Learning Workshop in Rome, featuring interviews with speakers, including a farmer who shut down his biogas plant and biogas and biomethane expert Lorenzo Maggioni link **5 articles on Ruminantia.it**: • One on the second Open Call of ALFA link • One promoting ALFA second survey on biogas awareness link • One on the March 2025 webinar co-organized by APRE and SIE link • One promoting the Mutual Learning Workshop & Field Visit in Rome link • An interview to Elisabetta Quaini - Azienda Agricola Le Barbiselle, winner of the first ALFA's Open Call link **Biogas: un alleato possibile, ma sconosciuto (EVENTO)** 6 Marzo, 2025 Il biogas rappresenta una risorsa spesso sottovalutata, ma con un potenziale straordinario per contribuire alla transizione verso un'economia circolare e sostenibile. Per approfondire questo tema, mercoledì **19 marzo 2025**, **dalle 11:00 alle 12:00**, si terrà il webinar "Biogas: un alleato possibile, ma sconosciuto", un evento organizzato nell'ambito del **progetto ALFA**, finanziato dall'Unione Europea attraverso il **programma Horizon Europe**. Questo appuntamento offrirà una panoramica completa sul ruolo del biogas nel rivoluzionare l'agricoltura sostenibile, riducendo l'impatto ambientale, migliorando l'efficienza energetica e promuovendo la resilienza economica delle aziende agricole. Attraverso interventi di esperti del settore, verranno esplorate le opportunità offerte dal biogas per creare sistemi energetici autosufficienti e rispettosi dell'ambiente. **2 articles on She is a Scientist**: • Interview with Maria Assunta Vitelli (AzzeroCO2) on renewable energy communities and biogas opportunities link	Farmers, civil society, researchers, experts, policy makers, energy providers. QualEnergia.it LinkedIn account followers: +21.000 QualEnergia.it Facebook account followers: +26.000 Ruminantia LinkedIn account followers: +2.000 Ruminantia Facebook account followers: +12.000 She is a Scientist LinkedIn account followers: +2.000 She is a Scientist Facebook account followers: +10.000

	• Interview with Chiara Pocaterra on bioeconomy and education link **1 article on EIOM Circuit (McTER events)**: • Promoting the ALFA project and its second open call link **1 article on European Bioeconomy Network** • Small plants, big impact: new collaborative models for agricultural biogas – interview with Laura Brida, founder of Eco8 srl link THE EUROPEAN BIOECONOMY NETWORK NEWS AND EVENTS ACHIEVEMENTS PROJECTS PARTNER IN Small plants, big impact: new collaborative models for agricultural biogas – interview with Laura Brida, founder of Eco8 srl The European project **ALFA - *"Upscaling the market uptake of renewable energy by unlocking the biogas potential of livestock farming"*** aims to promote the large-scale adoption of agricultural biogas as a driver for a sustainable energy transition in Europe. Funded by the Horizon Europe programme, the project supports livestock farms in starting up or modernising biogas plants, providing commercial and technical assistance, capacity building and awareness raising activities, while promoting innovative collaborative approaches. During the Mutual Learning Workshop and field visit organised in Rome in April 2025, a common challenge emerged among many Italian stakeholders: although interest in biogas is growing, small and medium-sized farmers face economic, bureaucratic, and operational barriers. In this context, cooperation between farms—for sharing resources, by-products, and facilities—represents a concrete yet still underexplored opportunity. This is the model promoted by Laura Brida, expert at the Circular Economy Cluster in Bolzano and co-founder of the start-up Eco8 srl. Through digital solutions and local network projects, she has long been advocating for cooperative models that make biogas accessible even to smaller farms. The idea is simple yet ambitious: to unlock the potential of agricultural biogas in Italy through shared development models and decision-support tools. As part of the project's awareness-raising campaign, Luna del Pizzo, project manager at **APRE (Agency for the Promotion of European Research)**, partner in the ALFA project, interviewed her to explore the potential of this approach and understand what is really needed today to spread agricultural biogas in Italy.	
Website post	The Italian Hub published 3 website post: **1 website post on the website of the University of Brescia** • Promoting the Italian Mutual Learning Workshop and field visit link **1 website post on the website of mcTERnews** • Promotion of the ALFA project presentation at mcTER, with slide sharing link **1 website post on the European Bioeconomy Network** • Promoting the ALFA project link	Farmers, civil society, researchers, experts, policy makers, biogas plant manufacturers and suppliers, companies operating in the energy sector.
Geographic coverage	Italy and Europe	

4.5.5 Slovakia

The Awareness Raising Campaign (ARC) in Slovakia, as for the first round, also for the second round, was held in line with the common ALFA campaign, titled "Together for biogas: what goes around, comes around… in circular economy!" (in Slovakia using the short version – **"Together for biogas" – translated to Slovak: "Spoločne za bioplyn!").** The aim of the campaign was continuously not only to target the general barriers (common to all Hubs), but the most critical ones for the Slovak area, such as:

- Lack of knowledge about biogas systems and their benefits.
- Negative perceptions and misconceptions surrounding biogas systems such as concerns about odour, noise, or environmental impacts.
- Financial constraints stemming from high initial investment costs.
- Complex administrative and legal procedures associated with implementing biogas systems.

During the second round of the campaign, PEDAL Consulting s.r.o., as the representative of the Slovak ALFA Hub, placed particular emphasis on the issue of financing—highlighted as one of the key barriers to the wider uptake of biogas technologies in Slovakia. The campaign focused on raising awareness about available funding sources and financial mechanisms supporting biogas deployment.

The PEDAL team in collaboration with the Slovak Biogas Association (SBA), initiated activities aimed at **enhancing public awareness about biogas**. The communication plan developed before the 1st ARC round was maintained - with a list of topics and subtopics, format, communication tools and channels, as well as the campaign timetable, covering structured thematic content, coordinated messaging, and consistent use of digital and event-based outreach channels.

While the Slovak Biogas Association continued to serve as the primary campaign partner, several other organisations actively contributed to the visibility, the impact and outreach of the campaign. These included Bioeconomy Cluster, Circular Slovakia (Platform for Circular Economy), The Agricultural Knowledge and Innovation Institute, CYRKL…, who were engaged to promote ALFA project, its activities and results.

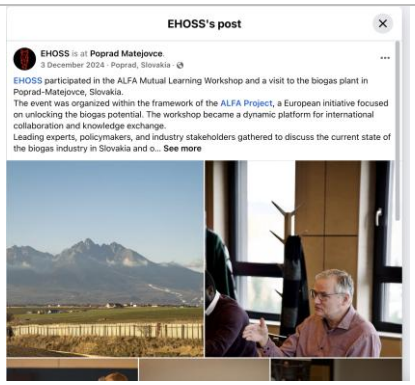
The campaign's target group spanned a wide range of stakeholder groups, including the general public, biogas plant owners, managers and operators, farmers, agriculture cooperatives and local authorities or policy makers - essentially anyone with an interest in biogas and the transition to green energy.

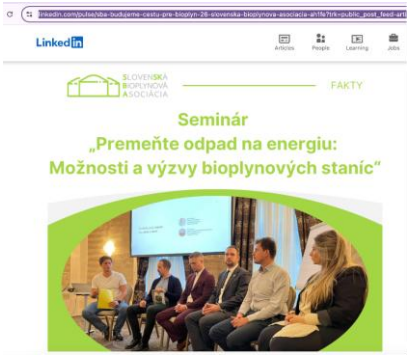
ARC activities within the Slovak Hub primarily leveraged **digital tools,** including published articles on PEDAL website and targeted posts on social media platforms such as LinkedIn, Facebook, Twitter, and Instagram. In addition to online visibility, in-person and hybrid events played a critical role in fostering engagement and spreading key messages across diverse stakeholder groups. All activities were implemented in close coordination with SBA to ensure coherence, credibility, and sectoral relevance.

Partner involved	**PEDAL Consulting s.r.o. (PEDAL) together with Slovak Biogas Association (SBA)**

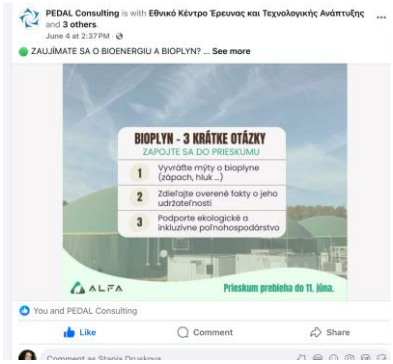
Total n. of actions	In total, **61 awareness-raising actions** were completed during the second round of the campaign. These spanned across digital, media, and event-based formats.
	
	Throughout the 2nd round of the awareness raising campaign, PEDAL **has published:**
	● **1 press release** was prepared and distributed to 102 Slovak medias, announcing the launch of the 2nd ALFA open call and inviting interested parties to apply for free technical and business support services
	● **8 articles/website posts were published on PEDAL's website**, five of which were part of a dedicated finance-focused series:
	  ● An overview of financial benefits of biogas plants
	  ● National and international funding opportunities
	  ● Access to international grant schemes
	  ● Horizon Europe funding for biogas initiatives
	  ● Cascade funding options for biogas
	● **2 posts were shared on Biogas Forum**, receiving a total of 237 views (up to 16 June). These highlighted the hybrid networking event in Aarhus and discussed biogas as a renewable energy source from biowaste.
	● **46 social media posts** were published through PEDAL's channels (LinkedIn, Facebook, Instagram, and X/Twitter), and were further amplified by partners
	represented ALFA activities on:
	● 1 conference - 10th Annual Slovak Biogas Association Conference having an ALFA booth there for two days
	organized:
	● 4 events (1 seminar, 1 webinar, 1 Mutual learning workshop and field visit, 1 networking event)	

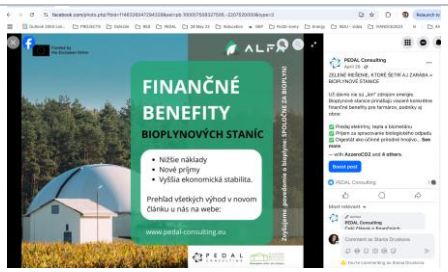
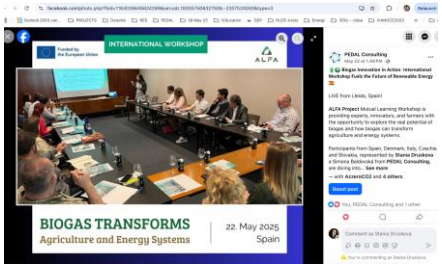
Type of action	**Detailed description (Message)**	**Type of target audience & total numbers of users reached /involved with the Action**
Posts on social media channels	About 46 posts were published via all four PETAL' social media (FB, LI, X, IG) as well as SM channels of some other organisations such as SBA, Bioeconomy Cluster, Circular Slovakia, The Agricultural Knowledge and Innovation Institute, CYRKL… and/or participants on some events (such as EHOSS:	Civil society mostly, but also to the farmers, agricultural cooperatives, biogas owners/producers/managers, anybody interested in biogas, policy makers… - cca total views/impression/reach/: 2095 PEDAL Linkedin account followers: 1931 followers; FB account: 351 followers; IG & TW accounts


EHOSS's post
EHOSS is at Poprad Matejovce.
3 December 2024 · Poprad, Slovakia ·
EHOSS participated in the ALFA Mutual Learning Workshop and a visit to the biogas plant in Poprad-Matejovce, Slovakia.
The event was organized within the framework of the ALFA Project, a European initiative focused on unlocking the biogas potential. The workshop became a dynamic platform for international collaboration and knowledge exchange.
Leading experts, policymakers, and industry stakeholders gathered to discuss the current state of the biogas industry in Slovakia and o... See more


LinkedIn
SLOVENSKÁ BIOPLYNOVÁ ASOCIÁCIA
FAKTY
Seminár
„Premeňte odpad na energiu:
Možnosti a výzvy bioplynových staníc"

PEDAL Consulting is with Εθνικό Κέντρο Έρευνας και Τεχνολογικής Ανάπτυξης and 4 others.
May 27 at 10:15 AM ·
AKO ZÍSKAŤ FINANCIE NA BIOPLYN Z PROGRAMU Horizont Európa – krok za krokom ... See more
ALFA
FINANCIE
Z PROGRAMU HORIZONT EURÓPA
KOMPLEXNE A PRAKTICKY
Ako sa zorientovať:
• hľadanie vhodných výziev;
• zostavenie konzorcia a oslovovanie partnerov;
• úspešný projektový návrh;
• na čo si dať pozor.
NOVÉ u nás na webe:
www.pedal-consulting.eu
You and PEDAL Consulting
1 comment


PEDAL Consulting is with Εθνικό Κέντρο Έρευνας και Τεχνολογικής Ανάπτυξης and 3 others.
June 4 at 2:37 PM ·
ZAUJÍMATE SA O BIOENERGIU A BIOPLYN? ... See more
BIOPLYN - 3 KRÁTKE OTÁZKY
ZAPOJTE SA DO PRIESKUMU
1 Vyvráťte mýty o bioplyne (zápach, hluk ...)
2 Zdieľajte overené fakty o jeho udržateľnosti
3 Podporte ekologické a inkluzívne poľnohospodárstvo
ALFA
Prieskum prebieha do 11. júna.
You and PEDAL Consulting
Like
Comment
Share

	 	
Participation in events organized (online/ presence)	Beyond digital engagement, ARC also relied on in-person and online events to create spaces for dialogue, knowledge exchange and awareness raising: **Regional capacity building seminar: Waste-to-energy** (15.10.2024, Bratislava, SK) - 42 participants (out of which 16 women) **10th Annual Slovak biogas association conference** (7. - 8. 11. 2024, Zvolen, SK) - cca 150 participants - ALFA has a booth there:	In total, over **350 individuals** were reached directly through events organized or co-organized by PEDAL during the campaign. Participants included a mix of domestic and international stakeholders, such as biogas and technology providers, farmers, municipal representatives, consultants, researchers, and green energy advocates. Moreover, PEDAL's ALFA team participated in all **mutual learning workshops abroad** (in Aarhus/Denmark, Rome/Italy, and Lleida/Spain), bringing Slovak stakeholders to contribute and learn from international peers. This supported cross-border collaboration, networking and mutual learning within the broader European biogas context.

Webinar Waste-to-energy (14.11.2024, online) - 46 participants

ML Workshop: Increasing the efficiency of biogas plants/Alternative revenue sources for biogas plants (26.11.2024) - workshop's participants 25/8 female; field visit: 24/7 female

Hybrid Networking event: Green Energy Transition: Biogas, Biomethane and Beyond (2.4. 2025, Aarhus, DK) - Onsite – 21 participants / 6 female; online – 31 registered/ 14 female

The PEDAL's ALFA team actively participated also on all mutual learning workshops - in

	Aarhus/DK; Rome/IT and Lleida, ES and brought there participants from Slovakia in order to foster the mutual learning and exchange of good practices.	
Posts on Biogas Forum	**2 original posts were published on the Biogas Forum**, an ALFA community platform dedicated to the exchange of knowledge, experiences, and best practices within the biogas and biomethane sectors. The posts promoted: ● ALFA hybrid networking event Green Energy Connections: Biogas, Biomethane and Beyond (https://alfaep.eu/community/alfa/alfa-hybrid-networking-event-green-energy-connections-biogas-biomethane-and-beyond/) - 136 views ● Biogas and Biomethane: Renewable Energy from Biowaste (https://alfaep.eu/community/alfa/alfa-hybrid-networking-event-green-energy-connections-biogas-biomethane-and-beyond/) - 201 view	The posts targeted the whole biogas value chain of biogas stakeholders, incl. biogas owners/producers, farmers, civil society, policy makers, researchers, experts… Together, the posts received **337 views.**
Press release	**1 press release** about 2nd open call: https://www.dropbox.com/scl/fi/1lmqbklawz85z6p8lrein/Tlacova_sprava_ALFA_vyzva2_bioplyn_sk_09122024.pdf?rlkey=bhbf0prud3yzm7k9bta6fsfa2&dl=0	**PR** was prepared and distributed to **102 Slovak medias**, announcing the launch of the 2nd ALFA open call and inviting interested parties to apply for free technical and business support services

	PEDAL CONSULTING Tlačová správa **Záujemcovia o bioplynové riešenia môžu opäť žiadať o bezplatnú obchodnú a technickú podporu** *31. októbra 2024	Martin; V druhom kole otvorenej výzvy na podporu bioplynových projektov možno získať podporné, na mieru šité služby obchodného a technického charakteru. Poskytovať ich budú partneri projektu ALFA – Scaling Up the Market Uptake of Renewable Energy Systems by Unlocking the Biogas Potential of Agriculture and Livestock Farming, ktorý je financovaný EÚ. Pomoc na Slovensku koordinuje PEDAL Consulting, s.r.o. Žiadosť je potrebné podať v slovenčine do 17. januára 2025.* **Čo môžu žiadatelia získať** Praktickú pomoc pri vývoji a implementácii bioplynových technológií získa 50 vybraných poľnohospodárskych projektov zo sektoru bioplynu a v živočíšnej výrobe. Prispôsobené budú jedinečným požiadavkám vybraného projektu v nasledovných oblastiach: SLUŽBY OBCHODNEJ PODPORY SLUŽBY TECHNICKEJ PODPORY V porovnaní s prvým kolom majú záujemcovia na výber aj novú technickú službu – Katalóg technológií: Charakteristika čistiacich a modernizačných zariadení. **Oprávnené projekty** O podporu môžu žiadať nasledovní uchádzači: • Farmári, ktorí chovajú hospodárske zvieratá. • Chovateľia hospodárskych zvierat s bioplynovými stanicami, ktorí chcú zvýšiť účinnosť a funkčnosť svojich stanic. • Chovateľia hospodárskych zvierat bez bioplynových stanic, ktorí chcú inštalovať bioplynový systém (úroveň investičnej pripravenosti). • Bioplynové stanice využívajúce, okrem iných druhov vstupných surovín, aj maštaľnú hnoj, ktoré plánujú zlepšiť udržateľnosť svojho projektu a maximalizovať energetickú produkciu. • Združenia poľnohospodárov, družstvá, ktoré chcú inštalovať alebo zlepšiť súčasný bioplynový systém. PEDAL Consulting Securing the right funding for the right problems Adress. Bjornsonova 5/31, 03601 Martin, Slovakia Email. secretariat@pedal-consulting.eu Website. www.pedal-consulting.eu PEDAL CONSULTING • Energetické komunity, ktoré chcú nainštalovať/zlepšiť bioplynový systém využívajúci i maštaľnú hnoj, ako jednu zo svojich vstupných surovín, s cieľom podporiť komunitné iniciatívy v oblasti obnoviteľných zdrojov energie. • Zainteresované strany, ktoré majú záujem investovať do chovu hospodárskych zvierat pomocou bioplynových riešení. **Časový harmonogram** 31. októbra 2024 – 17. januára 2025 Registrácia a prihlasovanie projektov v druhom kole. 20. januára 2025 – 31. januára 2025 Hodnotenie podaných projektov a výberové konanie. 3. februára 2025 – 30. mája 2025 Poskytovanie podporných služieb, akčný plán a spätná väzba. **Registrácia a žiadosť o podporu** Žiadosť je potrebné podať po registrácii na webovej stránke projektu „ALFA Engagement Platform" najneskôr do **17. januára 2025, 17.00 h** stredoeurópskeho času: https://shorturl.at/vxFJ1. Všetky podrobné informácie k otvorenej výzve sú dostupné aj v slovenčine: https://alfaep.eu/open-call-sk/ **Iniciatíva ALFA** Cieľom projektu ALFA je využiť potenciál výroby bioplynu z chovu hospodárskych zvierat; posilniť širšie využívanie obnoviteľných zdrojov energie a zvýšiť podiel bioenergie ako základného zdroja energie. Je financovaný Európskou úniou, v rámci akčného programu pre výskum a inovácie Horizont Európa. **O PEDAL Consulting, s.r.o.** PEDAL Consulting je inovatívna manažérsko-konzultačná firma. Viac ako 12 rokov navrhuje a implementuje partnerstvá a modely spolupráce, s cieľom riešiť sociálne výzvy. Je najúspešnejšou spoločnosťou na Slovensku, čo sa týka počtu schválených a implementovaných grantov v rámci programov Európskej komisie: Horizont 2020, Horizont Európa a COSME. Medzinárodný tím sa usiluje o podávanie kvalitných výsledkov pre svojich klientov – z verejného, ako aj súkromného sektora, z rôznych oblastí priemyslu, krajín a politík. PEDAL Consulting má rozšírenú sieť partnerov vo všetkých členských krajinách EU, ostatnej Európe, Eurázii, Afrike, v krajinách MENA-y, Južnej Amerike a Spojených štátoch amerických. **Kontakt pre komunikáciu s médiami:** Karolína Mendelová, PEDAL Consulting s.r.o. Project Manager e-mail: k.mendelova@pedal-consulting.eu PEDAL Consulting Securing the right funding for the right problems Adress. Bjornsonova 5/31, 03601 Martin, Slovakia Email. secretariat@pedal-consulting.eu Website. www.pedal-consulting.eu	
Articles/Website posts	**7 articles:** ● **2nd ALFA Open call -** https://www.pedal-consulting.eu/zaujemcovia-o-bioplynove-riesenia-mozu-opat-ziadat-o-bezplatnu-obchodnu-a-technicku-podporu/ - This article invited Slovak stakeholders to apply for free technical and business support under the ALFA project, clearly outlining	Biogas owners/providers/operators, farmers, agricultural cooperatives, civil society, anybody interested in biogas, policy makers (regional - SK and international - both SK and EN) Total # of views: 57

eligibility, scope of services, and application procedures.

- **Website Artcile - ARC - 12 Q&A about biogas -** https://www.pedal-consulting.eu/bioplyn-najcastejsie-otazky-a-odpovede/ - Designed in a clear Q&A format, this article addressed common concerns and misconceptions about biogas, including topics such as odour, safety, profitability, feedstock types, and environmental benefits.

- **Invitation to Networking event: Green Energy Connection: Biogas, Biomethane and Beyond -** https://www.pedal-consulting.eu/green-energy-connection-biogas-biomethane-and-beyond/ - A promotional piece detailing the agenda, speakers, and registration process for the ALFA networking event held in Aarhus, Denmark, with the goal of attracting Slovak and international participants to

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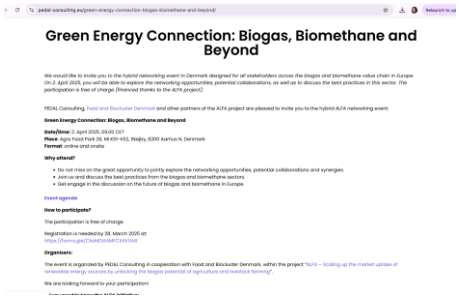
foster the mutual learning and best practices exchange.



Green Energy Connection: Biogas, Biomethane and Beyond

We would like to invite you to the hybrid networking event in Denmark designed for all stakeholders across the biogas and biomethane value chain in Europe. On 2. April 2025, you will be able to explore the networking opportunities, potential collaborations, as well as to discuss the best practices in this sector. The participation is free of charge (financed thanks to the ALFA project).

PEDAL Consulting, Food and Biocluster Denmark and other partners of the ALFA project are pleased to invite you to the hybrid ALFA networking event:

Green Energy Connection: Biogas, Biomethane and Beyond

Date/time: 2. April 2025, 09:00 CET
Place: Agro Food Park 26, MI K51-K52, Skejby, 8200 Aarhus N, Denmark
Format: online and onsite

Why attend?

- Do not miss on the great opportunity to jointly explore the networking opportunities, potential collaborations and synergies.
- Join us and discuss the best practices from the biogas and biomethane sectors.
- Get engage in the discussion on the future of biogas and biomethane in Europe.

Event agenda

How to participate?

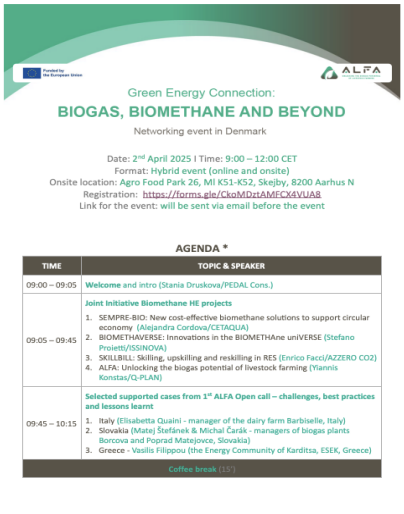
The participation is free of charge.

Registration is needed by 28. March 2025 at:
https://forms.gle/CkoMDztAMFCX4VUA8

Organisers:

The event is organized by PEDAL Consulting in cooperation with Food and Biocluster Denmark, within the project "ALFA – Scaling up the market uptake of renewable energy sources by unlocking the biogas potential of agriculture and livestock farming".

We are looking forward to your participation!



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ALFA

Green Energy Connection:

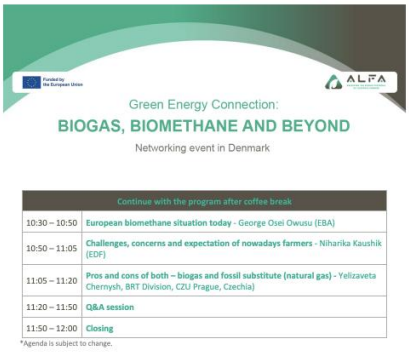
BIOGAS, BIOMETHANE AND BEYOND

Networking event in Denmark

Date: 2nd April 2025 I Time: 9:00 – 12:00 CET
Format: Hybrid event (online and onsite)
Onsite location: Agro Food Park 26, MI K51-K52, Skejby, 8200 Aarhus N
Registration: https://forms.gle/CkoMDztAMFCX4VUA8
Link for the event: will be sent via email before the event

AGENDA *

TIME	TOPIC & SPEAKER
09:00 – 09:05	Welcome and intro (Stania Druskova/PEDAL Cons.)
09:05 – 09:45	Joint Initiative Biomethane HE projects 1. SEMPRE-BIO: New cost-effective biomethane solutions to support circular economy (Alejandra Cordova/CETAQUA) 2. BIOMETHAVERSE: Innovations in the BIOMETHAne uniVERSE (Stefano Proietti/ISSINOVA) 3. SKILLBILL: Skilling, upskilling and reskilling in RES (Enrico Facci/AZZERO CO2) 4. ALFA: Unlocking the biogas potential of livestock farming (Yiannis Konstas/Q-PLAN)
09:45 – 10:15	Selected supported cases from 1st ALFA Open call – challenges, best practices and lessons learnt 1. Italy (Elisabetta Quaini - manager of the dairy farm Barbiselle, Italy) 2. Slovakia (Matej Štefánek & Michal Čarák - managers of biogas plants Borcova and Poprad Matejovce, Slovakia) 3. Greece - Vasilis Filippou (the Energy Community of Karditsa, ESEK, Greece)
Coffee break (15')	



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Networking event in Denmark

Continue with the program after coffee break	
10:30 – 10:50	European biomethane situation today - George Osei Owusu (EBA)
10:50 – 11:05	Challenges, concerns and expectation of nowadays farmers - Niharika Kaushik (EDF)
11:05 – 11:20	Pros and cons of both – biogas and fossil substitute (natural gas) - Yelizaveta Chernysh, BRT Division, CZU Prague, Czechia)
11:20 – 11:50	Q&A session
11:50 – 12:00	Closing

*Agenda is subject to change.

Finance-Focused Series: Recognising that financial barriers are among the most critical obstacles to biogas development in Slovakia, PEDAL launched a five-part article series dedicated to funding options and financial strategies for biogas projects:

- **ALFA ARC - FINANCE - 1. Financial benefits -** https://www.pedal-consulting.eu/bioplynove-
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all relevant stakeholders and/or civil society interested in biogas (regional - SK language)
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	stanice-prehlad-financnych-benefitov/ - An overview of the economic advantages associated with biogas, including energy self-sufficiency, cost savings, and income generation through biogas/biomethane sales. ● **ALFA ARC - FINANCE - 2. Sources -** https://www.pedal-consulting.eu/narodne-a-medzinarodne-zdroje-financovania-bioplynovych-projektov/ - the existing support schemes at national and EU levels, describing eligibility and application tips for Slovak biogas stakeholders. ● **ALFA ARC - FINANCE - 3. Grants -** https://www.pedal-consulting.eu/ako-hladat-medzinarodne-vyzvy-pre-financovanie-bioplynu/ - A practical guide on how to identify and apply for EU-level calls relevant to renewable energy and bioeconomy projects. ● **ALFA ARC - FINANCE - 4. Finance from the Horizon Europe -** https://www.pedal-consulting.eu/ako-financovat-vystavbu-bioplynovej-stanice-z-programu-horizont-europa/ - A deep dive into the opportunities available under Horizon Europe, focusing on calls that support biogas research, innovation, and demonstration actions. ● **ALFA ARC - FINANCE - 5. Cascade Funding -** https://www.pedal-consulting.eu/kaskadove-financovanie-a-bioplyn-preco-nie/ - introduction to cascade funding (FSTP), explaining	

	how small Slovak companies and innovators can access funding through larger EU-funded projects.	
Geographic coverage	Slovakia and Europe	

4.5.6 Spain

The Spanish Hub actions have focused on raising awareness about the ALFA project and building a network of relevant stakeholders in Spain. Key players engaged include AEBIG (the Spanish Biogas Association) and IDAE (the Spanish Institute for the Diversification and Saving of Energy). Communication efforts have evolved from initial awareness campaigns through Sustainable Innovations' channels, to the strategic promotion of the project's services and the open call. This dual approach has aimed to not only publicize the initiative but also to build a foundational understanding of the biogas landscape in Spain, making use of educational content and context-specific data.

Social media has played a central role in this communication strategy. Over the past months, SIE has shared a consistent stream of posts—including promotional materials, infographics, webinar announcements, event recaps, and biogas-related insights. These include highlights from the ALFA Project Review Meeting in Brussels link, the SEPOR seminar in Lorca link, and the awareness campaign about Spain's untapped biogas potential link. Specific milestones such as webinars with PEDAL Consulting link and APRE link, as well as the Spanish Mutual Learning Workshop promotion and recap, have helped strengthen sectoral engagement. Furthermore, outreach has expanded via two joint press releases with Cycle0 published in national and industry-specific media such as *El Periódico de la Energía*, *BioEnergy News*, and *Industria Química*, helping to contextualize the project's relevance within the broader energy transition narrative.

Future actions will intensify content production and publication frequency across channels. While the first phase relied on a few impactful actions—like webinars, surveys link, videos link, and stakeholder-specific mailings—upcoming efforts will focus on scaling visibility and participation. This includes leveraging media impact analytics link, expanding informational content (e.g., the ALFA whitepaper link), and continuing direct engagement with livestock associations, 22 of which were already contacted by phone and email following the second press release campaign.

Partner involved	**Sustainable Innovations (SIE)**

Total n. of actions	The Spanish Hub has implemented a wide range of communication and engagement activities within the ALFA Project. These actions have combined social media outreach, event organization, stakeholder interaction, formal presentations, and online publications. The strategy has focused on raising awareness about biogas opportunities, fostering knowledge exchange through multi-actor events, and promoting participation in the project's services. The mix of formats and channels used reflects a coherent and sustained effort to engage relevant audiences across the Spanish biogas ecosystem.	
Type of action	**Detailed description (Message)** The communication efforts focused first on raising awareness about the ALFA project, then shifted towards promoting the open call and sharing technical knowledge about biogas in Spain. Messages ranged from event promotions, survey dissemination, and whitepaper releases to educational posts about biogas benefits and national potential. Strategic collaborations with partners like PEDAL Consulting, APRE, and Cycle0 supported wider outreach. The Spanish Mutual Learning Workshop was both promoted and reported through various channels. These messages were disseminated via social media posts, press releases published in sectoral and national media, public webinars, and the SIE corporate website.	**Type of target audience & total numbers of users reached /involved with the Action** The target audience included industry stakeholders, energy professionals, public administration bodies, livestock and farming associations, project partners, and the general public interested in renewable energy.
Posts on social media channels	ALFA Project webinar on livestock biogas opportunities and benefits Webinar on waste-to-energy biogas challenges with PEDAL Consulting Spain's untapped biogas potential under ALFA Project initiative Biogas seminar with expert speakers at SEPOR in Lorca	The total number of users reached through the ALFA Project social media posts (based on LinkedIn impressions) is 10,632.

	ALFA Project Review Meeting in Brussels Spanish Survey for the awareness raising activities ARC: Poster about the biogas benefits (1) Registration link for the APRE and SIE webinar ARC: Poster about the biogas benefits (2) ALFA Survey about the biogas knowledge Press Release Impacts Spanish Mutual Learning Workshop promotion Spanish Mutual Learning Workshop Whitepaper MLW Denmark + GA Video about Biogas 2nd Video about Biogas	
Participation in events organized (online/ presence)	The Spanish Hub co-organized and participated in several high-impact events to foster knowledge exchange and stakeholder engagement around biogas. These included a **webinar with PEDAL Consulting** focused on waste-to-energy biogas challenges, and a **joint webinar with APRE** titled *"Biogas: A Possible, Yet Unknown Ally"*, aimed at promoting circular energy solutions in agriculture as well as another webinar with EBA and WR about the **Biogas**	An average of 20-30 participants were present in the events. included industry stakeholders, energy professionals, public administration bodies, livestock and farming associations, project partners

	Framework Conditions . Additionally, the team held a **biogas seminar at SEPOR (Lorca)**, a major agri-industrial fair in Spain, gathering farmers, associations, and public authorities. Finally, Sustainable Innovations coordinated the **Spanish Mutual Learning Workshop (MLW)** in Lleida in collaboration with CycleØ, featuring expert speakers from Spain, Italy, and Slovakia and combining policy, technical, and business perspectives.	
Impacts on Media as part of the MLW with CYCLEO	IndustriaAmbiente OpenPR ElPeriodico de la Energia BioEnergy News Salón del Gas Renovable Industria Química	
Website post	Sustainable Innovations published a brief of the successful Mutual Learning Workshop where they shared the key insights and outputs generated during the session. The website was published in Spanish and English.	English: https://sustainableinnovations.eu/sie-cycleo-organise-mutual-learning-workshop-lleida/ Spanish: https://sustainableinnovations.eu/es/sie-cycle0-organizan-mutual-learning-workshop-lerida/
Geographic coverage	The communication and engagement actions of the Spanish Hub have primarily focused on the Spanish territory, with most social media posts targeted to Spanish-speaking audiences. Content was tailored to national stakeholders, including farmers, associations, and public entities. However, the outreach extended beyond national borders through European-level engagement. This included participation in and organization of online events such as webinars, as well as the Spanish Mutual Learning Workshop (MLW) held in Lleida, which brought together participants and speakers from Spain, Italy, Slovakia, and Denmark, fostering cross-border knowledge exchange on biogas practices.	

4.6 Feedback and lessons learnt:

Taking the lessons learned throughout the first round into account, all Hubs-coordinated by APRE-adjusted their strategies for the second round, continuing their efforts to build public awareness of biogas and social acceptance in each country. As expected, the diversity of local contexts required Hubs to tailor their implementation plans accordingly, resulting in regionally customised campaigns. The challenges identified during the first round also emerged in the second round, but were tackled with greater awareness, tools, and collaboration among the Hubs, yielding positive results overall.

During the 2nd round, the following challenges and lessons were observed:

1. **Midpoint and final data collection challenges**: As with the baseline data collection in the first round, collecting consistent data during the midpoint and final surveys proved difficult due to the campaign's wide and diverse target audience. Differences in awareness levels, cultural perceptions, and regional outreach made it hard to gather a uniform sample across the three rounds, complicating the comparison of evolving perceptions and behaviours. In fact, some Hubs succeeded in collecting higher numbers of responses than others. Nevertheless, comparative analysis of the three survey rounds confirmed a measurable increase in social acceptance, especially regarding socio-economic benefits and inclusive & sustainable agriculture development. The positive but lower increase in relation to environmental benefits is likely due to already high awareness levels at the baseline.

2. **Engagement through livestock fairs and peer examples**: A highly effective strategy was organising events that involved livestock farmers who already operate biogas plants (including small to medium-sized ones), or those actively pursuing one. This peer-to-peer approach proved especially successful in attracting the interest of other farmers who wanted to “see and touch” real-world experiences. On-site events such as mutual learning workshops and field visits helped to establish connections and build trust with farmers and between them and other stakeholders. Some Hubs were able to involve trade associations more closely, where possible, and their collaboration supported dissemination and participation. However, an ever-closer relationship with trade associations remains a goal to be pursued.

3. **Promotion of webinars through partner networks**: Promoting online events through well-established partner channels helped increase visibility, although challenges remained in reaching certain farming audiences.

4. **Engagement of institutional actors and policy influencers**: Hubs have recognised that a key factor in increasing the impact and legitimacy of awareness campaigns in the future is to involve government bodies and regulatory actors more in reposting campaign content on social media or in newsletters. Some Hubs explored these possibilities during the campaign, although not always with the same success, but in general this aspect remains fundamental and should continue to be pursued.

5. **Leveraging networks and associations for dissemination**: Some Hubs identified this as the most efficient strategy for expanding outreach. Articles and announcements were shared via sectoral platforms (e.g., ruminant farming, renewable energy, women in

science). In this round, certain Hubs placed increased focus on gender equality, collaborating with platforms dedicated to gender issues and sharing success stories of women in renewable energy, biogas, and research. Collaborations with initiatives like the EU Bioeconomy Network further enhanced visibility and stakeholder connections. This approach generated notable interest and engagement and is generally agreed that it should continue to be pursued even more in all future actions.

6. **Participation in diverse external events**: During this round, several new contacts and collaborations originated also from presenting the ALFA project in non-biogas-specific settings and events, and these proved valuable for stakeholder engagement and project promotion. Project partners participated in various types of events, and the recommendation for further stakeholder outreach and growth in awareness and social acceptance is to continue and increase this commitment by participating, for example, in bioeconomy round tables, communities of practice and renewable energy forums.

7. **Use of direct communication channels**: In addition to promoting open calls, tools such as Telegram and WhatsApp were used during this round to improve the response rate for feedback (e.g., evaluation forms, survey completion), when possible. In fact, another important lesson—particularly for livestock farmers—was the difficulty in obtaining feedback.
   Many stakeholders did not respond to emails or formal requests. Hubs often had to send multiple reminders and resort to direct messages (e.g. WhatsApp) to receive responses. As highlighted by what was already learned in the first round, regular follow-up and the use of familiar communication methods proved essential to maintaining engagement.

8. **Language accessibility**: During this round, a commonly reported barrier was language. Many livestock farmers do not speak English, and European projects often rely on English as the default language for events, activities and materials. Hubs addressed this challenge by offering instant translation during live events, providing presentation slides in local languages, and uploading articles in their original language to the ALFA Biogas forum. Nevertheless, the demand for more locally delivered activities in the local language remains a priority and a challenge to balance in European project settings.

9. **Involving key players in connection with research and industry**: Another important takeaway is the value of engaging stakeholders who can act as intermediaries between the research world and business sectors—particularly those who are able to translate complex or technical concepts into business-oriented language. Greater involvement of these figures can help bridge the gap between scientific information and farmers' practical decision-making, as their presence can help make messages more accessible and actionable, especially when communicating the economic feasibility and operational aspects of biogas-based solutions.

10. **Collaboration with associations connected to primary producers**: Partnering with associations that have direct links with primary producers—such as cooperatives, farmers' unions, or sectoral consortia—proved to be a crucial enabler for engaging primary producers across the entire biogas value chain, and all Hubs agreed that this collaboration is essential to achieving the desired impact, and that it should therefore be pursued further. In fact, these associations not only are able to facilitate access to hard-to-reach farming communities, but also play a role in fostering broader collaboration

between producers, technology providers, researchers, and policy actors, helping create a more integrated approach, and encouraging stakeholders to perceive themselves as active contributors to the circular bioeconomy rather than isolated players. Strengthening these partnerships remains therefore essential for improving uptake and long-term sustainability.

To summarise, table 28 presents the activities conducted during the first and second rounds of the ARC with their targets and status of achievement.

Table 28 - Deployment activities and reached targets for the ARC

Activities	Targets	Reached
Defining and segment specific target audiences for the campaigns.	Increased social acceptance of biogas facilities in civil society (>25%) Increased women and young farmers involvement in biogas value chain (>10%) Stakeholders with enhanced awareness of socioeconomic and environmental benefits of biogas (>10.000)	Measured via activities of WP4 (T4.1) at the end of the rounds of the ARC, based on the baseline set in WP1 (Task 1.2) in target regions. The awareness-raising actions carried out across the six Hubs increased citizen acceptance of biogas socio-economic benefits by 42.22%, environmental benefits by 15.74%, and inclusive, sustainable agriculture by 35.88%. Eurostat baseline participation rates were 33.34% for young people and 20.78% for women. With ALFA services, these rose to 37.5% (+12.5% relative increase for youth) and 26.9% (+22.7% relative increase for women). Through all the support measures carried out, ALFA project reached more of 10.000 stakeholders, generating awareness of socioeconomic and environmental benefits of biogas
Utilizing a mix of communication channels, including traditional media, social media, events, and printed materials, based on regional preferences and coordinating deployment activities to maximize visibility	Dissemination activities & local ARCs: Social media followers (>1000) External events attended (≤15) Promotional material distributed (>300)	1000+ Followers have been reached >15 external events have been attended >300 flyers, leaflets, brochures have been distributed to the participants of

and create an impression.		ALFA project´s and external events ✓
Leading the deployment of at least two awareness-raising campaigns per round, tailored to regional needs	12 (1 per region per round)	1st and 2nd rounds of the ARC completed for the 6 Hubs. ✓

5. Conclusions, Lessons Learnt and Next steps

The second round of activities under the ALFA project **built upon the lessons learned and feedback** collected from awardees and stakeholders during the first round, leading to a **more effective and targeted approach**. These insights guided a **revised strategy** that refined support services, enhanced capacity-building efforts, and strengthened awareness-raising campaigns. By incorporating specific enhancements—such as more tailored regional actions, improved stakeholder engagement methods, and streamlined coordination—the consortium achieved stronger results in Round 2. Leveraging the iterative methodology established under T2.4, the project was able to d**eliver highly responsive and context-specific actions**, better aligned with the needs of local contexts and the supported cases, ultimately driving **greater impact**.

To summarize, in relation to its objectives ALFA achieved:

- **ALFA Hubs activated and services delivered**: **6;58** (6; ≥50; target met)
- **Farms and projects supported: 53** (50|8-9 per country; target partially met). While the overall target of 50 was exceeded, not all targeted regions reached the target of 8–9 projects per country, making this a partially achieved objective at the Hub level. However additional cases were supported from Germany, the Netherlands, Portugal and Ukraine.
- **Capacity building activities**: **7** international webinars and **6** regional seminars (≥6 | ≥6; target met).
- **Awareness-raising campaigns**: **12** campaigns deployed (12, one per Hub per round; target met), reaching tens of thousands of stakeholders and boosting social acceptance of biogas.

Key Impact Indicators:

- **KPI-1**: Farmers viably taking up biogas systems facilitating wider uptake of RES – 53 supported cases (50; target met)
- **KPI-2**: Renewable energy production - To determine the total renewable energy production of the supported ALFA cases, the nominal capacities of all identified biogas plants (both operational and projected based on generated results) were aggregated, resulting in a combined capacity of **35 MWel**. By assuming an electrical efficiency factor of 40%, which is

typical for modern CHP systems, and an annual operation of 8030 hours (365 days x 22 hours) the total primary energy potential of the produced biogas (for combined electricity and heat applications) is estimated at **2524 TJ.** For plants where installed capacity was not explicitly defined, a default capacity of **0.61 MWel**, representative of medium-scale livestock biogas units, was assumed. This assumption led to a slight underestimation of total renewable energy output, as several units had livestock capacities indicative of higher generation potential. Additionally, total primary energy production was not allocated equally across all cases, as larger-capacity units compensated for the lower output of smaller installations. Cases assisted in both rounds of services were only accounted one time to avoid double inputs - **2524 TJ** (>1660 TJ, assumed from 33.3 TJ × 50 cases; target met)

- **KPI-3**: Biogas markets further developed that can operate efficiently and incentive compatible – 6. Initially, the ALFA Hubs were established in **six countries**: **Belgium, Denmark, Greece, Italy, Spain, and Slovakia**. Within these locations, the Hubs conducted thorough analyses, built local networks, established stakeholder contacts, and delivered a range of services including capacity-building activities and awareness-raising campaigns. However, the project's reach extended beyond these initial locations. In Portugal, a participant received services while attending the mutual learning workshop in Spain, demonstrating the cross-border impact of the initiative. Similarly, in Ukraine, a beneficiary accessed services and participated in the mutual learning workshop hosted in Slovakia. In Germany, services were directly provided, further indicating the spread of ALFA's impact. Additionally, in the Netherlands, the Belgian Hub leveraged the Flemish language to disseminate information, facilitating outreach. (6; target met).
- **KPI-8**: Total projected output of supported biogas systems integrated in energy-consuming sectors - as explained in KPI-2, the total projected output of all biogas plants was estimated at **35 MWel**. Similarly to the aforementioned KPI, larger-capacity units compensated for the lower output of smaller installations - **35 MWel** (>30 MWel, based on 0.61 MWel per case × 50 cases; target met)
- **KPI-9**: Stakeholders with enhanced awareness of socio-economic and environmental benefits of biogas +10,000 (10,000, target met)
- **KPI-10**: Increased involvement of women/young farmers in the biogas value chain - **12.5% increase in young and 22,6% increase in women participation**[7] (>10%; target met).
- **KPI-11**: Total CO_2 emissions saved utilizing fossil fuel free energy - the avoided CO_2 emissions from biogas-derived electricity were estimated based on the annual electricity production presented in KPI-2.For each participating country, annual electricity output was calculated and converted into avoided emissions using the country-specific CO_2 emission factors per kWh, from national electricity mix data sourced from Statista. This estimation yielded approximately **42,270 tons of CO_2 avoided** from renewable electricity generation. Regarding heat generation, a thermal efficiency factor of 50% was assumed (accounting for an estimated 10% energy loss in the CHP system) resulting in a total of 350,506 MWh of heat annually. Given that the typical fossil fuel alternatives for industrial heating are coal and

[7] The baseline percentages of young people and women engaged in the biogas value chain were determined using Eurostat data: *Employment by sex, age, and detailed economic activity (from 2008 onwards, NACE Rev. 2 two-digit level) – 1000* (link). The baseline percentage of young people engaged was **33.34%**. With ALFA service provision, this increased to **37.5%**, representing a **12.5% relative increase** in participation among young people. Similarly, the baseline participation of women was **20.78%**. Under the ALFA service, this rose to **26.9%**, showing a **22.67% relative increase** in women's participation.

natural gas, an average CO_2 emission per kWh factor based on these sources was applied[8]. This resulted in an estimated **259,000 tons of CO_2 avoided** through the use of biogas-derived heat. Combining both electricity and heat contributions, the total avoided CO_2 emissions from fossil fuel free energy usage were estimated at approximately **302,170 tons per year** (>270,000 tons CO_2/year; target met)

- **KPI-12**: Total GHGs savings from sustainable manure - the GHG emissions of each supported livestock unit were estimated using literature-based data for four main animal categories: cattle, swine, sheep, and poultry. For livestock units where manure quantities were not explicitly reported, daily manure production rates per animal category were used to approximate total waste output[9]. Once animal-specific manure volumes were determined, their potential greenhouse gas emissions were calculated by applying category-specific emission factors[10]. The aggregated results indicate that biogas production, as a sustainable manure management practice, across the supported units lead to an estimated annual reduction of **365,017 tons of GHG emissions - 365,017 tons CO_2eq saved/year** (>330,000 tons CO_2eq saved/year; target met)

Across the project's duration, **more than 50 biogas cases received tailored support services,** and a slightly **greater number of capacity-building activities were delivered** than originally planned. The awareness-raising actions carried out across the six Hubs successfully **increased citizen acceptance of biogas socio-economic benefits** (+42.22%), **environmental benefits** (+15.74%), and **inclusive and sustainable agriculture** (+35.88%), also strengthening the **involvement of women and youth** in the biogas value chain.

By directly engaging stakeholders through field visits, fairs, peer-to-peer learning, and multiple communication channels, the consortium fostered deeper engagement and built trust with the target audience. Dissemination activities expanded the project's visibility, reaching followers, distributing promotional materials, and participating in external events.
The project demonstrated **scalability and replicability** across diverse agricultural and regulatory contexts, confirming the flexibility and relevance of the ALFA model. The **adaptability and responsiveness** of the Hubs—stressed even more during the second round of support services—proved effective. Equally important was the **efficiency of project management and coordination mechanisms**, which ensured the smooth implementation of activities and the achievement of objectives. The use of structured and regularly updated **Action plans** played a key role in guiding operations, outlying a step-by-step approach, with clear milestones, timelines, and a sequence of activities, providing a systematic roadmap for the deployment of market uptake support services, capacity-building activities, and regional awareness-raising campaigns. The consortium maintained **close communication** throughout the project, both through **monthly plenary meetings and bilateral exchanges** whenever needed. Each meeting included a review and reassessment of the Action plans, ensuring timely **adjustments to maximise performance and quality** across all activities.

The business and technical support, together with the knowledge acquired have **positioned the supported biogas projects for successful implementation and long-term sustainability**. Some of their stories were promoted through dissemination activities and awareness campaigns, with some

[8] Literature source: *How much carbon dioxide is produced per kilowatthour of U.S. electricity generation?* link
[9] Literature source: *Manure Characteristics – Manure Management Systems Series* link
[10] Literature source: *Relating bacterial dynamics and functions to greenhouse gas and odor emissions during facultative heap composting of four kinds of livestock manure* link

cases invited to share their experiences at project events or through articles and interviews to **inspire other livestock farmers** and **policy makers**, highlighting the strong sustainability and replication potential of the initiatives fostered by ALFA. In fact, several cases, initially uncertain, **decided to implement biogas plants** after receiving tailored services—some already securing project designs, cost estimates, and permits to begin construction, and such developments — together with the further action and development they could stimulate in others—could result in **substantial CO_2 emissions savings across the livestock sector** in Europe and beyond utilizing **fossil fuel free energy** and **GHGs savings from sustainable manure**.

Of course, major structural barriers remain in several countries, most notably the lack of a clear, stable, and supportive regulatory and policy framework for biogas. In fact, while **interest in biogas technologies is steadily increasing in the livestock sector, market development continues to be constrained by regulatory uncertainty** and the reluctance of financial institutions to invest under current conditions. This underscores the **urgent need for coherent policies and regulatory clarity to unlock the sector's full potential**. At the same time, while social resistance to biogas adoption persists, ALFA has made measurable progress in contributing to build citizens' trust and fostering a **more informed and accepting environment**. Although a single project cannot reshape the European landscape alone, ALFA has laid a solid foundation—offering practical tools, tested approaches, and valuable insights to guide future initiatives and policy efforts toward the broader uptake and social acceptance of sustainable biogas solutions across Europe's livestock sector.

Building upon the process of the deployment of the support measures and the insights gathered through Task 4.1 (Monitoring and evaluation of project activities) and Task 4.2 (Mutual learning and good practices exchange), under Task 4.3 a comprehensive **Replication Guide** will be developed (October 2025 – M36), with contributions from all partners who implemented ALFA's market uptake support measures and operated the project Hubs. The Replication Guide will be **rooted in the practical experiences gained throughout the project** and **will offer concrete methodologies, tools, and actionable guidelines to support stakeholders interested in establishing or adapting similar support measures in other EU countries and beyond**. It will be designed to **facilitate the replication and scalability** of ALFA's approach, promoting the wider deployment of biogas systems in livestock farming. This Guide will also serve as a foundational document for the **ALFA Final Conference and Policy Roundtable**, to be held in Brussels on **25 September 2025**. In fact, the event will aim to catalyse policy alignment and stakeholder engagement across the EU, to refine the Replication Guide through multi-stakeholder dialogue, and to collect meaningful inputs to elaborate a set of **Policy Recommendations** targeting both EU-level and national-level decision-makers. These recommendations will contribute to **mainstreaming biogas solutions at scale**, supporting the EU's leadership in sustainable energy and climate-smart agriculture.

Further details will be provided in Deliverable **D4.3 – Replication Guide and Policy Recommendations** (due in Month 36 – October 2025).

6. Annexes

6.1 Annex I: ARC survey

* What is your country of residence?

- ☐ Belgium
- ☐ Denmark
- ☐ Greece
- ☐ Italy
- ☐ Slovakia
- ☐ Spain

* Does a biogas plant create socio-economic benefits?

- ○ 1 - Biogas development has a negative impact on citizens' socio-economic conditions.
- ○ 2 - Biogas development has a moderately negative impact on citizens' socio-economic conditions.
- ○ 3 - Biogas development has a neutral impact on citizens' socio-economic conditions.
- ○ 4 - Biogas development creates a moderate benefit on citizens' socio-economic conditions.
- ○ 5 - Biogas development creates a strong benefit on citizens' socio-economic conditions.

* Does a biogas plant create environmental benefits?

- ○ 1 - Biogas development has a negative impact on the environment.
- ○ 2 - Biogas development has a moderately negative impact on the environment.
- ○ 3 - Biogas development has a neutral impact on the environment.
- ○ 4 - Biogas development creates a moderate benefit on the environment (e.g., lower CO2).
- ○ 5 - Biogas development creates a strong benefit on the environment (e.g., lower CO2).

* Does a biogas plant contribute to create a sustainable and inclusive agriculture (e.g., gender inclusive)?

- ○ 1 - Biogas development has a negative impact on the creation of a sustainable and inclusive agriculture.
- ○ 2 - Biogas development has a moderately negative impact on the creation of a sustainable and inclusive agriculture.
- ○ 3 - Biogas development gives a neutral contribution to the creation of a sustainable and inclusive agriculture.
- ○ 4 - Biogas development gives a moderate contribution to the creation of a sustainable and inclusive agriculture.
- ○ 5 - Biogas development gives a strong contribution to the creation of a sustainable and inclusive agriculture.

Soumettre

6.2 Annex II: 2nd round Open Call

OPEN CALL

Support for biogas projects in the livestock sector

Apply now

Open Call

ALFA is offering free, customized support for biogas projects in the livestock sector, including business and technical assistance, mentoring, networking opportunities, and capacity-building activities.

The ALFA project aims to accelerate the adoption of biogas solutions, actively supporting over 50 projects in deploying biogas systems through demand-driven services in two rounds for a comprehensive and impactful engagement. We are glad to announce that the 1st Open Call has just been launched. If you interested in biogas solutions in livestock sector, do not miss the opportunity to apply! Open until **17th January, 2025** 17:00 CET!

Unleash Possibilities with Our Offerings

Unlock the Biogas Revolution in Livestock: Two Rounds free of charge **Business and Technical Support!**

Who can Apply

- Livestock farmers with biogas plants, that want to improve an existing biogas system
- Livestock farmers without biogas plants, that want to install a biogas system (lever of readiness of investment)
- Biogas plants using manure among other feedstock
- Farmers associations that want to install/ improve biogas system
- Energy community that wants to install / improve biogas system using manure among other feedstock
- Stakeholders that are interested to invest in livestock farming with biogas solutions

6.3 Annex III: Selection Matrix – Service provision 2nd round

ALFA
UNLOCKING THE BIOGAS POTENTIAL OF LIVESTOCK FARMING

	Identifier	Applicant Name	Region	Selection Committee										
				Q-PLAN	APRE	A0CO2	FBCD	SIE	CERTH	WR	PEDAL	EDF	EBA	SUM
14	ES-01		ES	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
20	ES-02		ES	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
28	DK-01		DK	#N/D	#N/D	#N/D		#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
10	DK-02		DK	#N/D	#N/D	#N/D		#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
11	DK-03		DK	#N/D	#N/D	#N/D		#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
5	DK-04		DK	#N/D	#N/D	#N/D		#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
33	PT-01		Portugal	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
34	PT-02		Portugal	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
9	BE-01		BE	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
25	SK-01		SK	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
17	SK-02		SK	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
4	SK-03		SK	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
8	IT-01		IT	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
36	ES-03		ES	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
19	SK-04		SK	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
18	SK-05		SK	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
30	IT-02		IT	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
6	DE-01		Germany	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
37	DK-05		DK	#N/D	#N/D	#N/D		#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
21	SK-06		SK	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D
13	EL-01		EL	#N/D	#N/D	#N/D	1	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D	#N/D

Overall Matrix | Q-PLAN | APRE | SIE | A0CO2 | FBCD | CERTH | WR | PEDAL | EDF | EBA | Ma

6.4 Annex IV: Matching Matrix

Applicant Name	Region	Gender	Age	Please prioritise here services based on the need analysis questionnaire, after the 1st meeting with awardees (from 1 being the highest priority to 5 being the lowest)											Given Service	Support by	Suppport by	Responsible Hub	Remarks	Service Action Plan	Service Questionnaire	Delivery	Report	Evaluation	Last update (please add date in this column)
				Market Research	Business Modelling and Planning	Access to Finance	Corporate and Sustainable Finance	Farmer to Farmer Advice	Concept Design and Development of Biogas Systems	Evaluation of Biogas Potential based on Preliminary Calculations	Energy and Environmental Analyses	Consultancy on Implementation and Monitoring of Biogas Solutions	Technical Support for Farmers in the Evaluation and Comparison of Plant Suppliers' Quote	Technology Catalogue: Features for cleaning and upgrading equipment											

6.5 Annex V: Needs Analysis Questionnaire

Need Analysis Questionnaire

Project Information:

Project Title:

Organization/Individual Name:

Region of Operation:

Primary Contact Person:

Contact Email:

Contact Phone Number:

Project Overview:

Briefly describe your project, including its objectives and key activities.

Technical Support Needs:

What specific technical challenges or requirements does your project currently face?

Are there any specific areas within the biogas or livestock sector where you seek technical expertise or guidance?

Please outline any existing technical infrastructure or systems related to your project.

Business Support Needs:

What are the primary business challenges or needs for your project?

Do you require assistance in business planning, market analysis, or financial management? If so, please specify.

Have you identified any potential barriers to the market uptake of renewable energy solutions in the livestock sector within your region?

Investment Readiness:

How prepared is your project for investment in renewable energy solutions for the livestock sector? Please provide information on the current level of readiness, including financial planning, funding sources, and any existing partnerships or collaborations in place.

Service Prioritization:

Please prioritize the following ALFA services based on your project's current needs. Use numbers (1 being the highest priority, 5 being the lowest) to indicate the importance of each service.

Prioritisation	**Services Portfolio**
	Market Research
	Business Modelling and Planning
	Access to Finance
	Corporate and Sustainable Finance
	Farmer to Farmer Advice
	Concept Design and Development of Biogas Systems
	Evaluation of Biogas Potential based on Preliminary Calculations
	Energy and Environmental Analyses
	Consultancy on Implementation and Monitoring of Biogas Solutions
	Technical Support for Farmers in the Evaluation and Comparison of Plant Suppliers' Quote
	xxx

General Project Information:

What are the expected outcomes or goals for your project within the next 6-12 months?

Are there any specific milestones or deadlines that we should be aware of in the coming months?

How do you envision the ALFA project supporting the market uptake of renewable energy solutions in the livestock sector through your initiative?

Additional Comments:

Is there any other information or specific support you would like to highlight or discuss regarding your project?

The project

ALFA has the objective to help unlock the EU's biogas production potential by fostering the adoption of technologies using manure to produce biogas, thus helping increase the adoption of renewable energy sources in the EU and helping reduce emissions from untreated animal waste. The project will identify drivers and barriers for the uptake of biogas in the EU livestock farming industry and will support farmers from 6 EU countries (Italy, Denmark, Belgium, Slovakia, Greece and Spain) through its own co-created solutions, including financial, business, and technical support services as well as capacity-building seminars. In parallel, the project will develop an Engagement Platform to host tools that facilitate collaboration and knowledge exchange among industry actors and provide credible estimations of each farm's biogas potential, prospect profits, and environmental and social impacts. Moreover, ALFA will inform all relevant stakeholders via awareness-raising campaigns and policy recommendations, and will provide guidelines for replication of its results in other regions.

Coordinator: **Q-PLAN**

PARTNER		SHORT NAME
Q-PLAN INTERNATIONAL	Q-PLAN INTERNATIONAL ADVISORS PC	QPL
APRE Agenzia per la Promozione della Ricerca Europea	AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA	APRE
AzzeroCO2 climate in our hands	AZZERO CO2 SRL	A0CO2
CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS	CENTRE FOR RESEARCH & TECHNOLOGY HELLAS	CERTH
Food & Bio Cluster Denmark	FBCD AS	FBCD
Sustainable INNOVATIONS	SUSTAINABLE INNOVATIONS EUROPE SL	SIE
WHITE	WHITE RESEARCH SRL	WR
PEDAL CONSULTING	PEDAL CONSULTING SRO	PED
EUROPEAN DAIRY FARMERS	EUROPEAN DAIRY FARMERS E.V.	EDF
EBA European Biogas Association	EUROPEAN BIOGAS ASSOCIATION AISBL	EBA

CONTACT US: info@alfa-res.eu VISIT: www.alfa-res.eu

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