

Low-carbon Farming: building a sustainable future

Deliverable D5.1

Plan for dissemination and exploitation, including communication activities

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3	SCIENTACT ANONYMI ETAIRIA EMPORIAS EPISTIMONIKOU EXOPLISMOU	SCIENTACT	EL
4	MINISTRY OF ENVIRONMENT AND ENERGY	YPEKA	EL
5	AG FUTURA TECHNOLOGII DOOEL SKOPJE	AGFT	RNM
6	ZDRUZENIE PLATFORMA ZA ZELEN RAZVOJ SKOPJE	GGP	RNM
7	AGENCIJA ZA POTTIKNUVANJE NA RAZVOJOT NA ZEMJODELSTVOTO	APRZ	RNM
8	REPUBLIC OF MACEDONIA GOCE DELCEV STATE UNIVERSITY STIP	UGD	RNM
9	ERATOSTHENES CENTRE OF EXCELLENCE	ECoE	CY
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11	CELLOCK LTD	CELLOCK	CY
12	TECHNOLOGIKO PANEPISTIMIO KYPROU	CUT	CY
13	ETHNIKO SYSTIMA DIAPISTEUSIS	ESYD	EL
14	PANAGROTIKOS SYNDESMOS KYPROU SOMATEIO	PSK	EL

Executive Summary

Carbonica strives to strengthen regional innovation excellence in the widening countries (WC): Greece (GR), North Macedonia (MK) and Cyprus (CY). In these three countries, the innovation ecosystems (IES) around the field of carbon footprint from agriculture (CFA) will connect to develop and establish a long term joint research and innovation (R&I) strategy of European relevance. This joint strategy will define key research priorities, areas of focus, objectives and joint actions to improve knowledge transfer, to uptake innovative technologies, to create new business opportunities for SMEs and to attract and maintain young local R&I talents.

The efficiency of this joint strategy will be mainly determined by the synergy among all stakeholders (policy, industry, academia, civil society) in the quadruple helix (QH) within the place-based innovation ecosystems (PBIES).

The Carbonica deliverable D5.1 “Plan for dissemination and exploitation, including communication activities” describes the coordinated ways to ensure continued stakeholder engagement and to foster lasting connections between academia, industry, society and government within and between CY, GR and NMK. This deliverable provides an outline of the messages the project wants to disseminate to targeted stakeholders, and a set of guidelines on how and when these messages must be delivered to achieve the best possible outreach and engagement.

The deliverable aims to:

- describe the dissemination actions, communication tools and key performance indicators (KPIs) that will be used to effectively share information within the partners and to transfer project knowledge and results to the targeted stakeholders over the four years of the project and at least 3 years beyond its completion.
- create the project’s brand and unique identity to facilitate the delivery of messages which capture and sustain the target groups’ attention constantly and in a comprehensive and gripping manner;
- initiate a framework of rules and recommendations for the optimal use and protection of the key exploitable results (KERs), commercial and no-commercial, of the Carbonica project.

This is the first iteration of the deliverable “Plan for dissemination and exploitation, including communication activities” and will be updated in M18, M30, M48 after continuous monitoring and adjustment of the implementation of the communication and dissemination activities as well as the exploitation pathways.

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Glossary of terms and abbreviations used

Table 1-1 | Glossary

List of Abbreviations and Acronyms	
Abbreviation #1	Acronym #1
CEH	Carbonic Excellence Hub
CF	Carbon Farming
CFA	Carbon Farming Agriculture
CMYK	Cyan - Magenta - Yellow Key (black)
CRA	Climate Resilient Agriculture
CY	Cyprus
D&C	Dissemination and Communication
EU DG(s)	European Union's Directorate(s)-General
EO	Earth Observation
EU	European Union



GA	Grand Agreement
GR	Greece
IE(s)	Innovation Ecosystem(s)
IPRs	Intellectual Property Right(s)
KER(s)	Key Exploitable Result(s)
KO(s)	Key Objective(s)
KPI(s)	Key Performance Indicator(s)
MAA	Multi-actor approach
MAP(s)	Multi-actor platform(s)
NMK	North Macedonia
PBIE(s)	Place-based innovation ecosystem(s)
QH	Quadruple helix
R&I	Research and innovation
RGB	Red - Green - Blue
SME(s)	Small-Medium Enterprise(s)
TG(s)	Target Group(s)
UAV	Unmanned Aerial Vehicle
WCs	Widening Countries
WPs	Work packages

1 Introduction

This section provides an overview of the Carbonica project, providing brief information about its objectives, methodology and structure. The aim of this section is to highlight the project's key points for the reader to understand the dissemination and communication (D&C) activities described in the following sections and the way they are related to the overall project's structure.

1.1 Project Overview

The project aims to establish the Carbonica Excellence Hub (CEH) by connecting the innovation ecosystems (IEs) of the three (3) widening countries¹ (WCs): Greece (GR) - North Macedonia (NMK) - Cyprus (CY). The core activities of the CEH will be around carbon farming (CF). CF encompasses a set of technologies and practices that target to reduce carbon footprint and to contribute to accelerated mitigation towards climate-resilient agriculture (CRA). The agri-food sector in the three (3) WCs, is at different development stages, but at the same time the three (3) ecosystems are similar in terms of the climate conditions, portfolio of crops, cultural values, the role of agriculture in the economy and its impact to the environment. All three (3) countries have set climate change on the top of their strategic policy agendas, but specific progress in reducing carbon footprint lacks, which urgently requires consolidation of capacities and joint actions.

A common characteristic of the three (3) ecosystems is the different progress that each actor of the quadruple helix (QH) has so far demonstrated (i.e policy, industry, academia, civil society). The absence of consolidated capacities, clear vision, capitalisation on cross-sectoral, cross-border, interdisciplinary and transdisciplinary approaches have resulted in moderate improvements. The greatest progress has been made in the academia quadrant. The industry sector has demonstrated examples of technologies and services directly or indirectly related to CF, but is still facing the challenge of how to develop and promote enough core value for sustainable business models. At the civil society level, the awareness depends on demographic, socio-economic and behavioural factors.

The CEH targets to interconnect the three (3) place-based innovation ecosystems (PBIEs) through collaboration of three (3) regional multi-actor platforms (MAPs) which will include key stakeholders of the carbon farming domain across the QH. The MAPs will be in the form of focus groups (at least 15 participants per each ecosystem) led by a regional manager. The responsibilities of the regional manager will be to identify regional stakeholders and engage them in activities such as research, training, support in business development and uptake of the developed knowledge in carbon farming.

The results and input from the multi-actor focus groups will support the identification of key research and innovation (R&I) activities and the development of a joint R&I strategy. The joint R&I strategy will define research priorities per country, present clear objectives and joint research actions, as well as future policies and funding initiatives. The CEH will also attempt to bridge the gap between science and industry and create business opportunities in carbon farming. Start-ups and SMEs with innovative ideas will be supported through 1) business development support services (mentoring, coaching, virtual workshops), 2) acceleration programs, 3) commercialisation activities (understanding market needs). Finally, a three-level policy network (regional, national and EU level) will be established to foster communication and collaboration between policy makers. The project's findings will be utilised to produce evidence based policies.

It is evident that the success of the CEH will greatly depend on the internal synergies of the MAPs and the engagement of all stakeholders. Dissemination channels and processes will be deployed to capitalise on the existing R&I capacities within each PBIEs targeting at strengthening the cross-border connections as

¹ European Commission. "EN Horizon Europe Work Programme 2023-2024 11. Widening participation and strengthening the European Research Area." *European Commission*, 31 March 2023, https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-11-widening-participation-and-strengthening-the-european-research-area_horizon-2023-2024_en.pdf. Accessed 15 June 2023.

well as the intersectoral mobility. Communication and outreach material will be used to raise awareness in the QH sector regarding CF and highlighting the importance of carbon neutral agri-food products and disseminate main results.

1.2 Project Methodology

The methodology of the Carbonica project unfolds into six (6) work packages (WPs) that correspond to the project's objectives:

- **Work Package 1: Consolidation, capacity building and brain gain strategies**

The main focus of WP1 is to: (i) Map and analyse the full range of drivers and barriers for regional innovation excellence in carbon farming in CY, GR, and NMK; (ii) identify gaps and analyse the end-users needs; (iii) set up and operate the Carbonica MAPs; (iv) capacitate stakeholders on carbon farming solutions through training and knowledge exchange activities; (v) develop and implement brain gain strategies to attract and retain talent in the three PBIEs; (vi) gather the key outcomes of the project into a *Guide* for carbon farming solutions.

- **Work Package 2: Establishing collaboration links among the involved IES and reviving CARBONICA EH**

WP2 aims at (i) designing and implementing the stakeholders' collaborative activities involving stakeholders of the QH of each involved ecosystem; (ii) developing, monitoring, and updating a joint R&I strategy, and (iii) developing, monitoring, and updating an action/ sustainability plan.

- **Work Package 3: Joint pilot research project and testing and validation**

The Objectives of WP3 include the development of lab prototypes and the validation of the toolbox of carbon farming solutions on various crops to showcase the impact capacity on CF. WP3 also ensures the feasibility and viability for the adoption of the lab prototypes and proposed toolbox. Moreover, it provides recommendations for upscaling and investment planning and develops a roadmap for CF certification protocols for agri-food products.

- **Work Package 4: CARBONICA EH Support for business development**

The objectives of WP4 are the following: i) Provide meaningful business development support for the CEH and outstanding providers of technologies (start-ups and SMEs) in the domain of carbon farming; ii) capitalise upon the expertise of consortium members from the relevant strands of the QH to provide multidisciplinary holistic support in the form of mentoring, coaching, workshops, networking; iii) develop modular, flexible tailored programs (virtual infrastructure, acceleration, support for commercialization and internationalisation).

- **Work Package 5: Stakeholder engagement, outreach and policy recommendation**

The objectives of WP5 are: (i) communicate the project's activities, promote outreach, and establish synergies with other initiatives to exchange information and knowledge and mobilise research, innovation, and technological capacities; (ii) facilitate and enhance the dialogue between relevant stakeholders, increasing their engagement in the project network; (iii) create a network with policymakers to work on the development of future policies at EU and national/regional level, in the agriculture, environment, education, and R&I areas.

- **Work Package 6: Project Management**

The objectives of WP6 are the following: (i) ensure overall management framework, including administrative, financial, and strategic aspects; (ii) ensure appropriate data management and the timely production and quality of the final results; (iii) guarantee compliance to all ethics aspects.

1.3 Document Scope and Structure

Carbonica needs a strong communication and dissemination strategy which will define the activities for outreach and impact maximisation. The dissemination strategy will follow a targeted multi-channel approach with objectives and measures chosen to maximise the thorough and extensive dispersal of information about the existence, purpose, value and results of excellence hubs to all target groups. Carbonica's communication strategy goal is to maintain engagement and spur continuous knowledge exchange between and beyond QH stakeholders. A solid exploitation strategy is also reflected in this document, analysing the pathways for exploitation including the uptake, diffusion, deployment, and use of the project's results by the identified target groups.

This document is the first iteration (M6) of the deliverable, which will be updated to monitor the relevant activities progress in months M15, M30, M48.

This document is comprised of the following sections and Annexes:

Section 1 provides a summary of the project, the document scope and its overall structure.

Section 2 provides an overview of the project's D&C methodology and approach, the identified target groups, and relevant key messages.

Section 3 elaborates on the specific D&C activities, tools and channels including the visual identity, communication material and channel mix.

Section 4 specifies reporting and monitoring procedures and tools, focusing on KPIs and the specific activities that will be carried out.

Section 5 presents the identified KERs, the potential pathways to bring Carbonica results to all target users as well as the identified IPRs and IPR strategy followed by the project partners.

Section 6 presents the conclusions of the deliverable.

Annex A demonstrates the project logo variations and branding

Annex B provides the proposed templates for the project documents/deliverables

Annex C demonstrates the dissemination and communication material

Annex D provides the social media accounts and metrics

Annex E demonstrates media coverage

Annex F provides the event planning template to be used for gathering information from partners regarding the events they are already planning on attending.

Annex G provides the synergy mapping template that partners will complete with information on existing projects, networks, alliances etc., that they are currently part of and could be relevant to Carbonica.

Annex H provides the publication planning template that partners will complete with information on peer reviewed journal publications, industry magazines, white papers, and any other planned publications.

Annex I provides a template for the identification of new KERs & IPR process

Annex J provides a template for a Non-Disclosure Agreement

2 Dissemination and Communication of the project activities and results

This section provides an overview of the project's D&C methodology and approach, the identified target groups, and relevant key messages.

2.1 Purpose and objectives of the D&C activities

2.1.1 Link to the project methodology

The Plan for the dissemination and exploitation of Carbonica's results, creates the roadmap of activities and actions that lead to the best possible way for the project to communicate, disseminate and later exploit its results.

The Plan has seven (7) goals what are served through specific activities which ensure stakeholders engagement, creation of synergies, networking, collaboration with initiatives/projects/organisations and project visibility and outreach:

Inform - Promote - Communicate - Attract - Engage – Network - Exploit

The Plan is implemented in three (3) phases that span from M1 of the project and extend 5 years beyond the project's completion, following the overall project's approach and reporting periods of the project.

Phase 1: Vision [Inform - Promote - Communicate] (M1-M15)

The first of the project will establish the foundation for all subsequent communication, dissemination, and exploitation of results. A recognisable project identity will be designed through digital presence (website, social media), a visual identity book and an offline identity material package. This phase will also include planning event participation, compiling and evaluating potential synergies. Specific activities will be distributed among partners and a preliminary time-schedule will be issued. All partners will be informed about the specific guidelines that they need to follow for D&C outreach and reporting.

Phase 2: Results dissemination [Communicate - Attract - Engage – Network] (M16-M30)

During the second phase and as the project results unfold, the focus will be to i) generate and retain leads by providing up-to-date valuable content; ii) establish ties with other related projects / initiatives / organisations / excellence hubs through ecosystem building activities (i.e. industry fairs and trade shows, community outreach presentations, open pitch events, symposium/networking events, joint events).

More importantly, during this phase, the three (3) ecosystems and the Carbonica Excellence Hub will become the focus, by organising and/or participating in events where stakeholders relevant to Carbon Farming Agriculture (CFA) will have the opportunity to network and share knowledge. Materials such as leaflets, videos, rollups, etc. will be developed to disseminate the findings and further engage farmers, advisors, academia, policy makers, industry, investors and the society.

Phase 3: Exploitation and future sustainability [Network - Exploit] (M31-48 and five years after project's completion)

During the third phase there will be focus on exploitation and developing a go-to-market strategy for the project's commercial results: Toolbox for carbon farming solutions; Lab prototypes; E-learning platform. After the project's completion, content will continue to be uploaded on the project's website and platforms (multi-actor platform; e-learning platform) as well as in the social media accounts (Facebook, Twitter, LinkedIn, YouTube). Synergies established during the project will be maintained.

All of the dissemination and communication tools utilised through the duration of the project, will be maintained by FSH as WP5 Leader in conjunction with the sustainability plan developed in WP2. The website and other platforms will be available for at least 3 years beyond the project, to ensure extended

visibility of CARBONICA Hub. Regular updates with posts and news feed on the website and open access results (posters and publications) will be available to view and download. The partners' contact details will be updated to maintain engagement with QH stakeholders. Web-based communication channels concerned with the project's outputs will remain active. By sharing updates from relevant initiatives, projects and commercial successes, Carbonica will endeavour to create new and sustain existing synergies and continue supporting the ongoing development and uptake of innovative carbon farming technologies and carbon footprint measurement methodologies.

2.1.2 Objectives of the D&C activities

The D&C activities are all linked to the project's Key Objectives (KOs):

KO#1: Strengthen place-based innovation and excellence in CY, GR and NMK in carbon farming in order to achieve increased collective understanding and broad uptake.

KO#2: Foster long-term cross border collaboration and strong viable linkages between the actors of the QH in the involved IEs to motivate knowledge transfer, sharpen entrepreneurial skills and expand the collective capacity in carbon farming.

KO#3: Design, validate and plan for pilots and demonstrators to underpin the development of the long-term R&I strategy and action plan.

KO#4: Create business opportunities in carbon farming by bridging the gap between science and industry and establishing poles of attraction for innovators and investors and improve the uptake.

For the achievement of the above-mentioned project's objectives, five (5) specific dissemination and communication objectives have been set.

Obj.1: Diffuse the R&I results derived from the CEH

Audience: Industry, policy makers, farmers, advisors

Relevant Activities: Technical publications and contributions to discussion papers

Obj.2: Capacity building

Audience: Academia, industry, private investment, farmers and advisors

Relevant Activities: Virtual and physical technical workshops, online and in person training sessions and webinars.

Obj.3: Ecosystem building

Audience: Academia, industry, farmers and advisors

Relevant Activities: Participation in industry fairs and trade shows, community outreach presentations, organisation of open pitch events.

Obj.4: Amplify and maximise the impact and outreach of the project's results

Audience: Academia, policy makers, industry, society, farmers, advisors and investors

Relevant Activities: Participation in symposium/networking events, joint activities and data exchange with other initiatives, liaison with other projects from the Excellence Hub call.

Obj.5: Policy-making contribution

Audience: Policy makers

Relevant Activities: Policy master classes, white papers delivery.

2.2 Carbonica Approach

2.2.1 Multi-actor approach

Carbonica uses a multi-actor approach (MAA) in its core as the CEH will build on setting up and mobilising three national MAPs to bring together all stakeholders in QH to exchange experiences, ideas and knowledge in carbon farming. This multi-actor approach ensures that the CEH will address the national needs and challenges in carbon farming and drive regional innovation.

Carbonica goes beyond the technological and economic aspects of adapting carbon farming solutions by farmers towards reducing carbon footprint. It also strives to develop the business environment by bringing together industry, academia and investors, to contribute to policy-making, to establish a brain gain strategy and to raise awareness on CF issues among consumers.

This MAA also extends to the project’s activities which are related to the communication and the dissemination of results, to ensure wider impact from the start and to identify also possible exploitable results and IPRs.



Carbonica EU Multi-actor approach scenarios



2.2.2 Target Groups and Key Messages

Carbonica has identified the following key target groups (TGs) to achieve the D&C objectives:

- Academia
- Policy makers
- Industry
- Society
- Farmers, advisors and exporters
- Investors

This key message has to be addressed to the target groups with a different approach and focus, as well as through different communication means and channels. Each target group has to relate to the respective following key messages:

➤ **TG#1 Academia**

Universities / Research Institutes of relevant scientific disciplines (carbon farming, climate resilience, circular economy, geo-informatics, remote sensing), early-career researchers in relevant fields, researchers of the diaspora

Message for this TG: *Engage in high quality, interdisciplinary, cross-border research and gain access to current consolidated knowledge on carbon farming. Liaise with a wide national & diaspora research network, and benefit from the brain gain strategy.*

➤ **TG#2 Policy makers**

Regulators, local, regional and national authorities (e.g. ministries and governments), standardisation organisations (ISO, ETSI, etc.) and European Commission's Directorate-Generals (EC DGs), units and regulatory agencies

Message for this TG: *Gain access of white papers and other data on your region and develop an all-inclusive strategy for the sustainability, resilience and upscaling of CFA in the three countries.*

➤ **TG#3 Industry**

Agri-food start-ups and/ or private companies, industry associations, clusters in the field of agriculture at national and EU level

Message for this TG: *Gain support for developing your business plan on CFA, participate in the CEH acceleration Programme and seek out strategic partnerships within a network of start-ups and SMEs.*

➤ **TG#4 Society**

Consumers and their associations, citizens

Message for this TG: *Understand the unique carbon farming solutions and great benefits related to CFA, support sustainable practices and make informed decisions concerning your consumer preferences.*

➤ **TG#5 Farmers, advisors and exporters**

Farmers, land managers, and their associations, agricultural advisors, agronomists.

Message for this TG: *Maintain competitiveness of crops, reduce costs and increase long-term sustainability through novel carbon farming techniques and practices.*

➤ **TG#6 Investors**

Venture capital, angel investors, etc.

Message for this TG: *Fund new business solutions and new technologies that will improve carbon farming, contributing to increase agri-food business competitiveness, reduction of CFA and tackle climate change.*

2.2.3 Ethics and Gender Equality

2.2.3.1 Ethics

The CARBONICA project involves personal data collection and/or processing. The project brings some ethical issues the consortium is aware of and will take appropriate measures to cover them. In particular, humans will be incorporated as an integral part of the project [e.g. formation of 3 regional Multi Actor Platforms (MAPs)], in order to recognize and support the specific needs of different stakeholders and improve access to excellence for all the quadrants of the quadruple helix.

2.2.3.1.1 Joint pilot research project and testing and validation

Specifically, humans will participate in providing requirements and validating the solutions, meaning that no experiments will be conducted on them. This involvement is necessary for testing, evaluating and validating the toolbox and the lab prototypes. The research will adhere to ethical principles, and applicable international, EU and national law, satisfying all relevant compliance requirements for each specific activity. It will ensure respect for individuals and human dignity, fair distribution of burden and research benefits, while at the same time protecting the values, rights and interests of all research stakeholders. The consortium will perform its research activities in line with The European Code of Conduct for Research Integrity.

2.2.3.1.2 Recruitment of participants to data-gathering events

Participants in the various events that will be planned will be recruited as follows: Participation will be by invitation, based on their roles, and will be given opportunities to decline at any time during participation, accompanied by a destruction of any data collected.

The project team will actively endeavour to achieve a fair gender balance at events, and representative samples overall. Participants will be fully informed, in advance, of what information will be gathered; and how it will be processed, stored, and disseminated. Where participant tracking is involved, this will be fully explained to each participant and a written consent will be required.

2.2.3.1.3 Impact

All persons involved in the project will be made aware that they are taking part in a research project and will be fully informed of their rights and the potential risks that the data processing may bring. The informed consent will follow the guidelines of each local Ethics Committee and GDPR and an appropriate explanation of the aims, methods, anticipated benefits, potential hazards, and any other aspect of the study which is relevant to his decision to participate will be included.

Moreover, CARBONICA is fully compliant with the Do No Significant Harm (DNSH) Principle, and it will contribute in a positive way to all 6 environmental objectives set out in Articles 9 and 17 of the EU Sustainable Finance Taxonomy Regulation. CARBONICA activities will not 1) lead to significant GHG emissions and emissions of pollutants into the air, water, and land; 2) have an adverse impact on climate and the resilience of ecosystems; and 3) lead to waste disposal having a negative effect on the environment.

The research does not involve children or adults unable to give informed consent.

There are no exclusion criteria. It will be ensured that procedures and criteria do not result in discriminatory practices or unfair treatment.

The consortium will comply with the General Data Protection Regulation (GDPR) (UE) 2016/67. The GDPR has been analysed and reviewed in order to align the project objectives accordingly. All partners have their internal procedures updated and are compliant with current legislation. Taking into account the importance of data management, in the respective section of the proposal (i.e. 1.1.3 Research data management & management of other research outputs), an initial data management plan is presented. A detailed data management plan will be established at month 6 (D6.2). This deliverable will ensure the proper handling of data that is collected within the project. Data will be stored in a separate data usage tracker that allows to document metadata (e.g. the type of data, origin), its storage place and the parties granted to it. This will also specifically include if the data is intended for publication as open access data. The owner of the data will have a veto to ensure that no industrial confidential data will be released to the public. The Data Management plan officer will provide suggestions for methods of anonymizing data for each case in order to ensure that as much data as possible can be published for open access.

Apart from the GDPR, CARBONICA will comply with all EU and national regulations in place like GCP (Directive 2004/27/EC) and, from an ethical point of view, these rules are aimed at safeguarding the security of subjects included in the research and ensure the accuracy, reliability and integrity of the data obtained in research. The directive 2004/27/EC is, in turn, based on the Directive 95/46/ EEC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals regarding the processing of personal data. To assure the participants privacy, all data will be anonymized, encrypted and stored on a server to which only the relevant staff have access. Accordingly, each partner agrees that it will take all necessary steps to ensure that all Personal Data is removed from Shared Information, made illegible, or otherwise made inaccessible (i.e., deidentify) to the other partners prior to providing the Shared Information to such other partners. Each partner who provides or otherwise make available to any other partner Shared Information represents that: (i) it has the authority to disclose the Shared Information, if any, which it provides to the other consortium partner; (ii) where legally required and relevant, it has obtained appropriate informed consents from all the individuals involved, or from any other applicable institution, all in compliance with applicable regulations; and (iii) there is no restriction in place that would prevent any such other partner from using the Shared Information for the purpose of the project and the exploitation thereof.

2.2.3.1.4 Ethical Approvals

Copies of ethical approvals for the collection of personal data or the respective notifications (depending on the type of personal data that will be collected and according to the national data protection legislation of each participating country) by National Data Protection authorities will be submitted to the European Commission.

2.2.3.1.5 Ethics Manager

Carbonica foresees the appointment of an Ethics Manager, who, along with the Data Manager, shares formal responsibility for data protection compliance within the Project. GDPR provides a more formal framework describing the roles and responsibilities of the Ethics Manager, which are also being adopted here within the auspices of the Project's implementation effort.

The primary role of the Ethics Manager, within the boundaries of the Project's activities, is to ensure that the Project Partners will process the personal data of their staff, of potential stakeholders and/or any other individuals (data subjects) in compliance with the data protection regulations.

Even though the Carbonica Project does not call for the experimentation on human beings, human beings, as stated above, will participate in providing requirements and validating solutions. As such, the Ethics Manager will be responsible for ensuring that the following principles are adhered to, project-wide:

- respect for people;
- respect for human dignity;
- fair distribution of the benefits and burden of project results. The general principle is "maximise benefits and minimise risks/harm";
- protection of the values, rights, and interests of the Project participants: the research methodologies will never result in discriminatory practices or unfair treatment.

The role of the Ethics Manager will be further exemplified in the second amendment of this DMP. However, the overarching tasks of the Ethics Manager, along with the Data Manager where appropriate, involve the following:

- monitoring compliance with the GDPR and other data protection laws, Carbonica's dataprotection policies, awareness-raising and training,
- advising and providing information to the Data Manager and the Project Manager regarding data protection obligations &
- in case it is needed, acting as a contact point for the National and EU Data Protection Authorities. Co-operate with them, including prior consultations under Article 36, and consulting on any other matters relevant to Data Protection.

2.2.3.1.6 Personal Data

If cases arise where personal data will be collected, then detailed information will be provided regarding the following:

1. on the type of medium where personal data is being collected, stored and processed;
2. on the recruitment process, inclusion/exclusion criteria for participation;
3. on privacy/confidentiality and the procedures that are implemented for data
4. collection, storage, access, sharing policies, protection, retention and destruction during and after the project;
5. on how informed consent is pursued;
6. if application/is needed to be filed with a local/institutional ethics review body (if personal data is being collected) and if yes, which bodies/where/when.

In case such data will be collected, the Ethics Manager will oversee the Process and ensure that any and all procedures will be fully compliant with all relevant national and EU laws.

2.2.3.1.7 Legislation of PDP regarding the Republic of North Macedonia

National legislation of the Republic of North Macedonia on personal data protection is in accordance with the GDPR, and the rules defined by the GDPR have also been codified in the Law on personal data protection. The legislation can be found in the Official Gazette of the Republic of North Macedonia, issues 42/2020 and 294/21. Other, relevant documentation can also be found here: <https://azlp.mk/en/pdpa/regulations-and-documents/laws/>.

The use of personal data is not particularly mentioned in the legislation, however, as is stipulated in the legal text: *“This Law regulates the protection of personal data and the right to privacy with regard to the processing of personal data, and in particular the principles related to the processing of personal data, the rights of the data subject, the position of the controller and the processor, the transfer of personal data to other countries, the establishment, status and competencies of the Personal Data Protection Agency, the special operations for the processing of personal data, the legal remedies and liability in the processing of personal data, the supervision over personal data protection, as well as the misdemeanors and misdemeanor proceedings in this area.”*²

2.2.3.1.8 Other Non-EU countries

We confirm that the ethical standards and guidelines of Horizon Europe will be rigorously applied, regardless of the country in which the research and test cases are carried out. For data transfer to non-EU countries, we will make a data transfer agreement with the recipient and obtain a specific required authorization by the national data protection authority for data transfer to third countries (if required).

2.2.3.1.9 Right to be forgotten and to erasure

All participants of the project activities will have the right to obtain the erasure of personal data relating to them and the abstention from further dissemination of such data according to the GDPR. They will be informed about this right in the information sheets. Applications for erasure of data will be carried out without delay. In case the personal data has been made public, the consortium will take all reasonable steps, including technical measures, to inform third parties which are processing such data, that a data subject requests them to erase any links to, or copy or replication of that personal data. A procedure for exercising the right to be forgotten and to erasure will be provided.

2.2.3.1.10 Need to know principle

Data collected and processed will be anonymized, encrypted and stored on a server which will have server-side encryption. That means that the server’s administration personnel will be able to generate public keys for specific personnel who will have access to the data but will not be able to access the data themselves (since the private keys required for this access will be generated on the machine of the person with access to the data). This means that only the required personnel (specifically assigned by the project partners) will have access to the data.

2.2.3.1.11 EU Code of Conduct for Agricultural Data Sharing by Contractual Agreement

Literature review but also empirical data from the implementation processes of projects which, like Carbonica, need to engage stakeholders involved in digital farming networks indicates that, farmers in particular, are not always willing to share farm data³.

In response to farmer’s distrust of farm data sharing, principles, codes of conduct and codes of practice have been shaped all over the world, to foster trust in farm data sharing. In the EU, farmer’s representatives from Copa-Cogeca and CEJA (Conseil Européen des Jeunes Agriculteurs) and major agribusinesses presented the EU Code of Conduct for Agricultural Data Sharing by Contractual Agreement in 2018. This EU Code of Conduct provides a valuable start to the discussion about trust in farm data sharing in Europe. It remains to be seen, however, as the project proceeds with the implementation effort, how the EU Code of Conduct for agricultural data sharing by contractual agreement can be made use of in the case of Carbonica. Furthermore, the Project is ready to address issues of TRUST that may involve beyond the

² https://azlp.mk/wp-content/uploads/2022/12/lpdp_2020.pdf

³ Van der Burg et al. 2019

scope of the EU Code of Conduct. These are often viewed as intangible principles which cannot be readily codified and may involve the ideals that can be considered as the building blocks of Trust such as respect for private freedoms, privacy and autonomy, fairness, citizenship or care for the commons and inclusiveness. Given their broader scope, such notions have not been included in the Code of Conduct yet.

Carbonica will take the EU Code of Conduct for Agricultural Data Sharing by Contractual Agreement into consideration during the implementation process, when and where applicable and also in the context of relevant data processing, sharing and management.

2.2.3.2 Gender Equality as part of the Carbonica Ethics Code

The Carbonica Excellence Hub will apply the Gendered Innovations⁴ approach to “*harness the creative power of sex and gender analysis to discover new ideas and develop new technologies*”⁵; the analysis will be incorporated in the CEH *Action and Sustainability Plan*⁶ in order to ensure that, in the emergent Excellence Hub, the equal representation of sexes will be ensured. As such the CEH will employ a Gender Equality Plan, taking also into consideration the alignment of the CEH to the ERA’s objectives:

- fostering gender equality in scientific careers;
- ensuring gender balance in decision-making processes and bodies;
- integrating the gender dimension in R&I content

As such Carbonica aspires to embrace the EC policies and actions aimed at achieving gender equality, by aligning with the main three gender-strategic approaches, as defined by EC: [1] “Fix the Numbers of Women” - CARBONICA will realize this through (a) female researchers’ active participation, including their representation and participation in the Project’s General Assembly and Steering Committee⁷, (b) collaborations with prominent female scientists in the project’s domain, (c) Carbonica’s representation in events by women speakers. [2] “Fix the Institutions” - The participating public institutions employ specific policies on gender equality in their recruitment programmes; as such gender balance in management and execution will be observed throughout the project and the *CARBONICA Hub Action and Sustainability plan* will incorporate all necessary provisions. Moreover, the EH to be established will have a gender equal working environment. [3] “Fix the Knowledge” CARBONICA will take into consideration, where applicable, gender and ethics in the research and innovation content and process; likewise, gender and ethics will also be taken into consideration in any formal and informal science education actions.

Lastly, all of CARBONICA’s communication (both internal and external) will follow the principles of Gender Sensitive Communication (UNDP).

2.3 Methodology for communication, outreach and impact maximisation

2.3.1 Internal Environment

2.3.1.1 Carbonica Consortium

Communication of the project and dissemination of its results starts from the internal environment of the project, i.e. the project partners. The beneficiaries must promote the action and its results by providing targeted information to multiple audiences (including the media and the public). But first this information and results delivered by the implementation of the project activities need to be well communicated among the project partners. This helps the partnership to achieve solid knowledge of the overall progress of the activities and facilitate further research, synergies and sometimes unexpected findings that contribute to the project’s thematic.

All communication channels and tools that have been created for the project (see Section 3) are means that address not only the external environment of the project, but the partnership as well. Foodscale Hub (FSH) is the responsible project partner for proper communication and dissemination of all project activities within the partnership.

⁴ DG R&I, 2020

⁵ Schiebinger, L. (2014), *Triple Helix*, 1(1), 1-17

⁶ D2.4

⁷ see Project Management Handbook, §2.2 Project Governance Structure

The measures that ensure this communication are:

- The monthly meeting of the steering committee where the progress of the D&C activities is presented
- Updating the Carbonica website and social media accounts with project news, partners' news and progress, achievements, other relevant news and events – Informing partners for the updates and urging them to follow, subscribe and keep track
- Issuing the project's newsletter (8 in total, 2 in the first reporting period and 3 in each of the last two reporting periods) by collecting information by the partners through monthly reporting
- Creation of a project flyer, 3 in total – start, middle, end – for the partner's to be informed about the project and other partners' progress.

2.3.1.2 Communication among the MAPs

Three (3) multi-actor platforms consisting of key stakeholders from the QH will be established in CY, GR and NMK. Key stakeholders (researchers, farmers, advisors, industry, investors, public authorities and consumers) will be selected and engaged to create a critical mass of at least 15 members per MAP, organised annually. A regional manager per MAP will be appointed to manage their operations. The role of the regional manager is key in the effective communication within each MAP and with the Carbonica consortium. The regional manager will identify and liaise with regional stakeholders, engaging them in research, creation, training and support in business development, organising local stakeholder engagement events, and facilitating the uptake of the developed knowledge in carbon farming.

The measures that ensure the communication with the MAPs are:

- Annual meetings between the MAPs and the responsible regional manager - transferring project results to and from the MAPs
- Urging the member of the MAPs to follow, subscribe and keep track on project's activities through the website and social media accounts
- Relevant partners to disseminate the project's newsletter and flyer to the members of the MAPs

2.3.2 External Communication

Defining the project's target audience was a critical step for focusing objectives and pursuing meaningful impact (see 2.2.2).

Specific communication tools and channels have been scheduled to reach the identified target groups:

Table 2-1 | Communication Channels per target group

Communication tools and channels	Academic & research organisations	Policy makers & regulators	Industry & technology clusters	Society	Farmers & advisors	Investors
Website & social media	+	+	+	+	+	+
E-newsletters	+	+	+	+	+	+
Press releases	+	+	+	+	+	+
Published videos with interviews & updates	+	+	+	+	+	+
Technical and policy publications	+	+	+		+	+
Networking &	+	+	+		+	+

Communication tools and channels	Academic & research organisations	Policy makers & regulators	Industry & technology clusters	Society	Farmers & advisors	Investors
liaison activities						

The means to approach these target groups are:

- Translate materials into partner’s languages;
- Focus on communicating information that matters to the end user;
- Use language, vocabulary and communication channels that are appealing and audience appropriate;
- Seek synergies and collaboration opportunities with other projects, initiatives, networks, with and between academia, industry, society, and government;
- Capitalise on partners existing connections, networks, and events program;
- Include knowledge exchange activities and discussion in event programs.

The promotional material of Carbonica will be translated into the languages of the partner countries and the responsibility has already been assigned to specific partners:

Table 2-2 | Translation Languages

Partner	Language
FSH	Greek
AFGT	Macedonian

The texts with scientific or technical content will be translated, when necessary, by the partner organisation that is most relevant. The person that will be responsible will be decided during the WP Leaders meetings.

3 Dissemination and Communication means

This section outlines the dissemination and communication means that will be used to reach Carbonica target groups and create a vibrant and well-established ecosystem.

3.1 Visual Identity

To craft a unique visual identity, Foodscale Hub considered the target groups in question and the need to attract stakeholders, simultaneously explaining what the project's key values are. The partners will employ these branded elements in digital and live communications, informing the audience about ongoing activities and receiving feedback to improve over the course of the project. Carbonica's posting is regular with at least three posts per month, keeping stakeholders up to date.

To better represent the project, a minimal approach was employed to place emphasis on research and innovation. The idea is that fine lines and simple aesthetics do not distract from the message transferred. The arrows point to the carbon cycle, correlating the project's visuals with its essence and goals. At the same time, the bright green is eye-catching and attractive, offering positive connotations that are also related to farming and ecology.

3.1.1 Logo

The logo selected after design consultation and discussion is easily recognisable and passes the desirable message of innovation and environmental protection. In **Annex A**, there are the different versions that support the partners' needs of dissemination and communication. The logo has already been established in the digital platforms and print materials and is an inextricable part of the project's brand.



Figure 1 | Carbonica EU most common logo

3.1.2 EU Emblem

As required, all communications of the project contain the EU Emblem to acknowledge the funding source. A horizontal or vertical version is available to partners, as well as translations in X languages to ensure it is used for the scope of each activity. The ready-to-use EU emblem including the funding statement can be downloaded in all EU languages. [8]



Figure 2 | EU Emblem

⁸ https://ec.europa.eu/regional_policy/en/information/logos_downloadcenter/

3.1.3 Disclaimer for publications

In addition to the EU Emblem, all dissemination and communication material must include the following disclaimer (translated into local languages where appropriate):

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.”⁹

3.1.4 Colour Palette

The colour variations of the material support the use in different backgrounds and settings to facilitate the partners' work, representing how agriculture becomes part of the solution when it comes to mitigating the carbon footprint. The RGB and CMYK values selected have excellent printing performance, while the photographic material used follows the colours completing a unique feel of the content. The colour palette is provided in **Annex A**.

3.1.5 Templates

To ensure that the project is represented in the best possible way, the use of templates is essential. This also ensures organisation and good collaboration within the consortium.

- The ppt Carbonica template uses the arrows of the logo, pointing out at the content and maintains the branding of the project in meeting and event attendance.
- Accordingly, the deliverable template is simple, easily legible to further enable the smooth process of writing complex, multi-page documents. It includes the colours of the project, while the cover page displays the project's logo in a prominent position, its name, deliverable information (number, full title, the work package number, and title) as well as the writer's information.

These two templates are provided in **Annex B**.

3.1.6 Leaflets

The first leaflet developed has already been distributed at the Public Launching Event and has been translated to the project's languages: Greek, English and the Language of the Republic of North Macedonia. The second leaflet will further be developed to transfer accurate and solid information to stakeholders, through a user-friendly design that helps the reader focus on the essential. The leaflets will be primarily used in digital format and become available in print format where necessary and can be found in **Annex C**.

3.1.7 Banner

In live events, the project needs to establish a strong presence; for this reason, four (4) banners will be created to present significant information to stakeholders and capture their interest. The first one is found in **Annex C**. During the lifespan of the project the information of the banners will be diversified, disseminating suitable information for each stage. All banners will also be translated into the partner's languages to make information accessible to the various ecosystem players.

3.1.8 Posters

The total number of posters is three (3), one (1) in each reporting period. The posters will showcase the three ecosystems' crops and field visits, as this information is engaging for all stakeholder groups: academia, policy makers, industry, society, farmers, advisors and exporters, and investors.

⁹ Based on the Annotated Model Grant Agreement: [GA] . For any changes, the Plan will be updated accordingly.

3.2 Communication Tools and Channels

3.2.1 Carbonica Diverse Communication Outlets

To achieve optimal dissemination and communication of the project, a solid website is a key tool, while it is going to be combined with email marketing, social media outreach; online and print press releases will also be regularly distributed. Video interviews will be released, placing the project in the general framework of EU efforts to mitigate the carbon footprint, explaining how it plans to contribute to 2030 goals set in the new CAP.

3.2.2 Website: Carbonica-hub.eu

As far as the website is concerned, Carbonica went for a modern and minimal feel that is absolutely engaging. Separated in sections, it is easy to navigate presenting in detail the scope and goals of the project to render carbon farming an attractive perspective for farmers. The website is the nexus of all dissemination material and deliverables, concentrating the added value of the project for stakeholders to access. The blog and contents will further be enriched with videos, interactive links and cross references, establishing the identity and credibility of the project. The website supports mobile view and includes all social media to share. The project's website aims to have at least 30.000 unique visitors.

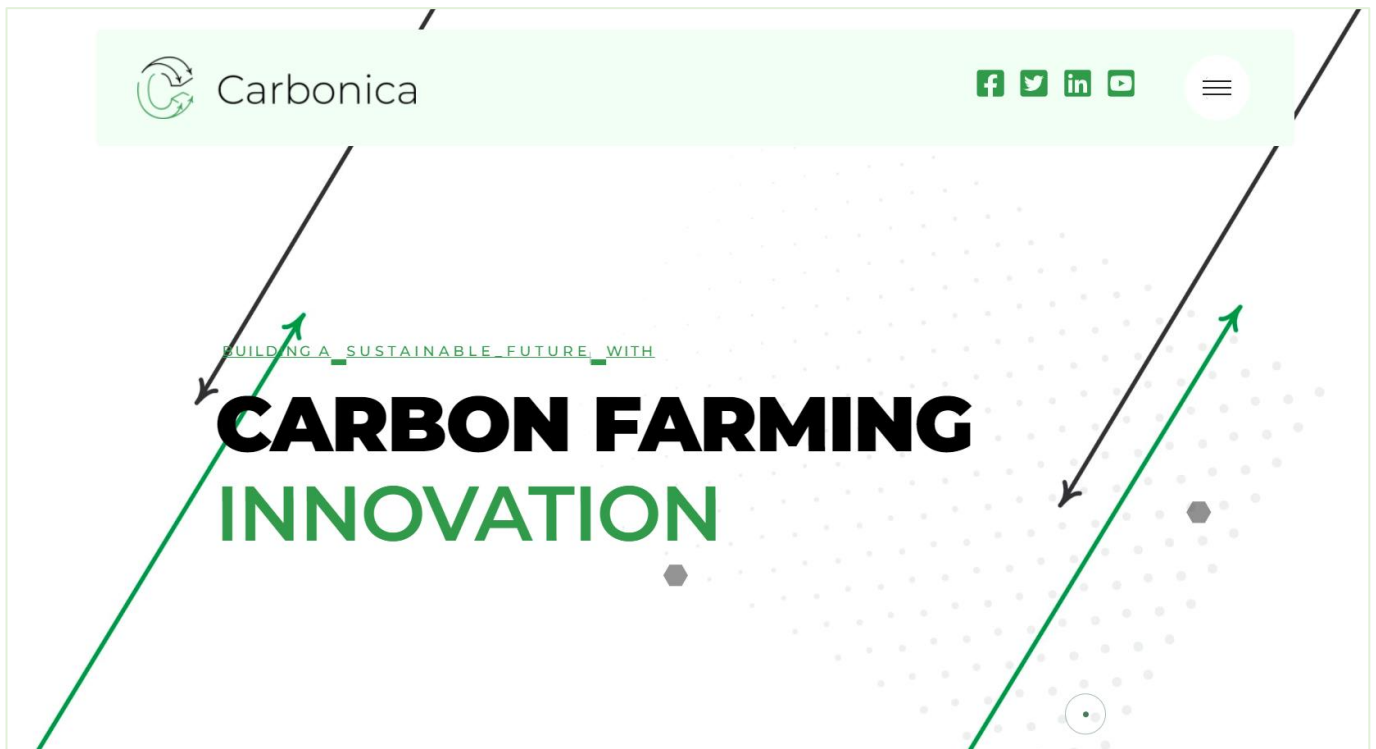


Figure 3 | Carbonica EU Website



Figure 4 | Carbonica EU Website

Delivered in M3, the Carbonica EU website is hosted at www.Carbonica-hub.eu and will contain the following sections and features:

Home

The visitor is welcomed with the project’s slogan and the emphasis is placed on “innovation”. The visuals surrounding the text add to the strong feel and movement of elements completes the tab. The project’s social media are the first thing visitors encounter to guide traffic towards them.

About us

This section describes the consortium and the PBIES mapped and boosted in order to align carbon farming innovation in Greece, Cyprus and North Macedonia. With a multi-actor approach that encompasses and reflects the quadruple helix, the “About us” part summarises what Carbonica is set to achieve.

Excellence Hub

The Carbonica Excellence Hub is the essential kernel to tie together the innovation ecosystems of the three participating countries. This is described in a comprehensive manner that showcases the values of co-creation and collaboration in the project.

Objectives

Visually attractive, clear and concise are the three core objectives that follow. These are the basic objectives of Carbonica, to strengthen place-based innovation, foster long-term cross border collaboration and create business opportunities.

Outcomes

The outcomes section describes what the project is set to accomplish within its four-year lifespan. By presenting the concrete outcomes, stakeholders are kept engaged to witness the progress and understand how the outcomes are interconnected within the project. This section will also serve as social media material to achieve multi-platform communication and promote the outcomes benefiting the ecosystem.

Consortium

The section includes a presentation of the consortium partners, followed by a brief description of each organisation and their respective role in the project. Active links to their webpages are also provided for more information.

Publications/Newsroom

This section will be frequently updated with relevant website posts to inform stakeholders of all project’s activities and upcoming events, as well as making scientific information accessible. This section aims to reveal insights, milestones, events, and other news worth sharing. Blog posts are particularly important, as they can help raise awareness regarding the project, enhance its visibility, boost conversions around the topics of interest and, finally, drive traffic to www.Carbonica-hub.eu. A detailed strategy and timeline have already been planned and, in total, at least 50 posts will be published, with extra ad hoc posts to cover the project’s needs. The Publications section will include two submenus:

- a) Deliverables: Providing links to public project deliverables and research articles.
- b) Media kit: Providing access to all the project communication material (e.g., banner, templates, brand book).

Contact

At the start of the page links for the four (4) social media platforms are provided via the social media icons to be messaged. Contact information of the Carbonica project is located at the bottom of the page facilitating communication with the project’s coordinating partners directly, and the subscription option is also provided.

3.2.3 Social Media

The project has established four social media channels, each aiming to attract different demographic groups and stakeholder categories. Carbonica’s strong social media presence is enriched with visual and interactive cues to initiate two-way communication with and better reach-out to target groups as well as the broader public. To enhance interactive communication, four (4) media channels were chosen based on the following principles:

- **Cost-effectiveness:** a set of free channels to share immediate updates from the project to all stakeholders’ groups were selected
- **Validity:** channels featuring valid hyperlinks to accurate sources are used for informative purposes and the project aims to employ this feature and showcase results and relevant information
- **Popularity:** social media platforms to communicate and interact with various stakeholders



Figure 5 | Carbonica EU social media demographics

Carbonica EU has been active since day one on the 4 (four) social media platforms designated, with a total base of about 430 followers by 1.06.2023. The accounts and necessary metrics can be found in **Annex D**.

The social media described above have been selected to further support the multi-actor approach of the project. To approach key stakeholder groups different means of reaching out are needed. In that sense, the following characteristics have been considered:

LinkedIn - build a strong network: This channel is used mainly to create awareness and generate networking and collaboration opportunities due to its professional character and style of communication. Groups related to the project have already been identified to share updates about project activities.

YouTube - be informed and share the knowledge: This channel is mainly used for awareness and training purposes. Carbonica EU will use this channel to reach any stakeholder interested in carbon farming by promoting interviews and key video content of the project.

Twitter - instant updates: Twitter is used mainly for building awareness and enhancing public relations, as well as to provide real time updates and quickly spread information regarding all fields of interest. Carbonica EU will use this channel to reach all identified target groups by focusing on the several events that will take place throughout its course.

Facebook - building a loyal audience: Used to create relationships and maintain connection with peers and contacts. It is a good platform to build loyalty to the existing network. Carbonica EU will use this channel to reach all identified target groups.

Carbonica EU will use the consortium's already developed social media networks, shaping them into a broader project network. Partners are expected to share, publish, and retweet content from the project's social media accounts and website. This will increase traffic for project-related work, while partners are also encouraged to create relevant content to the project's actions, always tagging the project's channels.

The project's content is focused around the following axes:

- **Interactivity:** Posts will be easily understood by the layman, prompting the audience to share and comment on them.
- **A minimal approach:** This will clearly pass across the information so that it is not dispersed in the busy, multi-coloured social media interfaces.
- **Versatility:** Social media assets adapt to the format and functionality of the several devices and they will be used effectively in all devices.

Hashtags

Creating hashtags that are relevant to the project will help reach target audiences and make it easy to access project work and outputs. Hashtags divide the project main topics into easily digestible and engaging keyword phrases and will help increase visibility in the social media environment, while they will make our messages stand out and influence the relevant communities. Tracking of the hashtags is going to help the consortium analyse quantitative and qualitative data.

The project has set five (5) official hashtags: **#circulareconomy**, **#climateresilience**, **#Carbonicaexcellencehub**, **#carbonfarming** and **#widera** used to monitor the posts related to the

project. In addition, the hashtags **#HorizonEurope**, **#ResearchImpactEU**, suggested by the European Commission, will accompany each post to emphasise the EU direction of the project.

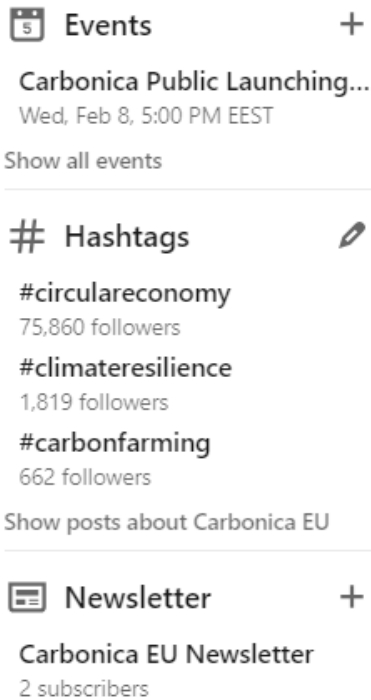


Figure 6 | Carbonica EU hashtags

3.2.4 E-Newsletters & Subscriptions

An e-newsletter will be released to provide updates and information on the project's activities to the public and consortium members. This will include the latest developments, previous or upcoming events and workshops, as well as facilitating access to Carbonica EU recent publications. The target audience of the newsletter mostly consists of the following target groups: Academia, Carbon Farming Stakeholders, the Agri-food Industry, Civil Society entities, Policy Makers and Regulators, while its frequency is defined to quarterly issues starting from Month 6. Newsletters will be at least 8 in total, and the subscriptions are anticipated to be more than 500 over the course of the project and the interactions stimulated by the newsletter over 3.000. Subscription to the newsletter will be made through the project's website, utilising an easy fill-in box, employing User Experience (UX) design. For the development of the newsletters a Brevo account will be created by FSH, while the new opportunity to create and circulate a newsletter on LinkedIn will be utilised.

The first newsletter will be produced by FSH, with content co-created with partners and it will be sent to all consortium partners for review after its completion. After the partners have provided feedback and then FSH will circulate the newsletter and promote it to all social media accounts of the project. All newsletters will remain available on the project's website.

The proposed structure of each newsletter is:

- Introduction
- Project Updates / News and Events / Work Progress
- Resources for further reading

3.2.5 Press Releases

Regarding the press outreach, a minimum of **7** press releases will be sent out by partners to provide information about key activities implemented and to share important updates related to the milestones, such as cross visits and exchange activities' completion. The table below presents the indicative planning of press releases based on the relevant milestones and tasks throughout the course of the project.

To maximise influence on local stakeholders, the consortium will translate all press releases into all consortium partners' languages (3 in total) (see 2.3.2). A press release template has been developed (Annex C) and shared with partners.

The first press release has been created and distributed in Month 2 to the partners for circulation to the media. Relevant screenshots of the press release published in [national media](#) are in **Annex E**, along with other relevant media coverage.

3.2.6 Published videos

The project's consortium will develop promotional videos with project updates and interviews; in total **15** videos will be produced and uploaded online. This falls under the category of appealing multimedia material, leveraging available distribution channels (e.g., YouTube). To further support this medium, there is some data regarding the rise of video marketing. Video Marketing Statistics 2023 Report demonstrates that people are 52% more likely to share video content¹⁰ than other types of content.

3.3 Dissemination Activities

3.3.1 Innovation publications

Carbonica EU will develop at least **8** technical and at least **4** policy publications to reach a wide range of targeted stakeholders and to promote the project and its main events/ milestones. These publications will implement Open Access and open peer-review values, in accordance with current EU regulations on Open Access and Open Science.

A key aspect for Open Science is to collect information and data available for future research and analysis, always in compliance with GDPR regulations. The availability of project outputs as Open Access will ensure:

- more citations for academic publications and reports
- greater impact due to increased visibility with the stakeholder ecosystem
- future research and analysis on carbon farming will be able to build on and reuse the project's results, thereby helping in terms of the reproducibility and strong linkages between research results.

Technical articles will be published in industry magazines to attract interest of the industry stakeholders. The following partners will ensure Carbonica's presence in such magazines: i-BEC, SCIENTACT, AGFT, GGP, UGD, CELLOCK.

Discussion Papers will be published to translate Carbonica results into useful input for policy making and implementation, drawing on scientific data and stakeholder feedback. These will be directed at EU level and target national and regional officials. The specific publications will inform policy makers about the current carbon farming landscape in the three participating ecosystems to assist future policy design and putting in place structures for facilitated uptake of the practice.

¹⁰ <https://www.wyzowl.com/video-marketing-statistics/>

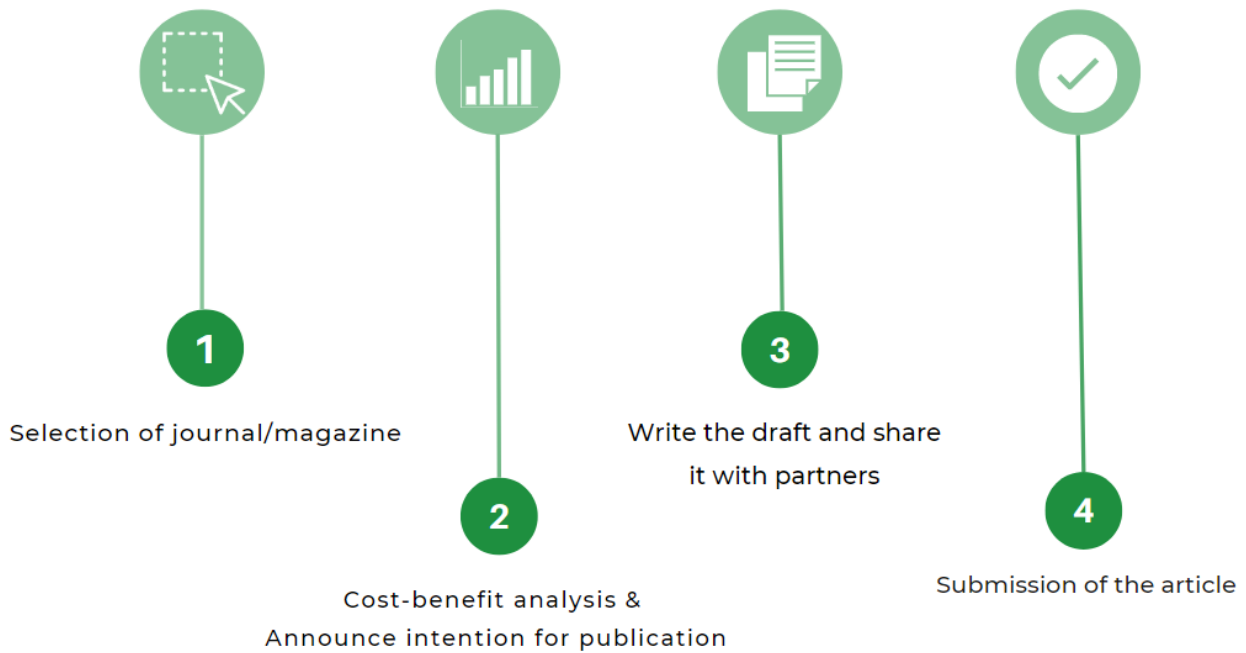


Figure 7 | Carbonica EU Pathway to article submission

3.3.2 Capacity Building

Capacity building concerns two areas of activities and aims to overcome the gaps to consolidate the R&I capacities. Each part of the QH will exchange knowledge in the involved PBIES and develop new capacities. knowledge will be transferred, through the established links in the EH (open e-learning platform, field-based learning, training workshop) by using an interdisciplinary, transdisciplinary and cross-sectoral approach.

CARBONICA Academy

WP1 will develop an e-learning platform and provide capacity building opportunities through training sessions, with a target of >1.000 stakeholders reached. Capacity building activities and brain gain strategies will broaden the existing knowledge and capacity of the related fields. During the project virtual and physical technical workshops, online and in person trainings and webinars will be organised for knowledge transfer, wider outreach, and sustainability of the CEH. Focus areas will include carbon farming, carbon footprint measurement, business modelling, carbon footprint certification/accreditation protocols, policy design and will target participants from CY, GR and NMK of the QH, as well as other WC (North Mediterranean and Balkans). The GA foresees a succinct number of sessions that are still to be determined and will be further investigated during the implementation process.

3.3.3 Events

Carbonica has already participated in numerous events and this effort will be continued during the lifespan of the project. An event calendar has already been circulated to partners to put a good planning strategy in place. On a regular basis, partners are asked to describe the events that are in their immediate or long-term planning. The date, location, title/ description of the event and a brief elaboration of the role/implication for Carbonica EU (i.e., workshop, presentation, booth) are required to support the dissemination process. The responses will be compiled in the online reporting tool for reference and easily accessible records. Several potential events to share the project's activities have already been identified and are presented in the following table.

Table 3-1 | Potential events for participation

#	Date	Planned Events	Partner	Location	Role /Description and Links
1	12-16 June (2023)*	EJP SOIL Annual Science Days & General Meeting	FSH	Riga, Latvia	https://ejpsoil.eu/about-ejp-soil/news-events/item/artikel/default-7641d9d2d5
2	15-16 June (2023)*	Sustainable Foods Summit Europe	FSH	Amsterdam, Netherlands	https://www.organicseurope.bio/events/sustainable-foods-summit-europe/
3	28 August - 1 September 2023	Wagenigen Soil Conference	FSH	Wagenigen, Netherlands	https://ejpsoil.eu/about-ejp-soil/news-events/item/artikel/wageningen-soil-conference
4	28 September 2023	The Future of Food & Farming Summit	FSH	Paris, France	https://www.politico.eu/agrifood-summit/
5	1-4 February 2024	Agrotica Expo	FSH	Thessaloniki, Greece	https://www.agrotica-expo.gr/en/
6	May 2024	Food & Science Festival	FSH	Mantova, Italy	https://www.foodsciencefestival.it/en/
7	4-5 June 2024	Organic Food Iberia	FSH	Madrid, Spain	https://www.organicfoodiberia.com/en/
8	3/6/2024 - 3/7/2024	Low Carbon Agriculture 2024	FSH	Coventry, UK	https://www.showsbee.com/fairs/Low-Carbon-Agriculture-Show.html

To better coordinate efforts between partners participating at similar events and establish an effective plan for Carbonica EU, information will be consolidated online in a living document that will be updated frequently. Following the identification of the relevant event, the selection of events will be done based upon the guidelines below. These necessary actions and when they should occur will ensure event participation aligns with the project's objectives and budget. These will need to be adapted to individual activities, since numerous factors can result in varying steps and deadlines.

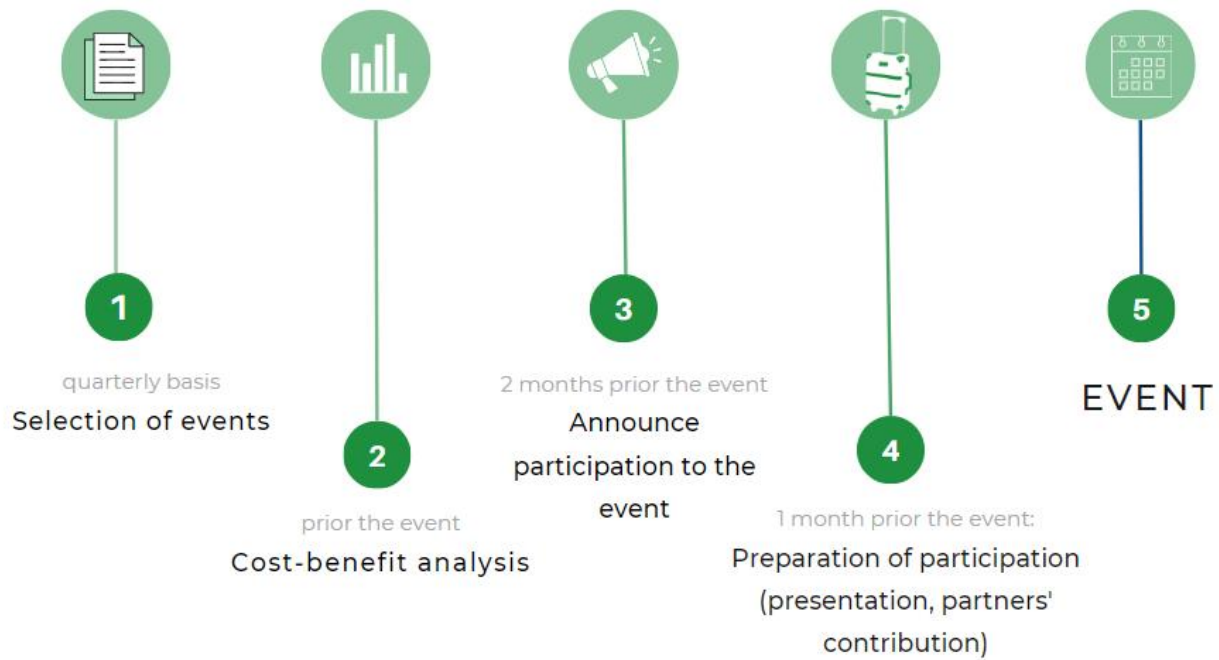


Figure 8 | Carbonica EU process for event attendance

3.3.4 Networking and Synergies

Carbonica will create at least 2 synergies with related projects and has already instigated the Solar Hub Synergy. These include Horizon 2020, Horizon Europe, EAFRD, ERDF, Cohesion funds, and Excellence Hub call projects, as well as initiatives and networks (e.g., European Institute of Innovation & Technology, CAP network, EU Missions, NRNs, Focus Groups, Operational Groups, and Thematic Networks).

Table 3-2 | Potential Synergies

#	Project	Website
1	SolarHub	https://cordis.europa.eu/project/id/101086110
2	AGREEN	https://agreen-project.eu/
3	EU Life Carbon Farming	https://www.life-carbon-farming.eu/
4	Interreg North Sea Carbon Farming	https://northsearegion.eu/carbon-farming/
5	ORCASA	https://irc-orcasa.eu/
6	SOLO	https://soils4europe.eu/
7	BENCHMARKS	https://soilhealthbenchmarks.eu/
8	AI4SoilHealth	https://ai4soilhealth.eu/
9	INBESTSOIL	https://cordis.europa.eu/project/id/101091099
10	NOVASOIL	https://novasoil-project.eu/
11	SOILval	https://www.soilver.eu/news/project-soilver-recognising-soil-values-in-land-use-planning-systems/
12	NATI00NS	https://nati00ns.eu/
13	HuMUS	https://cordis.europa.eu/project/id/101091050
14	NBSoil	https://nbsoil.eu/
15	Excel4Med	https://cordis.europa.eu/project/id/101087147

3.3.5 EC Tools

Carbonica will take advantage of several of the tools offered by the European Commission to support dissemination (D), exploitation (E) and communication (C) of the project's results.



Figure 9 | EU Tools for DCE

4 Monitoring and Evaluation

Monitoring and evaluating the implementation of the dissemination and communication (D&C) activities are integral steps for ensuring project goals are met. This section will provide the overall methodology that will be applied and includes the dissemination and communication Key Performance Indicators (KPIs), barriers beyond the scope of the project, as well as reporting and monitoring KPIs and risks.

4.1 Dissemination and Communication KPIs per reporting period

Key Performance Indicators (KPIs) are concrete, measurable targets used for monitoring and evaluating the project's progress and enabling adaptation when necessary. A set of dissemination and communication KPIs have been identified. For each KPI, a specific target is set and distributed between the reporting periods in which the dissemination and communications activity plan will be also updated.

Table 4-1 | Carbonica Dissemination KPIs per reporting period

#	Dissemination KPIs	Target	M1 - M15	M16 - M30	M31 - M48
D.1	Innovation publications				
D.1.1	Technical Publications	8	1	4	3
D.1.2	Discussion Papers	4			4
D.2	Capacity building				
D.2.1	Online training series (seminars and webinars)	8	2	3	3
D.2.2	In-person training series (field visits)	15	5	10	
D.2.3	Cross-visits, staff exchanges and secondments	12	4	4	4
D.2.4a	Online roundtables of working groups (quarterly meetings)	12	4	4	4
D.2.4b	Brain Gain Conferences	6	1	2	3
D.3	Ecosystem building				
D.3.1	Participation in industry fairs and trade shows	6	2	2	2
D.3.2	Community outreach presentations	8	4	2	2
D.3.3	Open pitch events (one in each country)	3	3		
D.4	Joint Activities and Relevant Initiatives				
D.4.1	Participation in symposium/networking events	6	2	2	2
D.4.2	Posters	3	1	1	1
D.4.3	Data exchange with other initiatives	4		3	1
D.4.4	Liaison (Synergies) with other projects from the Excellence Hub call	2	1	1	
D.5	Policy Contribution				
D.5.1	Policy master classes (1 in CY, 1 in GR, 1 in NMK, 1 in Brussels)	4			4
D.5.2	White papers	5		2	3

Table 4-2 | Carbonica Communication KPIs per reporting period

#	Communication KPIs	Target	M1 - M15	M16 - M30	M31 - M48
C.1	Branding & Materials				
C.1.1	Logo and visual identity	1	1		
C.1.2	Digital leaflets	2	1	1	
C.1.3	Banners	4	3	1	
C.1.4	Distributed printed/digital promotional materials	3,000	1000	1000	1000
C.1.5	Brand Book	1	1		
C.2	Website				
C.2.1	Website	1	1		
C.2.2	Posts	50	15	25	10
C.2.3	Unique visitors	30,000	7500	7500	15000
C.3	Social Media				
C.3.1	Social Media Channels (LinkedIn, Facebook, Twitter, YouTube)	4	4		
C.3.2	Audience reach	1,000	400	300	300
C.3.3	Posts	100	30	40	30
C.3.4	Interactions	8,000	2500	3000	2500
C.3.5	Hashtags	5	5		
C.4	e-Newsletters & Email Campaigns				
C.4.1	e-Newsletters	8	2	3	3
C.4.2	Subscriptions	500	200	150	150
C.4.3	Interactions	3,000	750	750	1500
C.4.4	Press releases	7	2	3	2
C.5	Multimedia				
C.5.1	Published videos	15	5	5	5

4.1.1 Target audience KPIs

In the proposal phase, KPIs related to the target audiences and number of stakeholders to be engaged with the project's results were determined. While the KPIs related to the specific D&C tools and channels are fundamental for planning and implementing a strong D&C plan, it is equally valuable to understand the target audience for the main project results and activities. The following table outlines KPIs, targets and verification mean (VMs) related to stakeholder numbers and the size of targeted audiences.

Table 4-3 | Audience KPIs

Audience KPIs		
Initial audience (network + dissemination activities)	Target	VM
Website unique visitors	≥30.000	Google Analytics
Social media audience	≥1.000	Social Media Insights
Social media interactions	≥8.000	Social Media Insights
Newsletter subscriptions	500	Mailing service insights
Newsletter interactions	≥3.000	Mailing service insights
Stakeholders engaged through surveys	≥200	Surveys
Stakeholders engaged through interviews	≥60	Interviews
Stakeholders engaged through training modules, workshops, field-based activities,	≥1.000	Platform tracking tool, No. of registrations
Start-ups and SMEs participating in the support programmes for Business Development	≥30	Report on registered participants and user evaluation
Farmers introduced to the toolbox	≥1.500	Ecosystem Supervisor(s)
Citizens aware of the CARBONICA results:	≥15.000	Event organisers / Media coverage numbers

4.1.2 KPIs per partner

All partners share the responsibility of communicating the project and disseminating the results. Depending on each partner's expertise, experience and networks, KPIs and targets were allocated.

Table 4-4 | Carbonica Communication KPIs per partner

#	PMs	Target	FSH	i-BEC	SCIENTAC	YPEKA	AGFT	GGP	APRZ	UGD	ECOE	MARDE/	CELLOCK	CUT	ESVD	PSK
C.1	Branding & Materials															
C.1.1	Logo and visual identity	1	1													
C.1.2	Digital leaflets	2	2													
C.1.3	Banners	4	3							1						
C.1.4	Distributed printed/digital promotional materials	3,000	3													
C.1.5	Brand Book	1	1													
C.2	Website															
C.2.1	Website	1	1													
C.2.2	Posts	50	50													
C.2.3	Unique visitors	30,000	30,000													
C.3	Social Media															
C.3.1	Social Media Channels (LinkedIn, Facebook, Twitter, YouTube)	4	4													
C.3.2	Audience reach	1,000	1,000													
C.3.3	Posts	100	100													
C.3.4	Interactions	8,000	8,000													
C.3.5	Hashtags	5	5													
C.4	e-Newsletters & Email Campaigns															
C.4.1	e-Newsletters	8	8													
C.4.2	Subscriptions	500	500													
C.4.3	Interactions	3,000	3,000													
C.4.4	Press releases	7	7													
C.5	Multimedia															
C.5.1	Published videos	15	12					2					1			

Table 4-5 | Carbonica Dissemination KPIs per partner

#	PMs	Dissemination KPIs	FSH	i-BEC	SCIENTAC	YPEKA	AGFT	GGP	APRZ	UGD	ECOE	MARDE/	CELLOCK	CUT	ESVD	PSK
D.1	Innovation publications	91	25	8	1	2	4	30	5	4	4	2	6	3	0	3
D.1.1	Technical Publications	8		2	1		1	2		1			1			
D.1.2	Discussion Papers	4		1				2			1					
D.2	Capacity building															
D.2.1	Online training series (sessions and webinars)	8		3						2				3		
D.2.2	In-person training series (field visits)	15		5						5	3			2		
D.2.3	Cross-visits, staff exchanges and secondments	12		3						3	3			3		
D.2.4a	Online roundtables of working groups (4 in each session)	3		1						1	1					
D.2.4b	Brain Gain Conferences	6		2						2	1			1		
D.3	Ecosystem building															
D.3.1	Participation in industry fairs and trade shows	6	1		2		1						1			1
D.3.2	Community outreach presentations	8		1			1	2	1			1				2
D.3.3	Open pitch events (one in each country)	3	1				1				1					
D.4	Joint Activities and Relevant Initiatives															
D.4.1	Participation in symposium/networking events	6	2	3			1									
D.4.2	Posters	3	3													
D.4.3	Data exchange with other initiatives	4		1			1				1			1		
D.4.4	Liaison (Synergies) with other projects from the Excellence Hub call	2	2													
D.5	Policy Contribution															
D.5.1	Policy master classes (1 in CY, 1 in GR, 1 in NMK, 1 in Brussels)	4	2					1				1				
D.5.2	White papers	5						5								

4.2 Reporting Methodology and Tools

4.2.1 Reporting Forms for Event, Activity and Communication

An online form has been developed and distributed to all partners to serve as a reporting on event participation and communication activities and will help maintain accountability and engagement with the dissemination and communication process. Partners should include in this report only past information, meaning activities that have already taken place **within the last month**.

FSH will collect information from the partners **on a monthly basis** regarding their involvement in the project's D&C activities.

The reporting procedure includes the following steps:

1. FSH sends a reminder to all partners within the first week of each month to report relevant activities on the online form
2. All partners report the D&C activities that they have organized or/and participated or/and attended during the last month and fill in the respective information.
3. Partners provide the information within the next 15 days from the day they received the request/email.

Partners are also advised to send supportive material along with the reporting form to justify their involvement and progress, i.e photos, short description, role of the partner to the event, type of activity etc.

If partners have already uploaded any social media posts regarding the event on their institutional website or social media accounts, they should tag Carbonica’s accounts in LinkedIn, Facebook, Twitter, YouTube. It is also important that partners share the link of the post with FSH, so that the communications team can repost their website/social media content.

The results will be compiled and serve to monitor targets and inform D&C strategies as the project progresses. During the monthly meetings of the steering committee FSH will inform the rest of the partners about the progress and the achievement of the relevant KPIs. Significant deviations will have to be justified and changes on the dissemination and communication strategy will have to be agreed and reported on the updated versions of the D&C plan.

4.2.2 Project’s Social Media Analytics

For each channel, established metrics were selected to monitor its effectiveness and implement corrective measures when necessary.

Table 4-6 | Carbonica Social Media analysis

Social platform[1]	<u>LinkedIn</u>	<u>Facebook</u>	<u>Twitter</u>	<u>YouTube</u>
Followers in the first 6 months	319 followers	107 followers	19 followers	24 subscribers
Metrics to be provided in Annual Project Meetings	Number of followers	Number of views	Number of followers	Number of views
	Number of views	Number of followers	Hashtags	Number of subscribers
	Demographics of followers	Number of reaction (likes, comments, shares)	Number of link links (to the posts associated with the tweet) Number of re-tweets	Watch time

5 Exploitation of Results and IPR management

Carbonica will produce commercial and non-commercial Key Exploitable Results (KERs) with exploitation paths, aiming to achieve optimal use and expedited uptake of the KERs by the targeted stakeholders. To make them stand out and ensure the wider use and maximum impact to the science, technology, society, and the business world, Carbonica aims to formulate and communicate the Unique Value Proposition (UVP) of each KER; a concise, yet understandable statement, to a technical and non-technical audience, that is distilling the value that its result offers to the targeted groups.

This chapter will provide all potential exploitation modalities and routes to bring Carbonica results to all targeted groups and deliver a sustainable output that far outlasts the project duration.

5.1 Key Exploitable Results

Each exploitable result requires a unique exploitation approach based upon the type and whether it can be commercialised. By the time this is written, Carbonica has identified the following five key exploitable results and corresponding unique value propositions that will be available for use/ reuse by partners and target group stakeholders.

Table 5-1 | Key Exploitable Results

KER name: Joint R&I strategy	
Partners contributing to its development	All partners collaborating with the Advisory Board
Description of the KER	Long-term plan of the strategic research areas in carbon farming. Taking into consideration current challenges, research trends, stakeholders' needs and policy framework related to carbon farming, key R&I priorities per IES, as well as joint research themes, areas of focus, objectives and actions will be defined.
Unique Value Proposition	The real needs of the agri-food sector in the context of carbon farming will be identified, while at the same time synergies with existing policy and research activities will develop.
Target groups	<ul style="list-style-type: none"> ● Academia ● Policy makers
Scope of exploitation	Non-commercial
Means of exploitation	<u>Non-commercial:</u> Scientific exploitation: Generation of new knowledge under new research projects and for educational/ training purposes. Policy Making exploitation: Policy makers will be able to identify where and how they can improve to make impactful policies in CA.

KER name: Toolbox for carbon farming solutions	
Partners contributing to its	UGD, i-BEC, AGFT, CUT

development	
Description of the KER	A digital inventory of carbon farming solutions, involving carbon farming technologies, practices and models used at the regional and field levels.
Unique Value Proposition	Technologies, practices and models will be tested in real life settings for economic, technical and legal feasibility to ensure recommendations for widespread acceptance are justified.
Target groups	<ul style="list-style-type: none"> ● Farmers ● Industry ● Investors ● Policy makers
Scope of exploitation	Non-commercial & Commercial
Means of exploitation	<p><u>Commercial:</u> Farmers: Gain access to validated new technologies to minimize CFA. Industry: Exploit the toolbox for enhancing their portfolio of solutions and services in the carbon farming field.</p> <p><u>Non-commercial:</u> Policy makers & Investors: Capitalize on evidence-based suggestions to develop investment strategies that will leverage regional, national and EU funds and private capital.</p>

KER name: Lab Prototypes	
Partners contributing to its development	CUT, UGD, i-BEC, AGFT, MEEN, MNEA, ARI
Description of the KER	Two lab prototypes will be developed: 1 lab prototype in carbon farming solutions consisting of optimal set of methods, infrastructure (equipment and software), source of data and data aligned with the specific characteristics and needs of the agri-food ecosystem; 1 lab prototype for protocols for CF accreditation/certification.
Unique Value Proposition	The lab prototypes will be tailored to the stakeholder needs (based on close collaboration with MAPs actors) and assessed for feasibility and market prospects.
Target groups	<ul style="list-style-type: none"> ● Academia ● Policy makers ● Farmers

	<ul style="list-style-type: none"> • Industry • Investors
Scope of exploitation	Non-commercial & Commercial
Means of exploitation	<p><u>Non-commercial:</u> Academia & policy-makers: Exploit the regional level lab prototype to open up opportunities for future large-scale pilots and demonstrators.</p> <p>Commercial: Farmers & industry: Utilize valuable, practical insight on carbon farming and CF obtained through the field level prototype.</p>

KER name: E-learning platform	
Partners contributing to its development	All partners
Description of the KER	An interactive e-learning platform will be created with training content for carbon farming solutions, CF certification protocols, business development, and policy design.
Unique Value Proposition	The platform will act as a repository of knowledge, including information on how to adopt and assess innovative technologies, including training on carbon farming, CF measurement and policy design.
Target groups	<ul style="list-style-type: none"> • Academia • Farmers • Industry
Scope of exploitation	Non-commercial & Commercial
Means of exploitation	Increased capacities of all stakeholders on carbon farming practices through training and knowledge exchange activities.

KER name: Policy recommendations	
Partners contributing to its development	All partners
Description of the KER	A set of all the recommendations produced during the project, in a single document that will be broadly disseminated at the EU and national levels.
Unique Value Proposition	Recommendations will be co-created, discussed

	and validated in four policy masterclasses with the active participation of policy makers.
Target groups	<ul style="list-style-type: none"> • Policy makers
Scope of exploitation	Non-commercial
Means of exploitation	Formation of more efficient and impactful policies in the carbon farming domain.

5.2 Identification of new KERs- project procedure

As the project progresses additional KERs might be identified by the partners. To this end, certain procedure and steps have been designed and presented in the figure below:

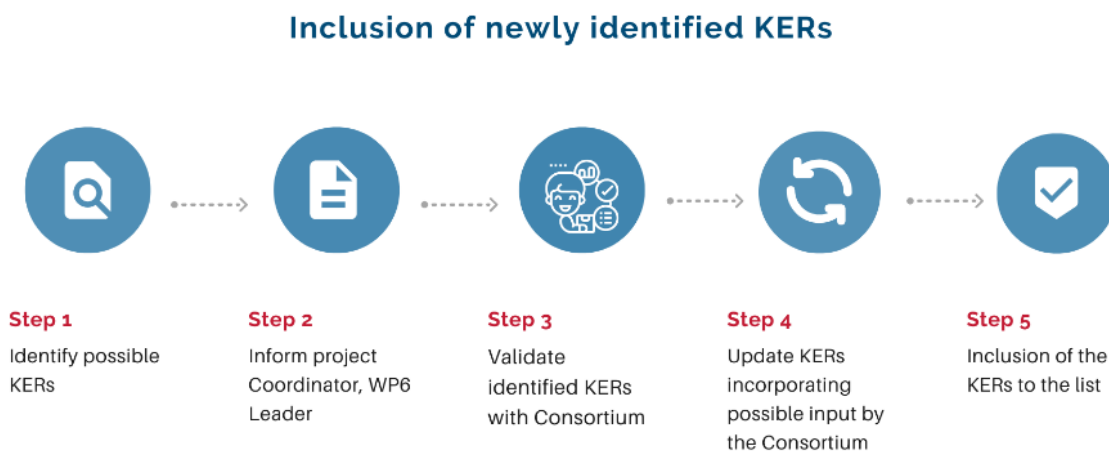


Figure 10 | Newly identified KERs procedure

The first step towards the identification of a KER by a partner, is for the latter to inform the WP5 leader providing a detailed explanation of the exploitability potential of the identified result by making sure it aligns with the project exploitation plan. Specific analysis needs to be made covering the following aspects:

- **Scope of exploitation (why)**
- **Target groups (to whom)**
- **Means of exploitation (how)**

Once this step is concluded, a relevant form will be sent to the partners asking them to validate the new KER/s (Annex H). Comments and suggestions of the partners will be recorded and discussed in meetings of the steering committee, while possible objections will be discussed thoroughly and addressed appropriately. Finally, after the new KER is validated, it will be included in the project's KERs list.

5.3 IPR Management

Intellectual Property Rights (IPR) are the ownership rights for creations of the mind, such as inventions, names, images, or designs and can enable owners to obtain financial benefit from their ideas. Striking the right balance between creator and public interests can foster creativity and innovation.

All KERs are potentially subject to IPR management. Carbonica will examine the protection of any result that could potentially be commercially exploited, and if possible, reasonable, and justified, protect it.

5.3.1 Types of IPR

The standard forms of IPR protection include:

- Patent: an exclusive right granted for an invention. It allows the owner to decide how and whether the invention can be used by others
- Trademark: a sign that distinguishes goods and services of one enterprise from those of another
- Industrial design: includes the aesthetic aspect of an object. 2D features can include patterns, lines, and colours, whereas 3D features extend to shape and surface
- Copyright: is the legal term to describe the rights over literary and artistic work but can also extend to databases, advertisement, maps, and technical drawings
- Trade-secret: commercially valuable confidential information which may be sold or licensed. This can include technical or nontechnical data, formulas, patterns, methods, lists of customers
- Confidentiality: information that is not publicly known and warrants protection

The choice of the most suitable form will be based upon the specifications of the activity and its results.

Carbonica handles IPR Management at three (3) levels:

1. IPR Background

All project participants background, tangible and intangible assets (i.e. scientific studies, methods, tools, materials) and the potential Intellectual Property Rights attached to them (i.e. copyright), likely to be needed for the implementation of the project and/or for the use of the expected results that can be subject to IPR have been already taken under consideration during the proposal formulation. The “Consortium Agreement” has included Consortium members’ background assets to be excluded from access rights or granted on special conditions. At the time the consortium agreement was signed, all partners declared *“to the best of their knowledge, no data, know-how or information of theirs is needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights to background and results for implementing the action”) or Exploitation of that other Party’s Results (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights for exploiting the results”)”*.

Access rights for exploitation or further research will be agreed before the signing of any contract and granted given fair and reasonable conditions and/or royalty-free.

2. IPR Foreground

Newly generated knowledge and related new IPR will be recorded, recognized, captured, and assessed. The WP5 Leader will have access and be provided with appropriate mechanisms and tools (e.g. disclosure forms) in order to identify all relevant IP (know-how, papers, software) and clarify ownership, screening and managing new IP. The consortium will employ protective, supportive measures to instil confidence in all participating actors that IP-related issues will be managed according to the European Commission's guidelines on IP and knowledge transfer. Any IP derived, obtained, or developed by consortium member(s) or during the development of CARBONICA will be owned by the said consortium member(s). Protection will be derived through the consensus of all consortium members. Publication of Foreground IP will be published by the consortium owner(s), either during or post project, and a consortium member must never publish another consortium members’ Foreground IP.

3. IPR strategy after the project

The main objective is to ensure sustainability of the CEH platform developed within the project with no IPR barriers preventing the continued use of any platform and the toolbox that will also be developed..

The tools/technologies/datasets that have already identified to have open access (open IPR) and will be openly available are:

- CF measuring models using OE (spatial), UAVs (Aerial) and ground data (WP3)
- Multi-Actor Platforms (MAPs) (WP3)
- On spot permanent stations including atmospheric and soil sensors (WP3)
- Mobile toolbox including a set of soil, atmospheric and vegetation sensors (WP3)

5.3.2 Partner obligations

Carbonica will follow all IPR management requirements described in the Grant Agreement.

5.3.2.1 Access rights

{Article 16.4 and its Annex 5, Section Agreement on background}

The beneficiaries must identify in a written agreement the background needed for implementing the action or for exploiting its results and must give each other and the other participants access to the necessary background identified.

Background refers to any data, know-how or information (tangible and intangible) and rights that are:

- a) held by the beneficiaries before they acceded to the Agreement and
- b) needed to implement the action or exploit the results.

If background is subject to rights of a third party, the beneficiary concerned must ensure that it is able to comply with its obligations under the Grant Agreement.

At the time of signing the consortium agreement, no data, know-how or information (background) of any partner was needed by another partner for the implementation of the project.

5.3.2.2 Results and ownership

{Article 16.4 and its Annex 5, Section Ownership of results}

Results are the tangible or intangible effect of an action (e.g., data, know-how or information) as well as the rights attached to it and are owned by the beneficiaries that generate them. It is also possible for two or more beneficiaries to jointly share results if:

- The results have been generated jointly
- It is not possible to establish the respective contribution of each beneficiary
- It is not possible to separate them for the purpose of obtaining/maintaining their protection.

Unless otherwise agreed:

- Each of the joint owners shall be entitled to use their jointly owned Results for non-commercial research and teaching activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s).
- Each of the joint owners shall be entitled to otherwise Exploit the jointly owned Results and to grant non-exclusive licences to third parties (without any right to sub-license) if the other joint owners are given: (a) at least 45 calendar days advance notice; and (b) fair and reasonable compensation. The joint owners shall agree on all protection measures and the division of related cost in advance.

Third parties may also claim rights to the results if the beneficiary ensures those rights can be exercised in a way that is compatible with its obligations under the Grant Agreement.

5.3.2.3 Transfer of results

{Article 16.4 and its Annex 5, Section Transfer and licensing of results, sub-section "Transfer of ownership"}

According to the Consortium Agreement, ownership of a party's own results may be transferred, including its share of jointly owned Results, following the procedures outlined in the Grant Agreement. In the case of ownership transfer to the third party, the third party must be identified in Attachment (3) of the Consortium Agreement and the other Parties must waive their rights to prior notice and to object to such a transfer to listed third parties according to the Grant Agreement. The transferring Party must inform the other Parties at the time of transfer and will ensure the rights of other Parties are not affected by such a transfer. Any addition to Attachment (3) after signing the Consortium Agreement requires a decision of the General Assembly.

5.3.2.4 Access Rights to Results

{Article 16.4 and its Annex 5, Section Access rights for exploiting the results}

The beneficiaries must grant each other access - under fair and reasonable conditions - to results needed for exploiting their results. The beneficiaries must grant each other access -under fair and reasonable conditions – to background needed for exploiting their results, unless the beneficiary that holds the background has — before acceding to the Agreement — informed the other beneficiaries that access to its background is subject to restrictions.

Requests for access must be made — unless agreed otherwise in writing — up to one year after the end of the action (see Data Sheet, Point 1).

For the avoidance of doubt any grant of Access Rights not covered by the Grant Agreement or the Consortium Agreement shall be at the absolute discretion of the owning Party and subject to such terms and conditions as may be agreed between the owning and receiving Parties.

5.3.2.5 Dissemination of Results

{Article 17.4 of the Grant Agreement and its Annex 5, Section Dissemination}

During the project and for a period of 1 year after the end of the project, the dissemination of partner's own results such as publications and presentations, shall be governed by the Grant Agreement. This includes:

- Prior notice of any planned publication should be given to the other Parties at least 45 calendar days before the publication.
- Any objection to the planned publication should include a precise request for necessary modifications and be made in accordance with the Grant Agreement by written notice to the Coordinator and to the Party or Parties proposing the dissemination within 30 calendar days after receipt of the notice.
- If no objection is made within the time limit stated above, the publication is permitted.

An objection is justified, and measures will be taken to overcome the objection if:

- The protection of the objecting Party's Results or Background would be negatively affected, or
- The objecting Party's legitimate interests in relation to its Results or Background would be significantly harmed, or
- The proposed publication includes Confidential Information of the objecting Party.

Access rights for software adhere to the same rules as described above. Access rights do not include source or object code ported to a certain hardware platform or software documentation beyond what is available from the party granting the access rights. All KERs and any potential individual component/module will be made available under the adequate licensing scheme, which will be determined during the implementation of the relevant project task(s).

5.3.2.6 Consequence of non-compliance

{Section 2 of the Grant Agreement}

If a beneficiary breaches any of the obligations of the Grant Agreement, the grant may be reduced.

5.3.2.7 Non-disclosure of information

{Consortium Agreement, Article 10}

All information in whatever form or mode of communication, which is disclosed by a Party (the “Disclosing Party”) to any other Party (the “Recipient”) in connection with the Project during its implementation and which has been explicitly marked as “confidential” at the time of disclosure, or when disclosed orally and has been confirmed and designated in writing within 15 calendar days from oral disclosure at the latest as confidential information by the Disclosing Party, is “Confidential Information”.

Information collected for Carbonica will be considered *de facto* confidential unless it is known as public. Access to participant information and data derived from that information, will require authorization from the provider of this data. If necessary, a Non-Disclosure Agreement will be signed by any actor involved in any step of the project to verify that they will not improperly use information, technical designs, or other sensitive information of beneficiaries through their involvement in Carbonica. All participants at project activities will be asked to provide informed consent, and permission to use the data in Carbonica. The consortium shall ensure that no unauthorised third party will have access to such information, applying information security policies and standards.

In addition, the Recipients undertake and without prejudice to any commitment on non-disclosure under the Grant Agreement, for a period of 5 years after the end of the Project:

- a. not to use Confidential Information otherwise than for the purpose for which it was disclosed;
- b. not to disclose Confidential Information without the prior written consent by the Disclosing Party;
- c. to ensure that internal distribution of Confidential Information by a Recipient shall take place on a strict need-to-know basis; and
- d. to return to the Disclosing Party, or destroy, on request all Confidential Information that has been disclosed to the Recipients including all copies thereof and to delete all information stored in a machine-readable form to the extent practically possible. The Recipients may keep a copy to the extent it is required to keep, archive or store such Confidential Information because of compliance with applicable laws and regulations or for the proof of on-going obligations provided that the Recipient complies with the confidentiality obligations herein contained with respect to such copy.

The Recipients shall be responsible for the fulfilment of the above obligations on the part of their employees, or third parties involved in the Project and shall ensure that they remain so obliged, as far as legally possible, during and after the end of the Project and/or after the termination of the contractual relationship with the employee or third party.

5.3.3 Next steps

At the proposal stage, no results subject to IPR were identified. As the project unfolds, all newly generated knowledge and results will be recorded and assessed to clearly determine ownership, and steps will be recommended for seeking proper protection if necessary. FSH will offer partners support on the basics of IPR. Legal expertise from third parties will be exploited if detailed consultation services are proven necessary.

6 Conclusions

D5.1 “Plan for the dissemination and exploitation, including communication activities”, has provided an overview of the communication, dissemination, and exploitation phases during the whole project lifetime. The intention of this document is to outline the initial plan for the D&C activities, a roadmap for the exploitation and sustainability of the project results and the tools that will be utilised to monitor the respective KPIs and successfully reach the project’s audience.

The document covers a wide range of key activities (as well as sets their timelines) to be conducted to meet the dissemination, communication, and exploitation targets. All partners will be actively involved in the communication and dissemination of Carbonica aiming to assure the proper exploitation of the project’s outcomes and maximise the impact.

The next iterations of the document will be developed in M15 and will be officially submitted to the European Commission. These documents will evaluate the current plan to identify weaknesses and strengths of the applied activities and tools and establish objectives and concrete actions beyond M30 and until the fourth official iteration (M48). The final update will focus on the dissemination of the knowledge and results of the MAPs and the CEH, as well as the policy recommendation papers that will derive from the project’s contribution to Carbon Farming in WC and local level.

7 Annex

7.1 Annex A: Logo variations and branding



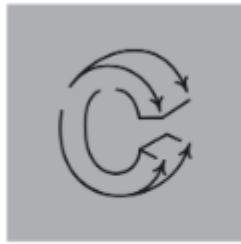
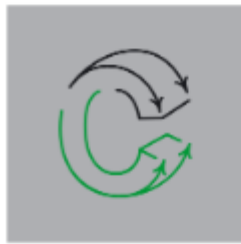
Vertical



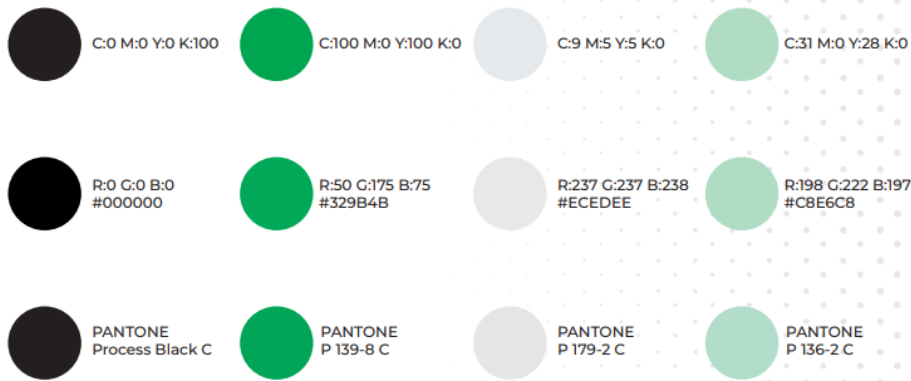
Horizontal



Carbonica EU Logo variations

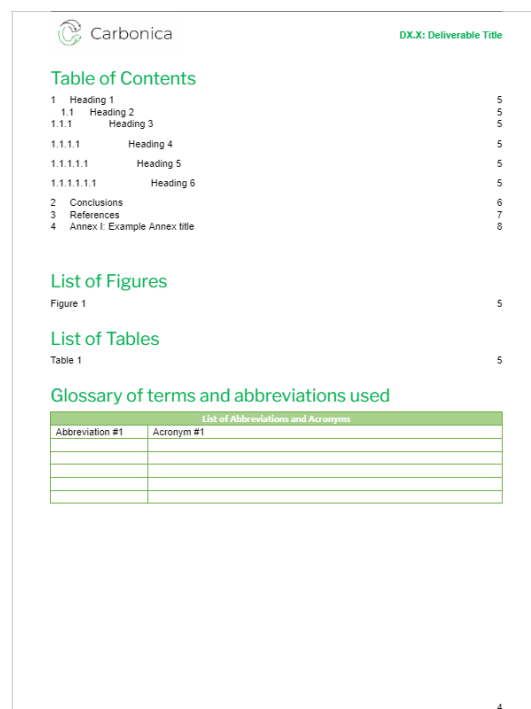


Carbonica EU Logo variations

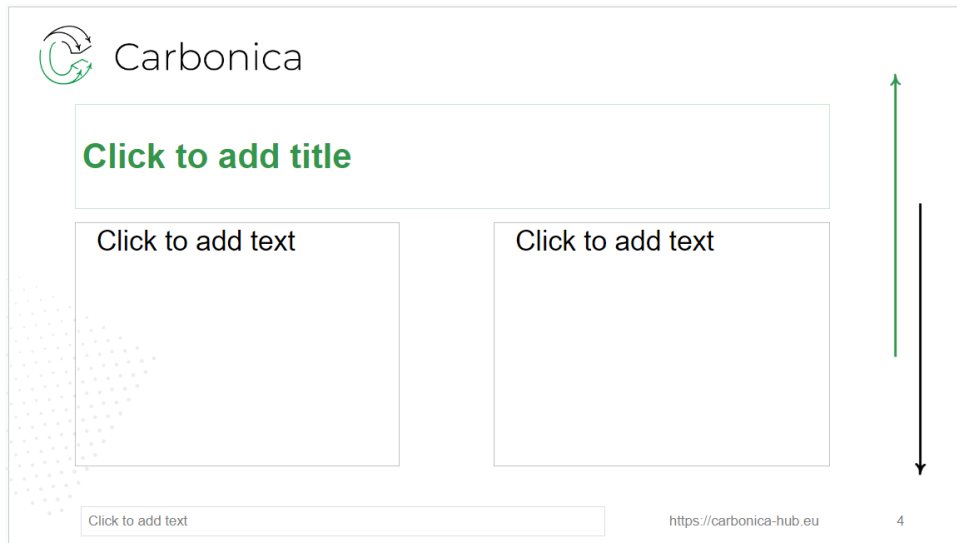


Carbonica EU Colour Palette

7.2 Annex B: Carbonica templates



Carbonica EU Deliverable template



Carbonica EU Presentation template

Annex C: Dissemination and Communication material

ABOUT CARBONICA

14 project partners from Greece, North Macedonia and Cyprus

An **Excellence Hub** established in the **widening region**

Multi-actor approach

3 ecosystems mapped & enhanced



ONE COMMON OBJECTIVE

To connect the carbon farming innovation ecosystems of **Greece, North Macedonia and Cyprus**, through the establishment of the



Do you want to get in touch with us?

info@carbonica-hub.eu

Partners



Follow us!



<https://carbonica-hub.eu>



Carbonica

Building a **SUSTAINABLE FUTURE** / with / **CARBON FARMING INNOVATION**



Funded by the European Union

carbonica-hub.eu

Carbonica EU leaflet front side

Deliverable D5.1: Plan for dissemination and exploitation, including communication activities

OBJECTIVES

- Strengthen place-based innovation and excellence in carbon farming to achieve increased collective understanding and broad uptake.
- Foster long-term cross border collaboration and strong viable linkages among carbon farming actors to motivate knowledge transfer, sharpen entrepreneurial skills and expand the collective capacity.
- Action planning and development of a long-term R&I joint strategy.
- Create business opportunities in carbon farming by bridging the gap between science and industry and establishing poles of attraction for innovators and investors to improve the uptake.

C Y P R U S
N O R T H
M A C E D O N I A
G R E E C E



Carbonica

**C A R B O N
F A R M I N G
S O L U T I O N S**

- Soil management
- Crop management
- Post-harvest management

Involvement of policy, industry, academia and civil society.

More than **1000 stakeholders** participating in training modules and workshops.

More than **30 start-ups and SMEs** participating in the support services for business development.

20 experts participating in brain gain activities.

Toolbox for carbon farming solutions

A comprehensive toolbox consisting of carbon farming solutions.

E-learning Platform

Interactive platform with training content and audio visuals covering, among others, topics of carbon farming solutions, carbon footprint certification protocols, business development and policy design.

KEY RESULTS

Joint Strategic R&I strategy

An R&I strategy including research priorities, themes, actions and areas of focus per country and jointly, taking also into consideration current challenges, research trends, stakeholders' needs and policies related to carbon farming.

Lab Prototypes

1 lab prototype in carbon farming solutions and 1 lab prototype for protocols for carbon footprint accreditation / certification.

Policy recommendations

A policy recommendations single document that will be broadly disseminated at EU and national level.

Carbonica EU leaflet back side



Carbonica

Building a
**SUSTAINABLE
FUTURE**
with
**CARBON
FARMING
INNOVATION**

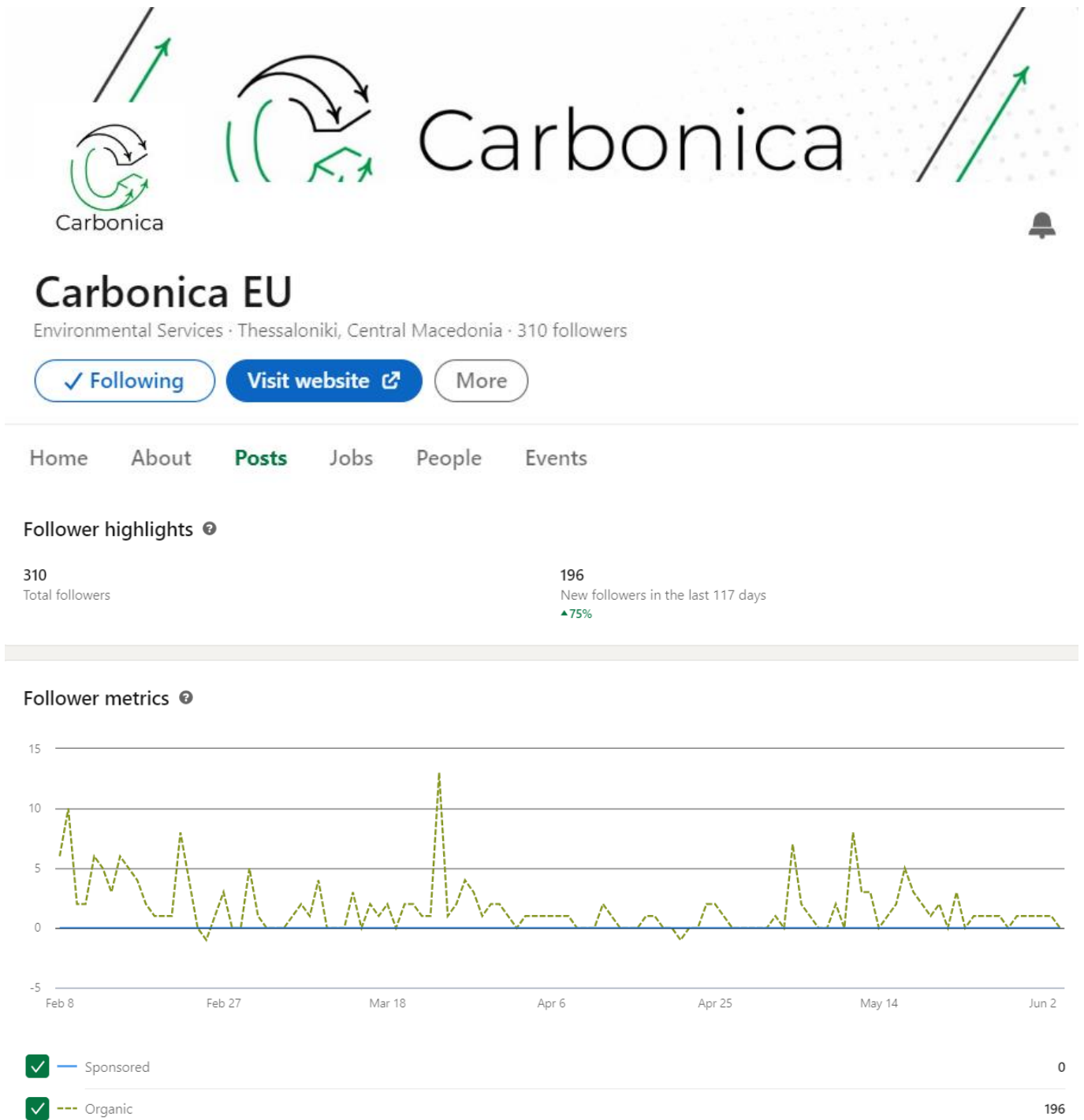
Logos of partners: FORTH, I4BEC, SCIENTACT, AGRIPIPER, etc.

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Carbonica EU Roll-up Banner

7.3 Annex D: Carbonica social media accounts and metrics

LinkedIn



Facebook



Carbonica EU

94 likes • 106 followers



Advertise

Manage

Edit

Posts About Mentions Reviews Followers Photos More

Page overview

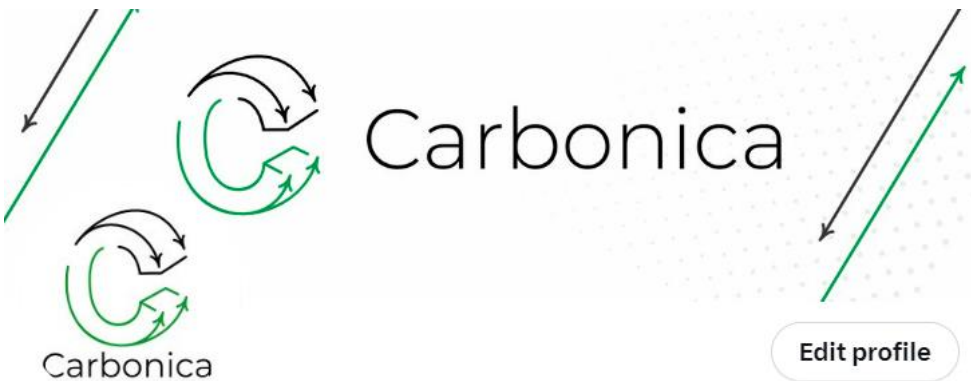
Followers: 106

Create a post

Last 28 days

Post reach	1,478
Post engagement	272
New Page likes	3
New followers	4

Twitter



Carbonica EU

@CarbonicaE

EU funded project to connect carbon farming ecosystems of EL, MK and CY via CARBONICA Excellence Hub

Environmental Joined December 2022

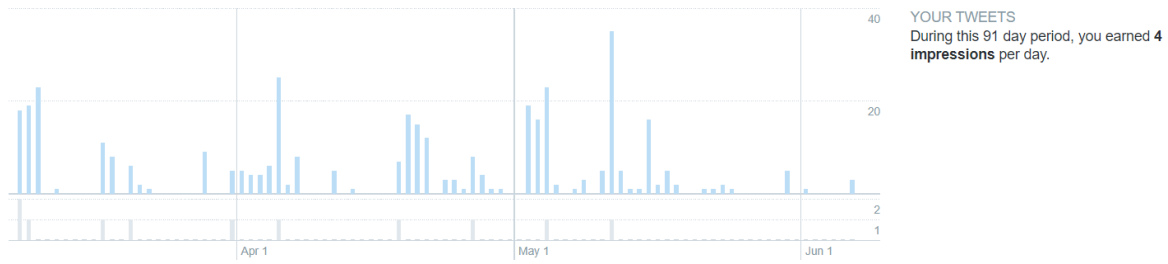
0 Following 18 Followers

Tweet activity

Mar 8 – Jun 6, 2023

Export data

Your Tweets earned **383 impressions** over this **91 day** period



YouTube



CarbonicaEU

@carbonicaeu 23 subscribers 1 video

More about this channel >

HOME

VIDEOS

PLAYLISTS

COMMUNITY

CHANNELS

ABOUT



Uploads



FoodScale Hub & I-BEC Carbonica Event 8.2.2023

29 views · 3 months ago

Carbonica EU is here to simplify #carbonfarming for you. Watch the video to find out experts' input and the institutional framework of the project. Agrifood pioneers talk market...

7.4 Annex E: Media Coverage

Carbonica: Η γεωργία άνθρακα από τη θεωρία στην πράξη
 Αντώνης Ανδρονικιάδης · 17.03.2023, 9:49

Romeo Εμβολιάστε το αμπέλι...




13^{ος} Εθνικός Διαγωνισμός ECOTROPHELIA
 Τελετή Βράβευσης **21 ΙΟΥΝΙΟΥ 2023 - 17:00** DIVANI CARAVEL
 Ο ΘΕΣΜΟΣ ΠΟΥ ΑΝΑΔΕΙΚΝΥΕΙ ΚΑΙΝΟΤΟΜΑ ΠΡΟΪΟΝΤΑ ΔΙΑΤΡΟΦΗΣ

Η γεωργία άνθρακα αποτελεί μια θεματική που προσελκύει μεγάλο ενδιαφέρον από τους Ευρωπαίους αγρότες και όχι άδικα, καθώς θεωρείται ότι στο εγγύς μέλλον θα μπορεί να προσφέρει ένα επιπλέον εισόδημα σε όσους καλλιεργούν με βιώσιμες πρακτικές, που συμβάλλουν στην αφαίρεση άνθρακα από την ατμόσφαιρα, αλλά και στη δέσμευση άνθρακα στο έδαφος.

Αν και ακόμα το νομικό πλαίσιο δεν έχει καθοριστεί, τον περασμένο Νοέμβριο η Ευρωπαϊκή Επιτροπή γνωστοποίησε ότι ήδη επεξεργάζεται τη μεθοδολογία και τις προϋποθέσεις,

ERATOSTHENES Centre of Excellence
 980 followers
 3w · Edited ·

TV coverage of the "Carbonica Project" on Rik TV
 Wednesday 17th of May 2023
 #CarbonicaProject #riktv
 Carbonica EU



Η Κύπρος μετέχει μέσω του Ερατοσθένη σε διεθνές πρόγραμμα για την ανθρακοδεσμευτική γεωργία



ΟΙΚΟΝΟΜΙΑ 17 Απριλίου 2023

Μεταπτυχιακά Προγράμματα 2023-24 Προθεσμία υποβολής αιτήσεων: Παρασκευή, 16 Ιουνίου 2023

Το Κέντρο Αριστείας Ερατοσθένης και το ΤΕΠΑΚ ανακοίνωσαν σήμερα ότι στο πλαίσιο του προγράμματος Horizon Europe Excellence Hubs, εξασφάλισαν χρηματοδότηση 674 χιλιάδων και 310 χιλιάδων ευρώ αντίστοιχα για το τρενιπτικά έργο με τίτλο «Carbon Initiative for Climate-Resilient Agriculture» – CARBONICA. Η κοινοπραξία του έργου αποτελείται από 14 εταιρίες από την Ελλάδα, την Κύπρο και τη βόρεια Μακεδονία, που εκπροσωπούν την ακαδημαϊκή κοινότητα, τη βιομηχανία, τις ΜΚΟ και τους φορείς άσκησης πολιτικής. Η συνολική χρηματοδότηση του έργου είναι σχεδόν πέντε εκατομμύρια ευρώ.

Ο κύριος στόχος του έργου, είναι η ίδρυση του Κόμβου Αριστείας CARBONICA συνδέοντας τα Οικονομικά Καντομιάς της Ελλάδας, της Κύπρου και της Βόρειας Μακεδονίας, ενισχύοντας παράλληλα την τεχνολογική τους.

ΓΕΩΡΓΙΑ ΔΕΣΜΕΥΣΗΣ ΑΝΘΡΑΚΑ: ΚΑΛΛΙΕΡΓΩΝΤΑΣ ΕΝΑ ΒΙΩΣΙΜΟ ΜΕΛΛΟΝ

Φεβρουάριου 28, 2023 Αναρτήθηκε από τον [Χρήστο Βοργιάδη](#) Κατηγορία [Τεχνολογία](#)

38 Likes

Διαβάστηκε 329

Εκτύπωση E-mail Πολυμέσα

Εναρκτήρια Συνάντηση και Εκδήλωση του έργου Carbonica

Γεωργία Δέσμευσης Ανθρακα: Καλλιεργώντας ένα βιώσιμο μέλλον

Στις 8 και 9 Φεβρουαρίου 2023 το έργο Carbonica πραγματοποίησε την πρώτη συνάντηση των εταίρων του στις εγκαταστάσεις της ΔΕΘ ΗΕΛΕΧΡΟ, σηματοδοτώντας την έναρξη του έργου και των ενεργειών για τη δημιουργία του Κόμβου Αριστείας Carbonica (Carbonica Excellence Hub), το οποίο έχει ως στόχο να συνδέσει τα οικονομικά καντομιάς της Ελλάδας, της Δημοκρατίας της Βόρειας Μακεδονίας και της Κύπρου για την υιοθέτηση και την εφαρμογή καινοτόμων πρακτικών δέσμευσης άνθρακα στη γεωργία.

