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REPORT FROM TRAIN-THE-TRAINERS WINTER SCHOOL

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CONTENT

INTRODUCTION AND SCOPE OF THE TASK

The Transnational Train the Trainers Winter School in the field of Carbon Farming was held with the clear aim of strengthening the capacities of regional agricultural advisers so that they become key carriers of knowledge transfer to end-users – farmers – and advocates of sustainable practices at the regional level. The primary task of the school was to train advisers to understand and transfer the principles of carbon farming, including methods of carbon sequestration in the soil, harmonization with European policies and regulations, and the development of business plans that enable farmers to achieve long-term economic sustainability.

Throughout the three-day programme, participants gained insight into the theoretical foundations and practical examples of carbon farming, analysed the best European practices and experiences, and participated in interactive workshops aimed at developing concrete plans for introducing these principles into existing advisery activities. In this way, the primary purpose of the winter schools was achieved – to ensure that advisers are not only recipients of knowledge, but also active actors in its dissemination and integration into local agricultural communities. An additional objective of the programme was to encourage cooperation and networking. Each participant received an educational brochure with a summary of key topics, practical guidelines, and a list of relevant contacts, ensuring ongoing support in further work. This created a network of experts ready to exchange experiences and work together to promote climate-sustainable agriculture.

To ensure both expertise and regional relevance, three external agricultural advisers were appointed in each region, as outlined in the project proposal. Their participation contributed to the achievement of the key objective – to expand and multiply knowledge about carbon farming to as many agricultural producers as possible at the regional level.

By holding this winter school, the main task was achieved: participants were empowered to become knowledge centers and initiators of change in their communities, with clear plans for integrating carbon farming into existing support systems for farmers. This laid the foundation for the systematic application of sustainable practices and further advocacy for climate-responsible policies in agriculture.

Figure 1:Photo of project partners and their agricultural advisers at the Agricultural Institute Osijek.

ABOUT THE TRAIN-THE-TRAINERS WINTER SCHOOL

The Transnational Train-the-Trainers Winter School was organized by project partners from Croatia, the Agricultural Institute Osijek, and it was held over three days, with the first two days hosted at the Faculty of Agrobiotechnical Sciences Osijek (Vladimira Preloga 1, 31000 Osijek), which can be seen in Figure 1, and the final day at the Agricultural Institute Osijek (Južno predgrađe 17, 31000 Osijek), which can be seen in Figure 2. The event brought together a total of 58 participants, including project partners, agricultural advisers, and guest speakers who are experts in agriculture and carbon farming. Each project partner brought a minimum of three of their agricultural advisers. All participants received promotional material that included a brochure with learning materials, a notebook, a contact list, a cotton bag, a pen, a lanyard with an ID card holder with their name, and a certificate of attendance. The Winter School provided an intensive training and exchange platform aimed at strengthening regional advisers' capacities for knowledge transfer in carbon farming practices.

Figure 2: Photo of project partners and their agricultural advisers at the Faculty of Agrobiotechnical Sciences Osijek.

PARTICIPANTS OF THE WINTER SCHOOL

Project partners:

- **Slovenia** (PP1) - Agricultural Institute of Slovenia (KIS) – project leaders
- **Slovenia** (PP2) - Institute for Sustainable Development (ISD)
- **Hungary** (PP3) - Education and Maintenance Nonprofit Public Benefit Limited Liability Company (GAK/MATE)
- **Italy** (PP4) - Ri.Nova società cooperativa (RI.NOVA)
- **Poland** (PP5) - Institute of Soil Science And Plant Cultivation - Research State Institute (IUNG-PIB)
- **Austria** (PP6) – Bio Forschung Austria (BFA)
- **Croatia** (PP8) – Agricultural Institute Osijek (AIO) – Winter School organizers
- **Italy** (PP9) - Alma Mater Studiorum – University of Bologna, Department of Agricultural and Food Sciences (UNIBO DISTAL)
- **Germany** (PP10) - Öko-BeratungsGesellschaft mbH (ÖBG)
- **Czech Republic** (PP11) – Agricultural Research, LtD. Troubsko (ART)

Agricultural advisers:

- **Slovenia** – 3 agricultural advisers
- **Hungary** – 4 agricultural advisers
- **Italy** – 3 agricultural advisers
- **Poland** – 4 agricultural advisers
- **Austria** – 3 agricultural advisers
- **Slovakia** – 3 agricultural advisers
- **Croatia** – 3 agricultural advisers
- **Germany** - 3 agricultural advisers
- **Czech Republic** – 3 agricultural advisers

Guest speakers:

- **Slovenia** – Slovenian Ministry of Agriculture, Forestry and Food
- **Croatia** – Faculty of Agrobiotechnical Sciences Osijek (FAZOS), Žito Group, and Agricultural Institute Osijek
- **Czech Republic** – Carboneg and Association of Organic Fertilizer Producers (AVOH)

PROGRAMME OVERVIEW - AGENDA AND DAILY SUMMARY

Tuesday, 7 October

14:00 – 14:10 Registration

14:10 – 14:20 Welcome introduction

14:20 – 14:30 Short presentation of the project

14:30 – 15:30 Carbon farming - two years of experience

15:30 – 15:45 Coffee break

15:45 – 16:15 From dialogue to impact: results and learnings from national seminars on carbon farming

16:15 – 16:35 Measuring what matters: soil carbon sequestration

16:35 – 18:30 Guided walk through the historic heart of Osijek - Tvrđa

18:30 – 19:00 Transport to Restaurant Ivica and Marica

19:00 – 21:45 Welcome dinner at Restaurant Ivica and Marica - local flavours & networking

Summary of the First Day

At the very beginning of the Winter School, the representative of the project leaders from KIS greeted all participants and officially opened the Winter School program, after which the floor was handed over to the team from AIO. On the first day, the AIO team welcomed the participants, presented the program and activities of the Winter School, and then invited the dean of FAZOS to address the audience. The dean extended warm greetings to all participants and wished them a cordial welcome, emphasizing the importance of international cooperation and knowledge exchange in the field of sustainable agriculture. After the opening session, the first presentation, delivered by a representative of ISD, focused on introducing the Carbon Farming CE project and provided an overview for participants who were joining the project activities for the first time. The following presentation, delivered by the team from ÖBG, titled "Carbon Farming – Two Years of Experience" highlighted the progress and results of various soil carbon farming practices implemented across partner countries. It discussed trial outcomes related to techniques such as the use of organic fertilizers, cover crops, crop rotation diversification, agroforestry, and reduced tillage, emphasizing that carbon farming methods can significantly increase total organic carbon (TOC) levels in soil, though results depend on initial conditions, weather, and long term management. The team from IUNG-PIB, Poland, presented "From Dialogue to Impact: Results and Learnings from National Seminars on Carbon

Farming." Their presentation summarized experiences and lessons learned from more than 800 participants across nine Central European countries, focusing on how capacity building empowers farmers, advisers, and policymakers to adopt carbon farming practices. The IUNG - PIB team emphasized that practical demonstrations, peer learning, and clear economic incentives are essential for turning awareness into long-term, sustainable implementation of carbon farming across diverse regional contexts. Also, in order to emphasize the importance of the seminar, they prepared a video of the seminar held in Poland, which they showed at the end of the presentation. The team from FAZOS delivered a presentation titled "Measuring What Matters – Soil Carbon Sequestration in Carbon Farming," focusing on the importance of accurate monitoring, reporting, and verification (MRV) of soil carbon changes. The presentation outlined different measurement methods, including direct soil sampling, modeling, and remote sensing, emphasizing the benefits of combining these approaches into hybrid MRV systems. The FAZOS team underlined that reliable and transparent measurement is essential for issuing carbon credits, ensuring policy credibility, and supporting farmers' participation in carbon markets, while also highlighting broader co-benefits such as improved soil health, biodiversity, and water retention. The program continued with a guided walk through the historic heart of Osijek – Tvrđa, offering participants an opportunity to explore the city's cultural heritage. The evening concluded with a welcome dinner at the restaurant Ivica and Marica, where guests enjoyed local flavours and informal networking in a warm and friendly atmosphere. Several photos from the first day of the Winter School can be seen in Figure 3, 4 and 5.


Figure 3: Registration and distribution of promotional material.

Figure 4: Photos from the first day of Winter School - lectures.

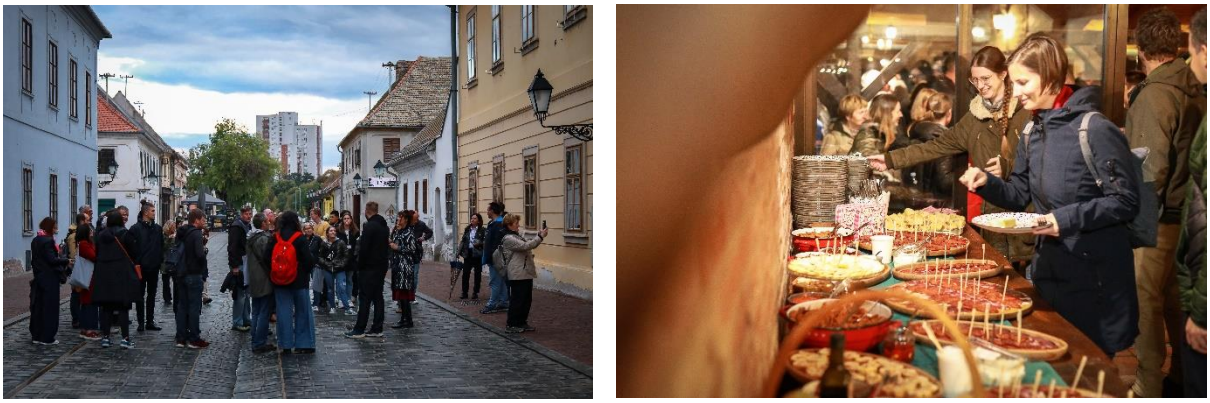


Figure 5: Photos from the first day of Winter School – excurion and welcome dinner.

Wednesday, 8 October

09:00 – 09:10 Registration

09:10 – 09:50 Guide to cooperation models

09:50 – 10:30 Experiences of testing cooperation models

10:30 – 10:50 Enabling Carbon Farming: Croatia's Eco-Schemes under CAP 2023–2027

10:50 – 11:20 Capacity building for carbon farming - how to bring people together and establish collaborations

11:20 – 11:35 Coffee break

11:35 – 11:50 Carbon credits for regenerative agriculture

11:50 – 12:05 Association of Producers of Organic Fertilizers

12:05 – 12:25 Strategic and regulatory framework for carbon farming in the EU

12:25 – 12:55 Soil monitoring methods for carbon sequestration

12:55 – 13:15 Eyes in the sky: using Sentinel-1 & 2 data to monitor soil moisture, flooding, and drought in European grasslands

13:15 – 14:45 Lunch

15:00 – 15:15 Transport to the excursion

15:15 – 16:30 From fields to energy - Slavonian bioenergy model and visit to the Žito Group biogas plant Orlovnjak, Antunovac

16:30 – 17:15 Transport to Baranja

17:15 – 17:45 A short stop at the beautiful viewpoint of the Baranja vineyards

18:00 – 21:30 Taste and talk working dinner with the flavours of the Baranja region

Summary of the Second Day

The second day of the Winter School began with a presentation by the GAK/MATE team on a guide to carbon farming cooperation models, which highlighted the need for guidance due to the evolving nature of the concept and the lack of a single universal approach. The presentation detailed five main collaborative models and introduced practical tools, such as gross margin calculation and a farm logbook system, to help farmers commercialize the value created by increased soil carbon sequestration. As part of this presentation, all project partners briefly presented their cooperation model, and after that all agricultural advisers filled out an online form prepared by the GAK/MATE team and which is also included in this report. Following this, the FAZOS team's presentation, "Enabling Carbon Farming: Croatia's Eco-Schemes under CAP 2023–2027," focused on how these eco-schemes provide financial and technical incentives for farmers to adopt carbon-friendly practices, thereby integrating climate-smart agriculture and ensuring active participation in climate mitigation efforts. The CARBONEG presentation championed regenerative agriculture as a scalable Natural Climate Solution for integrating food production with carbon sequestration and co-benefits. Their model focuses on empowering farmers with training and compensation, using science-based MRV (Monitoring, Reporting, and Verification) and physical sampling to verify soil carbon and issue high-integrity carbon credits. The AVOH presentation addressed the problem of soil degradation from high-carbon mineral fertilizers and the need to process hazardous animal byproducts, presenting their patented ROKOSAN technology, which creates zero waste, low carbon amino acid fertilizers from animal waste as a complete, sustainable replacement for conventional methods. Two online presentations (Carboneg and AVOH) were also attended by several participants who had taken part in the Winter School online. The presentations were followed by a lively discussion that engaged all participants. A representative from the

Slovenian Ministry of Agriculture, Forestry and Food defined carbon farming as agricultural practices focused on capturing and storing atmospheric carbon in the soil, which promotes climate change mitigation, soil health, and biodiversity conservation. The speaker emphasized that the comprehensive EU regulatory framework, including the upcoming Carbon Removal Certification Framework (CRCF) and current CAP support, presents a valuable opportunity for farmers to improve soil fertility, reduce climate risks, and generate additional income. Finally, the UNIBO presentation on Soil Monitoring Methods for Carbon Sequestration detailed various techniques - including direct lab chemical analysis, remote sensing, and the advanced Soil Quality Index (SQI) - highlighting that these methods are vital for assessing soil health and supporting policy and certification schemes for carbon sequestration. The IUNG - PIB presentation then showcased their system using Sentinel - 1 and Sentinel - 2 satellite data to monitor environmental conditions in European grasslands. This system is specifically designed to identify areas of excessive soil moisture and drought - related crop losses to help farmers qualify for additional payments under eco - schemes. After the intensive series of morning presentations, the agenda transitioned into a practical exploration of regional agriculture and a taste of local culture. Following a well deserved lunch, the afternoon was dedicated to a field excursion that began with a visit to the Žito Group biogas plant Orlovnjak in Antunovac. The excursion was led by the manager of the Žito Group's biogas plants and his associate, who spoke very professionally and in detail about all the processes of the Orlovnjak biogas plant. Here, participants gained firsthand insight into the Slavonian bioenergy model and the innovative "from fields to energy" process. The group then traveled to the picturesque Baranja region, pausing for a short, scenic stop to admire the beautiful Baranja vineyards viewpoint. The day concluded with a relaxed and engaging "Taste and talk" working dinner, where attendees had the opportunity to network and discuss the day's learnings while savouring the distinct local flavours of the Baranja region. Several photos from the second day of the Winter School can be seen in Figure 6 and 7.


Figure 6: Photos from the second day of Winter School - lectures.


Figure 7: Photos from the second day of Winter School – professional excurion and working dinner.

Thursday, 9 October

10:00 – 10:10 Registration

10:10 – 10:30 Transfer to Agricultural Institute Osijek

10:30 – 12:15 Visit to Agricultural Institute Osijek: 147 years of tradition and science, shaping the seeds of tomorrow

Summary of the Third Day

The visit to the Agricultural Institute Osijek (AIO) began with participants being transported by bus from the Faculty of Agrobiotechnical Sciences, where they completed registration and were warmly greeted by the AIO project team. The AIO Director then presented the Institute's rich 147 - year tradition and its crucial current work. He specifically highlighted the Institute's

commitment, guided by the motto "Science for Development" (Znanost za razvoj), and provided an overview of its comprehensive structure, including scientific, professional, production, and commercial activities. Following the highly engaging presentation - during which the participants showed great interest and had numerous questions that the Director answered - the program moved on to a tour of the seed processing unit, where the intricate process of preparing seeds for all crops in the Institute's assortment was explained by the Head of the Department for Agricultural Technique and Melioration. The participants had the opportunity to see the seeds of a large number of crops produced at the Agricultural Institute Osijek, try homemade popcorn and several apple varieties. After completing the tour of the seed processing facility, participants were taken to the banquet hall where a reception was held with the distribution of AIO promotional materials. During the gathering, the project leaders and organizers of the Winter School held closing remarks, officially ending the Winter School. Afterwards, the participants were transported by bus to a starting point. Several photos from the third day of the Winter School can be seen in Figure 8 and 9.

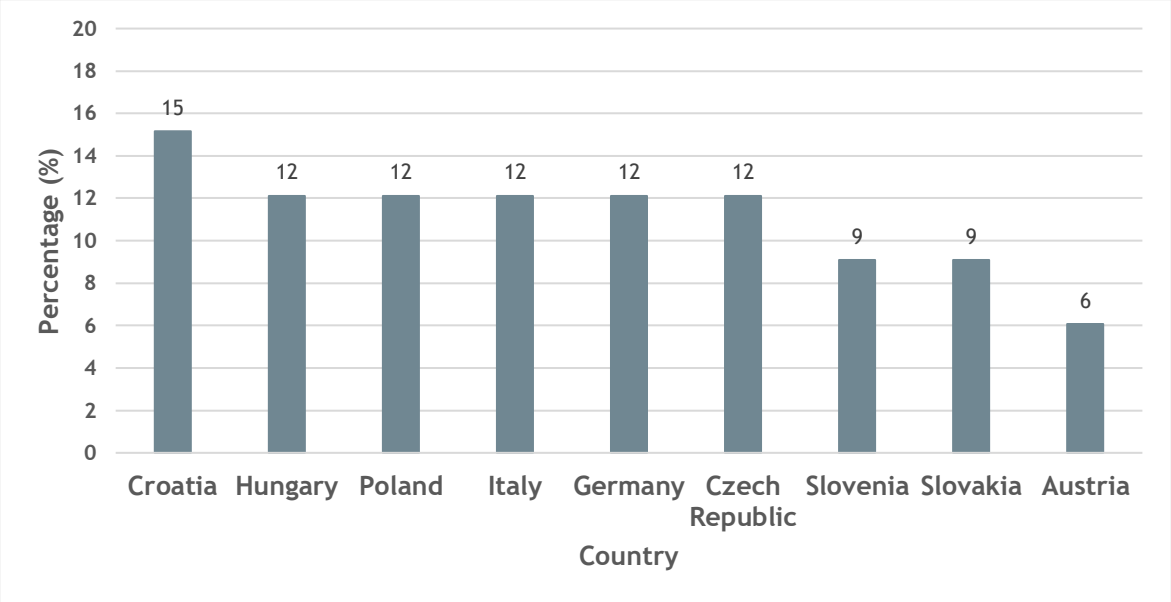
Figure 8: Photos from the third day of Winter School – lecture.

Figure 9: Photos from the third day of Winter School – seed processing unit and Winter School closure.

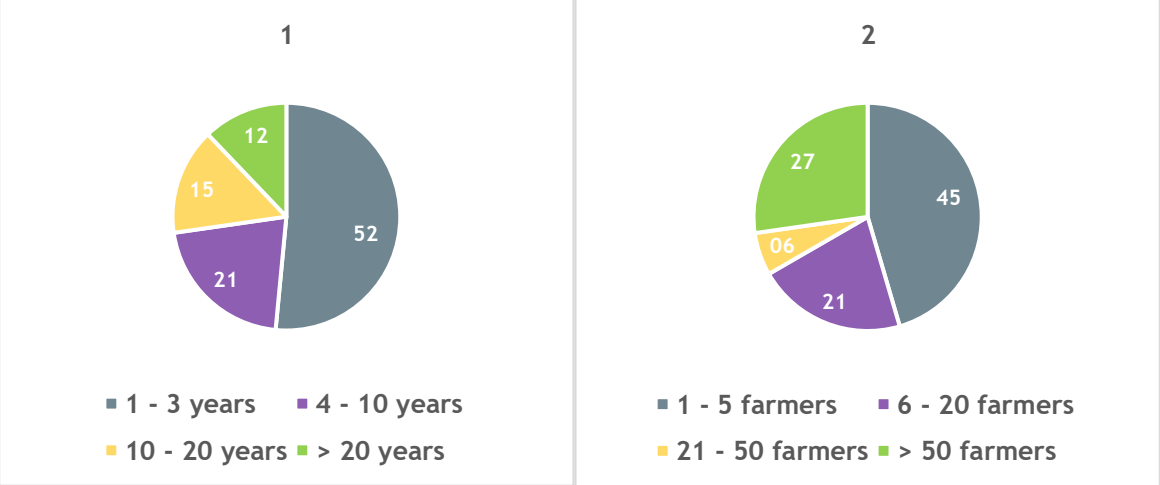
SURVEY FOR AGRICULTURAL ADVISERS

The survey for agricultural advisers was conducted by the project partner GAK/MATE. In addition to agricultural advisers, some project partners also completed the survey, and the data are shown below.

Graph 1: Percentage of participants who completed the survey by country.



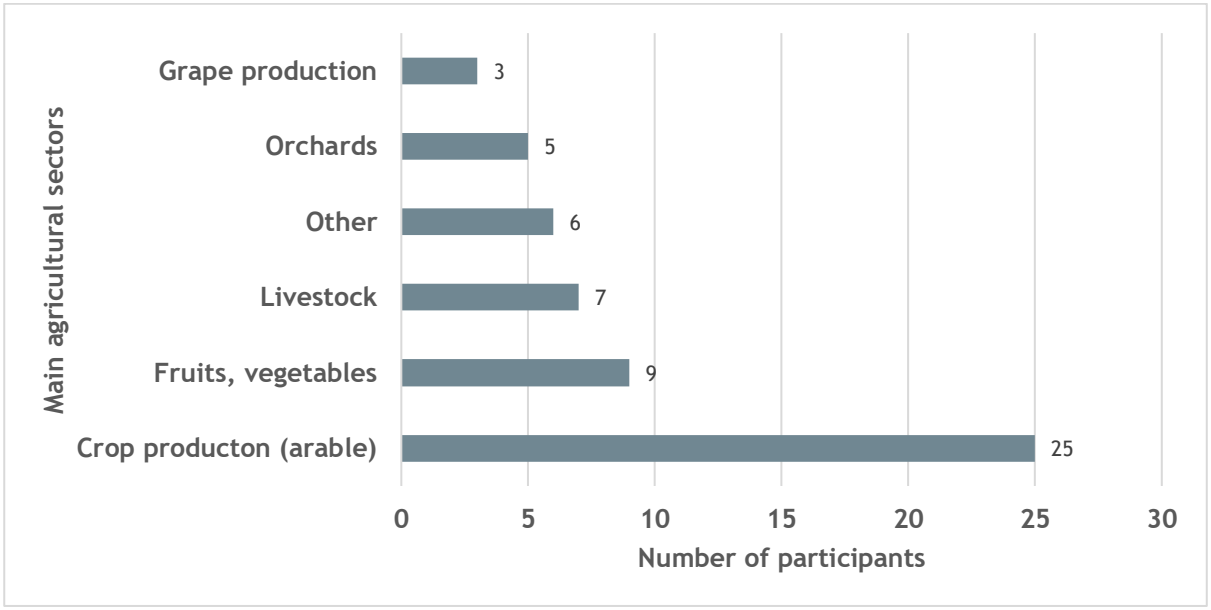
Graph 2: Percentage of participants in relation to how long they have been involved in agricultural advisery work (1) and percentage of farmers advised by agricultural advisers (2).



The Graph 1 shows that the survey was completed by 33 participants from 9 countries. Croatia had the highest number of respondents, with 5 people (15%), while Austria had the fewest, with only 2 respondents (6%). Most other countries - Hungary, Poland, Italy, Germany, and the Czech Republic - had 4 participants each (12%), and Slovenia and Slovakia each had 3 participants (9%).

Graph 2, in the first pie chart, the data show that half of the participants, 17 people (52%), have 1-3 years of experience in agricultural advisery work, while 7 participants (21%) have 4 – 10 years, 5 (15%) have 10 – 20 years, and 4 (12%) have more than 20 years of experience. In terms of the number of farmers they advise, in second pie chart, most participants, 15 people (45%), work with 1 – 5 farmers. Smaller numbers, 7 (21%) and 2 (6%) of participants, advise 6 – 20 farmers or 21 – 50 farmers respectively, while a group of 9 participants (27%) work with more than 50 farmers.

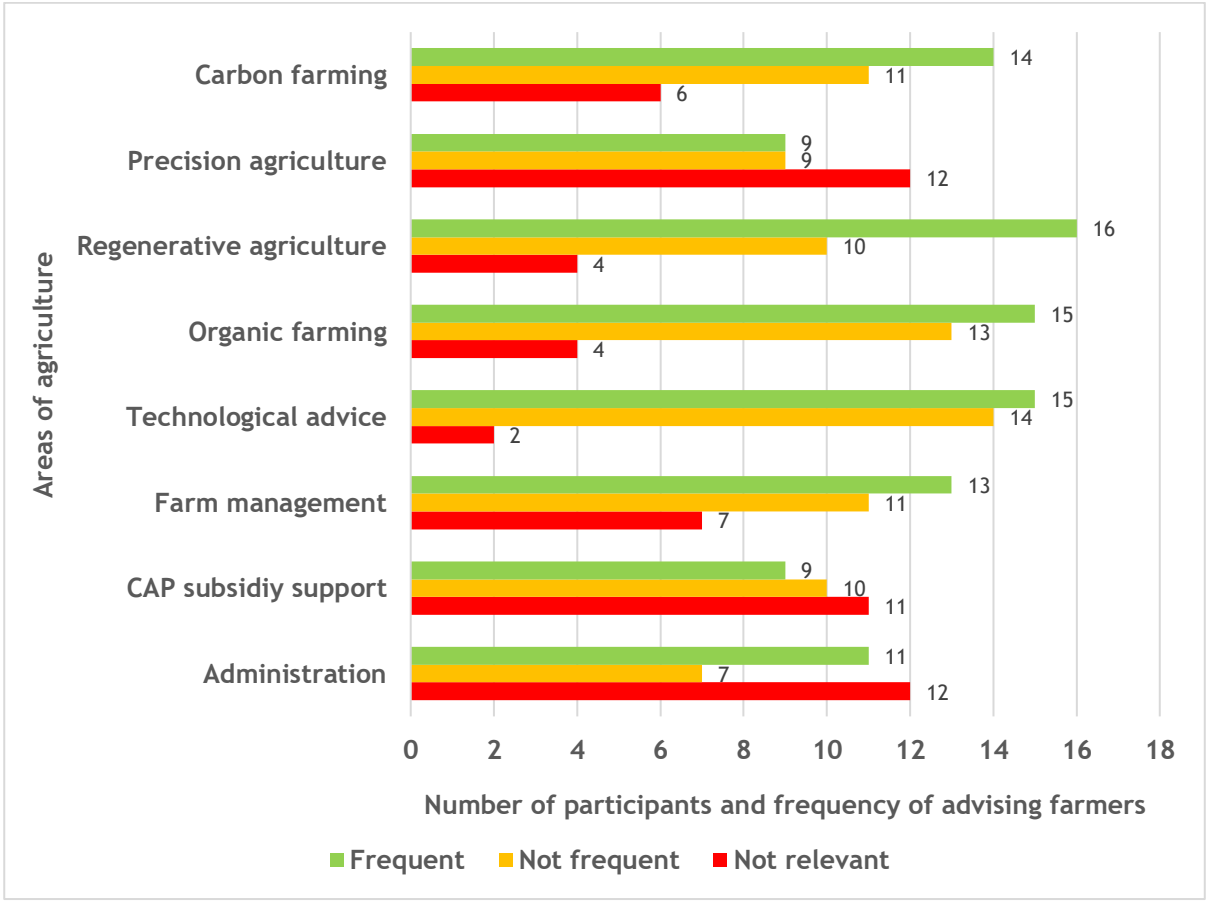
Graph 3: Number of participants per main agricultural sectors.



Graph 3 shows that the majority of participants are involved in arable crop production, with 25 people, followed by fruits and vegetables (9) and livestock (7). Smaller numbers of participants work in other sectors, such as orchards (5) and grape production (3). Participants who marked other in the questionnaire wrote that this included trees and plants – 2 participants; hop growing, natural resources, climate change, extreme weather - 1 participant; farmer – 1 participant; ecology – 1 participant; and seed production – 1 participant.

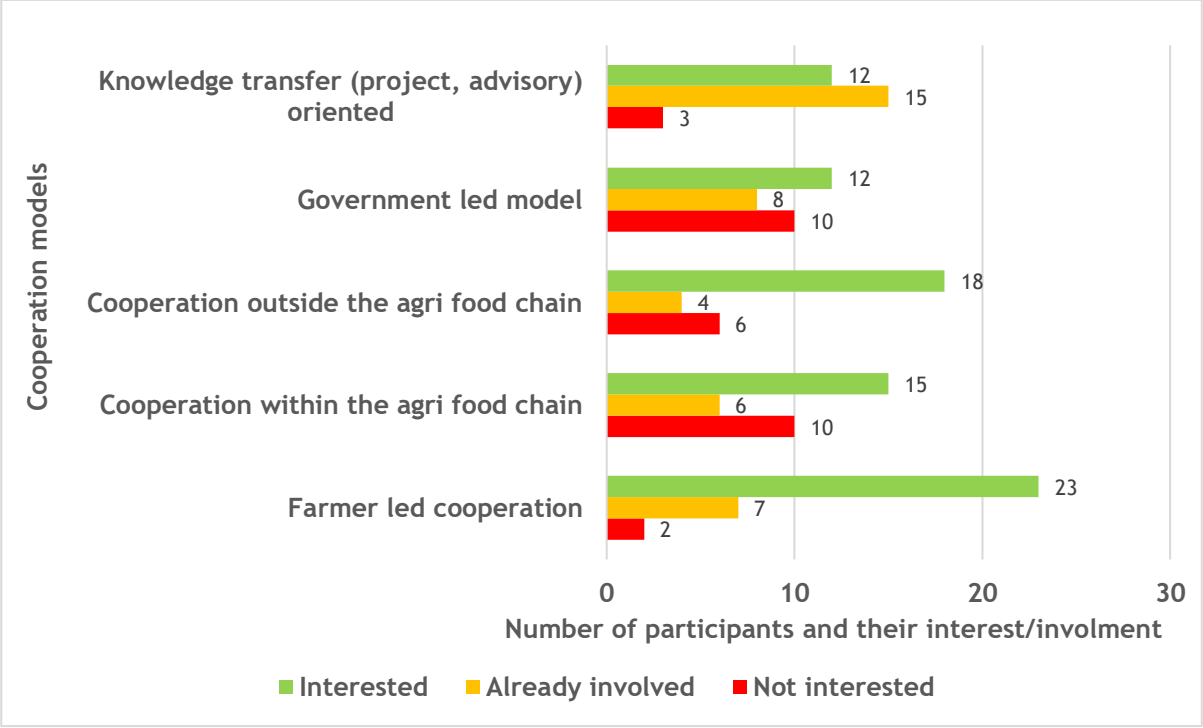
Graph 4 shows that regenerative agriculture and technological advice are the most frequently addressed areas, with 53% and 48% of participants providing frequent advice (16 and 15 participants), respectively. Organic farming is also commonly advised, with 47% of participants frequently involved (15 participants). In contrast, administration (40% or 12 participants) and precision agriculture (40% or 12 participants) have the highest proportions of participants who consider these areas not relevant, while CAP subsidy support has a relatively balanced distribution across relevance and frequency. Carbon farming and farm management are moderately advised, with around 45% and 42% of participants providing frequent advice (14 and 13 participants). Some participants also wrote other topics(s) where they provide support, such as: biodiversity – 1 participant; carbon credits – 1 participant; and conservative agriculture – 1 participant.

Graph 4: Number of participants and frequency of advising farmers by agricultural area



Graph 5 shows that farmer led cooperation is the most popular model, with 72% of participants interested (23 participants) and 22% already involved (7 participants). Knowledge transfer oriented cooperation also has strong involvement, with 50% of participants already participating (15 participants). Cooperation outside the agri food chain attracts 64% interest (18 participants), while government led models show lower interest (40% or 12 participants) and a relatively high proportion of participants not interested (33% or 10 participants). Cooperation within the agri food chain has a more balanced distribution, with 48% interested (15 participants), 19% already involved (6 participants), and 32% not interested (10 participants).

Graph 5: Number of participants not intrested/interested/involved in cooperation model(s).



FEEDBACK FROM AGRICULTURAL ADVISERS BY COUNTRY

Feedback from agricultural advisers by country was collected by the project partner AIO.

Advisers plan on how they will integrate carbon farming knowledge into their mainstream agriculture capacity building programmes.

1. **How do you intend to apply the knowledge and skills acquired during the Winter School on carbon farming in your current work or business activities (please provide specific examples where possible)?**

The Slovenian advisers stated that they will apply the acquired knowledge towards improving support to farmers by preparing educational materials, technical guidelines, and professional articles. They will also work on a more integrated top-down advisery approach by connecting two types of specialists: crop production experts and animal husbandry experts. In addition, the gained knowledge will help in advisers' communication with farmers and in promoting more sustainable, holistic practices.

Hungarian advisers plan to apply the knowledge and skills acquired during the Winter School by integrating carbon farming and regenerative practices into both their advisery work and, where applicable, their own farming activities. The Train-the-Trainers Winter School expanded their understanding of sustainable agricultural methods, particularly in reducing tillage, using organic manure and external organic fertilizers, and introducing cover crops with deep root systems to enhance soil carbon sequestration. One newly graduated adviser emphasized that the knowledge gained will strengthen future advisery services across all project targeted areas.

Italian advisers plan to apply the knowledge and skills gained during the Winter School on carbon farming directly to their current work and business activities. They aim to support farmers in adopting practices such as cover cropping, reduced tillage, and organic amendments. They also intend to integrate business plan ideas presented during the Winter School into their operations, applying the skills learned, even where some practices are already in use on their farms.

Polish advisers emphasized that the information aims to raise awareness of sustainable practices and promote the integration of regenerative principles into agriculture and land management. It

is particularly relevant for farmers, agricultural consultants, educators, ecologists, and students. Within the EIP Groups that some of them co-create, they plan to apply knowledge and skills - such as developing biofertilizers and fostering cooperation with the business sector - to support innovation. They also intend to update and enrich training programs for agricultural advisers and farmers, applying the training directly to both farmers and coaches.

Austrian advisers intend to apply the knowledge and skills in multiple ways. One adviser plans to raise awareness of the relevance of carbon farming among young farmers in their role as teachers. Another, as an expert in carbon accounting, aims to extend their knowledge to agricultural applications, particularly in quantifying carbon in soil and biomass. Additionally, they plan to integrate the acquired knowledge into ongoing education activities and incorporate it into projects with Bioforschung Austria, enhancing both practical and educational outreach.

Slovakian advisers intend to apply the knowledge gained by strengthening carbon farming awareness and practice within their organizations and advisery work. This includes improving internal knowledge on carbon management and transferring it to employees and management, as well as integrating regenerative techniques and soil carbon monitoring into education, training, and practical advisery services for farmers and gardeners. Additionally, the knowledge will be used in communication and outreach activities through cooperatives, public events, workshops, and exhibitions, helping to explain the benefits of soil carbon sequestration in a clear and accessible way.

Croatian advisers plan to apply the knowledge gained to better understand the impact of various carbon farming measures on carbon sequestration and to adapt cultivation and soil management practices accordingly. They intend to introduce practices such as green manure and wider crop rotations on family farms, optimizing these methods to enhance carbon sequestration and develop new grass mixtures with greater regenerative potential.

German advisers plan to optimize their daily soil management practices using methods such as gypsum liming and crop rotation. They intend to apply the knowledge gained to their current research, including Bachelor's thesis work on the functions of specific root exudates and their connection to carbon sequestration, which may help identify beneficial cover crops. They also aim to share this knowledge within their teams, organize webinars for farmers and advisers at Naturland, and scale agroforestry initiatives within the organization.

Czech Republic advisers plan to use the acquired information on regenerative farming and to strengthen cooperation with research institutes to support capacity building for implementing regenerative practices. They also intend to develop future research projects focused on carbon farming methods, alongside advisery services and collaboration with farmers and other stakeholders.

2. In what ways do you plan to integrate this new knowledge into your work with farmers — whether through advisery services, education, or collaborative initiatives?

Slovenian advisers will use the knowledge gained to strengthen individual consulting and develop workshops for farmers on key topics such as soil cultivation, fertilization, and crop rotation. This will be implemented through the advisery system, starting from the Agricultural and Forestry Advisery Service and specialists, and extending to field advisers who work directly with farmers. The gained knowledge will be especially valuable for comprehensive farm management planning, such as the use of manure, slurry, and pasture management.

Hungarian advisers plan to integrate the knowledge gained during the Winter School primarily through advisery services and collaborative initiatives. This focus is essential given the increasing importance of environmentally friendly and green technologies within the CAP framework. Advisery work will continue to be closely linked to subsidies, grants, and tenders that promote sustainable practices. Advisers also note a growing interest of farmers in improving soil quality and water retention. They intend to support farmers using the most suitable methods for each situation, ensuring that regenerative and carbon farming principles are effectively implemented in practice.

Italian advisers plan to organize training activities and field demonstrations to share their knowledge with farmers. They aim to develop advisery materials to help farmers understand the benefits of these techniques and to communicate their insights through field days and meetings with other farmers.

Polish advisers plan to use this information to deepen their understanding of regenerative techniques, including cover cropping, rotational grazing, and composting, and to apply these principles in practical settings through farm work, research, and community education. They aim

to support farmers by integrating new knowledge via CAP, organizing seminars, and participating in EIP Groups in cooperation with the business sector. Additionally, they will use Winter School sessions to equip agricultural advisers to transfer carbon farming knowledge effectively and will integrate this knowledge into education services and advisery work.

Austrian advisers plan to integrate the new knowledge into their work with farmers through multiple channels. They intend to focus on carbon farming in dedicated educational lessons, provide advisery services, and participate in research projects. They also aim to educate farmers about carbon credits and the carbon market, while offering insights into the broader context of carbon sequestration within the poly-crisis, helping farmers understand the relevance of these practices in addressing multiple environmental challenges.

Slovakian advisers plan to apply the knowledge and skills through advisery and educational activities. Participants plan to share regenerative and carbon farming practices via workshops, videos, online courses, and personal meetings at agricultural fairs and community events. They will present practical, hands-on methods for improving soil health and increasing carbon capture, while also building networks and collaboration among growers. Additionally, they will support cooperative efforts to organize training sessions and field demonstrations focused on living soil management and carbon-conscious farming practices.

Croatian advisers plan to integrate their knowledge through collaboration with colleagues from different departments and by sharing insights on the importance of proper fertilization, crop rotation, and green manure for soil conservation and emission reduction. They will transfer this knowledge to farmers through workshops, individual consultations, and communication activities, demonstrating the practical benefits of sustainable practices for soil improvement and climate resilience.

German advisers indicated that follow-up projects and trials may be carried out by young farmers, and that carbon farming will be considered by the family farms they work with as a potential source of additional income. They are also planning two educational events on carbon farming for their members in Germany and Austria, targeting all farmers.

Czech Republic advisers plan to integrate the new knowledge through education and direct advisery services. They intend to incorporate the concepts of carbon farming into training sessions and educational programs for farmers while also applying them in one-on-one advisery work. In addition, advisers aim to involve farmers in future projects.

3. Which cooperation models (e.g., farmer-consumer, farmer-industry, partnerships with the public sector, project-based collaborations) do you find most suitable for your context, and why?

Slovenian advisers identified several promising models of cooperation, including a farmer-led cooperation model that promotes environmentally friendly and healthy food production and a cooperation model outside the agri food chain aimed at mitigating industrial impacts on the atmosphere. They also highlighted the potential of project-led cooperation to better achieve tangible results. A commitment at the level of the Ministry of Agriculture could further strengthen the model outside the agri food chain. While some industrial plants may still exceed greenhouse gas neutrality, farmers can offset these emissions by sequestering more carbon in the soil than they produce, contributing collectively to statistical carbon neutrality.

Hungarian advisers noted that they can play a role in nearly all cooperation models. While the government led model aligns most closely with current practice and is common for farmers participating in CAP schemes, advisers also see opportunities in carbon credit schemes, project-led cooperation, and advisery models that combine these approaches. Project-led cooperation allows closer relationships with farmers, while outside the agri food chain initiatives - such as public events promoting locally produced food or partnerships with civic society - offer additional avenues for knowledge transfer and promoting sustainable practices.

Italian advisers indicated that, in their context, the farmer-researcher-public sector model represents the most suitable cooperation model, as it can leverage European funding and prioritize scientific research over profit. They also noted that project led cooperation and partnerships with the public sector, as well as farmer industry models, fit well, supporting funding, training, and demonstration activities.

Polish advisers highlighted the importance of farmer-industry and farmer led cooperation, as well as project led initiatives involving public sector participation and diverse partners, for implementing regenerative production and promoting the adoption of new practices over time. They are involved in numerous projects, including EIP Groups, which allow for practical testing and demonstration of complex carbon farming strategies, such as those within Horizon Europe projects. Overall, they emphasized that all these models are suitable for advancing sustainable and regenerative agricultural practices.

Austrian advisers consider farmer industry and farmer led models the most suitable for their context. The farmer led model is particularly useful for educational purposes, as it is easier for students aged 14 – 17 to understand. The farmer industry model aligns closely with professional practice, as advisers working as carbon accountants observe the interests of both farmers and companies and can leverage their networks to connect stakeholders. Their work often involves supporting companies with carbon neutralization strategies and assessing corporate carbon responsibilities, making farmer industry cooperation highly relevant and practical.

Slovakian advisers identified the most suitable cooperation models for them: farmer led and project led cooperation. They find the farmer led model particularly effective, as it allows direct engagement with the public, helping to educate people about carbon farming and raise awareness of sustainable practices. Additionally, project led cooperation, especially those connecting regenerative initiatives with municipalities and schools, is seen as valuable for building trust, fostering community involvement, and strengthening local networks that support climate friendly agriculture.

Croatian advisers identified government led cooperation as the most suitable model, as it allows for the combination of scientific approaches with practical field applications. They emphasized participation in eco schemes as the most appropriate and cost effective way to implement carbon farming in Croatia, noting that many farmers are already applying intercropping and crop rotation diversification and plan to continue through existing eco scheme programs.

German advisers highlighted farmer-industry cooperation as essential, with the industry supporting projects and methods to offset CO_2 emissions independently of product pricing. They also emphasized government-led cooperation as an effective way to engage many farmers, facilitated by CAP subsidies and aligned with farmers' focus on farm management. Existing partnerships with the food industry offer an additional mechanism to channel financial support from consumers to producers, enhancing the implementation of sustainable practices.

Czech Republic advisers identified project led cooperation and partnerships with the public sector and other stakeholders as the most important and suitable form of cooperation, particularly for those working in research and advisery fields.

4. What potential challenges do you anticipate when implementing the practices and strategies learned during the Winter School, and how do you plan to address or overcome them?

Slovenian advisers noted that the main anticipated challenges include gaining approval from supervisors and coordinators for the systematic, top - down implementation of new practices, as well as overcoming resistance from farmers who may be hesitant to change current methods. To address these challenges, the advisers plan to emphasize a holistic approach, clearly communicate the necessity and benefits of sustainable practices, and use the insights gained during the Winter School to explain the issues in a more comprehensible and convincing way.

Hungarian advisers anticipate several challenges when implementing the practices and strategies learned during the Winter School. One key challenge will be identifying the problems and needs of farmers, which requires open discussion, efficient communication, and collaboration with experienced advisers. Farmers may also hesitate to adopt new methods or lack the time to implement them. Additional difficulties include monitoring carbon sequestration and addressing long-term risks and opportunities. To overcome these challenges, advisers plan to use tools and methods from the business model guides, promote cost-effective practices such as reduced tillage and the use of cover crops and manure - which benefit both soil health and profitability - and emphasize practical demonstrations to build trust and understanding.

Italian advisers noted that key challenges include the lack of funding, fragmented certification methodologies, data collection, and ensuring the permanence of practices. They emphasized that raising awareness among farmers about cost-effective ways to increase soil organic carbon is crucial. Farms that have been practicing these techniques for several years can serve as valuable examples and demonstration sites to support wider adoption.

Polish advisers highlighted that transitioning to regenerative methods often requires investments in equipment, organic inputs, and training, which can be prohibitive for small-scale farmers. To overcome this, they plan to pursue grants, cooperative funding models, and government support programs. Recognizing that carbon farming is not yet widely known, they intend to involve scientific partners such as IUNG - PIB. Challenges like farmer resistance and the lack of accessible monitoring, reporting, and verification tools will be addressed through demonstrations, practical examples, training activities, and promotional events.

Austrian advisers anticipate several challenges, and these include the need to improve understanding of the relevance of carbon farming, clarify key definitions, and strengthen awareness and capacity building among stakeholders. Another major challenge is the limited availability of carbon credits and the need for further research in this area, which is currently being addressed through ongoing collaboration with Bioforschung Austria. To overcome these challenges, advisers plan to foster cooperation among multiple institutions and stakeholders to enhance communication, outreach, and coordinated action in promoting carbon farming practices.

Slovakian advisers anticipated challenges that include low public awareness and limited willingness to pay extra for regenerative products, as well as restricted funding and insufficient soil data to clearly demonstrate progress. Additionally, skepticism among conventional farmers and gardeners may slow adoption. To address these issues, advisers plan to collaborate with universities and research partners, use simple and accessible soil health indicators (such as soil organic matter, and visual soil assessments), and rely on practical demonstrations, field visits, and visible examples of improved soil and crop performance. Showing real, measurable benefits is seen as the most effective way to build understanding and trust.

Croatian advisers identified limited resources, the need for additional education of field advisers, and a lack of farmer understanding about the benefits of sustainable practices as key challenges. They also noted funding constraints and the high initial investment required for new machinery. To overcome these barriers, they plan to strengthen internal communication, enhance advisery services, and provide education, workshops, and practical on-farm demonstrations to encourage the adoption of carbon farming and other sustainable methods.

German advisers emphasized the need for more research to determine which combinations of measures are most effective for carbon sequestration and how soil organic carbon (SOC) levels can be increased. Advisers also noted that not all carbon farming practices are applicable or practical in organic agriculture, as some methods may conflict with organic principles, while others - such as the use of cover crops and organic fertilizers - are already widely implemented. Continued research and adaptation to organic systems will therefore be essential for effective integration.

Czech Republic advisers did not anticipate major challenges but acknowledged that attracting farmers' interest and encouraging changes in current practices may require effort. They plan to overcome this through organized field days, workshops, and practical demonstrations to engage farmers and showcase the benefits of new approaches.

5. How do you plan to monitor and assess the impact of the applied knowledge in your business or advisery role (please mention possible indicators, evaluation methods, or reporting practices)?

Slovenian advisers plan to monitor and assess the impact of the applied knowledge primarily through data analysis and structured evaluation methods. Much of the progress will be visible from subsidy applications, which can be statistically assessed and compared with previous years to monitor uptake and effectiveness. Furthermore, as part of the national work programme, research institutions will conduct targeted training for agricultural advisers, followed by evaluation questionnaires to collect feedback and continuously improve future training content and advisery effectiveness.

Hungarian advisers plan to monitor and assess the impact of carbon farming advisery services using multiple indicators and reporting practices. Key data include the number of farmer clients receiving support through eco-schemes, those contracted to carbon credit schemes, and the number of expert consultations on specific practices such as reduced tillage. Existing tools in Hungary, such as the farm logbook and e-claim systems, provide detailed records of farming practices that can be analyzed for monitoring purposes. Additional guidance will be drawn from the project manuals, while farm visits and on-site advisery sessions will support practical assessment and data collection.

Italian advisers plan to strengthen cooperation between farmers and public sector researchers by organizing workshops and field demonstrations. They intend to monitor results using the Visual Soil Assessment method, observing improvements in soil fertility, the amount of organic matter, and crop yields.

Polish advisers plan to organize training sessions to reach as many farmers as possible, supported by surveys, individual discussions, and field measurements to assess implemented practices. Participant feedback will be used to promote regenerative production and expand collaboration networks. Internal CDR reports document training activities, including participant statistics and program evaluations. Surveys and farm visits were identified as the most effective methods for monitoring and evaluating the adoption of these practices.

Austrian advisers plan to monitor and assess the impact of the applied knowledge in their business or advisery roles through multiple methods. These include questionnaires and learning reflections to track changes in participants' knowledge - what they knew before, what is new, and what can be applied in practice. They also plan to track quantitative indicators, such as the number of project stakeholders involved per year, the amount of carbon credits generated, funds raised for carbon farming projects, and the impact on educational materials through online evaluations and feedback forms.

Slovakian advisers plan to monitor and assess the impact of the applied knowledge, the advisers plan to rely primarily on field observations, participant feedback, and tracking improvements in soil and crop performance. This includes monitoring changes in soil structure, organic matter content, and yields, as well as collecting visual evidence of soil health improvements from gardens and farms that adopt regenerative methods. Additionally, engagement levels and feedback from workshops, fairs, and educational activities will serve as practical indicators of increased awareness and interest in carbon farming practices.

Croatian advisers plan to monitor the effects of implemented practices through soil fertility and vegetation assessments, SOC analyses on their own and other farms, and the comparison of multi-year data. Monitoring will also include surveys to track farmer adoption, field visits, yield measurements, farmer logbooks, final reports, and photographic documentation to evaluate progress and outcomes.

German advisers plan to use research on their farms and soils to monitor changes in soil organic carbon, enabling timely responses to evolving conditions. They will track the number of follow up projects and farms interested in participating, while also monitoring event participants and gathering their feedback to evaluate and improve engagement.

Czech Republic advisers plan to monitor and assess the impact of the applied knowledge primarily through direct soil measurements and comparative analyses. They intend to evaluate changes in soil organic carbon (SOC), bulk density, and other relevant indicators, as well as compare outcomes between conventional and carbon farming practices in terms of soil health, yields, water retention, and biodiversity.

ADVISERS' EVALUATION OF THE WINTER SCHOOL

On a scale from 1 to 5, how would you rate the Winter School and its content? (1 = poorly designed, 2 = fair, 3 = satisfactory, 4 = good, and 5 = excellently designed. Please select the number that best reflects your experience and briefly explain your choice).

Evaluation Element	Number of participants	Mean rating value
Content and relevance of the program *(how useful and applicable the topics are in practice)*	29	4.4
Quality of lecturers and presentations *(clarity, expertise, and ability to transfer knowledge)*	29	4.2
Organization and logistics of the school *(technical support, materials, agenda, venue, etc.)*	29	4.9
Interactivity and opportunities for discussion *(chances to ask questions, share experiences, and engage in practical discussions)*	29	4.3
Applicability of the knowledge gained to your work *(to what extent the acquired knowledge can be used in your work and in advising farmers)*	29	4.1

ADDITIONAL COMMENTS FOR EVERY EVALUATION ELEMENT

Content and relevance of the program

Advisers noted that while some topics are not yet fully applicable in current practice, they are expected to become increasingly important in the near future. One participant suggested that future editions/lectures of the project should include more practical examples alongside the lectures to enhance applicability.

Quality of lecturers and presentations

Several advisers highlighted that the connection between different presentations could have been stronger. Despite this, they praised the lecturers for their expertise, clarity, and engaging

delivery. While some participants found the content too theoretical and requested more practical examples, others felt that the balance between theory and practice was appropriate.

Organization and logistics of the Winter School

The majority of advisers expressed very positive feedback, emphasizing that the event was well organized, the agenda was well-structured, and that the overall experience exceeded their expectations.

Interactivity and opportunities for discussion

Most participants appreciated the opportunities for discussion, exchange of experiences among countries, and informal brainstorming , particularly during breaks. A few advisers suggested including a roundtable session to further enhance interaction. Conversely, some participants felt that the schedule was too tight and did not allow enough time for discussion, although some of them noted that professional excursions compensated for this.

Applicability of knowledge to professional work

Opinions varied: some advisers found the topic of carbon farming new and emphasized the need for a clear plan for its practical implementation, possibly with policy support. Others considered the topic highly relevant and valuable, especially for agriculture, pasture management, and regarding the livestock production, the acquired knowledge could be useful in their work.

OUTCOMES AND IMPACT OF THE WINTER SCHOOL

The Train-the-Trainers Winter School strengthened the skills of regional agricultural advisers in carbon farming, making them key players in sharing knowledge and promoting sustainable practices across Central Europe. This knowledge is now being included in national advisery programs, helping advisers support farmers more effectively. Participants are applying what they learned by creating educational materials, technical guides, and articles, and by using sustainable practices on their own farms, such as reduced tillage, cover crops, and bio-fertilizers. Advisers are also linking crop production and animal husbandry experts to give farmers more complete guidance.

The school led to clear plans for teaching farmers through workshops, field demonstrations, online courses, and seminars. Topics include green manure, wider crop rotations, proper fertilization, and using carbon farming for extra income via carbon credits or eco-schemes. Advisers also built a transnational network and identified effective cooperation models for their countries such as farmer-led, project-led, cooperation outside agri-food chan, cooperation within agri-food chain, and government-led cooperation.

Challenges were identified, including high costs for farmers, lack of simple monitoring tools, and hesitation to adopt new practices. To overcome these, advisers plan to partner with universities for better data, use simple indicators like Visual Soil Assessment, and use CAP grants to support farmers.

By combining knowledge transfer, capacity building, and community engagement, the Winter School proved to be more than a learning event – it helped create lasting change by sharing knowledge, encouraging collaboration, and supporting practical and financially viable carbon farming across Central Europe.

ANNEXES

As an addition to the Winter School D.3.4.1 report, the following documents are provided together with the report:

1. Agenda
2. Lists of participants
3. Advisers feedback
4. Brochure as a learning material and presentations
5. Photos of the Transnational Train-the-Trainers Winter School
6. Advisers online form