Updated Plan for dissemination and exploitation including communication activities

Deliverable 5.5

WP 5. Dissemination, exploitation and communication

Project title

D4AgEcol – Digitalisation for AgroEcology

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Deliverable Factsheet

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Version history	

Dissemination level	
X	PU = Public
	SEN = Sensitive
	EU classified = EU-Restricted, EU-Confidential, EU-Secret

Partners' short names

ATB – LEIBNIZ INSTITUTE OF AGRICULTURAL ENGINEERING AND BIOECONOMY E.V.

CETRI – CENTER FOR TECHNOLOGY RESEARCH & INNOVATION LTD

ZALF – LEIBNIZ CENTRE FOR AGRICULTURAL LANDSCAPE RESEARCH

AUA – AGRICULTURAL UNIVERSITY OF ATHENS

UCPH – UNIVERSITY OF COPENHAGEN

BOKU – UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES

LfL – BAVARIAN STATE RESEARCH CENTER FOR AGRICULTURE

PESSL – PESSL INSTRUMENTS GMBH

DLG – GERMAN AGRICULTURAL SOCIETY

LUKE – NATURAL RESOURCES INSTITUTE FINLAND

UNAC – UNIAO DA FLORESTA MEDITERRANICA

HAU – HARPER ADAMS UNIVERSITY

Abbreviations

AECM	Agri-environmental climate measures
CSA	Coordination and support action
DCP	Dissemination & communication plan
DTSW	Digital Tool Scoping Workshops
FAO	Food and Agriculture Organization of the United Nations
IOT	Internet of Things
KPI	Key performance indicator
PDEC	Plan for dissemination, exploitation and communication
SMAs	Social media accounts

Publishable summary

The WP5 (Dissemination, exploitation and communication) of D4AgEcol and in particular the D5.5 is divided into 6 main Tasks, which are summarized in the following Table 1.

Table 1. Main tasks of D5.5

WP5 Dissemination, exploitation and communication
Task 5.1: Dissemination, exploitation, and communication strategy planning
Task 5.2: Dissemination and communication tools design and development
Task 5.3: Exploitation plan, activities and IPR management
Task 5.4: Clustering activities and policy recommendations
Task 5.5: Raising awareness on Agroecology and Sustainable Farming
Task 5.6: Organisation of a final symposium event possibly integrated in an international conference

The D4AgEcol project is currently at its half (M18). The plan for dissemination, exploitation and communication (PDEC) is the predominant part of D.5.5. The PDEC will be constantly enriched and updated depending on the outcomes of the project, with the contribution of all partners. This document aims at designing and applying a targeted and efficient dissemination, communication and exploitation strategy at the European as well as national level to support the activities of the project, while, at the same time, building a community that can facilitate post project adoption.

Most of the tasks of table 1 are going to be part of the current report with the exception of *Task 5.6 - Organisation of a final symposium event possibly integrated in an international conference* which will be organized at the end of the project. Moreover, the part of task 5.4, which concerns the policy recommendations, will be also excluded from D.5.5 since D.4.1 and D.4.2., i.e., the reports for the national and European roadmaps for agroecology with digitalization, respectively, are prerequisites to its completion.

The interconnection between D.5.5 and other WPs of D4AgEcol is undoubtful since all the PDEC activities are created to promote and exploit all the works conducted within the project. For this reason, each of the PDEC activities are discussed and approved by the D4AgEcol's partners. In this direction, all partners are actively involved in the dissemination, exploitation and communication activities to ensure the success of dissemination and exploitation of the project's outcomes. In general, the expected contribution from partners is to:

- Supply news and updates for the project's website and newsletter;
- Apply dissemination campaigns in their own countries as well as internationally exploiting their contacts and networks;
- Help to keep the project's Social Media Accounts (SMAs) active with a focus on the European level as well as on each partner's country thus, to ensure an increased audience at each of the partner's countries

The leader of WP5 (CETRI) is responsible for the overall management and support of the activities defined under the presented PDEC. CETRI also develops and manages the main tools and the materials to be used during the project with the support of all partners.
Close monitoring of PDEC materials, tools and actions will allow CETRI in cooperation with all partners to assess the impact of the presented strategy and to prepare the following deliverables, which are:

- Deliverable 5.1: Website and social media presence, submitted by CETRI at M1 (October 2022)
- Deliverable 5.2: D4AgEcol promotional material (brochure, leaflet, teaser video), submitted by CETRI at M3 (December 2022)
- Deliverable 5.3: Plan for dissemination and exploitation including communication activities, due by CETRI at M6 (February 2023)
- Deliverable 5.4: Practice Abstracts Batch 1, due by CETRI at M18
- Deliverable 5.5: Update Plan for dissemination and exploitation including communication activities, due by CETRI at M18
- Deliverable 5.6: Final Plan for dissemination and exploitation including communication activities, due by CETRI at M36
- Deliverable 5.7: Report on scientific conferences, publications, due by ATB at M36
- Deliverable 5.8: D4AgEcol Best practices handbook, due by CETRI at M36
- Deliverable 5.9: Policy brief, due by ATB at M36
- Deliverable 5.10: Practice Abstracts Batch 2, due by CETRI at M36

This deliverable is conceived as a "living" document, since it is updated according to D4AgEcol progress, depicting the project's dissemination, communication and exploitation strategy. The document's content is regularly updated and properly adjusted during the project (M6, M18, M36). This is the second, updated version due in M18. The previous version was submitted on time, on M6. The current version of PDEC includes updates concerning "Task 5.1 Dissemination, exploitation, and communication strategy planning" along with the corresponding comments for the KPI's set in the previous version of PDEC, "Task 5.3 Exploitation plan, activities and IPR management", where the advancements and potential key-exploitable results of the projects are presented, "Task 5.4 Clustering activities and policy recommendations", where clustering activities are presented and "Task 5.5 Raising awareness on Agroecology and Sustainable Farming", where the organization of the Digital Tool Scoping Workshops is presented and discussed.

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1 Introduction

This document aims at designing and implementing a well-targeted and effective dissemination, communication and exploitation strategy at pan-European level, based on the corresponding progress and phase of the project, in order to support the activities of the project, all while building a community and brand that can facilitate post project adoption.

All partners are actively involved in the dissemination, communication and exploitation actions implementation and they are highly committed to ensure a satisfactory dissemination and exploitation of the project's results. In general, the contribution from partners is the following:

- They implement awareness and dissemination campaign in their own countries as well as internationally exploiting their contacts and networks;
- They supply news and updates for the web portal and newsletter;
- They help to keep the project's Social Media Accounts (SMAs) alive and active with a focus on each D4AgEcol partner's country, to individually stimulate each partner to increase the audience from its own country
- They participate and collaborate towards the development of D4AgEcol added-value key exploitable results.

This document is conceived as a "working/living" document, depicting the project's dissemination, communication, and exploitation strategy. Its content is regularly updated and properly adjusted during the project. This is the third, updated version.

2 Dissemination, exploitation, and communication strategy planning

This section gathers D4AgEcol outcomes that will be subject of promotional support during the three main phases of the project, a planning of concrete actions per phase, a description of targeted audiences, messages, tools and channels to reach those audiences. The exploitation strategy is excluded since it is presented within the description of Task 5.3.

2.1 D4AgEcol strategic objective

D4AgEcol aims at providing knowledge for the rapid digital transition of agroecology by identifying appropriate digital tools and technologies, by interacting with scientists, farmers and policy-makers and by suggesting measures for the transition to sustainable food and agricultural systems.

2.1.1 D4AgEcol key assets

In order to achieve the ultimate goal of the rapid digital transition in the agricultural sector D4AgEcol interacts with 10 living labs in 7 European countries (Austria, Germany, Denmark, Greece, Finland, Portugal, United Kingdom), including farmers and scientists, to raise awareness and understanding of digital contributions to the agroecological transition in a broad spectrum of different farming systems in Europe including amongst others arable cropping, orchards, vineyards, agroforestry systems, grazing systems and animal husbandry systems.
Depending on the framework conditions of each living lab, the D4AgEcol consortium will conceive the most appropriate combination of digital technologies and innovations that will allow the efficient agroecological digital transition with respect to the FAO's ten elements of agroecology,[1] which shall contribute to the United Nations Sustainable Development goals.
Concerning the digital innovations and technologies, D4AgEcol will map existing and emerging digital tools and technologies for crop and livestock farming in various farming systems across Europe. At least 100 innovative digital tools and technologies that are currently used in agriculture or examined at research projects for different crops, farming systems and pedo-climatic conditions including robots, drones, IOT, cloud computing, remote sensing applications and specialized software will be categorized and documented in a repository. These tools aim mostly to reduce costs and increase yields, rather than supporting the transition to agroecology or promoting agricultural sustainability. During the project they will be examined to what extent they can contribute to the agroecological transition of the agricultural sector. The outcomes of this investigation will be published in an open repository, which will be kept alive and updated beyond the project lifecycle and it will be transferable to EUFarmBook. During the project, a selection of at least 12 digital innovations will be identified and further studied in the living labs to contribute to the transition towards truly sustainable farming and food systems. The project will demonstrate the selected tools in organic and conventional farming systems, highly involving end-users in the adaptation procedure.

[1] https://www.fao.org/documents/card/en/c/I9037EN/

The digital innovations selected so far by the D4AgEcol Consortium to be presented during the Digital Tool Scoping Workshops (DTSW) organised at a national level by the Living Labs are summarized in the following Table 2.

Table 2. Technologies selected for the DTSW and corresponding partner.

Partner	Technology
DLG (Germany)	Solar-powered irrigation system
AUA (Greece)	Unmanned aerial vehicle sprayer for vineyards
LfL (Germany)	Robotic sowing and hoeing in row crops
PESSL (Austria)	Digitalised crop protection through the use of information and communications technology
UCPH (Denmark)	Unmanned-aerial-vehicle-based weed mapping
HAU (United Kingdom)	- Virtual fencing with the use of smart collars - Farm machines retrofitted for autonomous strip cropping
ZALF (Germany)	Online tool for agri-environmental-climate measures
LUKE (Finland)	Unmanned-aerial-vehicle-based green fertiliser mapping
ATB (Germany)	- Sensor-based health management in cattle farming - Site-specific fertiliser application based on sensors and maps
UNAC (Portugal)	Remote sensing in mixed farming systems

2.1.2 Timeline of D4AgEcol outcomes

According to the planned results, based on the Grant Agreement (GA), the previous version of PDEC included the subdivision of the planned activities into three distinct phases: The first until M12 concerned the awareness raising on the D4AgEcol project and future activities, the second until M24 concerns the intense promotion of the project as well as the engagement of stakeholders through the communication and dissemination of the project's outcomes and the third until M36 is about the promotion of D4AgEcol activities on technology fact sheets, the potential barriers during the adoption of digital technologies in agroecology and the national and EU roadmaps. The plus one phase, concerns the activities after the realisation of D4AgEcol.

2.1.2.1 Phases 1 & 2

From October 2022 to February 2024, several actions have been conducted to increase the D4AgEcol visibility, to increase the stakeholders' engagement and to inform the D4AgEcol community about the project's start, achievements and outcomes. Indicatively, they are mentioned here the release of Newsletter #1 to #3, which are available on the D4AgEcol website (https://d4agecol.eu/d4agecol-newsletter-archive/), as well as the participation in several international events and conferences which are summarized in Table 3.

Table 3. Events and conferences with participation of D4AgEcol partners (October 2022-February 2024).

EVENT	DATE	PARTNER
11th Unternehmertage der IAK. Landwirtschaft 2030	23-24 November 2022	ATB
GIL Meeting 2023	13-14 February 2023	ATB, LfL
Bernburger Innovation Days	12-13 June 2023	DLG
Public Hearing of the European Parliament	30 June 2023	ATB
ECPA Conference	2-6 July 2023	LfL, HAU
Food Systems Transformation conference	12 July 2023	ATB
EAAE Congress	29 August-01 September 2023	ATB
6th GIATE Symposium	18-19 September 2023	HAU, ATB, UCPH
ALL-Ready & AE4EU Final Conference	27 September 2023	ATB
Synergy Days	4-5 October 2023	AUA
ETARGO Conference	2-3 November 2023	AUA
AGRITECHNICA	12-18 November 2023	DLG, ATB

Moreover, until the end of 2024 they have been planned and confirmed the following:

Table 4. Events and conferences planned until the end of 2024.

EVENT	DATE	PARTNER
GIL Meeting 2024	27-28 February 2024	ATB, ZALF, LfL
98th Annual Conference of the Agricultural Economics Society	18-20 March 2024	HAU
AgEng2024	1-3 July 2024	AUA, ATB, HAU
IFMA Conference	7-11 July 2024	UCPH
16th International Conference on Precision Agriculture	7-11 July 2024	HAU
Landscape 2024	27-29 September 2024	ZALF, ATB

2.1.2.2 National Workshops

Beside the participation of D4AgEcol consortium members in international events and conferences, a special category is the organisation of national Digital Tool Scoping Workshops (DTSW) in Living Lab countries. So far, during this first reporting period 6 DTSWs were successfully conducted from September 2023 to February 2024, while 6 more are planned for the next D4AgEcol period. Despite the fact that the meaning of the DTSW is to present and evaluate the D4AgEcol digital innovations and their applicability into agroecology to relevant stakeholders so as to provide them potential with the digitalisation solutions, the DTSW *per se* were also a mean to advertise D4AgEcol and they have functioned as dissemination/communication tools as well. Hereby, a brief report on those workshops is provided with the corresponding pictures, in terms of dissemination and communication activities, since the detailed DTSW reporting is not part of the PDEC.

DTSW at UCPH

The DTSW of UCPH was organised and conducted on the 29th September 2023, at the University of Copenhagen's Taastrup campus (Højbakkegård), few kilometres outside the capital city. The context of the workshop was to present to relevant stakeholders the Thistle Tool which uses drone images to identify root weeds like thistles, and from that creates an allocation map that can be used for spot spraying in the field (see more details in the corresponding practice abstract). The tool's demonstration took place in one of the open fields by the university buildings, at a walking distance from the rooms where the group work occurred. The workshop was attended by 25 participants ranging from academia and research sector to farm industry and environment consultation.

Figure 1. The DTSW of UCPH for the presentation and demonstration of the Thistle Tool.

DTSW at HAU

The DTSW of HAU was conducted on the 13th October 2023, at the premises of the Harper Adams University campus which is surrounded by agricultural land, where several living labs are established. The context of the workshop was to present to relevant stakeholders the Virtual Fencing technology which is used in different cattle and sheep rotational grazing systems for precision pasture management. It works similarly to conventional electric fencing, but without relying on physical barriers. The virtual fencing living lab consists of a 2-hectare rotational grazing system comparison between virtual and electric fencing. 1 hectare is managed with virtual fencing and 1 hectare is managed with electric fences. The workshop was attended by 25 participants with a mixed background, including farmers, farm advisors, digitalisation experts, and members of academia with different expertise such as Ecology and Economics.

Figure 2. The DTSW of HAU for the presentation and demonstration of the Virtual Fencing technology.

DTSW at LfL

The workshop was framed by the LfL Living Lab "Future Crop Farming", which is an innovative, small-scale diversified and digitalized crop farming system. The workshop focused on *robot-assisted sowing and weed control* for row crops (e.g., sugar beet) on farms with sugar beet cultivation in Eastern Bavaria (conventional and organic cultivation). The Farmdroid FD20 was used as a reference for a market-ready and already implemented technology. The workshop was attended by 20 participants with a mixed background, including farmers, farm advisors, digitalisation experts, policy makers and members of academia with different expertise such as farm management and social sciences.

Figure 3. The DTSW of LfL for the presentation and demonstration of the robot-assisted sowing and weed control.

DTSW at ATB

The ATB's first DTSW took place on the 18th January 2024 at the Lehr- und Versuchsanstalt für Tierzucht und Tierhaltung e.V. (LVAT) in Groß Kreutz. The LVAT is a farm that is specialized in animal livestock husbandry and breeding (dairy, bull-fattening, sheep, goats, pigs) and forage production and it serves as a living lab for ATB with many experiments and projects. The workshop focused on the *bolus technology* which is a herd and health management system. A bolus is inserted into the cow's reticulum. This measures and sends various values to a station in the barn. AIs and algorithms determine the cow's health status and send reports and recommendations for action back to the farmer. The data and recommendations for action, e.g. push-up notifications for fever events, can be accessed via app or computer. The workshop was attended by 20 participants with a mixed background, including academicians, farm advisors and digitalisation experts.

Figure 4. The DTSW of ATB for the presentation and demonstration of the bolus technology.

DTSW at LUKE

LUKE in cooperation with Knehtilä Farm organized the DTSW on Unmanned-Aerial-Vehicle-based green fertiliser mapping on the 16th February 2024 at Knehtilä Farm premises, at Southern Finland. The farm serves as a LivingLab in the project. The Knehtilä Farm is an organic crop production farm utilizing digital technologies. The DTSW focused on the *green fertilizer mapping* which aims at defining the amount of nitrogen fixation by legume plants in in-field scale. The technology is based on the automation-assisted drone imaging (RGB) from low altitude (5 m) covering the whole field, as well as on an image of the entire field from higher altitude. The image of entire field was used for biomass estimation and the low-altitude images to define the growing density of legume plants. The workshop was attended by 10 participants representing education, research, policy, farmers and NGOs.

Figure 5. The DTSW of LUKE for the presentation and demonstration of the green fertiliser technology.

DTSW at ZALF

The DTSW of ZALF was organised and conducted on the 21st October 2024 at the Institute in Müncheberg, Germany. The workshop focused on the *NatApp*, an information and documentation application, with which farmers can get informed about agri-environmental climate measures (AECM) and other contract-based nature conservation measures and document them. The workshop was attended by 20 participants representing education, academia, research, policy, farmers and digitalization experts.

Figure 6. The DTSW of ZALF for the presentation and demonstration of the NatApp application.

The digital innovations proposed by D4AgEcol was presented by the partners from the corresponding institutions during the DTSWs and the participants identified advantages, problems, challenges, and prospects with respect to the 10 elements of agroecology. They contributed with comments, observations, and suggestions that will be included in the corresponding fact sheets. The workshop's results will be reported to the EC, in the form of detailed fact sheets forming the basis of discussions about the need for new policies in the EU agroecological sector. In this way, we hope to make D4AgEcol's digital solutions and innovations part of the rapid digitalization of the agricultural sector.

2.1.2.3 Dissemination and Communication during the rest of Phase 2 & Phase 3

During the rest of the phase 2 which lasts until August 2024, we will continue focusing on the promotion of the progress on the digital innovations and technologies mapped and selected for the corresponding DTSW organized and conducted by the Living Labs of the project. Also, the effort for increasing the engagement of stakeholders and the engaging of new stakeholders through promoting project's achievements will continue. All the D4AgEcol's progress will be used as news on the website and on social media accounts as well as on relevant press releases, such as newsletters and videos and potential publications which are planned for this second phase of the project. The rest of the second phase's activities are summarized in Table 5.

Table 5. Planning of communication and dissemination activities during Phase 2 (from February 2024 until August 2024).

Phase 2 – 1st March 2024 – 31st August 2024	
Apr. 2024 (M20)	CETRI prepares the release of the next YouTube video based on participant Living lab description CETRI prepares the promotion of D1.1 Mapping and categorization of existing and WP1 emerging technologies (AUA)
May 2024 (M21)	CETRI collects list of events form partners
Jul. 2024 (M23)	CETRI prepares the promotion of D2.3 Report on workshops performed based on preliminary fact sheets (BOKU) and of D3.3 Report on digital tool scoping workshops WP3 (drivers, barriers, risks and usability aspects) (LfL)
Aug. 2024 (M24)	CETRI prepares the release of the next YouTube video based on participant Living lab description CETRI and ATB prepare the Newsletter No. 4

Phase 3 will collect the last results of the project. Additional videos will be created describing the best achievements of the project. Policy making practices will be developed during this phase and ATB will organize a final symposium event to share the knowledge and present final achievements to scientists, market actors and policy makers. In order to maximize the outreach, it is foreseen to integrate this final event as part of a larger international event. Table 6 summarises the activities of phase 3.

Table 6. Planning of communication and dissemination activities during Phase 3.

Phase 3 – 1st September 2024 – 31st August 2025	
Sept. 2024 (M25)	CETRI collects list of events form partners Final symposium event – establish agreement with co-organizers and the agenda
Oct. 2024 (M26)	Update of website content and of promotional material
Nov. 2024 (M27)	CETRI prepares promotion of D2.4 Technology fact sheets (BOKU) CETRI prepares the release of the next YouTube video based on participant Living lab description
Dec. 2024 (M28)	ATB updates clustering stakeholders Final symposium event – call for speakers
Feb. 2025 (M30)	CETRI prepares promotion of D3.4 Report on Barriers and drivers of digitalization adoption to enable agroecology (HAU) and D4.1 Report on national roadmaps for Agroecology with Digitalization (UCPH) CETRI prepares the release of the next YouTube video based on participant Living lab description CETRI and ATB prepare the Newsletter No. 5
Mar. 2025 (M31)	Final symposium event – Send registration to conference
Apr. 2025 (M32)	Final symposium event – Distribution of reminder
May 2025 (M33)	CETRI prepares the release of the next YouTube video based on participant Living lab description
Jun. 2025 (M34)	CETRI initiates the preparation of Newsletter No. 6 and of the second batch of practice abstracts
Jul. 2025 (M35)	Organisation of D4AgEcol final symposium event
Aug. 2025 (M36)	CETRI prepares the release of the final YouTube video based on D4AgEcol last results Newsletter No. 6 release CETRI prepares the promotion of deliverables: D4.2 European roadmap for Agroecology with Digitalization (UCPH) D5.7 Report on scientific conferences, publications (ATB) D5.8 D4AgEcol Best practices handbook (CETRI) D5.9 Policy brief (ATB) D5.10 Practice Abstracts Batch 2 (CETRI)

2.1.2.4 Dissemination and communication beyond D4agEcol (Phase 4)

CETRI encourages all partners to communicate and disseminate about the project and its results through their communication channels and actions beyond the life of D4AgEcol. Some suggestions on how to promote D4AgEcol after August 2025:

- Dedicate a section of the website of partners to a summary of D4AgEcol main outcomes and materials.
- Keep on using the name D4AgEcol accompanied by the hashtag #D4AgEcol to refer to the project in the social media accounts of partners.
- Use and spread the word about D4AgEcol digital innovations and technologies to apply them in other projects.
- Encourage partners to use D4AgEcol printed and online promotional materials during networking events.
- Build on the network created during D4AgEcol by maintaining contact through partners newsletter.

Following these steps will help to make the project sustainable after its end, to replicate its solutions and to inspire new projects and gender-balanced initiatives no matter the sector. Last but not least, this type of joint effort will multiply the opportunity for partners to develop new ties with new networks and to stay receptive towards new initiatives.

2.2 Targeted stakeholder groups and audiences

Key audience groups have been identified already from the first version of PDEC to raise awareness about the project and its dissemination actions. In this second version, the potential stakeholders groups are enhanced with new categories such as research and innovation networks, environmental organisations, governmental authorities and research projects. These groups are summarized in the following Table 7 including the communication tools and the partners' networks that D4AgEcol will use to reach them.

Table 7. Target groups of stakeholders and audiences and tools to reach them.

Targeted groups	Tools to reach them
Scientific community: Agricultural universities, IOT research centres, Smart farming schools and research centres, National Institutes for agricultural research.	Publications, articles, conferences (GIL, EFITA, ECPA), workshops, news in research networks, social media engagement. It is foreseen to publish at least 5 peer- reviewed articles in journals (Precision Agriculture, Agriculture, Ecosystems and Environment, Computers and Electronics in Agriculture) and 5 articles in agriculture, smart farming and environmental magazines within the duration of the project and the year after.
Farming industry: Small, medium size and large farmers and growers, organic farmers,	Participation in exhibitions, fairs (Grüne Woche, Agritechnica), workshops, media

livestock farmers, national and international associations (e.g. COPA- COGECA), federations and unions, cooperatives, unit chambers.	publications, newsletters, B2B meetings, invitation to project events, social media engagement. Moreover, the D4AgEcol roadmap for digitalization as enabler for agroecology as well as the D4AgEcol handbook with suggestions on the best practices will be publicly available to download.
Industries collaborating with farmers: IPM / agrochemical / IOT / smart farming companies, sprayers manufacturers, nursery owners, traders, technology providers, food industry, animal feedstock companies.	B2B meetings, invitation at project events, social media engagement. Again, for this target group, the D4AgEcol roadmap and the best practices handbook will be an invaluable tool.
Policy makers & authorities: European ministers of agriculture, Experts on regulatory and policy issues related to agroecology, standardisation and certification bodies, environmental & food organisations.	Online and face to face meetings, invitation to participate in project events and workshops, social media engagement. The D4AgEcol best practices handbook and the project's roadmap with lessons learnt during the project will be also used.
Research projects: H2020, Horizon Europe, LIFE+, PRIMA.	Clustering activities, common workshops, social media interactions.
Media: Websites, portals, popular You Tubers, journalists, internet / social media influencers, local TV stations, newspapers, radio stations, magazines.	Targeted articles, promotional as well as living labs videos, infographics, advertisements, promotional materials.
General public: EU citizens and households, individuals interested in climate change and food security, consumers, schools.	Open fairs and workshops, media publications, popularized promotional material, large audience events, social media, promotional and informative videos, website and newsletter.
Research and innovation networks: Experts on regulatory and policy issues related to environment, energy, emissions and GHGs in agroecology, standardisation and certification bodies, policy makers at European and national level, EU's DG RESEARCH, DG AGRI, EIP AGRI, Public Environmental Monitoring Authorities, National and International Organisations in sustainable agriculture.	Events, newsletter, website, reports, social media
Environmental organisations: EEA (European Environment Agency), Climate Action Network Europe, European Environmental Bureau, Friends of the Earth Europe, Greenpeace European Unit, Health and Environment Alliance, Naturefriends International, WWF European Policy Office, AIRCLIM (Air Pollution & Climate Secretariat, EFCA (Euro-	Events, newsletter, website, reports, social media

pean Federation of Clean Air and Environmental Protection Associations), Global Atmospheric Pollution Forum.	
Governmental authorities: Ministries of Health, Ministries of Agriculture, Livestock and Fishery, Ministries of Rural Development	Events, newsletter, website, reports, social media
Research projects: ALL-Ready, AE4EU, PATH2DEA, ENFASYS, AGROSUS, GOOD, Agroecology-Transect, QuantiFarm, CO-DECS,	E-mail, calls, meetings and webinars in search of joint initiatives.

2.3 Key messages to be communicated

Key messages from the project, including outcomes and benefits, will influence the external messages of the D4AgEcol project and will be used in relevant tools and communication channels. The objective of this section is to draft clear messages capable to reach as many target audiences as possible. These messages are evolving and updating as the project progresses and they adapt to concrete materials and promotional actions. As a rule of thumb, the tone is simple, friendly, direct and built on facts. You will find below general messages highlighting the benefits of the project assets as well as corresponding highlights from social media promotion and posts showing the rationale behind promotional messages.

During Phase 1, the corresponding promotional activities focus on creating awareness about the D4AgEcol project, its goals and targets, the team and the people undertaking the activities, the events where the project participates and people can meet Consortium members and the forthcoming outcomes of the project. Indicatively, Figure 7 shows a twitter post where two of the participating members are presented and their role in D4AgEcol is described.

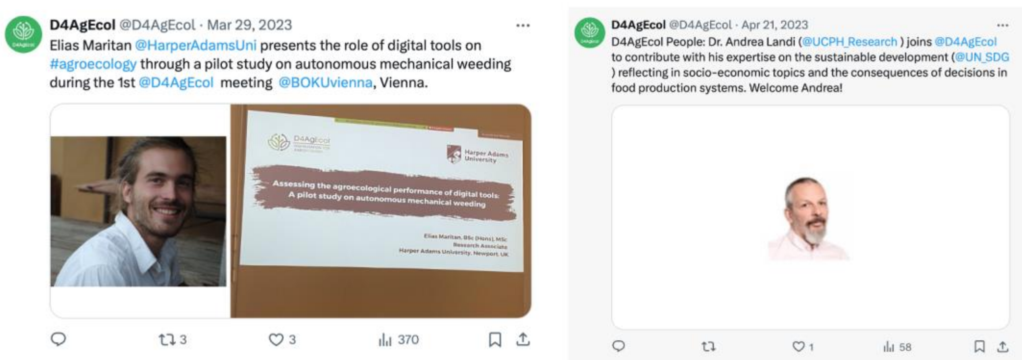

Figure 7. Twitter post for the presentation of team members participating in D4AgEcol.

Also, during this first phase, the promotion and advertising of D4AgEcol included participation of project partners in events and conferences with the goal of meeting people who are interested in D4AgEcol and the exchange of ideas. Figure 8 shows corresponding Twitter posts.

Figure 8. Twitter post for the participation of D4AgEcol coordinator in the GIL Meeting 2023 and for his speech at the Public Hearing of the European Parliament.

On the other hand, during Phase 2, when more outcomes are produced as the project progresses, the promotional activities concern this progress. It is referred as an example, the twitter post for the realization of the 1st D4AgEcol General Assembly where stakeholders are referenced to the D4AgEcol webpage for more information and for contacting the team to express their thoughts.

Figure 9. Twitter post for the 1st D4AgEcol General Assembly.

Furthermore, another important asset of this 2nd D4AgEcol Phase is the organization of the DTSW. For this reason, a social media campaign was designed where each of the DTSW organized by the corresponding living lab is advertised properly (Figure 10) with additional information from the project's website concerning the concept of the DTSW and the technologies that are intended to be presented during the project (Figure 11). For the latter, a special section "Digital Tool Scoping Workshop" was developed within the D4AgEcol website.

Figure 10. Indicative twitter posts for the promotion of the LfL's DTSW (left) and the successful organisation of the HAU's DTSW (right).

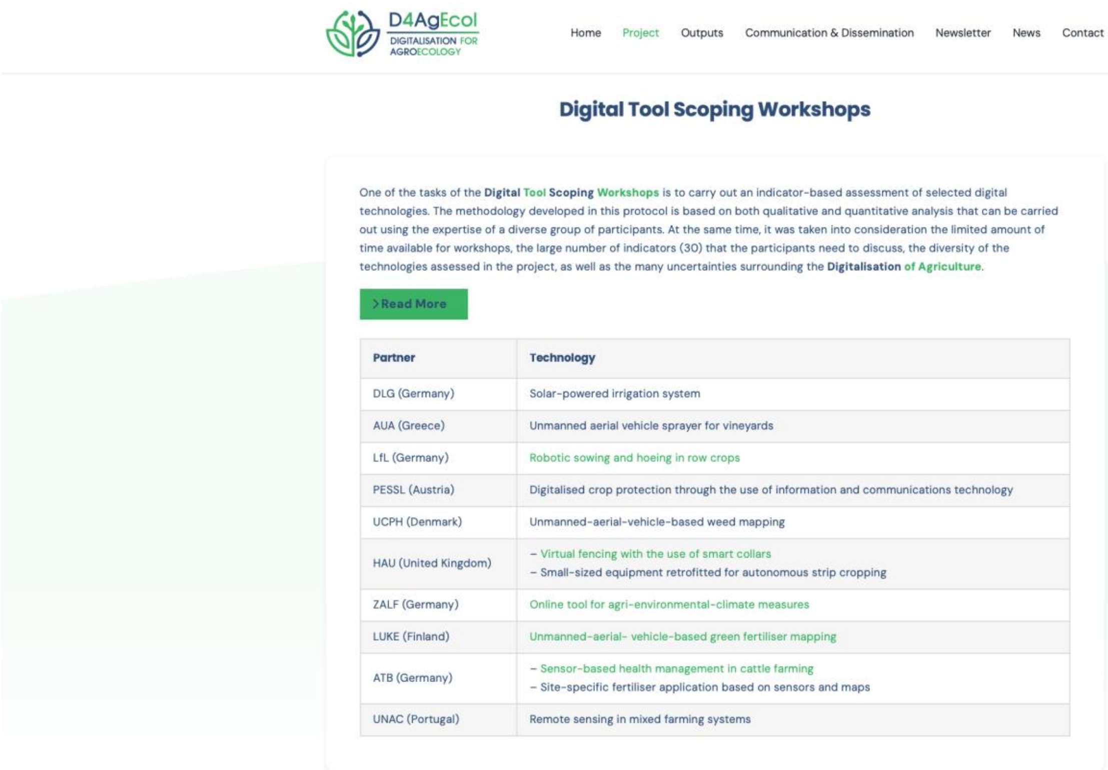

Figure 11. The section "Digital Tool Scoping Workshops" which was developed within the D4AgEcol website.

2.4 Conclusions

The current version of the plan for dissemination and communication plan (DCP) provides an overview of the activities conducted from the start of the project (September 2022) until the end of the first reporting period (February 2024). Moreover, the current version of the DCP provides the activities which are planned to be conducted during the rest of Phase 2 and Phase 3 of D4AgEcol readopted and based on the progress of the project until this point along with the tentative activities which are planned to be conducted after the end of the project. Finally, the current, second version of the DCP presents examples of the dissemination and communication strategy through representative social media posts and also, more importantly, within the next section quantitative analysis of the D4AgEcol impact and the corresponding engagement from stakeholders and the targeted audiences.

As a final reminder, close monitoring of DCP materials, tools and actions will allow CETRI, ATB and all involved partners to assess the impact of the strategy to prepare the following deliverables:

- Deliverable 5.6: Final Plan for dissemination and exploitation including communication activities, due by CETRI at M36
- Deliverable 5.7: Report on scientific conferences, publications, due by ATB at M36
- Deliverable 5.8: D4AgEcol Best practices handbook, due by CETRI at M36
- Deliverable 5.9: Policy brief, due by ATB at M36
- Deliverable 5.10: Practice Abstracts Batch 2, due by CETRI at M36

3 Dissemination and communication tools design and development

This section presents a description of the tools and channels foreseen during the project, including the objective, target, methodology and quantifiable indicators. All the presented materials have been initially developed in English. However, to increase the national visibility of the D4AgEcol project and to facilitate regional actions, the promotional materials are translated in partners' local language during the second year of the project.

Visual identity

The D4AgEcol visual identity includes the actions and items related to the creation of the first toolkit of communication tools (logo and colour chart, templates). All future actions such as specific promotional campaigns for events (conferences, symposia, workshops, seminars), reports, case studies, regional campaigns will integrate the designed visual identity.
CETRI has developed from the beginning of the project, the D4AgEcol logo, templates for presentations, leaflets and brochures of the project, a roll-up banner and a YouTube teaser video. CETRI has shared the manual to use the logo and uploaded all communication materials and templates to the D4AgEcol shared folder to be accessible to all partners as well as on the D4AgEcol website so as to be able to be downloaded by the webpage visitors.

E- Newsletters

Three Newsletters have been developed and sent as from February 2024. The frequency of Newsletter release is each 6-months, which will end-up with 6 in total at the end of the project. The content for the newsletters is assembled by ATB and CETRI, mainly, in cooperation with all the partners. All partners are strongly encouraged to share articles and any other relevant news items to be published in the newsletter. All issues of the newsletters are shown on the website and other social media to increase D4AgEcol outcomes visibility.
People can subscribe for the newsletter through a dedicated section in the D4AgEcol webpage. Furthermore, partners and stakeholders are encouraged to share the newsletter within their network, using their own dissemination channels. So far, 53 subscribers have been subscribed through the D4AgEcol webpage to receive the project's newsletter which is on the low side with respect to the KPIs set (see the following). However, we should have in mind that newsletters are also available from the project's social media accounts thus, the real number might be higher.

KPI Number of subscribers during the project + 1 year: **<250 = poor,** >250 = good, >500 = excellent

D4AgEcol website

The D4AgEcol website (www.d4agecol.eu) created on the 3rd of October 2023 and constantly updated, is the best tool for the communication of the project and its outcomes. The latest updates of the website include the separate section of "Digital Tool Scoping Workshops" as it has been discussed in the previous Section. The website is a platform for interaction with stakeholders ranging from scientists and farmers to policy-makers, industrial stakeholders and the general public. All public information generated in the project are easily findable and accessible. The special feature of the website is a box showing the most recent tweets with the corresponding links, a second box for the latest news and a third one for the upcoming events. The KPIs set for the website are shown in the following. Up to February 2024, the website has 500 visitors monthly which lies within the "good" performance indicator for the number of visits per month. Furthermore, the total number of the D4AgEcol website visits for a period of 11 months for which the metrics are counted is 5,600 which is in a good direction towards reaching the goal of 50,000 visits set by the corresponding KPI, if we take into consideration that during the first year the news about the project's outcomes were limited and these activities started on October 2023 mainly with the DTSW information. The increase in the website visits since October 2023 is approx. 200%, denoting that with the more detailed information about project's achievements the visibility of the website is rapidly increasing. As far as the downloads per public deliverable, this cannot be criticised yet since, the public deliverables have not been uploaded on D4AgEcol website.

KPI Visits per month: <500 = poor, **500-1000 = good;** >1000 + = excellent

KPI Number of visits to the D4AgEcol website: 50,000 visitors by the end of the project+1 year, 100 downloads per public deliverable

D4AgEcol social media

Social media content focuses on promoting the D4AgEcol project and increasing its presence across social platforms as well as spreading awareness of project uptakes, successes, and digital technologies. During Phases 1 and 2 (see section 2.1.2.1) of the project, the corresponding social media posts are focused on the project's targets, goals and people, the participation in events and conferences and in the achievements of the project. Additionally, during the D4AgEcol General Assembly 2023, it was discussed to present SMA activity through a dedicated campaign and how this campaign will be designed. Thus, the first part of the campaign includes dedicated information concenring the oganised DTSWs and the second axis of the campaign concerns asking questions and the opoinion of the project's followers.

D4AgEcol uses the following four different social media networks to target different stakeholder groups:

Table 8. Table of D4AgEcol social accounts metrics.

SOCIAL MEDIA CHANNEL	STATUS (up to 29 Feb 2024)	KPI Number of followers
Facebook	22 followers	1,000 followers in total by the end of the project + 1 year.
Twitter	131 followers	
LinkedIn	806 followers	
YouTube	12 subscribes/490 views	

The KPIs for the social media channels are generally excellent, especially the one of LinkedIn where more than 800 followers are following the D4AgEcol account. It seems that the Facebook platform does not offer the targeted engagement. Moreover, the D4AgEcol YouTube channel requires additional engagement but it is believed that with the release of more videos (10 are planned by the end of the project) more views and subscribes will be achieved. In any case, the engagement within the rest of the project's social media accounts seems to be extended thus, the D4AgEcol videos can be promoted efficiently through those accounts.

Videos

A teaser video has been created by CETRI on December 2023 informing about the objectives and goals of D4AgEcol. A second video has been also published in April 2023 presenting the Finnish living lab, Knehtila Farm. Other videos are not yet published since it is discussed among the partners the information that will be provided through these videos. The strategy that will be followed for the next videos is to publish information about the partner living labs, and short interviews from Consortium members as well as videos from the forthcoming DTSW. During the project, 10 videos will be produced in total. The videos will be uploaded on YouTube, on the D4AgEcol channel, and will be communicated and shared through the project's webpage and social media accounts. Concerning the following KPIs for the number of views, we are still on the poor side of the indicator with 490 views. This number is doubled to more than 1000 views if we consider the visibility of the corresponding posts, promoting the release of the videos. We believe that with the publication of more videos the targeted KPIs will be achieved.

KPI Number of Views: **< 8000 (across different social media platforms) = poor,** 8000-10000 = good, >10000 = excellent by the end of the project + 1 year.

Project workshops & extrovert events

As discussed in Section 2.1.2.2, 6 DTSW have been organised so far with an average participation of 20 attendees per workshop. This renders a total number of 120 participants in the D4AgEcol DTSW as compared with the number of at least 200 hundred attendees set by the following KPI. This number will be easily achieved with the realization of the remaining 6 DTSW and we have also to consider here the final D4AgEcol symposium.
KPI Number of attendees: < 200 = poor, 200-350 = good, >350 = excellent by the end of the project + 1 year

Project final symposium organization

The final symposium of the D4AgEcol project will be organized by ATB and will take place at Potsdam, targeting various stakeholders. It will be broadcast live through the D4AgEcol YouTube page and advertised on time by the project's social media.

KPI Number of attendees: 180 attendees, live broadcast to 1200 people

3.1 Conclusions

The quantitative analysis and the comparison with the KPIs reveals that D4AgEcol is in a good way towards reaching the goals set almost in all KPIs with highlights being the social media accounts followers and the participants in D4AgEcol DTSW and with the exception of Newsletter subscribers and the YouTube channel subscribes. Thus, the partners involved in the active dissemination and communication of the project's results as well as the entire D4AgEcol Consortium should continue the effort of promoting the project's achievements and boost them even more towards the last period of the project.

4 Exploitation plan, activities and IPR management

An initial exploitation plan that included the guidelines for exploitable results characterization, risk assessment of exploitable results, Intellectual property management and technical readiness level development have been reported in the 1st version of PDEC. Furthermore, a plan of D4AgEcol targeting activities, in order to enhance the successful exploitation of the project outcomes has been already demonstrated.

It should be noted here that D4AgEcol is a coordination and support action (CSA) and thus, the main results that are foreseen and could be exploitable are a summary of the applied digital technologies, in the form of e.g. a user-friendly digital platform as well as policy briefs and recommendations. In particular, the exploitable results are in the direction of terminology, such as the term Digital Tool Scoping Workshop which has been used in our project for the first time or in the form of gathering all digital innovations in agroecology together, such as the platform that has been developed by AUA. In all cases, publications that are targeted by the Consortium is a form of exploitation activities.

The suitable exploitation plan of D4AgEcol will be discussed through the Consortium of the project and its final update will be present in D5.6 at the end of the project.

5 Clustering activities and policy recommendations

An introduction to clustering activities has been presented in the 1st version of the PDEC. Clustering activities in D4AgEcol project are of vital importance and they are under the supervision of ATB (coordinator of the project). Furthermore, policy recommendation is also in the core of D4AgEcol and as such is treated in detail in WP 4 where the development of roadmaps on digitalization as enabler for agroecology at national and European level is thoroughly examined. Finally, the policy recommendation will be included in D.5.9 Policy brief at the end of the project.

Since the beginning of the project and as compared to the 1st version of the PDEC, D4AgEcol has been clustered with several projects either with direct discussions between the coordination teams or other partners or by the participation of the D4AgEcol coordinator in the Advisory Board of other project, e.g. the AGROSUS project. The following Table 9 summarises the clustering of D4AgEcol with other projects.

Table 9. Clustering activities and interactions with D4AgEcol.

Project	Interactions with D4AgEcol
AE4EU (H2020, CSA) Agroecology for sustainable agricultural and food systems	D4AgEcol will interact with AE4EU to use the best appropriate indicators for agroecology. Initial contacts and discussions have been already made. D4AgEcol participated in the final conference of AE4EU.
ALL-Ready (H2020, CSA) The European Agroecology Living Lab and Research Infrastructure Network	D4AgEcol will provide data of the living labs and infrastructures to ALL-Ready and will use available infrastructure and resources where appropriate. Initial contacts and discussions have been already made. D4AgEcol participated in the final con-ference of ALLReady.
Agroecology-TRANSECT: Trans-disciplinary approaches for systemic economic, ecological and climate change transitions	D4AgEcol will include the findings of the group in the assessment of selected digital tools and technologies on climate change mitigation, resilient agricultural production and enhanced biodiversity.
AGROSUS (Horizon Europe) Agroecological strategies for sustainable weed management in key European crops	The D4AgEcol coordinator is member of the Advisory Board of the project and he was present during the kick-off meeting.
GOOD (Horizon Europe) AGrOecOlogy for weeDs	A cooperation meeting has been already contacted and a synergies document between the projects has been written.
PATH2DEA (Horizon Europe) Paving the Way towards Digitalisation Enabling Agroecology for European Farming Systems	Initial discussions for potential cooperation of the two projects have been done.
QuantiFarm (Horizon Europe) Assessing the impact of digital technology solutions in agriculture real-life conditions	AUA is the coordinator of the project and LUKE participates also as Consortium member.
OPER8 (European Union Horizon 2021) European Thematic Network for unlocking the full potential of Operational Groups on alternative weed control	AUA is the coordinator of the project and a LOI has been already signed between the two projects.

5.1 Conclusions

The aim of this deliverable is to demonstrate the clustering activities conducted from up to M18. The potential participation of D4AgEcol into parallel cluster activities may improve the dissemination, exploitation and communication strategy. Furthermore, the networking activities through the clustering with similar projects is expected to strengthen the policy recommendations as well as the national and European roadmaps on digitalization as enabler of agroecology.

6 Raising awareness on Agroecology and Sustainable Farming

Throughout its progress, the D4AgEcol consortium develops constantly an integrated communication campaign with the aim to raise awareness and stimulate interest in the project, its outcomes and the benefits generated by implementing digitalization in agroecology. The campaign uses multiple channels to deliver clear and consistent key messages to a variety of audiences and stakeholders in a way that they can be understood by non-specialists, actively engaging with citizens, seeking their views and promoting a permanent dialogue. The tools and channels as well as the key and strategic messages have been presented in the previous sections. Additionally to conventional tools and channels such as social media accounts and projects' websites, D4AgEcol has developed the "Digital Tool Scoping Workshops" concept where participants are informed about the application of specific digital technologies in various agroecological fields, they actively participate and contribute with their opinion to identify the agroecology elements that the specific technologies cover. Through this interactive process the uptake of digital solutions may accelerated and improved. Furthermore, the platform which gathers all the digital solutions together is a powerful tool which will enable the involved stakeholders on getting informed concerning the digital technologies applied in agroecology and adopt the suitable solutions for them. These tools together with the policy roadmaps which are expected to be developed as the project progresses render D4AgEcol a unique platform where all stakeholders can be engaged in open discussions, share their viewpoints and concerns and provide the European circle of digitalisation and agroecology with concrete and creative solutions for the future. The campaign will be assessed using evaluation and measurement techniques including repeat of any pre-campaign research to review opinions and attitudes, as well as media analysis to examine the coverage received.

7 Organization of a final symposium event possibly integrated in an international conference

Task 5.6 has not been implemented yet. It is foreseen to be implemented at the end of the project.