ECHO

ENGAGING CITIZENS IN SOIL SCIENCE:
THE ROAD TO HEALTHIER SOILS

D3.1

Report on identified communities of stakeholders and engagement activities

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Short description of the deliverable

The present deliverable summarizes part of the work of Task 3.1, Mapping and engaging target citizen groups. The deliverable presents the co-creative processes through which ECHO beneficiaries identified and documented stakeholder communities relevant and suitable for ECHO engagement processes. The deliverable concludes with the analysis of the data gathered during the stakeholder mapping exercise and specific engagement strategies and guidelines derived from it.

Versioning and contribution history

Version	Date	Modified by	Notes
0.1	19/01/2024	Elisavet Papadopoulou (AFS)	Draft version
0.2	31/01/2024	Tanja Mimmo (Unibz) and Alba Peiro (Ibercivis)	Reviewed version 1
0.3	12/02/2024	Tanja Mimmo (Unibz), Alba Peiro (Ibercivis) and Roy Neilson (Hutton)	Reviewed version 2
0.4	15/02/2024	Elisavet Papadopoulou (AFS)	Final version

Foreword

Soil is a vital, yet often disregarded, resource that supports life on Earth by providing the foundation for agriculture, forests, and various other natural ecosystems. However, soil degradation is a global problem mediated through anthropogenic activities, resulting in concerns around food security, increased greenhouse gas emissions, and decreased biodiversity. ECHO aims to highlight the societal importance of soil by bringing together citizens and volunteer scientists from around Europe to work towards a common goal of protecting and preserving our soils, thus contributing to the transition towards healthy soils a goal of the EU Mission: “A Soil Deal for Europe”.

ECHO will generate new data on the health status of EU soils, complementing existing soil mapping and monitoring in EU Member States and Scotland, including the EU Soil Observatory (EUSO). The project will develop and deploy 28 tailor-made citizen science initiatives across EU Member States and Scotland, taking into account different land-uses, soil types, and biogeographical regions, as well as stakeholder needs. With 16 participants from all over Europe, including 10 leading universities and research centres, 4 SMEs, and 2 Foundations, under the coordination of the Free University of Bolzano-Bozen, ECHO will assess 16,500 sites in different climate and biogeographic regions to achieve its ambitious goals.

The project aims to engage citizens in protecting and restoring soils by building their capacities and enhancing their knowledge. Citizens will thereby not only actively contribute to the project’s data collection but also promote soil stewardship and foster behavioural change across the EU. ECHOREPO, a long-term open access repository with a direct link to the EUSO, will make citizen science data generated through ECHO available for exploitation not only by scientists but also by citizens, policy makers, farmers, landowners and other end-users, providing added value to existing data and other relevant soil monitoring initiatives. ECHOREPO will thus provide valuable information about the state of soil health in various regions, and help citizens make informed decisions about land use and conservation.

We believe that ECHO will have a significant impact on soil health and citizen engagement across Europe and become an important step towards protecting and preserving our soil for future generations. By working together, we can ensure that our soil remains healthy and productive, and that we continue to enjoy the many benefits it provides.

Executive summary

The ECHO consortium conducted a co-creative, stakeholder community (i.e., target group) mapping for the purpose of creating a compelling engagement strategy to aid the engagement process foreseen in Task 3.2 “Development of citizen science initiatives on soil health”. During the present activity 262 stakeholders were identified across 28 countries in the European continent. The resultant matrix identified diverse stakeholders, projects and organizations, associated with but not exclusive to environmental and soil health themes. While the engagement process was beneficial, several potential challenges were identified, and measures were proposed for their mitigation.

The target groups that were deemed most important for ECHO were well represented. Stakeholder representation included academia, local communities, farmers, students, civil society, including families and senior citizens, NGOs, especially those focused on the environment and the scientific community, industries, policy makers, and educational institutions (especially high schools). The identified stakeholders were diverse with regard to age, language, knowledge and experience. This initial mapping, even though it was thorough, diverse and inclusive, indicated the need for an ongoing mapping process that will expand further to include ongoing consortium networking. It also demonstrated the importance of a well-integrated engagement strategy that will encompass elements from all ECHO work packages. The focus on inclusivity, ongoing evaluation, and strategic collaboration demonstrates a commitment to meaningful contributions in soil-related citizen science initiatives.

Contents

1. Introduction

1.1. Background and context

The mapping of potential stakeholders is considered a significant part of Citizen Science (CS) methodology and development of initiatives. According to Skarlatidou *et al*. (2019), stakeholder mapping can be diverse, but it may take different approaches depending on the project's characteristics and timescales. A better understanding of stakeholder engagement may contribute to a more effective stakeholder communication, more successful implementation, and greater impact of CS initiatives (Skarlatidou *et al*., 2019). The first stage of stakeholder mapping was completed by ECHO under Task 1.1, which compiled a state-of-the-art list of recent and contemporary CS projects and produced a preliminary table of CS initiatives for monitoring soil health (D1.1, Ibercivis Foundation, 2023). Following identification of these projects, the present deliverable involves the identification and mapping of stakeholders that may be later engaged to facilitate the delivery of ECHO. These stakeholders are either part of identified existing projects or are otherwise connected to ECHO beneficiaries, and thus are included in the pool of prospective participating actors in initiatives that will be developed in the future stages of ECHO.

Within the stakeholder mapping, stakeholders are not necessarily connected to Soil Health Objectives but operate within communities that ECHO is interested in reaching with its central messages for Environmental and Soil Health awareness. Notwithstanding target groups with an immediate interest in soil health such as farmers, land managers, environmental groups and NGOs, foresters, and food associations, we also included members of school communities, environmental groups, other CS initiatives, youth and women's groups.

With the central goal of improving soil literacy and promoting CS methodology, ECHO is outlining strategies for effective stakeholder engagement. They include, among others, the development of a Citizen Science platform including a toolbox and mobile app (WP2) to be available via the ECHO website with multi-lingual training materials, effective communication and dissemination tools and materials, as well as provisions for the development of a reward system. This system is designed to foster long-term stakeholder commitment, progressing a journey from Soil Health Volunteer to Soil Steward and ultimately to Soil Ambassador (Task 2.2). Through the specific engagement strategies, we aim to encourage collaboration between CS projects and stakeholders from diverse sectors, including academia, industry, government, and non-profit organizations to create streamlined initiatives. To achieve this, it is important to identify and address the needs and expectations of key stakeholders to ensure that CS projects align with their priorities and contribute to shared goals.

1.2. Objectives of the stakeholder community mapping and engagement deliverable

- Identify stakeholders operating in the sphere of influence of ECHO and the most suitable stakeholders to engage
- Describe the profiles of the stakeholders identified
- Identify gaps in representation and the inclusivity principle
- Identify the needs and characteristics of stakeholders that are likely to affect their engagement
- Identify possible challenges and barriers in stakeholder engagement
- Enhance the existing ECHO stakeholder engagement strategy with further recommendations

2. Methods

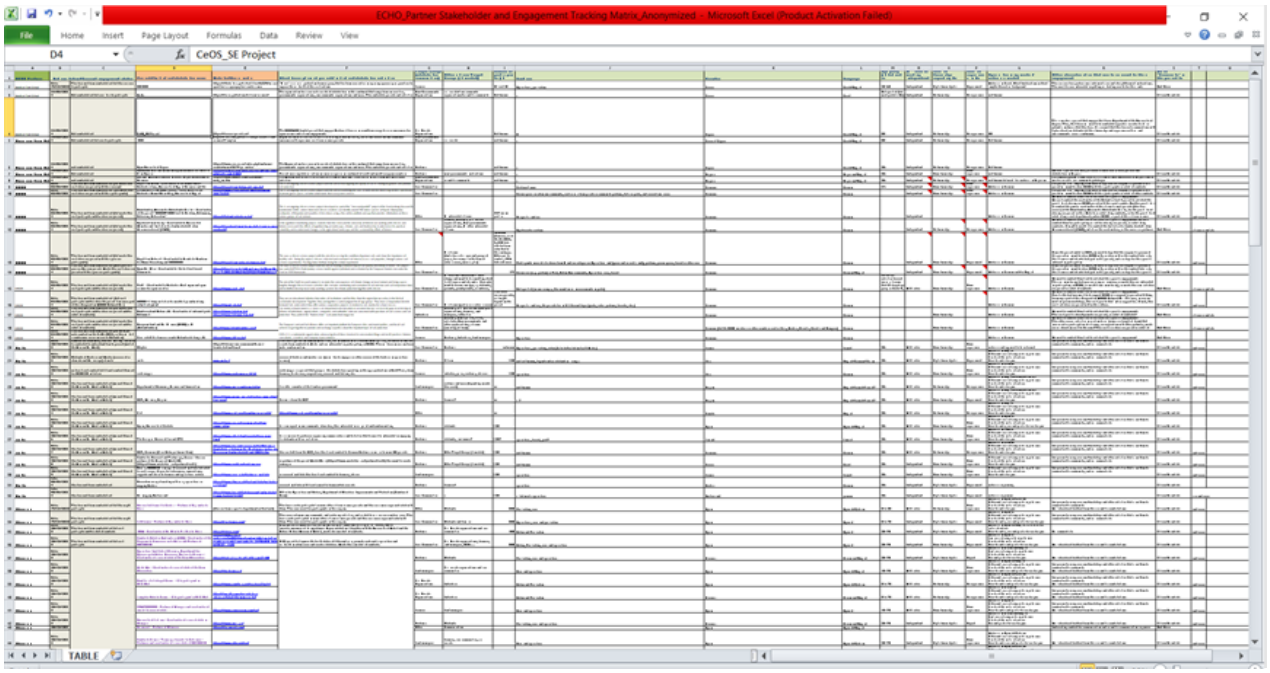
2.1. Approach and methods used to identify and map stakeholders

During the first co-creation workshop at the kick-off meeting, ECHO beneficiaries were asked to map different stakeholders within diverse groups and categories. A detailed overview of the workshop activities is available in ANNEX 1. The workshop included three activities:

1) Using their expert knowledge, beneficiaries were asked to highlight specific CS engagement, data gathering, and communication methodologies that they found interesting. The experts considered questions like “What do you find inspiring in their methodology (if apparent)?”, “What is their participant pool?”, “What would you improve on their website and communication material?” and “What captured your attention in how they present their work?”
2) In the same groups, experts were asked to locate 2 CS groups that related to the ECHO target groups and considered the following questions: “How can they support our project / What are we asking from them?”, “Do you think there should be some selection criteria?”, “What benefit can our project offer them / How can we motivate them to collaborate?” and “Who could approach them and how?”
3) The third activity included the methodology of PERSONAS. Following an example of a provided PERSONA, beneficiaries were asked to co-establish a hypothetical person in the community with whom they might get in contact and to consider characteristics that might be important for their engagement. Beneficiaries were encouraged to think of all the communities they may be in contact with in their personal and professional lives, raising awareness of their roles and the fact that each person may be a “gatekeeper” to several networks. (ANNEX 1)

A co-creative stakeholder mapping (Months 5-8), using a bespoke “Stakeholder Mapping and Engagement Matrix” followed this initial workshop (Table 1, Papadopoulou, 2024). The matrix was designed both as a mapping tool and as collective document to be revisited and revised continually to support and track the engagement progress. The reviewing of the stakeholder mapping matrix will be a regular agenda point at the Steering committee meetings of ECHO.

Table 1. The “Stakeholder Mapping and Engagement Matrix”



The categories chosen for mapping provide information about both the stakeholders and the communities that they represent (Table 2). Specifically, the information provided can be conceptualised in 2 levels. The 1st level includes information that is relevant only to the beneficiary who will be responsible for engaging the stakeholder. Due to potential ethical considerations (see D7.3) that may arise from the information collected in the “stakeholder information” category, the sections “name of contact person” and “email” have been omitted from open access versions of the matrix.

The 2nd level includes a stakeholder description. That is, a short general description of the fields of interest, objectives and activities of the stakeholder. As part of the 2nd level, we also identified the community to which the identified stakeholders belong, referred to as the "target group." This involved estimating the number of participants within their network (community), the associated land use, the country of operation, and the language spoken. Moreover, where possible, beneficiaries were asked to specify the age group of their potential network, their level of knowledge regarding Soil Health, their level of experience in soil testing, whether they were considered as having special training needs and other characteristics that

may affect their engagement with ECHO. Finally, beneficiaries were asked to consider whether the stakeholder represented potential citizen scientists who could potentially collaborate in soil sampling, end users of ECHO soil health data or both. The information gathered in this 2nd level is important for the development of the CS toolbox (Task 2.2), the methods of training that may be required and the potential data that may be gathered.

Table 2. Structure of the "Stakeholder Mapping and Engagement" Matrix

1st level	2nd level	Response type
Beneficiary (Beneficiary responsible for the stakeholder)		Free response
Engagement Status	Date	Free response and pending updates
	Actions taken	
Stakeholder information	Project/Initiative/stakeholder name	Free response
	Website/social media	
	Name of contact person	
	Email	
Communication (Who will be in contact with them)	Name of the person who is in contact with them within the partner organization	Free response and pending updates
Stakeholder Description	Short general description	Free response
	Target group (stakeholder community)	
	Number of participants (if known)	
	Land use	
	Country	
	Language	
	Age group (if applicable)	
	Will they be working independently or guided	Fixed response
	Level of Knowledge regarding Soil Health	Fixed Response
	Level of experience in Soil Testing	Fixed Response

	Special training needs / materials needed	
	Other characteristics that may be relevant to their engagement	Free response
	Which "Community" will the project be helpful to?	

ECHO beneficiaries were asked, where possible, to complete the matrix sections. As active stakeholder engagement will start in month 9, beneficiaries have not been in contact with stakeholders yet. The sections “Target group”, “Will they be working independently or guided”, “Level of Knowledge regarding Soil Health” and “Level of experience in Soil Testing” (Table 1) had fixed answers. This was believed to ease the completion process. The rest were free-response type and were later coded and categorized for analysis purposes.

2.2. Data sources and criteria for inclusion

During regular beneficiary meetings, beneficiaries were introduced to the matrix and provided with guidelines for use.

During the mapping process, attention was given to include all potential stakeholders and communities, regardless of whether they were already contacted, previously known or willing to participate. This provided a pool of potential stakeholders to be engaged during the next phase of the project (Task 3.2 Development of CS initiatives on soil health). The matrix constructed for T1.1 (State of the art on Citizen Science initiatives for monitoring soil health) of ECHO (Ibercivis Foundation, 2023) already included both the R&I projects from the Mission ‘A Soil Deal for Europe’ (European Commission, 2021) and a comprehensive repository of other projects that have involved citizens in soil health monitoring. Consequently, these communities were not mapped in the matrix of the current deliverable to avoid duplication.

2.3. Stakeholder communities

- Stakeholder communities for engagement in ECHO and its CS initiatives included representative individuals, groups and organizations from the whole quintuple helix (Carayannis *et al*., 2012). While the mapping exercise included the following ECHO target groups:
- Farmers
- Land Managers
- Educational communities
- Civil society groups and local communities

- Scientific communities/Academic institutions
- Non-Governmental Organizations (NGOs) and their networking communities and
- Local communities

It is important to note that the list is not comprehensive. Beneficiaries were free to also include wider communities that they might consider important such as local, regional, or national government agencies, funding bodies, and technology providers.

3. Matrix analysis and discussion

A total of 262 stakeholders were identified during the co-creation process (Papadopoulou 2024).

3.1. Stakeholder profiles

Identified stakeholders reflected a diverse and interconnected landscape of initiatives and organizations. Those present in the matrix represented different communities of citizen groups concerned with distinct environmental challenges, able to reach varying degrees of involvement, or to show differing degrees of familiarity with technology. Most stakeholders have a strong focus on CS, often using technology such as smart sensors or online platforms for data collection. A significant number of mapped target groups focus on environmental and soil health, including agro-ecological practices, biodiversity monitoring, soil quality assessment, and sustainable agriculture. Specific focus areas included soil health, agroecology, biodiversity, climate change and its impact on local ecosystems. Several groups included educational components, collaborating with schools, universities, and educational initiatives to promote scientific literacy and environmental awareness. Some groups aim to influence policies related to environmental conservation and soil protection, indicating a broader societal impact.

3.2. Geographic scope

The Stakeholder mapping distribution covered all 28 European countries (Member States plus Scotland) within the scope of ECHO (Fig. 1). Overall, the distribution of stakeholders reflects a rich and diverse landscape of citizen science initiatives across Europe, each with its own focus on various environmental themes. The notable concentration in Germany, Spain and Southern Europe guarantees a robust engagement in these regions, while opportunities for collaboration and expansion exist across the continent.

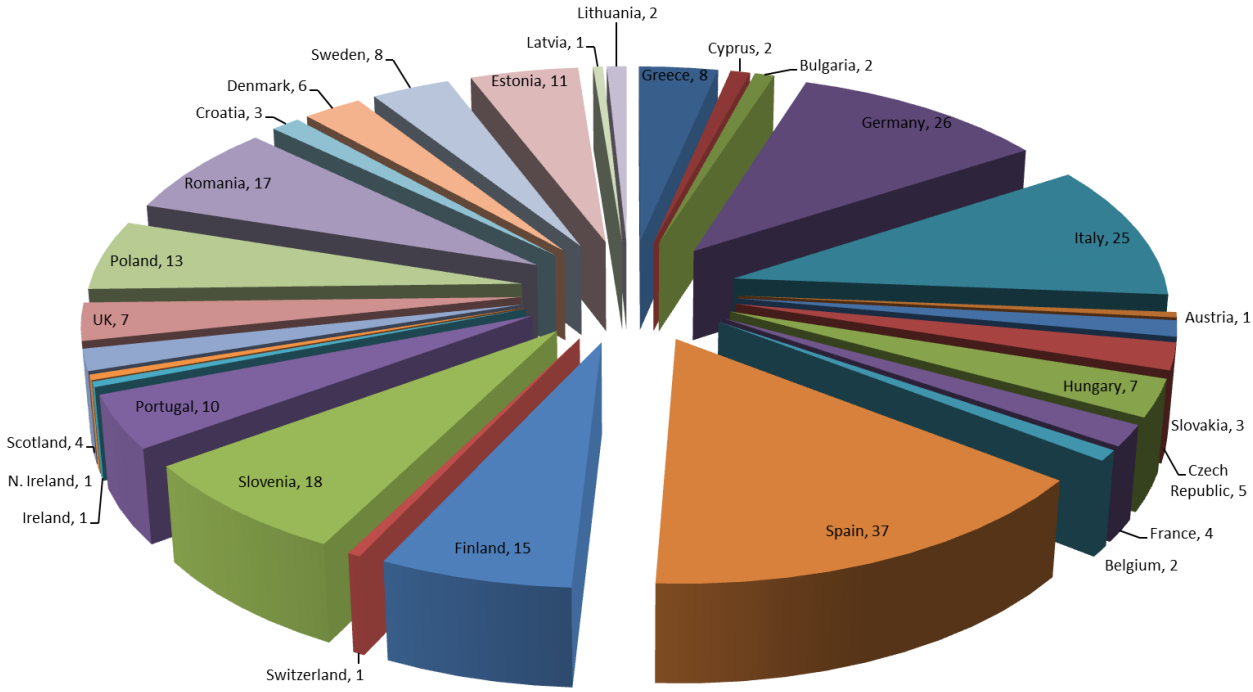


Figure 1. Geographic scope of the stakeholder mapping exercise. Numbers represent the number of stakeholders in each country.

3.3. Target groups

The target groups outlined in the matrix (Papadopoulou, 2024) are characterized as stakeholder communities. Academia, students, local communities, farmers and civil society were the dominant target groups identified in the matrix (Fig. 2). NGOs, especially those focused on the environment and the scientific community, are also well-represented. Families, senior citizens, industries, policy makers, and educational institutions (especially high schools) are also represented.

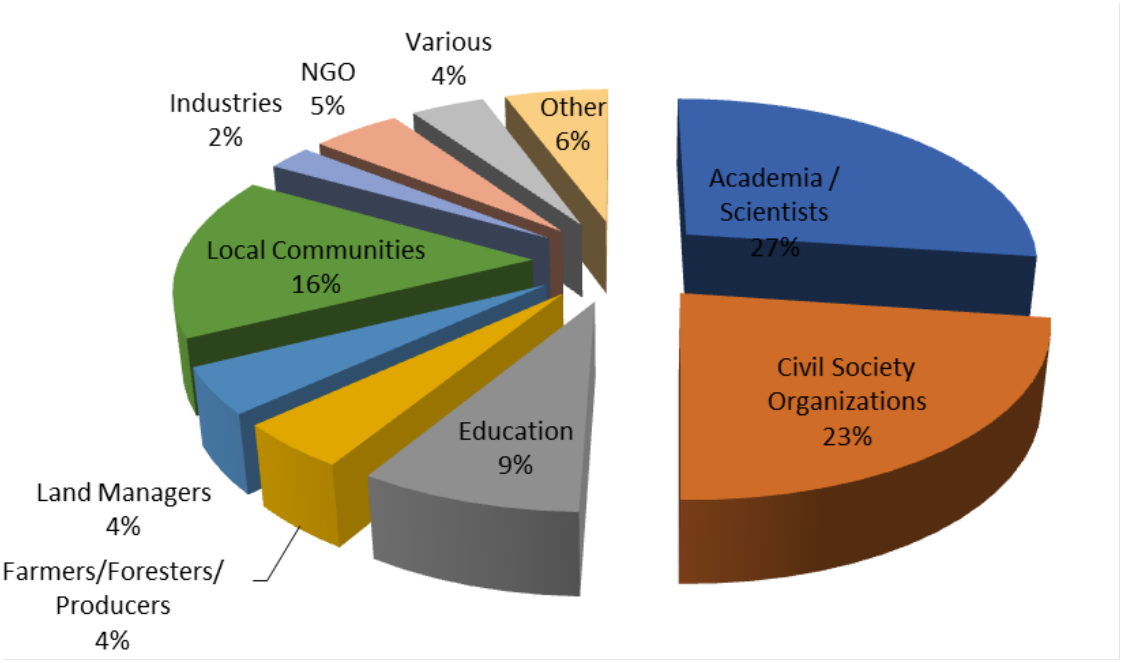


Figure 2. Representation of target groups. Percentages represent the proportion of specific groups in relation to the total number of citizen target groups provided.

3.4. Age groups

Overall, the representation encompasses a broad spectrum of age groups (Fig. 3). Age ranges of the target groups identified in the matrix are diverse and have been classified into three main age categories: individuals younger than 18 years old account for 8% of the total identified, those older than 18 years old comprise 60%, and those considered to comprise all age groups represented 23% of the total (Fig. 3). The remaining 9% could not be categorised into any age grouping due to uncertainties about the specific demographic that will ultimately be engaged from these stakeholder groups. In many instances, the age group of the citizens to be engaged was vaguely specified or unknown. For this reason, this aspect has not been analysed in depth at this stage.

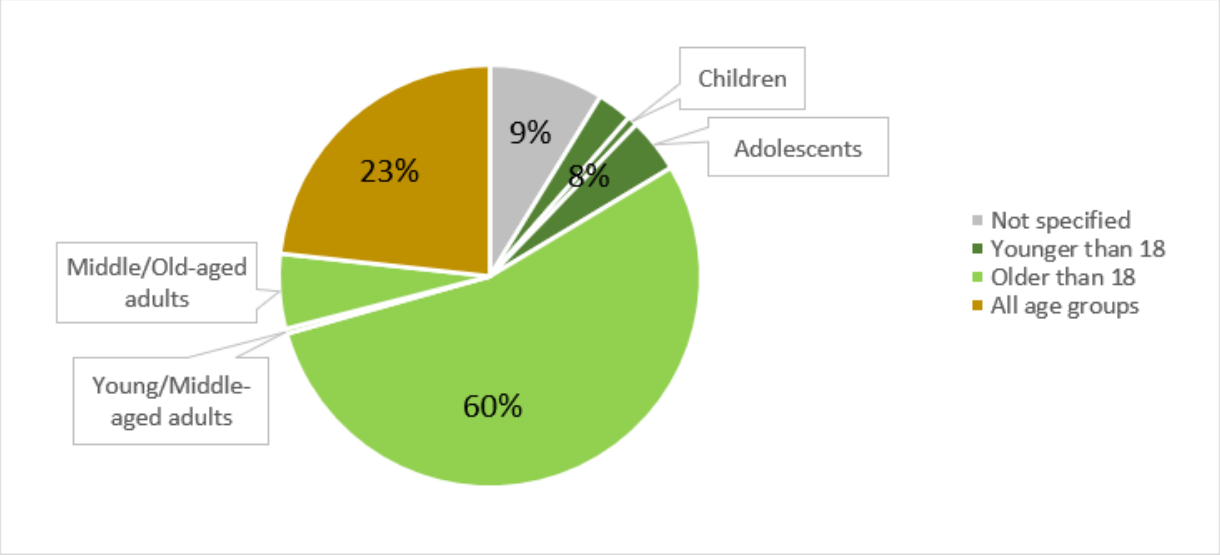


Figure 3. Graphical representation of the classification of the age groups.

3.5. Other stakeholder information that may be relevant to engagement

Regarding whether individuals from the target groups would work independently or would need a leader when engaged in the CS activities, approximately 64% are believed to be able to work independently and 36% are believed to need guidance.

In the category “Knowledge regarding Soil Health” and “Experience in Soil Testing”, a majority (229 out of 262 responses) of stakeholder communities were thought to have some knowledge on Soil Health. Similarly, most stakeholder communities were thought to have some experience with Soil Testing (121 responses), while a few had no experience (40 responses) or were expert (21 responses). A total of 62 responses was recorded under “Experienced” and “expert” Soil testers.

Regarding special training needs that stakeholder groups may need, the vast majority reported that supporting material in their local languages would be required. This is something that was foreseen in the project and is believed to increase the impact of ECHO activities.

Additionally, other highlighted stakeholder information was the need for user-friendly toolkits that simplify the sampling process, especially when knowledge about soil health and experience in soil testing was limited, and to minimize the user time, preventing fatigue. Moreover, providing well-structured feedback on stakeholder contributions to ECHO was also mentioned as key for maintaining engagement throughout the project's duration. This insight is fully in line with the recommendations already outlined in Task 1.1 and D1.1.

4. Matrix limitations and considerations

As the Matrix constitutes a continuous living and co-creative document, some of the current analyses are arguably preliminary. The stakeholder mapping will evolve, and the data will become richer with engagement.

A technical limitation of the matrix is that when it was first designed some fixed answers may have been limiting to the user resulting in participants bypassing the fixed answer function and instead included free answers. These answers were categorized and grouped together, in some cases resulting in new categories that were not considered in the original matrix.

5. Barriers and challenges to be considered in the engagement strategy

One of the main principles of ECHO is to improve soil literacy among European citizens, inspiring them to protect and restore this vital natural resource. The significant proportion of matrix responses indicated a limited understanding of Soil Health issues and experience in sampling among the stakeholders mapped. This underscores a challenge that ECHO has already anticipated and confirms the necessity of our work and assures that the project will make a meaningful impact in this area. The complexity that is associated with Soil Health and Soil Science concepts that could hinder the already-mentioned challenge are already being addressed in WP2. In this current phase, we are committed to ensure that the CS platform and training materials are both organized at the correct levels of knowledge and tailored to meet diverse needs.

The signs of long-term fatigue observed among participants in similar projects documented in T1.1 can also be considered as a future challenge in the ECHO engagement strategy. Participants may disengage if they perceive a lack of impact from their contributions, so the project will implement a strategy of providing well-structured feedback to all stakeholders. The feedback will emphasize not only the scientific value of their data but also the benefits to their own community well-being. These strategies are characteristic of Extreme Citizen Science approaches as adopted by ECHO, designed to involve citizens in different phases of the project, extending beyond mere data collection. This will include roles in coordination and assessment of processes, which are expected to foster a greater sense of ownership and empowerment among participants.

The stakeholder needs of materials translated into several languages, as mirrored in the responses of the matrix, cannot be considered as a barrier to ECHO, as the project already foresees to provide information in the 24 official European languages to reach all countries through their own language. This will guarantee generating better stakeholder engagement and increased general impact.

Engaging with diverse communities and stakeholders also presents an opportunity to embrace and understand cultural nuances. Successfully connecting with these groups necessitates an appreciation of local dynamics and the fostering of meaningful relationships. This underscores the value of forming trusted partnerships with community leaders, organizations, and key local figures who can inspire and streamline participation.

The main challenge highlighted by the present analysis is engaging participants who have limited access to technology, such as smartphones or computers, which complicates their access to the online platform. This issue is particularly relevant for middle-aged to older adults, a crucial demographic for ECHO. Although the project does not supply technological devices to stakeholders, it is exploring the possibility of structuring future co-creative workshops to include sections that facilitate the exchange of technological know-how related to use of the CS platform. This approach would enable participants to collaboratively upload their findings by sharing technological resources. By developing engagement strategies that are sensitive to the different technological levels across different age groups, and that consider generational perspectives on technology and environmental concerns, we aim to ensure inclusive participation in ECHO.

ECHO is already actively addressing these challenges through a combination of effective communication, community involvement, and strategic project design. By tailoring engagement strategies to meet the unique needs and characteristics of the target groups, ECHO is on the way to achieving positive outcomes.

6. Engagement strategy & recommendations

Building on the work done in reporting the State-of-the-art Citizen science projects (Task 1.1, WP1, D1.1), the Dissemination and Communication Strategy outlined in WP6 and related deliverable (D6.1 - Communication, Dissemination and Exploitation Plan), as well as the present Stakeholder Mapping activity, our engagement strategy is designed to reach diverse target groups and broad audiences. ECHO foresees to organize 28 co-creative workshops coupled to the 28 citizen science initiatives (T3.2 and T3.3), extensive communication and dissemination methods and materials, a CS toolbox, an online platform and multi-lingual educational resources. ECHO will utilize a “crowd harnessing” strategy towards mapped stakeholders. Thus, ECHO will seek visibility with diverse groups of potential participants. Visibility actions will also take place through different approaches, ensuring that a diverse range of citizens are represented in advertising materials, appealing to a breadth of motivations for participation. A clear identity and message have been created for the project (D6.1, D6.2 - Project communication and visibility toolbox), ensuring that potential participants have a clear view of the scope and objectives of ECHO.

6.1. ECHO strategy for stakeholder engagement and Citizen Science initiative design

ECHO has foreseen strategies for effective and long-term engagement and commitment through the development of a thorough training program and CS toolbox, co-creative workshops and reward schemes such as the “Soil Ambassador” ordinance, for exceptional examples of citizen scientists. ECHO will leverage the activities and outputs of a sister Mission Soil Project HuMUS ((https://humus-project.eu/) which is developing a Soil Steward course being the ECHO coordinator also partner of this project. The HuMUS project’s Soil Steward course will be incorporated into the ECHO app to promote soil stewardship across Europe. Users will have access to a forum tool for discussions during the course, utilizing the toolbox for questions and comments. In WP3, a thematic initiative leader will address citizen-derived questions. A reward-based system within the training module is foreseen, where volunteers progress through awards as they enhance their toolbox and training module knowledge. Upon completing the entire course, volunteers earn the title of Soil Health Volunteer, followed by the Steward award after external evaluation. Active participation in campaigns and forums can lead to achieving the highest qualification of Soil Ambassador. ECHO will thereby further increase soil literacy at the local level and enhance the knowledge of soil-related activists as outlined in the Mission Soil.

The following general recommendations have been derived from the current stakeholder engagement strategy and are intended to assist ECHO beneficiaries in the subsequent stages of the stakeholder engagement process.

1) **Address project partner needs**
    a) Engage in continuous communication with ECHO beneficiaries to identify and address any needs that emerge during the Stakeholder Engagement and Stakeholder Recruitment process.
    b) Co-create individual Engagement and Recruitment Plans with each responsible beneficiary.
    c) Create an early warning system and a safety plan for possible issues that may arise during the Engagement and Recruitment process.
    d) Create effective communication channels between WP3 and other WPs, especially those related to training and Data Collection (WP2 and WP4, respectively)

2) **Records for stakeholder engagement**
    a) Develop a template for homogenized record keeping regarding stakeholder engagement across the CS initiatives.

3) **Utilize varied engagement methods**
    a) Leverage educational resources such as websites, videos, and guides to provide a variety of engagement options.

4) **Enhance cross-regional collaboration**
   a) Actively seek collaboration opportunities across the continent (and beyond) to leverage diverse expertise and perspectives.
   b) Use the stakeholder mapping data to identify potential collaborators in specific regions and build partnerships accordingly.

5) **Promote inclusivity**
   a) Ensure that the engagement process includes stakeholders from diverse backgrounds as well as stakeholders that may come from less privileged and/or minority backgrounds.
   b) Ensure that the gender dimension is considered in the engagement process
   c) Provide in-person training if and when needed.

6) **Regularly assess and refine the engagement strategy**
   a) Continuously assess the engagement strategy.
   b) Be open to refining the strategy based on stakeholder feedback and evolving project dynamics for continuous improvement.
   c) Actively engage stakeholders in the evaluation and refinement process to promote a sense of ownership and empowerment and to ensure a bottom-up approach to the assessment criteria.
   d) Engage in ECHO communication channels to address and resolve any difficulties in specific engagement processes.

7) **Encourage long-term participation**
   a) Implement strategies to mitigate long-term fatigue among participants, such as providing well-structured feedback.
   b) Utilize foreseen strategies such as establishing “thematic initiative leaders” who will address citizen driven questions and will support in the sense of engagement and long-term commitment.

6.2. Strategies for collaboration between existing EU funded projects and ECHO CS initiatives.

Strategies for collaboration between ECHO stakeholders, CS initiatives and other EU funded projects are considered crucial for success. Such strategic engagements have already started with ECHO’s participation in the **Mission Soil Week** in November 2023. Significant opportunities have already emerged with projects such as **PrepSoil_Preparing the European Mission for Healthy Soils, HuMUS_Healthy Municipal Soils, Loess_Literacy boost through an**

Operational Educational Ecosystem of Societal actors on Soil health and **SOLO_Soils for Europe.**

ECHO has also sought to identify and engage end-user communities through other EU projects such as **Nati00ns** and the above-mentioned project **PrepSoil,** who map such end-user communities.

Collaborative actions and other communication and dissemination activities may significantly enhance the scope of ECHO, while adding to the knowledge and experience exchange between stakeholders, organizations and EU projects.

To establish such strategic collaborations ECHO will seek to:

- Identify common goals, interests and objectives with other relevant projects and citizen science initiatives
- Collaboratively evaluate the outcomes and impact of ECHO and other projects
- Establish and utilize common communication and dissemination channels
- Share results and findings with both the scientific community and the broader public through commonly accessible channels

7. Conclusion

The stakeholder community mapping conducted by the ECHO consortium reveals a comprehensive understanding of the diverse and interconnected landscape of different target groups across Europe. With 262 stakeholders identified in 28 countries, the matrix provides essential information for the initial mapping process.

Geographically, the mapping includes target groups from across all EU Member states and Scotland, however, further mapping is required for countries that have comparatively fewer target groups mapped. Target stakeholder communities such as academia, students, local communities, farmers, and civil society are well-represented. The matrix also highlights a broad spectrum of age groups.

ECHO has anticipated most of the identified potential barriers and challenges associated with its engagement strategy. A notable example includes addressing the need for materials translated into multiple languages. Given the limited soil awareness among stakeholders, the current environment has significant opportunity for enhancing soil literacy. Future workshops and training sessions will be thoughtfully designed with consideration for the specific requirements regarding technology access, ensuring inclusivity and accessibility for all participants. Throughout this strategy, ECHO is also committed to upholding confidentiality and respecting privacy rights, ensured through the ethical implementation and monitoring of its activities.

ECHO has a robust engagement strategy that ensures all challenges are tackled from the project's inception. It deploys tailored communication, diverse engagement methods, and

collaboration with a broad spectrum of stakeholders, thereby guaranteeing effective resolution of any potential obstacles. Strategies for collaboration with other EU projects are also considered crucial for success. ECHO recognizes the need for continuous evaluation and refinement of the engagement strategy to ensure inclusivity and effectiveness.

8. References

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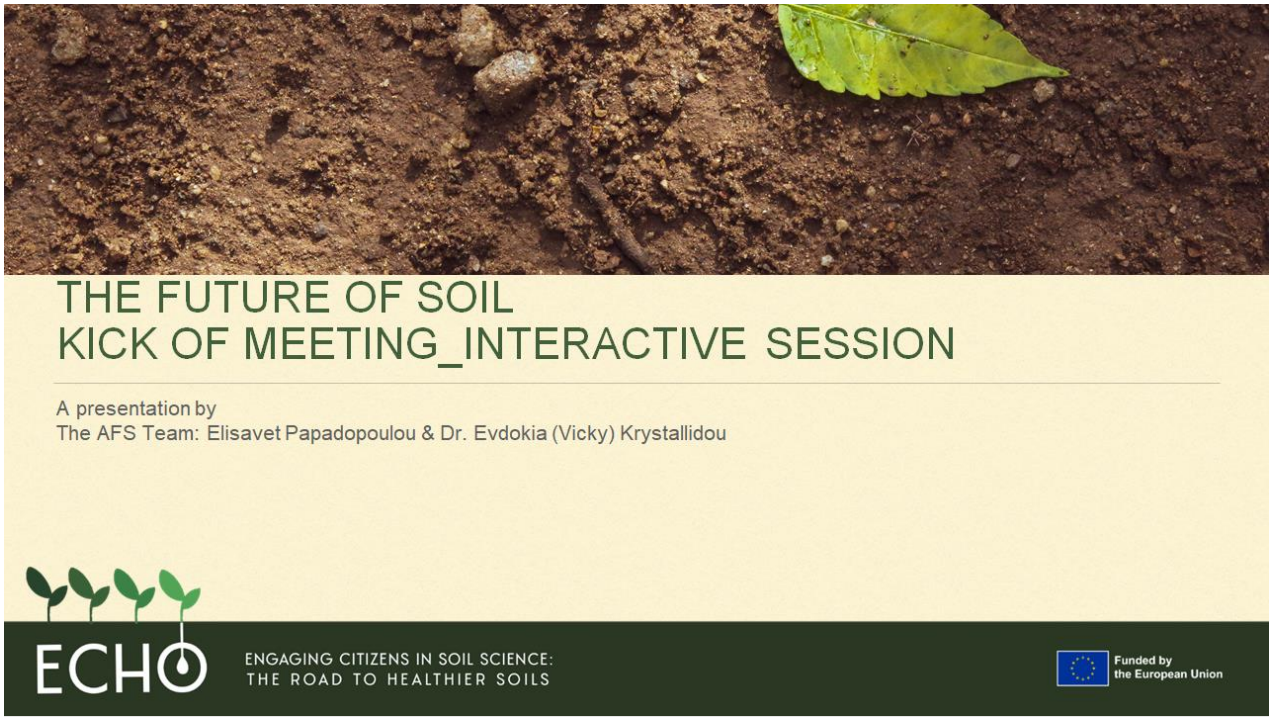
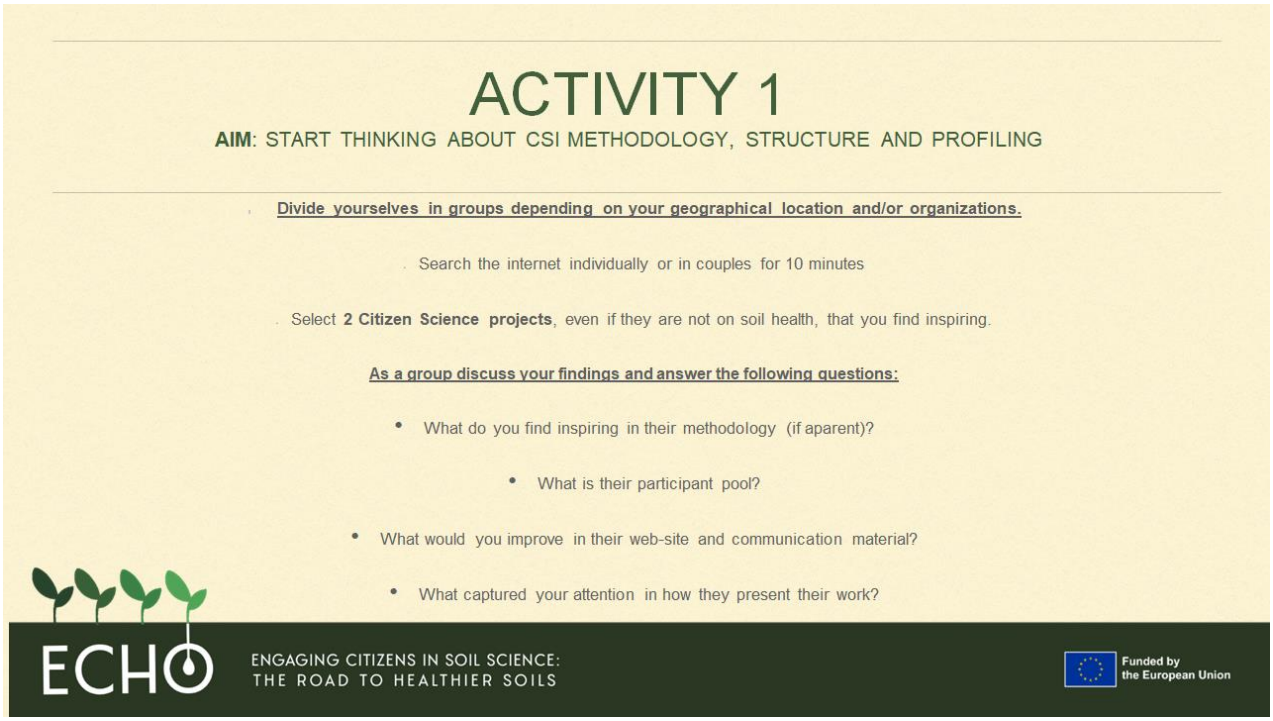
Annex 1

Presentation for the kick-of-meeting of ECHO, including instructions for the interactive session where beneficiaries started a preliminary stakeholder mapping and tackled some initial engagement issues:





ACTIVITY 2

AIM: START THINKING ABOUT SPECIFIC OUTREACH STRATEGIES

As a group locate 2 CSI related organizations and 2 projects that you could approach for collaboration and participant engagement.

Answer the following questions:

- How can they support our project / What are we asking from them?
- Do you think there should be some selection criteria?
- What benefit can our project offer them / How can we motivate them to collaborate?
- Who could approach them and how?

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ENGAGING CITIZENS IN SOIL SCIENCE:
THE ROAD TO HEALTHIER SOILS

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PERSONAS

Each group has to develop at least 1 persona to work with

Establish the profile of a hypothetical person that you might get in contact with. This person could be anyone in the community and we need to establish some of their characteristics in order to create an opportunity for them and for the ECHO Project

REMEMBER!
You are all gatekeepers of communities and you want to approach other gatekeepers for creating new communities (CSIs)

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Example of a PERSONA…

TONY

Tony is 35 and works as a 9th grade teacher. His school is located in a semi-urban area and has a big yard with a few trees. The school schedule is very tight but he would love to do more environmental projects with his students since environmental protection is very high in his priorities. He and his partner love to explore trails in the near by hills and they both enjoy to look after their health and food quality. He enjoys to meet new people and since the pandemic he feels that he has missed out on his social life.

1. What are the communities he can bring you in touch with?
2. What does the person need in order to participate? What are his values, inspirations etc.?
3. What are his limitations and challenges? What would discourages him from participating?
4. What activities can he participate in? How could he relate to the project?
5. How can the project accommodate him and motivate him?

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Photographs from the interactive session during the ECHO kick-off meeting in June 2023_Co-creative stakeholder-mapping exercise: