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D5.1 - Network hub and repository of relevant stakeholders for engagement, outreach and impact

Closing the gap between fork and farm for circular nutrient flows



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1 Executive Summary

The P2Green network hub is a list of relevant stakeholders and networks for cooperation and engagement to upscale impact and outreach of the project, it is currently hosted as a continuously updated .xlsx file, developed by all P2Green partners. The main goals of the network hub include: the identification of key stakeholders involved in nutrient capture and closing nutrient loops across the EU and including them in a repository, to develop and make available a range of tools that drive stakeholder engagement to instigate and facilitate cooperation with key networks and stakeholders and to develop and implement a long-term sustainable plan that ensures the continued operation of the network hub after the completion of the project.

This report provides: an overview of the network hub, explains its function, the methodology and approach used to develop it, the results and analysis to date, a description of the tools for engagement, outreach and impact, its integration into the P2Green innovation platform, and the long-term sustainability plan of the network hub.

Currently, the network hub includes 456 key stakeholders, with detailed publicly available information for each stakeholder, of which around half (218) have engaged with the P2Green project across all pilot and follower regions. Overall, the type of stakeholders (Figure 1.) and their thematic focus (Figure 2.) shows considerable variation in line with the variation within the work programme and between and within pilot and follower regions.

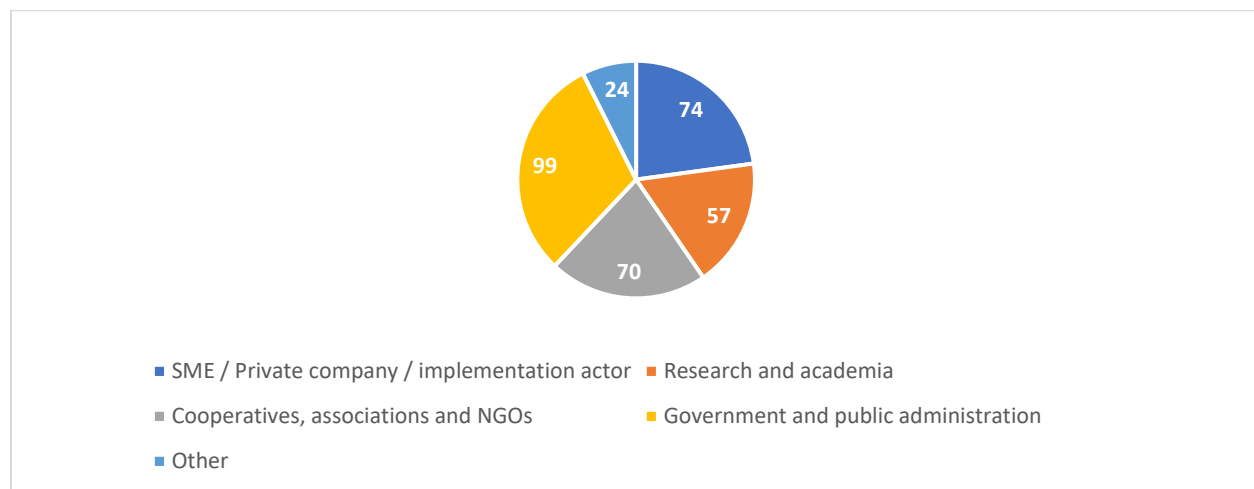


Figure 1. Stakeholders identified in pilot and follower regions according to stakeholder type



Figure 2. Stakeholders identified in pilot and follower regions according to thematic focus

A range of tools and suggestions have been developed for engagement and impact including: email templates, videos, communication materials and more and are available to all partners. This report also discusses the transition from a repository of stakeholders to a 'live' network hosted in the innovation platform as well as the long term-sustainability plan.

2 Introduction

2.1 Overview

This deliverable originates out of P2Green ‘Task 5.1 Development of a P2Green network hub for engagement, outreach and impact.’ The network hub is a continuously updated repository of relevant stakeholders and networks for cooperation and engagement to upscale impact and outreach of the project and will be included as a repository in the innovation platform, once operational, under Task 7.5. The network hub repository is currently hosted as an .xlsx file which is shared among all P2Green partners. This report provides: an overview of the network hub, explains its function, the methodology and approach used to develop it, the results and analysis so far, a description of the tools for engagement, outreach and impact, its integration into innovation platform, and the long-term sustainability plan of the network hub.

Simply put ‘The network hub’ is a list of relevant stakeholders and networks for cooperation and engagement to upscale impact and outreach of the project. This network hub has been developed in cooperation with all P2Green partners and it is a ‘live’ file where partners have the opportunity to and are reminded to update continuously as they identify new key stakeholders and drive engagement. In the second phase of this project key stakeholders will be invited to official ‘join’ this network through registering on the P2Green innovation platform.

This report is structured as follows: the rest of this section covers the main goals and objectives of the network hub and provides a short overview of the main activities planned in the coming 3 years, section 3 provides an overview of the methodology developed and implemented in order to develop the current version of the network hub, section 4 provides an overview of the key results of the network hub to date, section 5 briefly discusses and links to various tools for engagement, outreach and impact that have been developed to date, section 6 covers the integration of the network hub into the innovation platform, section 7 briefly presents an overview of the intention and possible avenues regarding the sustainability plan and post project context of the network hub.

2.2 Mains goals/objectives of the network Hub:

- Identification of key stakeholders involved in nutrient capture and closing nutrient loops across the EU. With a particular focus on identifying individual stakeholders, existing networks and already existing projects focused on nutrient capture and closing nutrient loops.
- Develop a repository of all relevant stakeholders including those from previous Tasks.
- Develop and make available a range of tools that drive stakeholder engagement.
- To instigate and facilitate cooperation with key networks and stakeholders to upscale the impact and dissemination of the project.
- To build connections with identified key stakeholders to foster network hub development.

- To develop and implement a long-term sustainable plan that ensures the continued operation of the network hub after the completion of the project.

2.3 Post M12 Vision Future

The network hub repository will be included in the innovation platform once its operational. This will lay the basis for the creation of an ‘interactive’ network hub through the P2Green innovation platform where key P2Green stakeholders will be invited to register to and become visible through an interactive map showing the location and specific information concerning each stakeholder (see section 6). For more detail on the establishment of the innovation platform please refer to D7.2.

D5.1 is an interim deliverable and this report will be updated, and include stakeholder lists from the live network hub through the innovation platform as part of D5.2 which is due in M45 of the project. Both these deliverables are closely related to ‘D5.3 Sustainability plan’ ensuring the continued operation and expansion of the network after the completion of the project’ (see section 7) in M46.

3 Methodology and approach

This section outlines the methodology and overall approach developed and used in developing the network hub covering the goals, scope, partner roles and responsibilities, and timeline associated with implementing the network hub.

3.1 Theoretical approach

The theoretical foundation underpinning our methodology for the creation of a network hub for key stakeholders is grounded in established principles of network theory, project management, and stakeholder engagement. Network theory provides a conceptual framework that emphasizes the interconnectedness of actors and resources, guiding our understanding of how collaboration and information flow within the network (Kapucu & Hu, 2020). Concurrently, project management principles contribute a structured approach to planning, execution, and control, ensuring systematic development and implementation. Furthermore, our methodology draws from stakeholder engagement theories, recognizing the pivotal role of diverse perspectives and active involvement in achieving project success (Missonier & Loufrani-Fedida, 2014). By combining these theoretical perspectives, our approach seeks to create a robust and adaptive network hub which will support all partners to upscale the impact and outreach of the project.

The implementation of the methodology for the P2Green network hub is a collaborative process involving all project partners implementing a ‘multi actor approach’ whereby a wide range of partners work together to identify and engage key stakeholders.

3.2 Timeline

3.2.1 T5.1 Planned Timeline

According to the timeline foreseen in the T5.1 network hub strategy document finalised in June 2023 various key tasks are planned as part of T5.1 and the development of the network hub. In particular, the process of identifying stakeholders covers the timeline of

the entire project. While the development of tools for engagement started in M6 and is expected to continue over the coming 2 years. The process of actively starting stakeholder engagement began in M8 onwards, while integration into the innovation platform is expected from M13 onwards and the development of a detailed sustainability plan is expected to start in M35 (Figure 3).

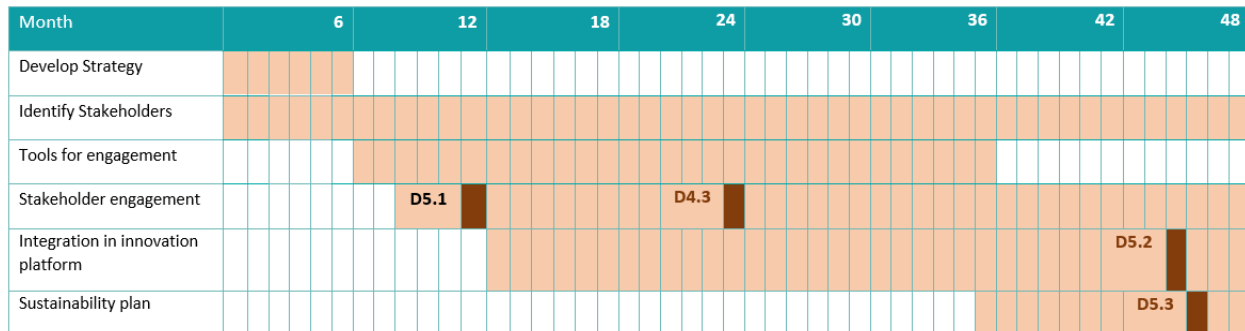


Figure 3. Timeline of tasks related to T5.1

3.2.2 Actions undertaken so far

It is important to note that the P2Green network hub aims to support engagement, outreach and impact for P2Green activities. In this sense, there are numerous parts and stages of the network hub. First, key stakeholders, actors and networks that are involved in nutrient capture and closing nutrient loops are continuously identified across the EU by all partners of P2Green. These are also continuously integrated into the repository of relevant stakeholders and networks which captures relevant information about each stakeholder. This continuously updated database is available to all P2Green actors to help implement their actions under the project (Table 1).

Table 1. Performed actions

Date	Description
13/01/2023	During the 2 nd day of the P2Green kick off meeting in Hannover on January 13 th , 2023 a collaborative session was led by CERTH, involving all partners to identify relevant networks and stakeholders for P2Green. This session was implemented to provide an initial snapshot of all the relevant stakeholders for P2Green. Partners were asked to categorise stakeholders according to national networks, international networks, projects.
13/01/23	In addition, another session was organised by CBS concerning the identification and digitalisation of national stakeholders. The results of these were digitalised by CBS and included in the overall network hub file prepared by CERTH.
13/01/2023 – 13/02/2023	The results from the collaborative session were digitalised by CERTH as various excel sheets, with relevant columns added and filled out (based on publicly available information on the stakeholders identified). This file was shared by CERTH on MSTeams to all partners requesting them to evaluate the structure and check and edit

		the information already included in the file and to add any other relevant networks and/or stakeholders
19/06/2023		A T5.1 Network Strategy Document developed by CERTH was shared with all partners outlining the main goals, structure, timeline and roles and tasks of all partners.
13/01/23 17/11/23	-	Various actions were undertaken by CERTH to update the structure and categorisations of the network hub based on partner comments in order to streamline the structure of the network hub. The main interventions implemented were a reduction in the total number of sheets, a simplification of the key columns and categories.
13/01/23 17/11/23	-	The current status of the network hub and next steps were presented and discussed at each monthly work package 5 meeting.
13/01/23 17/11/23	-	Various meetings were organised and held between CERTH and ICLEI, CBS, CIPower and MOV as they are key partners in the development of the network hub (see section on roles and tasks of partners). Inputs from their actions, such as developing synergies with other projects and national workshops, were integrated by these partners into the network hub.
13/01/23 17/11/23	-	Various communications and meetings were held between CERTH and individual partners to answer specific questions and facilitate partner inputs.
13/01/23 17/11/23	-	Partners were reminded regularly to check and update the network hub.
18/10/23		During the 2 nd in person consortium meeting in Malaga, CERTH presented the current structure of the network hub to all partners and requested them to make any final updates by the middle of November in time for submitting D5.1

3.3 Structure of the Network Hub

Over the past 12 months the structure and categorisations of the network hub have been edited and updated numerous times in order to improve its function and overall design. The current network Hub is hosted as a .xlsx file with multiple sheets in order to categorise the various stakeholders effectively. Categorising stakeholders along multiple sheets was chosen, as opposed to having a single sheet with numerous dropdowns as by using multiple sheets it is easier to navigate through specific categories and subsets of stakeholders. This segregation also facilitates focused data management and minimizes the risk of information overload. Additionally, individual sheets facilitate data formatting and customization for each stakeholder category, optimizing the presentation of relevant details. This approach also streamlines data entry and retrieval processes, reducing the likelihood of errors. Moreover, utilizing multiple sheets supports scalability, enabling the addition of new stakeholders or categories without disrupting the existing structure.

The current structure of the network hub is as follows:

A. README: this sheet provides a brief overview of the file outlining the version, purpose of the file, partner roles, and the structure of the Network Hub.

B) National, EU and International Networks: this sheet contains existing key networks/groups/associations of stakeholders related/relevant to P2Green that operate in the EU and globally. These networks must always be a combination of multiple actors.

C) EU Projects, Clusters and Initiatives: this sheet contains key projects, clusters and initiatives related to P2Green.

D) Germany Stakeholders: this sheet contains key stakeholders that are related to the Germany pilot region.

E) Spain Stakeholders: this sheet contains key stakeholders that are related to the Spanish pilot region.

F) Sweden Stakeholders: this sheet contains key stakeholders that are related to the Swedish pilot region.

G) Italy Stakeholders: this sheet contains key stakeholders that are related to the Italian follower region.

H) Greece Stakeholders: this sheet contains key stakeholders that are related to the Greek follower region.

I) Hungary Stakeholders: this sheet contains key stakeholders that are related to the Hungarian follower region.

J) France Stakeholders: this sheet contains key stakeholders that are related to the French follower region.

K) Thematic Focus List and Stakeholder Type List": this sheet provides an overview of the key lists of categorizations used along thematic and stakeholder type lines.

3.4 What are key stakeholders for P2Green:

Key stakeholders in P2Green are those relevant to P2Green's work involved in circular nutrient flows capture and closing nutrient loops. These key stakeholders are not just those involved in the P2Green pilot regions but all those involved in effectively implementing the project and its goals as well as those that can help with effective dissemination and communication activities.

These stakeholders include:

- WWTP actors
- Nutrient and bioeconomy related networks and clusters
- EU and national projects
- Toilet producers
- Food producers'/ farmers

- Local citizens and citizens associations
- Industry
- Academia and research
- Innovation brokers and advisers
- Policy makers
- Local, national and regional government authorities
- NGOs and civil society organizations
- Local citizens, farmers, other N & P stakeholders

The stakeholders included in the network hub are limited to relevant networks, projects, clusters, initiatives, institutions, associations, companies, cooperatives and organisations. It is important to note that individuals/persons are not included in this repository due to privacy concerns. In the transition to a ‘live’ network hub individuals are planned to be included providing their explicit consent.

3.5 Key categories/information needed per stakeholder and guidelines for entering data:

These are the key information/data categories included in the network hub according to the different sheets.

Table 2. Data categories for sheet B. ‘National networks and EU and International Networks’

Column name	Description	Input type
Network Name	Include full name of the network.	Free text
Network Type	Indicate whether it is a local, national, EU or international network	Free text
Thematic Focus	Indicate whether the thematic focus of the network	Free text
Connected partner	Indicate which P2GreenN partner is connected to the network.	Free text
Link/info	Provide link(s) to websites, profiles, etc	Free text / url
Comments	Include any additional relevant information	Free text
Connection established P2GreenN	Indicate whether connection has been established (meeting, workshop, email contact, phone conversation, etc)	Yes / No
Priority for P2GreenN	Indicate the ‘importance of the stakeholder	High / Medium / Low

Table 3. Data categories for sheet C ‘EU Funded Projects, Initiatives and Clusters’

Column name	Description	Input type
Name	Include full name of the project, initiative or cluster.	Free text

Acronym	Indicate the acronym of the project initiative or cluster.	Free text
Type (Cluster, project, initiative)	Indicate the type	Free text
End date (projects)	Indicate the official end date of the project, initiative or cluster if applicable	Free text
Thematic Focus	Indicate the thematic focus of the project, initiative or cluster	Free text
Aim	Briefly state the aim of the project, initiative or cluster	Free text
Connected partner	Indicate which P2Green partner is connected to the project, initiative or cluster	Free text
Priority for P2Green	Indicate the 'importance of the stakeholder	High / Medium / Low
Link/info	Provide link(s) to websites, profiles, etc	Free text / url
Suggested synergies or collaboration	Describe any potential or carried out synergies or collaboration	Free text
Connection established P2Green	Indicate whether connection has been established (meeting, workshop, email contact, phone conversation, etc)	Yes / No
Status (Completed, ongoing)	Indicate the current statuses of the project, initiative or cluster	Free text

Table 4. Data categories for sheets D-K for pilot and follower regions stakeholder lists

Column name	Description	Input type
Organisation/Institution	Include full name of institution/organisation	Free text
Thematic Focus	Indicate whether the thematic focus of the stakeholder is on: Water and sanitation, Food and agriculture, Waste Management, Sustainability/Circularity, Construction/Architecture/Planning, Governance, Social, Education or Other	Dropdown list
Stakeholder Type	Indicate whether stakeholder is a: SME / Private company / implementation actor, Research and academia actor, Cooperatives, associations and NGOs, Government and public administration, or Other	Dropdown list
Link/info	Provide link(s) to websites, profiles, etc	Free text / url
Comments	Include any additional relevant information	Free text

Connection established P2Green	Indicate whether connection has been established (meeting, workshop, email contact, phone conversation, etc)	Yes / No
Priority for P2Green	Indicate the 'importance of the stakeholder	High / Medium / Low

The thematic focus for sheets B and C are filled out as free text while those for sheets D-K are filled out using a dropdown menu. This approach was chosen after discussions with various partners as the thematic focus of both networks and projects are potentially, and more likely, to be very specific and allowing for a free text function for these allows for a more accurate categorisation of these stakeholders.

3.6 Role and Tasks of the Partners

All P2Green partners are expected to regularly contribute to the development of the network hub throughout the course of the project. The specific partner roles are the following:

- CERTH – T5.1 Lead
 - Overall responsibility for the network hub, the strategy and associated deliverables.
 - Ensure network hub is up to date and proceeds according to the planned timeline outlined in section 3.2.1.
 - Develop all sheets.
 - Lead contacts with certain key stakeholders (identified as high priority)
 - Develop 'sustainability plan' that will ensure the continued operation and expansion of the network hub after the completion of the project.
 - Cooperate closely on the development of the 'live' network in the innovation platform.
- ICLEI – T5.5 Lead
 - Develop and maintain sheet C synergies with EU projects, clusters and initiatives.
 - Develop sheet 'EU Projects, Clusters and Initiatives'
- CBS - T4.2 Lead
 - Contribute to stakeholder lists for pilot and follower regions and feed them into the network hub.
 - From the GA: "Stakeholders including also those that are identified from T4.2 will be included, as well as farmers, citizens, associations, industry, academia, research innovations brokers and policy makers."
- CIPower + MOV - WP6 leaders
 - Coordinate dissemination and exploitation activities.
 - Contribute to the development of tools for engagement and impact.
- All partners
 - Maintain individual relationships.
 - Feed contacts and stakeholders into all relevant sheets in the network hub.

- Regularly update and provide inputs into the repository.
- Use their own contacts to facilitate the transition to a 'live' network hub.

3.7 GDPR and privacy regulations:

The network hub adheres to the General Data Protection Regulation (GDPR), ensuring that all data processing activities align with the established guidelines for privacy and security. The information contained within the hub is limited to publicly available data, adhering to the principles of transparency and legality. Any inclusion of additional information beyond publicly accessible data is undertaken only with the explicit consent of the respective stakeholders or actors involved. This commitment to obtaining explicit consent underscores our dedication to respecting individual privacy rights and maintaining a secure and compliant data processing environment in accordance with GDPR standards.

3.8 Methodological limitations

There are a number of key limitations to the current structure of the network hub. Even though it is designed to facilitate connections, currently for GDPR and privacy reasons only organisations are tracked. Consequently, in practice, connections between individuals are not tracked which are known to be considerably higher, increasing the known impact of the project. This limitation is expected to be partly overcome in the transition to a live network hub based on a registration process as key stakeholders, including individuals, will have the possibility to become part of an interactive network.

Currently key stakeholders in sheets D-K are categorised according to thematic focus and one type of stakeholder, however, in numerous cases stakeholders fit in multiple categories simultaneously. It is proposed that during the registration process of the innovation platform stakeholders will be able to fill out their own categorisations through a dropdown menu allowing multiple selection.

The definition of what constitutes a key stakeholder is open to interpretation and centred around those relevant to P2Green's work involved in circular nutrient flows capture and closing nutrient loops. This definition was chosen due to the variation of actors expected to be relevant across the P2Green work programme and across the pilot and follower regions. Nevertheless, it allows for the identification of partners of varying levels of relevance to P2Green. To overcome and minimise the identification of non-key stakeholders partners have been urged to focus on identifying stakeholders that are assessed as useful to their work programme and/or support effective communication and dissemination activities.

The network hub is mainly focused on and designed to capture the main stakeholders involved in the pilot and follower regions. This supports the work programme however this format is biased towards stakeholders that are based in these regions whereas key stakeholders are also based outside these regions. The planned innovation platform is

likely to overcome this limitation as the format will allow stakeholders from across the EU to register.

4 Results and analysis of stakeholders

The section provides an overview of the results of network hub and a short analysis of the type and make up of stakeholders currently included in the network hub. For more detailed illustrations of the network hub please refer to Annex A.

As of November 23rd 2023, the network hub consists of 456 key stakeholders, these were identified in the first 12 months of the project. The network hub is a 'live file,' and these numbers are expected to grow steadily in the coming years as the project progresses. The largest current stakeholder sheets are national, EU, and international networks closely followed by each pilot region (Table 5 and Figure 4).

Table 5. Number of identified and engaged stakeholders in the network hub

Sheet in network hub	Number of stakeholders	Of which engaged
National, EU and International Networks	93	Not tracked
EU Projects, Clusters and Initiatives	25	9
Germany Stakeholders	92	66
Spain Stakeholders	52	35
Sweden Stakeholders	56	33
Italy Stakeholders	20	10
Greece Stakeholders	54	19
Hungary Stakeholders	26	17
France Stakeholders	38	29
Total	456	218

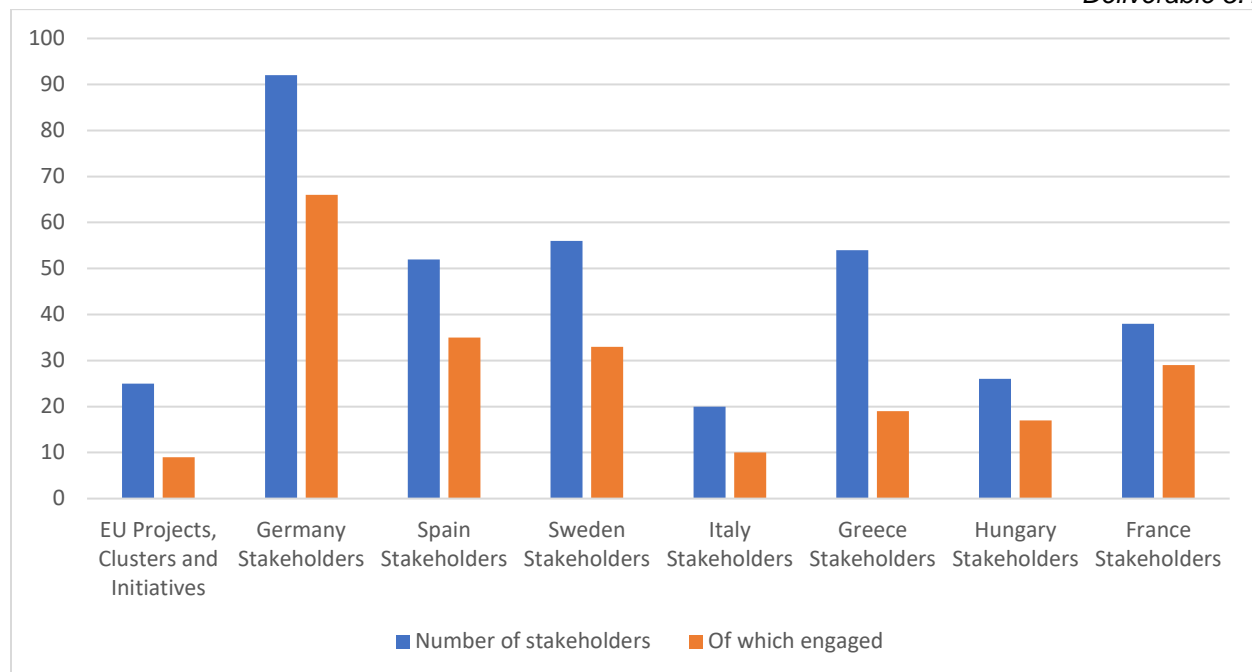


Figure 4. Number of stakeholders and those engaged per sheet

Of those identified and included in the network hub (456) around half (218) had a least some sort of engagement with the P2GreenN project in its first twelve months (Table 5). Higher overall numbers of engagement are generally observed in the pilot regions and France (Figure 4) with Germany recording the highest level of engagement. It is important to note, however, that until now, the level of engagement was not further classified, as such any direct interaction on P2GreenN or participation in an event was classified as engagement. Taking this into account, it is likely, though not measurable, that the quality of engagement was higher (exploring of synergies, collaborations) in the pilot regions due to their level of implementation.

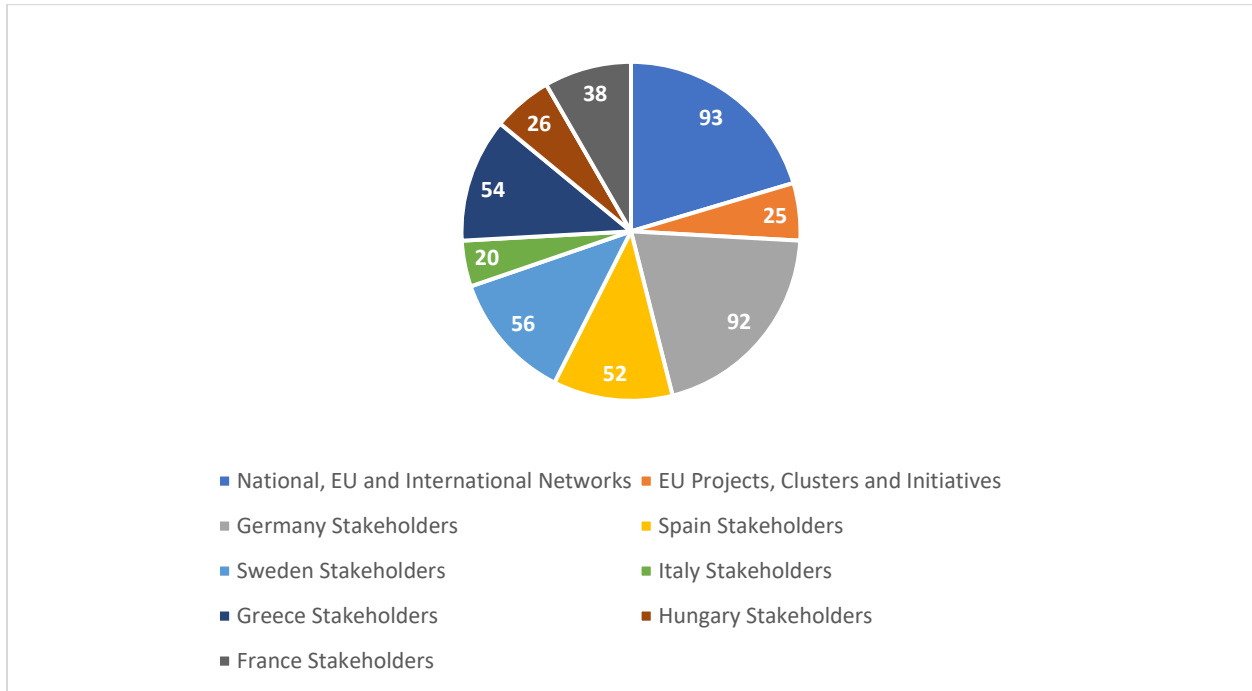


Figure 5. Key stakeholders identified per sheet category

Considerable variety is observed in the type of key stakeholders identified, the largest recorded category is ‘government and public administration’ accounting for over a quarter of all stakeholders followed by ‘SME / private company / implementation actor,’ ‘cooperatives, associations and NGOs,’ ‘research and academia’ and other (Figure 6). On a country level, all countries show a variation in the types of key stakeholders identified with multiple stakeholders falling under each category.

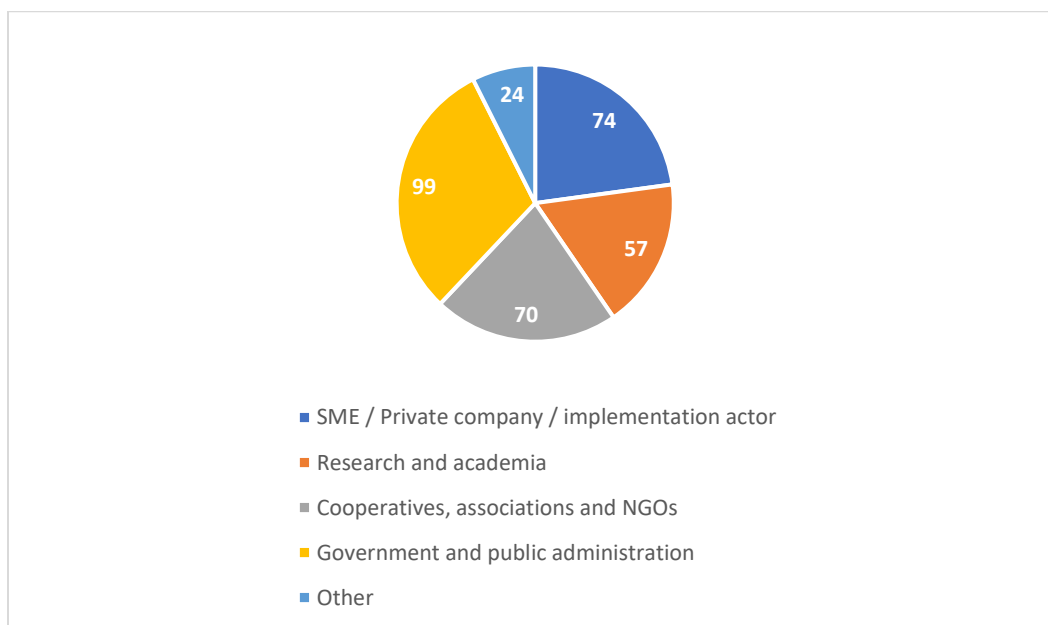


Figure 6. Stakeholders identified in pilot and follower regions according to stakeholder type

Table 6. Stakeholder type of stakeholders per country identified in pilot and follower regions

Stakeholder type	Germany	Spain	Sweden	Italy	Greece	Hungary	France
SME / Private company / implementation actor	16	9	20	3	13	8	5
Research and academia	20	6	6	3	11	8	3
Cooperatives, associations and NGOs	9	17	7	7	20	3	7
Government and public administration	33	16	13	7	10	6	14
Other	0	4	10	0	0	1	9

Regarding the thematic focus of stakeholders. As would be expected, considering P2Green's work programme, the two largest groups of stakeholder types are food and agriculture and water and sanitation, together accounting for almost half of the total number of stakeholders. The rest of the seven thematic categories show a much more even distribution, together accounting for little over half of the total number of stakeholders (Figure 7). On a country level, food and agriculture stakeholders are well represented across all countries. This situation is similar for water and sanitation while proportionally fewer water and sanitation actors have so far been identified in Greece and Italy (Table 7). Overall, all types of stakeholders are well represented which is a prerequisite for the effective implementation of the project due to the research, governance and justice aspects of the project.

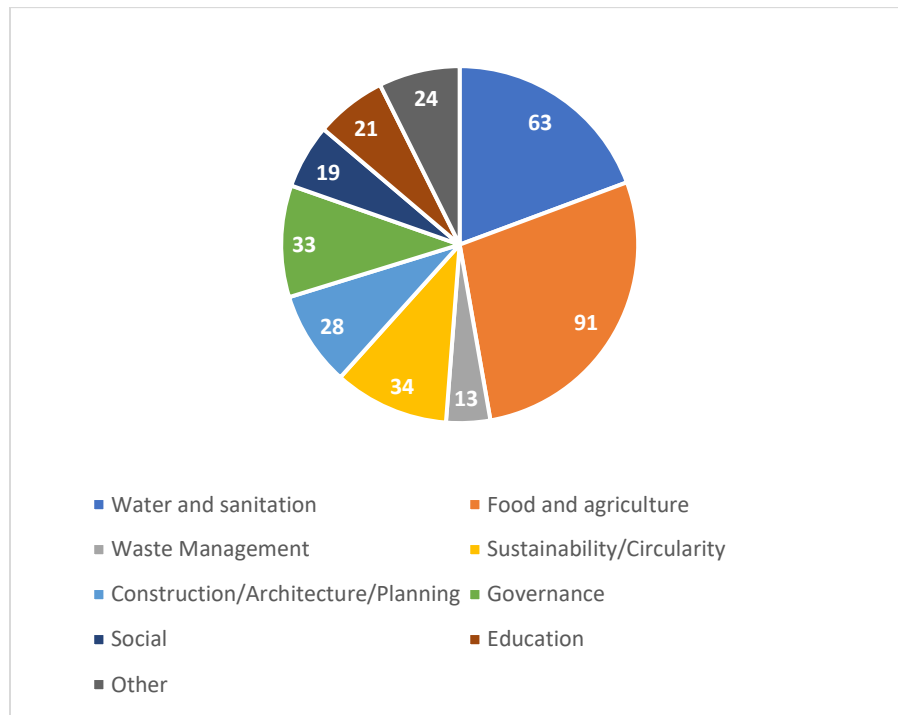


Figure 7. Stakeholders identified in pilot and follower regions according to thematic focus

Table 7. Thematic Focus of stakeholders per country identified in pilot and follower regions

Thematic Focus	German y	Spai n	Swede n	Ital y	Greec e	Hungar y	Franc e
Water and sanitation	22	10	9	3	5	5	9
Food and agriculture	24	19	7	5	22	10	4
Waste Management	1	0	7	1	3	1	0
Sustainability/Circularity	5	5	4	5	8	1	6
Construction/Architecture/Plannin g	9	0	8	1	0	1	9
Governance	11	6	6	0	4	2	4
Social	2	4	11	0	0	0	2
Education	2	1	4	2	7	4	1
Other	6	5	0	3	5	2	3

5 Tools for engagement, outreach and impact

Effective communication serves as a strategic instrument to foster connections and enhance stakeholder engagement. Ensuring clear and transparent communication is

crucial to inform stakeholders of the opportunities presented by P2GreeN and its associated technologies, as well as to guide them on practical ways to leverage these opportunities in diverse contexts. Additionally, it plays a vital role in providing stakeholders with the necessary information on how and when to participate. Recognizing that not all media messages consistently reach their intended audience, we aim to employ various additional tools to facilitate more targeted and impactful engagement. These will be further developed as the project develops, at M12 of the developed tools for engagement and outreach include:

- Personal and organisational relationships with key stakeholders. Partners are encouraged to use their own contacts to initiate connections related to P2GreeN and use the P2GreeN created available communication and dissemination materials available.
- Various email templates have been developed to facilitate connections between key stakeholders and partners that have not had prior contact (see Annex B) or have had some prior contact. These templates are designed to be modified by each partner in order to effectively inform and engage key stakeholders.
- As part of the Focus groups under T5.3 one video per pilot region has been developed. These can be used as standalone videos or in combination with others in order to provide an overview of the pilot regions and associated technologies to relevant key stakeholders. These are currently available through the P2GreeN YouTube channel.
- Events, workshops, conferences and focus groups. A variety of events have been organised by P2GreeN within the first year of the project by a variety of partners. Partners are encouraged to use these events to communicate and engage key stakeholders.
- Any other tools that have been created under WP6 including videos, brochures, banners, etc. These are available through the MS teams repository.
- The Rural Bioeconomy Alliance (RBA). Partners are encouraged to use this cluster of bioeconomy related EU funded projects as a tool that allows them to scale their communications with other potentially interested stakeholders and also as a tool to develop synergies with other projects (see section 5.1).

5.1 The Rural Bioeconomy Alliance (RBA)

The Rural Bioeconomy Alliance (RBA) is a cluster of eleven European funded projects that support the development of rural sustainable circular bioeconomy initiatives in the EU. These projects support the development of a rural circular bioeconomy and investigate, develop or analyse rural circular bioeconomy success stories, best practices, pilots as well as ways (e.g. training and education) to increase the adoption of circular bioeconomy concepts mainly in rural areas. The development of this cluster was initiated by CERTH and P2GreeN was one of the eleven founding members.

The primary motivation behind establishing and participating in the RBA is to amplify our efforts and influence in advancing the transition towards a circular bioeconomy. This collaborative approach goes beyond the capabilities of individual projects or bilateral cooperation. The creation of the RBA offers several specific advantages, including strengthened collaboration, knowledge exchange, resource optimization, heightened impact, influence on policy and decision-making, networking opportunities, partnerships, and capacity building. The ultimate goal of the cluster is to expedite the overall development of the bioeconomy. By bringing together various projects, the cluster aims to facilitate the sharing of knowledge regarding project outcomes and support dissemination and communication activities related to existing bioeconomy knowledge. The collaborative project has committed to working together on various aspects.

As a founding member of the RBA P2Green has direct access to a wider range of related and interested stakeholders and parties through the other 10 projects. In addition, this is an additional channel available to all partners in the project to further upscale the impact and outreach of the project. Currently plans are underway to merge the P2Green international conference scheduled in May 2024 with the second annual meeting of the RBA members.

6 Integration into innovation platform

From November 2023 onwards the P2Green innovation platform will be established. As indicated, this will include a publicly available external part accessible to the wider public. This part will include a live and interactive part where stakeholders will have the opportunity to register and be shown on a map. This process will begin after M12. As such the intention is that the 'network hub' will facilitate the transition into a 'live network hub' through which key stakeholders will be invited to join and complete their own profile. As part of this various discussions are currently taking place as to what the registration form could look like (see Table 8 for a draft proposition) and the most effective way for stakeholders to be categorised according (see Table 9). The current proposition of the fields to include in a registration form and the best way of categorising stakeholders are depicted in Table 8 (note that these are subject to change after the submission of this deliverable).

Multiple partners have stressed that any 'live network' where stakeholders are asked to register should be simple and easy to fill out in order to ensure active participation and engagement. In accordance with this, discussions will be held with developers concerning the option of 'pre-filing' any registration form through other platforms, for instance through LinkedIn.

Table 8. Draft propositions for fields for the innovation platform registration form

	Field	Field type	Compulsory/ optional
Stakeholder Data	Full name	Text	[C]
	Organization	Text	[C]
	Short Description (250 characters)	Text	[C]
	Type of stakeholder (filter for map)	Dropdown menu (see tables below)	[C]
	Thematic Focus (filter for map)	Multiple selection (see table below)	[C]
	Location/Address	Google map link or select in a map	[C]
	Contact name and email	Text	[C]
	Phone	Text	[Op]
	Logo / picture	Jpg, png file	[Op]
	Website	Link	[Op]
	Social media	linkedIn, Twitter...	[Op]
	Preferences of info to be received?	Multiple selection (newsletter, other)	[C]
	Agree to publish profile in innovation platform	Tickbox	[C]

Table 9. Draft thematic and stakeholder type categorisations for the innovation platform

Thematic Focus	Stakeholder Type
Water and sanitation	SME / Private company / implementation actor
Food, agriculture and parks	Government and public administration
Waste Management	Public company
Innovation and Investment	Research and academia
Sustainability/Circularity	Platform or Network
Digitalisation	Project
Social and education	Cooperatives, associations and NGOs
Sustainability/Circularity	Individuals
Urban Planning	Other
Construction	
Management	
Governance and Regulations	
Other	

In terms of format, it is expected that the network hub will feature an interactive map that is searchable according to filters and could look somewhat similar to BioRural's European Rural Bioeconomy Network (see Figure 8)

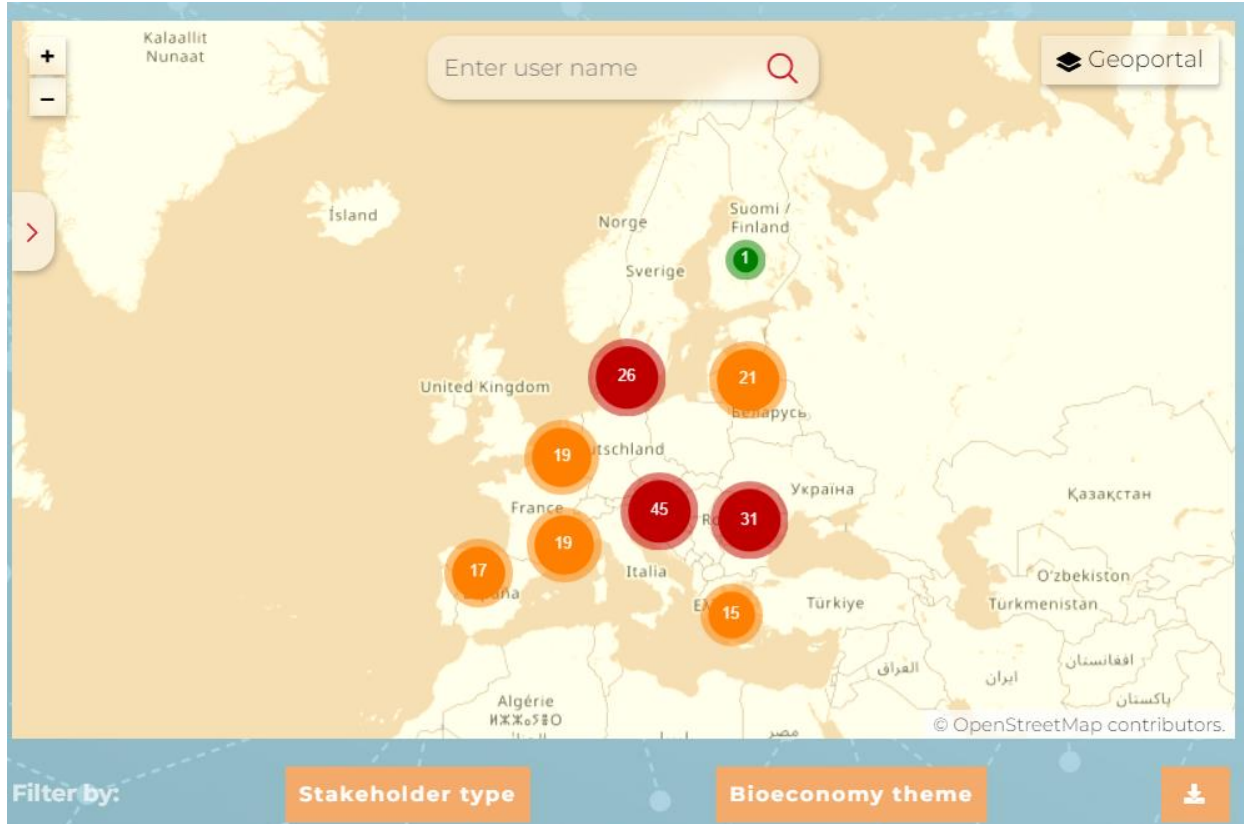


Figure 8. Map of BioRural's European Rural Bioeconomy Network

7 Sustainability Plan

T5.1 includes D5.3 Sustainability plan ensuring the continued operation and expansion of the network after the completion of the project due in M46 (October 2026). The formulation of a long-term plan is important to secure the sustained operation and expansion of the network hub beyond project completion. A comprehensive long-term plan acts as a strategic roadmap, providing a clear vision for the future and guiding decision-making processes. This planning horizon allows the network hub to anticipate and adapt to as the context in which P2GreeN operates changes.

In addition to operational considerations, a long-term plan facilitates sustainable growth and expansion and allows the hub to engage in strategic partnerships, alliances, and community collaborations, fostering a supportive ecosystem that can fuel expansion efforts. The commitment to a long-term vision also enhances the hub's relevance as stakeholders are more likely to participate in and align with a network that demonstrates a clear long-term strategy.

Detailed planning for the sustainability plan is not scheduled yet due to the considerable time until its due date/initiation. However, in the coming 12 months exploratory discussions will be initiated between the consortium in order to establish the most

desirable options for the long-term growth of the network. To date, the various potential options that have been identified include:

- A P2Green partner, such as CERTH, manages the post-project network hub.
- The establishment of a multi-partner board, either between project partners or external stakeholders, that collectively manage the network hub.
- Integration of the network hub into other existing platforms or networks, these could include EU funded initiatives such as FarmBook or alternatives run by other projects or networks.
- Integration into a successor or similar project to P2Green.

8 Conclusion

In conclusion, the development of the P2Green network hub under Task 5.1 is a collaborative effort involving all partners. This network hub serves as a continuously updated repository of key stakeholders and networks crucial for cooperation, engagement, and the overall success of the P2Green project. It aligns with the project's goals to capture and close nutrient loops across the EU.

The report provides a comprehensive overview of the network hub, detailing its goals, methodology, timeline, and the roles of each partner. The theoretical approach is grounded in network theory, project management, and stakeholder engagement principles. The timeline outlines key tasks, actions undertaken, and the evolution of the network hub structure, hosted as an .xlsx file with multiple sheets for effective categorization.

The network hub has made significant progress in its first year and currently includes 456 key stakeholders, with about half having engaged with the project. The report also presents a detailed analysis of stakeholder types, thematic focuses, and engagement levels, providing insights into the diversity and distribution of stakeholders across countries and sectors. The future vision involves integrating the network hub into the innovation platform, creating an interactive and expansive network that enhances visibility and collaboration as well as the development of a long-term sustainability plan.

9 Reference List

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Missonier, S., & Loufrani-Fedida, S. (2014). Stakeholder analysis and engagement in projects: From stakeholder relational perspective to stakeholder relational ontology. *International Journal of Project Management*, 32(7), 1108–1122. <https://doi.org/10.1016/J.IJPROMAN.2014.02.010>

10 Annex A. Screenshots of the network hub

Network Name	Network Type	Network Thematic Focus	Relevant Partner	Link/info	Comments	Connection Established (yes/no)	Priority for P2Green (High, medium, low)
Roskilde Festival	National (Denmark)	Festival		https://www.roskilde-festival.dk/da/about/non-profit/	The purpose of the society is to support initiatives benefitting children and young people and to support humanitarian and cultural work. The society's work is independent of party politics and has no geographical borders.		medium-high
Sustainable Place	Gotland (Sweden)	Sustainable cities	SLU	https://www.sustainableplaces.eu/			medium
Tillväxt Gotland	Gotland (Sweden)	Community Investment	Sanitation 360	https://tillvaegtotland.se/	investors		medium
Byggnastare Föreningen	Gotland (Sweden)	Infrastructure	SLU	https://stockholmsbygf.se/	local industry organizations for construction, civil engineering and specialist companies		medium
REWAISE	H2020 Project	Water management	Sanitation 360	http://rewaise.eu/	The results will be a carbon-free, sustainable hydrological cycle in line with the concept of a resilient circular economy.		medium
Hellenic Fertiliser Association (SPEL)	Inter/ National (Greece)	Fertilisers	SusiChem SA	http://www.spef.gr/index.php	develop, produce, market and distribute high quality fertilisers and nutrition products		medium
DWA	Inter/Regional (Germany)	sustainable water management		https://en.dwa.de/en/	Water management, wastewater-waste		medium
EKOPOLIS	Local (Paris region)	Sustainable constructions		www.ekopolis.fr	Sustainable development and construction, sharing knowledge		medium
AMDRCE VA-Citilde	Local/regional (France)	Energy, waste, water management	ENPC, Ville de Paris	https://amerce.asso.fr/association	Energy transition, territorial waste management, sustainable water management		medium
	National (Sweden)		Sanitation 360				medium
ARI (Agriculture Research Institute)	National (Cyprus)	Food and Agriculture		http://www.mra.gov.cy/mra/ari/en/index.html	a model center of knowledge and innovation, and lead Cyprus to a better future by strengthening rural development, improving the quality of life, and ensuring the sustainable use of natural resources.		medium
EYE Platform	National (Cyprus)						
Cyprus Water Association	National (Cyprus)	Wastewater, water		https://cwakys.com/en/	water issues, to support research and development in this field and to promote and apply best practices, techniques and modern methods in the field of water and wastewater.		medium
Cyprus Farmer Association	National (Cyprus)	Food and Agriculture					low
Innovationcenter for Organic Farming	National (Denmark)	Food and Agriculture		https://icofol.dk/en/about-us/	promote research, trials and development within organic production based on the four global organic principles and the UN's 17 Sustainable Development Goals.		medium
Food4Bio Cluster	National (Denmark)	Food and Agriculture		https://food4biocluster.com/	Strengthening innovation, accelerating business development, developing world-class skills		medium
SEGES	National (Denmark)	Food and Agriculture		https://www.seges.dk/ https://www.bl.dk/eng/wh/ik-local-government-denmark/	research and development organization within the agricultural and food sector		medium-high
Local Municipalities DK	National (Denmark)						medium
Dry Toilet Association in Finland	National (Finland) and abroad	ecologic sanitation, DT technology		https://dtoa.net/en/fo/contacts/	Sustainable sanitation and nutrient cycle		High
ASTEE (French association of water and waste professionals)	National (France)	Wastewater	ENPC, Ville de Paris	https://www.astee.org/homepage-en/	Seed knowledge, share technical practices		Medium
FNCCR (Fédération Nationale des Collectivités Concédantes et Régies)	National (France)	Water, wastewater	ENPC, Ville de Paris	https://www.fnccr.asso.fr/missions/	wastewater treatment, on-site sanitation, waste management		High
Ecoquartier	National (France)	Sustainable cities	ENPC, Ville de Paris	http://www.ecoquartierslogement.gouv.fr/	integrates the challenges of sustainable development and offers its inhabitants the possibility of a way of life that meets the major challenges of climate, biodiversity and living together, relying on local resources.		medium-high
RAE	National (France)	Chemical and petrochemical		http://www.raefrance.fr/	works mainly for the chemical and petrochemical markets, inspection bodies, analysis laboratories, emergency services, soil remediation and public works.		low
RAE (the one which was merit...)	National (France)	Sanitation	ENPC, Ville de Paris	https://reseau-assainissement-ecologique.org/ https://www.lensu.fr/cepp/assainissement/cepp-program/	The Ecological Sanitation Network (Réseau d'Assainissement Écologique - RAE) is a collective of associations, consultancies, craftsmen, companies and individuals active in the promotion and implementation of ecological sanitation systems.		medium-high
OCAPs	National (France)	Human management excretion	ENPC, Ville de Paris	https://reseauocap.org/	It aims at studying the contemporary mutations of nutrient flows, and more specifically, the management of human nutrient excretion.		medium
Reseau Compost Citoyen (RCC)	National (France)	Bio-waste management	ENPC, Ville de Paris	https://fermentcollect.org/	Sharing and exchanging information and practices for bio-waste management		medium-low
GTO (German Toilet Organisation)	National (Germany)	Sanitation		https://fermentcollect.org/de/	access to a sustainable and safe sanitation and water supply in accordance with human rights and independently practice basic principles of hygiene.		High
Agarsysteme de Zukunft	National (Germany)	Food and Agriculture	IGZ	https://agarsysteme-de-r-zukunft.de/	vision is a fair, reliable and responsible agricultural economy from countryside to city that places people and the environment at the center. For sustainably produced food on every plate. Includes projects such as RUN and SLSKULT.	yes	High

Figure 9. Screenshot of part of sheet B. National, EU and International Networks

Name	Acronym	Type (Cluster, project, initiative)	End date (projects)	Thematic Focus	Aim	Connected Partner	Priority for P2Green (High, medium, low)	Link (url)	Suggested synergies or collaboration	Connection established P2Green (yes/no)
Regions Initiative	ICCI	Initiative		Circular economy at city and region level	Focuses on implementing the circular economy across Europe's cities and regions	AgriPartner	High	http://www.icci.eu/		no
AgriPartner Ecosystem for Innovation and Realisation of Urban	TERRAS	EU Project		Environmental sustainability	aims to increase environmental sustainability and urban/rural ecosystems safety through redefining and reinforcing forests protection and management by developing and validating an innovative, sustainable and applied holistic wildlife management approach	AgriPartner	Medium	https://terraproject.eu/agripartner/		no
Community energy potential to sustain of bioenergy heating	BIOCOOP	EU Project		Bioenergy	putting communities in charge of their local renewable bioenergy generation		Medium-high	https://www.biocoop.org/EN/EN/PROJECT/ABOUT/	yes	no
of Innovation & Technology	ET Food	EU Project		Food and Agriculture	we invest in projects, organisations and individuals that share our goals for a healthy and sustainable food system	AgriPartner	Medium-high	https://www.etfood.eu/		no
	Water Europe	EU Project		Water management	Water Europe (WE) was initiated by the European Commission (EC) in 2004 as the European Technology Platform (ETP) for water with the same scope. This ETP status was renewed by the EC in 2013 in line with its FP7/2020 strategy. In 2017, WE was transformed into a member-based multistakeholder platform under Belgian law. Since then, the membership and activities of the organisation have continuously grown and evolved in line with its ambition to represent the whole value-chain of water and achieve a European Water-Smart Society.	AgriPartner	Medium-high	https://water-europe.eu/		no
Business and its social, environmental impact on different	WATERGATES	EU Project	2028	Water management	aims at developing new technologies and solutions	ICCI	Medium	https://watergates.eu/	P2Green partners exchange	yes
Implementation of the innovative to achieve better-informed decisions, social engagement in the bio-based economy	BIOACCELERATION	EU Project	2028	Sustainable development	aims to support the establishment of the innovative governance model at local/regional level to achieve better informed decision-making processes, social engagement and innovation to support and strengthen EU and international science-policy interfaces to achieve the Sustainable Development Goals.	ICCI	Medium	https://www.bioacceleration.eu/		yes
Community of Practice of	H2COOP	EU Project	2028		A European Community of Practice for Hydrogen Circularity which connects actors from industry, regions and cities, H2COOP, and research and development organisations who are interested in sharing knowledge, experiences, tools and materials to progress faster towards industrial and industrial-urban symbiosis and circular value chains.	ICCI	Medium	https://www.h2coop.com/en/about/	P2Green partners attended the H2COOP online launch event where they exchanged on challenges faced when building relationships to exchange resources and prevent waste degradation.	yes
H2 Fertilisers in agriculture - New Policies	LS430	EU Project		Fertilisers	aims to achieve this goal by collecting and processing regional nutrient stocks, flow surplus and deficiency data, and reviewing and assessing the required technological solutions. Socioeconomic benefits and limitations to increase substitution of mineral fertilizer for BBPs will be analysed.	Luke Coordinates	medium	https://www.lsh2.eu/		no
Urban material flows	CityLoop	EU Project		Circular economy	The CityLoop project brings together seven European cities - Aachen, Bonn, Milano, Porto, Sevilla,	ICCI		https://cityloop.eu/		yes

Figure 10. Screenshot of part of sheet C. EU Projects, Clusters and Initiatives

Organisation/Institution	Thematic Focus	Stakeholder Type	Link/Info	Comments	Connection established P2Green	P2Green (High, medium, low)
Nds. Umweltministerium, Regionsversammlung Hannover	Governance	Government and public administration	Link https://www.h2.de/home.html		yes	High
HS Magdeburg	Water and sanitation	Research and academia	Link https://www.hannover.de/leben-in-der-Region-Hannover/Umwelt-Nachhaltigkeit/Wasser-Abwasser/Abwasser-Stadtentw%C3%A4sserung-Hannover/%C3%9Cber-uns		yes	High
OE68.1 Planung und Bau Stadtentwässerung Hannover	Water and sanitation	Government and public administration			no	medium
OE68.3 Überwachungsaufgaben Stadtentwässerung Hannover	Water and sanitation	Government and public administration			yes	High
OE83 SEH	Water and sanitation	Government and public administration			yes	High
OE68.23 Abfallentsorgung & Klärschlammverwertung Stadtentwässerung Hannover	Water and sanitation	Government and public administration			yes	High
Lange GmbH & Co. KG Friedhofstraße 16 31515 Wunstorf – Luth	Architecture/Planning	Private company	Link https://www.igzev.de/portfolio_type/portfolio-Ariane		yes	High
IGZ e.V.		Research and academia	Krause/ https://finizio.de/		yes	High
Finizio	Water and sanitation	Private company			yes	High
Ecovillage hannover	Architecture/Planning	Cooperatives and NGOs	Link https://vhe-nord.de/		yes	High
Gundlach						High
Verband der Humus- und Erdenwirtschaft Region Nord e.V. & aha Region Hannover Team	Food and agriculture	Cooperatives and NGOs			yes	High
Gewässerforschung.net		Government and public administration			no	High

Figure 11. Screenshot of part of sheet D. Germany stakeholders

Organisation/Insitution	Thematic Focus	Stakeholder Type	Link/info	Comments	Connection established P2Green	Priority for P2Green (High, medium, low)
Junta de Andalucía	Governance	Government and public administration	https://www.juntadeandalucia.es/	Invitation to participate in 1st Cross-Fertilisation Workshop (T1.4)	yes	medium
Consejería de Agricultura, Ganadería, Pesca y Desarrollos Sostenible - Junta de Andalucía	Sustainability/Circularity	Government and public administration	https://www.juntadeandalucia.es/organismos/agricultu-rapescagaaydesarrollorural.html	Invitation to participate in 1st Cross-Fertilisation Workshop (T1.4)	yes	high
Territorial Delegation of Agriculture, Fisheries, Water and Rural Development in Málaga	Food and agriculture	Government and public administration	https://www.juntadeandalucia.es/organismos/agricultu-rapescagaaydesarrollorural/consejeria/delegaciones/malaga.html	Invitation to participate in 1st Cross-Fertilisation Workshop (T1.4)	yes	high
Dirección General Infraestructura y Explotación del Agua - Junta de Andalucía	Architecture/Planning	Government and public administration	https://www.juntadeandalucia.es/organismos/agricultu-rapescagaaydesarrollorural/consejeria/spa/dgia.html	Invitation to participate in 1st Cross-Fertilisation Workshop (T1.4)	yes	high
AGAPA (Andalusian Agrarian and Fisheries Management Agency) - Department of Agriculture, Water and Rural Development, Regional Government (Junta de Andalucía)	Food and agriculture	Government and public administration	https://www.juntadeandalucia.es/agenciaagrariaypesquera/portal/	Invitation to participate in 1st Cross-Fertilisation Workshop (T1.4)	yes	high
TRADE (Business Agency for Transformation and Economic Development) - Junta de Andalucía	Sustainability/Circularity	Government and public administration	https://www.juntadeandalucia.es/organismos/trade.html	Invitation to participate in 1st Cross-Fertilisation Workshop (T1.4)	yes	high
Servicio de Promoción Rural en Junta de Andalucía	Food and agriculture	Government and public administration	https://www.juntadeandalucia.es/organismos/agricultu-rapescagaaydesarrollorural/areas/desarrollo-rural.html		no	medium
Municipality of Algarrobo	Governance	Government and public administration	https://www.algarrobo.es/	Regular contact for project updates	yes	high
Municipality of Vélez Málaga		Government and public	https://www.velezmalaga.es	Invitation to participate in 1st stakeholder awareness		

Figure 12. Screenshot of part of sheet E. Spain stakeholders

Organisation/Insitution	Thematic Focus	Stakeholder Type	Link/info	Comments	Connection established P2Green	Priority for P2Green (High, medium, low)
Länsstyrelsen (m)	Governance	Government and public administration	https://www.lansstyrelsen.se/gotland/om-oss/kontakt-a-oss.html?TSPD_101_R0=D88d4528d9ab200017f23af8286460973ca40f4d9c2fde9214dc154d4cf8ee471cc9415bfa347c908f2a1633a143000700bec745c9246c10d942f3a33ea459989194bae207e3deeb6b23aecaede17d90aa6c81fbeb27a4c4d9c1fb5974b26cb2		no	high
Region Gotland (h)	Governance	Government and public administration	https://www.gotland.se		yes	high
Gotland military (m)	Waste Management	Government and public administration	https://www.forsvarsmakten.se/sv/organisation/gotland-s-regemente-p-18/		no	medium
Kneippbyn resorts (m)	Constructuin/Architecture/Planning	SME / Private company / implementation actor	https://kneippbyn.se		no	medium
Medeltidsveckan (m)	Social	SME / Private company / implementation actor	https://medeltidsveckan.se		yes	high
Almedalen (m)	Governance	Government and public administration	https://www.almedalsveckan.info		Yes	high
Ljugarn (l)	Social	SME / Private company / implementation actor	https://ljugarn.se		no	medium
Destination Gotland (l)	Waste Management	SME / Private company / implementation actor	https://www.destinationgotland.se/		no	high
GEAB (h)	Constructuin/Architecture/Planning	Other	https://gotlandsenergi.se		no	medium
Fenomenalen (l)	Education	Other	https://www.gotland.se/fenomenalen		yes	medium
CEMENTA (h)	Architecture/Planning	SME / Private company / implementation actor	https://www.cement.heidelbergmaterials.se/sv		yes	high
Uppsala University Gotland (m)	Sustainability/Circularity	Research and academia	https://www.campusgotland.uu.se		yes	high
LRF Gotland (h)	Food and agriculture	Cooperatives, associations and NGOs	https://www.lrf.se/regioner/gotland/		no	medium
Sustainable plejs (l)	Food and agriculture	Cooperatives, associations and NGOs	https://gotland.com/sustainableplejs/?fbclid=IwAR19Ecb9RY9ARThhTMIVLAPGAGCoSs0HyKNNV5rXNePvNztMDGv6sSQ4		no	medium
GA (newspaper)	Social	Other	https://etidning.gotlandssallehanda.se		no	medium
GT (newspaper) (h)	Social	Other	https://etidning.gotlandstidningar.se		yes	high
Tofta association (l)	Governance	Government and public administration	https://www.toftagotland.se		yes	high
P4 Radio (h)	Social	Other	https://sverigesradio.se/avsnitt?programid=94		yes	high

Figure 13. Screenshot of part of sheet F. Sweden stakeholders

Organisation/Insitution	Thematic Focus	Stakeholder Type	Link/info	Comments	Connection established P2Green	Priority for P2Green (High, medium, low)
Regional Water Utility (I)	Water and sanitation	Government and public administration			no	high
Regional Water Authority (I)	Water and sanitation	Government and public administration			no	high
Finagricola (Farmer) (h)	Food and agriculture	Cooperatives, associations and NGOs	https://finagricola.it/en/		no	medium
Cremonini Group- Chef Express (Highway station) (h)	Architecture/Planning	Private company / implementation actor	https://www.cremonini.com/en/ristorazione		yes	high
EPA Regional Environmental Protection Agency - ARPA (I)	Sustainability/Circularity	Government and public administration	https://www.arpa.piemonte.it/english-version		no	high
Ministry of Agriculture (MIASAF) (h)	Food and agriculture	Government and public administration			No	high
Ministry of Environment (MITE) (m)	Sustainability/Circularity	Government and public administration	https://va.mite.gov.it/en-GB		Yes	high
Ministry of Health (h)	Other	Government and public administration			No	medium
Istituto Superiore di Sanità (Public Health Research Institute) (h)	Other	Research and academia	https://www.iss.it/web/iss-en		Yes	high
Assofertilizzanti (h)	Food and agriculture	Cooperatives, associations and NGOs	https://assofertilizzanti.federchimica.it/		Yes	medium
Association of biofertilizers (ICAS International, Fertileva, Fertili, Agribios Italiana, Green MAS) (h)	Food and agriculture	Cooperatives, associations and NGOs			No	high
SILCFertilizzanti (Consultancy) (m)	Food and agriculture	Private company / implementation actor	http://www.silcfertilizzanti.it/?lang=en		Yes	medium
UNI VPM (I)	Education	Research and academia	https://www.univpm.it/Entra/		Yes	high
UNIUD (I)	Education	Research and academia	https://www.uniud.it/it		Yes	high
UTILITALIA (Association of Public Utilities) (m)	Water and sanitation	Government and public administration	https://www.municipalwasteurope.eu/member/utilitali		Yes	high
NER Biosph (Cooperative) (I)	Other	Private company / implementation actor	https://nerbiosph.it/		Yes	high

Figure 14. Screenshot of part of sheet G. Italy stakeholders

Organisation/Insitution	Thematic Focus	Stakeholder Type	Link/info	Comments	Connection established P2Green	Priority for P2Green (High, medium, low)
Karditsa Municipality (h)	Governance	Government and public administration	https://dimoskarditsas.gov.gr/en/		yes	high
Southern Lights (h)	Food and agriculture	Cooperatives and NGOs	https://thesouthernlights.org	Potential site for feasibility study	yes	high
Co-operative of Nikaia (h)	Food and agriculture	Cooperatives and NGOs			yes	high
FODSA	Waste Management	Government and public administration	https://fodsakm.gr/en/		no	medium
Municipality of Papagos Cholargos	Waste Management	Government and public administration	https://www.dpapxol.gov.gr/		yes	high
TOEB Ταυρωπού	Water and sanitation	Government and public administration	https://www.toevtavropou.g	Potential site for feasibility study	yes	high
Ministry of Agriculture (h)	Food and agriculture	Government and public administration	https://www.minagric.gr/en/		no	high
Ministry of Environment, Forestry (m)	Sustainability/Circularity	Government and public administration	https://ypen.gov.gr/		no	high
EENE - National body of inspection (h)	Governance	Government and public administration			no	high
AUGMENTA (I)	Food and agriculture	Private company / implementation actor	https://www.augmenta.ag/		no	medium
NEUROPUBLIC (I)	Food and agriculture	Private company / implementation actor	https://www.neuropublic.gr/		yes	medium
AGENSO (I)	Food and agriculture	Private company / implementation actor	https://www.agenso.gr/		yes	low
HACI - Hellenic Association of Chemical Industries (m)	Other	Cooperatives, associations and NGOs	https://haci.gr/haci/		no	low
SPEL - Hellenic Fertiliser Association (m)	Food and agriculture	Cooperatives, associations and NGOs	https://www.spel.gr/index.php		no	high
HHF - Hellenic Hotelier Federation (m)	Other	Private company / implementation actor	https://www.hhf.gr/about-us/		no	low
EYDAP - national water company (h)	Water and sanitation	Government and public administration	https://www.eydap.gr/en/	invited to focus group	yes	high
Aristotle University (m)		Research and academia	https://www.auth.gr/en/		yes	high
Agricultural University of Athens (m)	Food and agriculture	Research and academia	https://www2.aua.gr/en	Potential site for feasibility study, invited to focus group	yes	high
NTUA - civil engineering, water technology (m)	Water and sanitation	Research and academia	http://www.hydro.civil.ntua.gr/en/		no	medium

Figure 15. Screenshot of part of sheet H. Greece stakeholders

Organisation/Insitution	Thematic Focus	Stakeholder Type	Link/info	Comments	Connection established P2Green	Priority for P2Green (High, medium, low)
Local waste treatment company NON-Authority (h)	Waste Management	Other	https://new.delkom.hu/	Invitation to participate in FG interview (T5.3)	yes	high
Regional green authority (m)			https://www.kormanyhivatal.hu/hu/baranya/szervezeti-egysegek-menu/kornyezvedelmi-termeszetvedelmi-es-hulladegazdalkodasi-foosztaly		yes	
	Governance	Government and public administration		Invitation to participate in FG interview (T5.3)		high
Local farmer: Szabó Sándor family-run business	Food and agriculture	SME / Private company / implementation actor		Invitation to participate in FG interview (T5.3)	yes	medium
Noragro ltd (Hungary) agricultural sites (h)	Food and agriculture	SME / Private company / implementation actor	https://noragro.hu/	Invitation to participate in FG interview (T5.3)	yes	high
Crossdisciplinary reg. working group of the hungarian academy of science (m)			https://mta.hu/english/information-on-the-tasks-and-activities-of-the-hungarian-academy-of-sciences-as-public-body-106316		no	
	Education	Research and academia				medium
ökováros Foundation ecocity-ecoregion found (m)	Other	Cooperatives, associations and NGOs	http://pecsiertek.hu/tag/okovaros-okoregio-alapitvany/		no	medium
NÉBIH National Food security authority (m)	Food and agriculture	Government and public administration	https://maradknekul.hu/en/		no	medium
Ministry for agriculture (m)	Food and agriculture	Government and public administration	https://2015-2019.kormany.hu/en/ministry-of-agriculture		no	high
Agricultural Research Institute (I)	Food and agriculture	Research and academia	https://www.biokutato.hu/en/	Invitation to participate in FG interview (T5.3)	yes	high
University of Pannonia (m)	Education	Research and academia			no	medium
Toilet Producers (ALFÖLDI) (I)	Water and sanitation	SME / Private company / implementation actor			no	high
Hungarian University of Agriculture and Life Sciences (I)	Education	Research and academia	https://en.uni-mate.hu/	Invitation to participate in FG interview (T5.3)	yes	high
Alliance of Climate-Friendly Municipalities (Hungary) (I)			https://greendependent.org/index.php?option=com_content		no	

Figure 16. Screenshot of part of sheet I. Hungary stakeholders

Organisation/Insitution	Thematic Focus	Stakeholder Type	Link/info	Comments	Connection established P2Green	Priority for P2Green (High, medium, low)
City of Paris - DTEC	Sustainability/Circularity	Government and public administration			yes	high
City of Paris - DPE	Water and sanitation	Government and public administration			yes	high
City of Paris - DEVE	Other	Government and public administration			yes	high
Ecole nationale des ponts et chaussées (ENPC) - Laboratoire Eau Environnement et Systèmes urbains (LEESU)	Education	Research and academia	https://www.leesu.fr/?lang=fr		yes	high
CEREMA Ile-de-France	Governance	Government and public administration	https://www.cerema.fr/fr/cerema/directio		yes	high
INSA - TBI (Toulouse Biotechnology Institute, Bio & Chemical Engineering)	Sustainability/Circularity	Research and academia	https://www.toulouse-biotechnology-institut.fr/		yes	medium
P&MA (public urban planning/developer)	Architecture/Planning	Other	https://www.paris-metropole-amenagement.fr/		yes	high
Établissement public d'aménagement Paris Saclay (EPAPS)	Architecture/Planning	Other	https://epa-paris-saclay.fr/		yes	high
Paris Habitat (social housing)	Architecture/Planning	Other	https://www.parishabitat.fr/nous-connaître		yes	high
Régie Immobilière de la Ville de Paris - RIVP (social housing)	Architecture/Planning	Other	https://www.rivp.fr/		yes	high
Colas (civil engineering)	Architecture/Planning	Private company / implementation actor	https://www.cecinc.com/what-we-do/civil/		yes	medium
Tilia	Water and sanitation	Private company / implementation actor	https://tilia.info/en/		yes	high
Evoloop	Sustainability/Circularity	Private company / implementation actor	https://www.evoloop.eco/		yes	medium
Louise Raguet (independent designer)	Other	Other			yes	medium
Le Sommer Environnement	Constructuin/Architecture/Planning	Private company / implementation actor	https://lesommer.fr/web/home.html		yes	high

Figure 17. Screenshot of part of sheet J. France stakeholders

11 Annex B. Email Blueprints

11.1 To actors with no prior connection

Project Number:
Project Acronym:

101081883
P2Green
Deliverable 5.1

Subject: Potential synergies with [Organsiation name] and P2Green, a Horizon Europe Project Transforming Sanitary Waste into Bio-Based Fertilizers

Dear [Stakeholder Name],

I trust this email finds you well. My name is [Your Name], and I am reaching out to you on behalf of the [Your Organization/Project Name]. We are currently involved in an exciting project called [P2Green](#) under the Horizon Europe program that focuses on transforming human sanitary waste into safe, bio-based fertilizers for agriculture.

Our project is groundbreaking, aiming to develop, test, and adapt technologies that utilize human urine and feces to produce fertilizers that are not only environmentally friendly but also contribute to addressing the challenges faced by modern agriculture. Our project operates in three pilot regions, in Germany, Spain and Sweden, for testing different technologies in converting sanitary waste into fertilizer. Additionally, we are initially exploring the potential for implementing these innovative technologies in follower regions (Greece, Italy and Hungary) in the EU.

The scale of our project is significant, involving a consortium of 31 European partners dedicated to making a lasting impact on both wastewater management and agricultural sustainability. Given your expertise and achievements in the [relevant field or area of expertise], we believe that this project is of interest to you.

We are reaching out to you to gauge your interest in learning more about our project and exploring potential future collaboration opportunities. Your insights and contributions could prove valuable as we strive to address the critical intersection of wastewater management and agricultural productivity.

If you are available, we would appreciate the opportunity to schedule a brief meeting or call to provide you with more detailed information about our project, answer any questions you may have and explore any potential synergies that their may be between your organization and P2Green.

Please let us know a convenient time for you, and we will make the necessary arrangements.

Thank you for considering our invitation.

Best regards,

[Your Full Name]
[Your Position]
[Your Contact Information]

11.2 To actors with some prior connection

Project Number:
Project Acronym:

101081883
P2Green
Deliverable 5.1

Subject: Exploring Synergies: P2Green Horizon Europe Project

Dear [Stakeholder Name],

I hope this email finds you well. I'm reaching out to you to introduce you to ,[P2Green](#), part of the Horizon Europe program, dedicated to transforming human sanitary waste into bio-based fertilizers for agriculture.

P2Green is focused on developing technologies that convert human urine and feces into environmentally friendly fertilizers, addressing challenges in modern agriculture. We operate in pilot regions in Germany, Spain, and Sweden, with additional exploration in follower regions (Greece, Italy, and Hungary).

With 31 European partners, our project aims to revolutionize wastewater management and enhance agricultural sustainability. Given your expertise in [relevant field or area of expertise], we believe this project aligns with your interests.

I thought of reaching out to you [insert relevant sentence based on connection]. We're eager to discuss potential synergies between your organization and P2Green. If you're available, we'd love to schedule a brief call to share more details, answer any questions, and explore collaboration opportunities.

Please let us know a convenient time for you, and we'll make the necessary arrangements.

Thank you for considering our invitation.

Best regards,

[Your Full Name]

Contact



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